CITY OF SYDNEY

19 February 2026

At 5.00 pm

Central Sydney Planning Committee

Agenda

1. Disclosures of Interest
2. Confirmation of Minutes
3. Matters Arising from the Minutes
4. Development Application: 136-140 Elizabeth Street, Sydney - D/2025/675
5. Public Exhibition - Planning Proposal - City Architect and City Landscape Architect Heritage Items - Sydney Local Environmental Plan 2012 Amendment
6. Public Exhibition - Planning Proposal - 41-49 Mountain Street, Ultimo - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment
7. Summary of Applications to be Reported to the Central Sydney Planning Committee

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1. Register to speak by calling Secretariat on 9265 9702 or emailing secretariat@cityofsydney.nsw.gov.au before 10.00am on the day of the meeting.
2. Check the recommendation in the committee report before speaking, as it may address your concerns so that you just need to indicate your support for the recommendation.
3. Note that there is a three minute time limit for each speaker (with a warning bell at two minutes) and prepare your presentation to cover your major points within that time.
4. Avoid repeating what previous speakers have said and focus on issues and information that the committee may not already know.
5. If there is a large number of people interested in the same item as you, try to nominate three representatives to speak on your behalf and to indicate how many people they are representing.

At the start of each Central Sydney Planning Committee meeting, the Chair may reorder agenda items so that those items with speakers can be dealt with first.

Central Sydney Planning Committee reports are available at www.cityofsydney.nsw.gov.au

Item 1.

Disclosures of Interest

Pursuant to the provisions of the City of Sydney Code of Meeting Practice and the City of Sydney Code of Conduct, Members of the Central Sydney Planning Committee are required to disclose and manage both pecuniary and non-pecuniary interests in any matter on the agenda for this meeting.

In both cases, the nature of the interest must be disclosed.

This includes receipt of reportable political donations over the previous four years.

Item 2.

Confirmation of Minutes

Minutes of the following meeting of the Central Sydney Planning Committee are submitted for confirmation:

Meeting of 11 December 2025

Item 3.

Matters arising from the Minutes

Matters arising from the minutes of the Central Sydney Planning Committee of 11 December 2025.

Item 4.

Development Application: 136-140 Elizabeth Street, Sydney - D/2025/675

File Number: D/2025/675

Summary

Date of Submission:	22 July 2025 (amended plans and supporting documentation received 24 and 28 October 2025)
Applicant:	Investa 140E Devco Pty Ltd
Architect/Designer:	Mostaghim
Developer:	Investa
Owner:	The Salvation Army (NSW) Property Trust
Planning Consultant:	Colliers
Cost of Works:	$105,068,700
Zoning:	SP5 Metropolitan Centre The proposal comprises a mixed-use building for community floor space and co-living residential uses which are permissible with consent.
Proposal Summary:	The proposal seeks consent for the demolition of the existing building and the construction of a 17-storey mixed use building including 2 storeys of community floor space and 15 storeys of co-living residential uses. The proposed co-living component includes 251 residential rooms with a total capacity of 441 residents. Co-living facilities include 524 square metres of indoor communal areas spread over two different levels and 269 square metres of outdoor communal areas split over three different levels. The co-living component also provides a communal laundry and bicycle parking facilities. The proposal also includes approximately 1,420 square metres of community floor space uses, located on the ground and first floors of the development.

The application is referred to the Central Sydney Planning Committee (CSPC) for determination as the proposal is "major development" for the purposes of the City of Sydney Act 1988.

During the assessment of the application, the proposal was amended, and additional information was submitted to address the concerns of Council officers and other public authorities. These concerns primarily related to:

- architectural resolution
- residential amenity
- landscape design
- waste management
- flood and stormwater management
- bicycle parking

These issues were largely addressed by the applicant in amended plans and the submission of additional supporting documentation. Subject to the adoption of the recommended conditions of consent, the proposal is now considered to achieve an acceptable degree of compliance with the relevant planning controls, provides appropriate residential amenity to future residents and will have an acceptable impact on surrounding developments.

The application was notified for 30 days between 30 July 2025 and 28 August 2025, with 10 submissions received. Of the 10 submissions received, one made comment on the proposal, one was in support of the proposal and eight were objecting to the proposal.

The submission of support noted the benefit in providing an increased housing mix to the area, retaining an area of community floor space on the lower levels and the strategic placement of proposed artworks.

Objections raised the following concerns:

- Acoustic, traffic and dust impacts during construction
- Inappropriate setbacks from the street and adjacent buildings
- View and outlook loss
- Acoustic impacts during operation

- Overcrowding of streets and nearby parks from increased population
- Privacy and overlooking from the development to adjacent sites
- Lack of community consultation
- Site overdevelopment
- Lack of competitive design process
- Socio-economic background of future residents

Issues raised above are addressed and discussed within the report. Overall, the proposal is accompanied by documentation demonstrating the development is capable of maintaining appropriate acoustic levels so as to not adversely impact existing surrounding developments and will maintain an appropriate level of residential amenity in surrounding residential development.

The proposal is generally consistent with the applicable planning provisions including those within the Sydney Local Environmental Plan 2012 (SLEP 2012), the Sydney Development Control Plan 2012 (SDCP 2012) and the State Environmental Planning Policy (Housing) 2021.

Proposed non-compliances have been assessed as generally having merit in the specific circumstances of the proposal and are addressed in the report.

As a result of the design modifications made to the application, the amended proposal has a high standard of architectural design, materials and detailing. It presents an improved outcome, comprises an appropriate response to the site conditions and locality and will result in a form and scale that achieves the desired future character. The desired future character includes an overlay of trees including Snow Pear and London Plane trees in accordance with the City's Street Tree Master Plan.

Summary Recommendation: The development application is recommended for approval, subject to conditions.

Development Controls:

(i) City of Sydney Act 1988

(ii) Environmental Planning and Assessment Act 1979 and the Environmental Planning and Assessment Regulation 2021

(iii) Sydney Water Act 1994

(iv) SEPP (Resilience and Hazards) 2021

(v) SEPP (Industry and Employment) 2021

(vi) SEPP (Sustainable Buildings) 2022

(vii) SEPP (Transport and Infrastructure) 2021

(viii) SEPP (Housing) 2021

(ix) SEPP (Biodiversity and Conservation) 2021

(x) Sydney Local Environmental Plan 2012

(xi) Sydney Development Control Plan 2012

Attachments:

A. Recommended Conditions of Consent

B. Selected Drawings

C. Submissions

Recommendation

It is resolved that consent be granted to Development Application Number D/2025/675 subject to the conditions set out in Attachment A to the subject report.

Reasons for Recommendation

The application is recommended for approval for the following reasons:

(A) The proposal satisfies the objectives of the Environmental Planning and Assessment Act 1979 in that, subject to the imposition of conditions as recommended, it achieves the objectives of the planning controls for the site for the reasons outlined in the report to the Central Sydney Planning Committee.

(B) The proposal is consistent with the standards for co-living housing under Chapter 3 Part 3 Section 68 of the State Environmental Planning Policy (Housing) 2021.

(C) The proposal generally satisfies the objectives and provisions of the Sydney Local Environmental Plan 2012 and the Sydney Development Control Plan 2012.

(D) The proposal is consistent with the objectives and provisions of the SP5 Metropolitan Centre zone.

(E) The proposed development has a height, scale and form suitable for the site and its context and, subject to conditions, satisfactorily addresses the heights and setbacks of neighbouring developments, is appropriate in the streetscape context and setting of the Central Sydney locality.

(F) The development is considered to exhibit design excellence, consistent with the provisions of Clause 6.21C of the Sydney Local Environmental Plan 2012 and the application demonstrates the site is suitable for the proposed uses and is of a high standard of architectural design, materials and detailing

(G) Subject to the recommended conditions of consent, the proposed development achieves good amenity for the existing and future occupants of the subject and adjoining sites.

(H) The proposed development is unlikely to result in any significant adverse environmental or amenity impacts on surrounding properties, the public domain, and the broader Central Sydney locality, subject to conditions.

(I) The public interest is served by the approval of the proposal, as amendments to the development application have addressed the matters raised by the City and the community, subject to recommended conditions imposed relating to appropriate management of potential environmental impacts associated with the development.

Background

The Site and Surrounding Development

1. The site has a legal description of Lot 10 DP 812806 and is commonly known as 136-140 Elizabeth Street, Sydney.

2. The site is located in Central Sydney, just south of Museum train station. The site is located at the junction of Elizabeth Street and Clarke Street, just south of the intersection of Elizabeth Street and Liverpool Street. The site is rectangular in shape with an area of approximately 1,046 square metres. It has an eastern frontage of approximately 19m to Nithsdale Street, a northern frontage of approximately 56m to Clarke Street and a western frontage of approximately 19m to Elizabeth Street. The site adjoins a 33-storey residential apartment building to the south.

3. The site is located in close proximity to the underground City Circle railway line, running just west of the site. The site is also located close to the new City and Southwest metro rail line, running to the west of the site.

4. The site is identified on the plan in Figure 1 and an aerial photograph in Figure 2 below, showing the location of the site and its context.

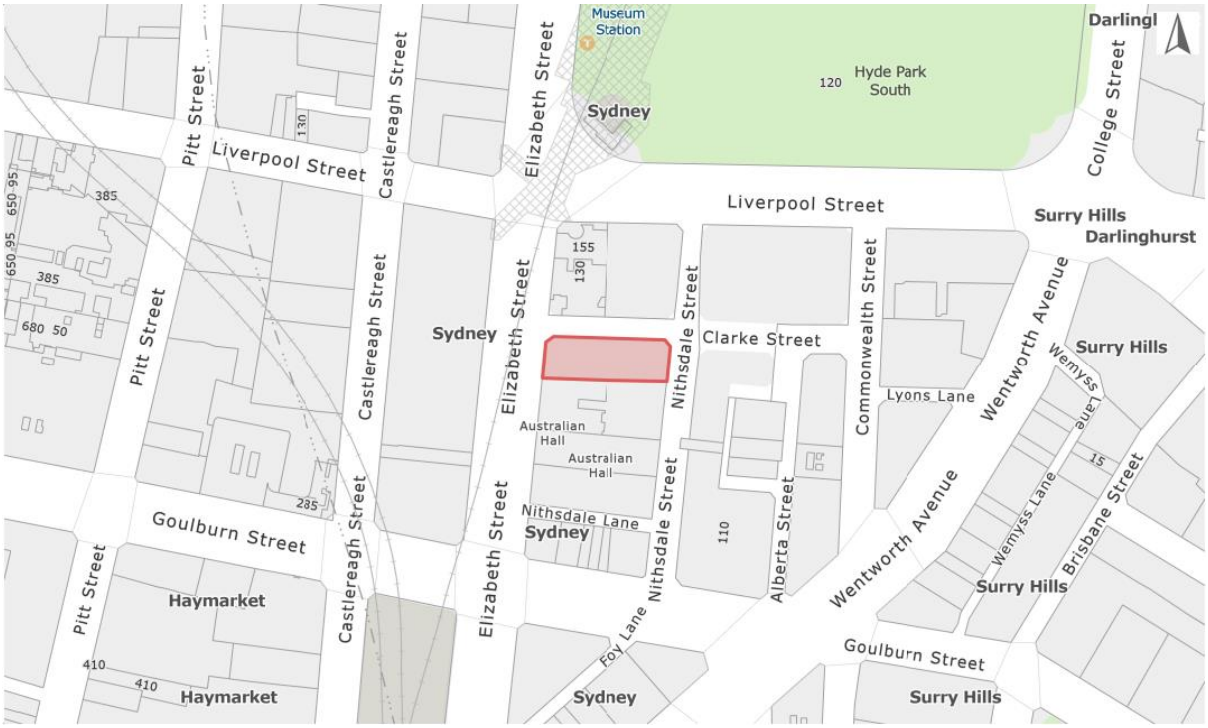


Figure 1: Map view of the site and surrounds

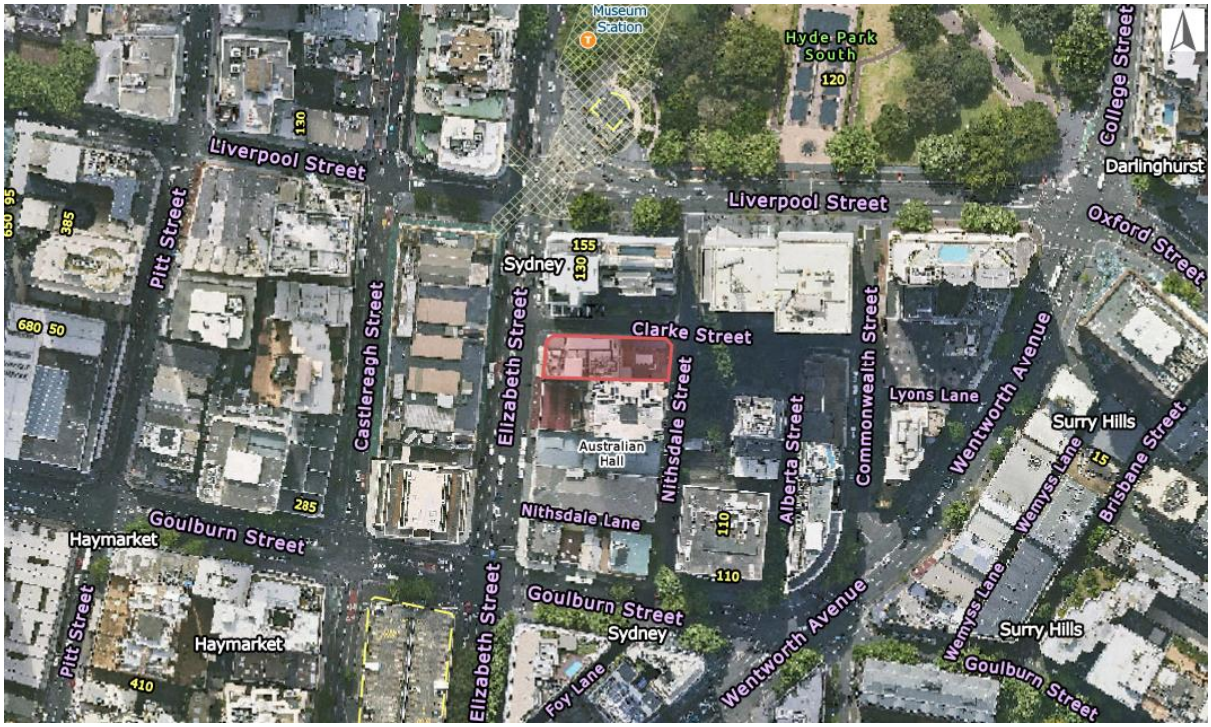


Figure 2: Aerial view of the site and surrounds

5. The subject site contains a 11-storey community building (refer to Figures 3 and 4 below) and is currently occupied by The Salvation Army Congress Hall and is used for administration and community uses.

6. The site currently has vehicular access along the Nithsdale Street frontage and pedestrian access from Elizabeth Street. The site is not identified as being subject to flooding and is not identified as a heritage item nor located within a heritage conservation area.

Figure 3: Site viewed from Elizabeth Street

Figure 4: Site viewed from the intersection of Clarke Street and Nithsdale Street

The Locality

7. The surrounding area is characterised by a mix of commercial, residential and civic uses.

8. To the north of the site on the opposite side of Clarke Street at 130 Elizabeth Street, Sydney, is a 38-storey mixed use development containing commercial uses on the ground floor and residential apartments above. Further north is Hyde Park South and the ANZAC Memorial.

9. To the east is a commercial tower and privately owned pocket park located opposite the site on Nithsdale Street. Further east is a mix of commercial and residential developments.

10. Adjoining the site to the south is a 34-storey mixed use building known as Hyde Park Towers comprising commercial tenancies on the ground floor to level 3 and residential apartments and associated parking on the levels above.

11. Opposite the site to the west along Elizabeth Street is the Downing Centre court complex.

12. Figures 5 to 7 show the existing development located within close proximity of the subject site.

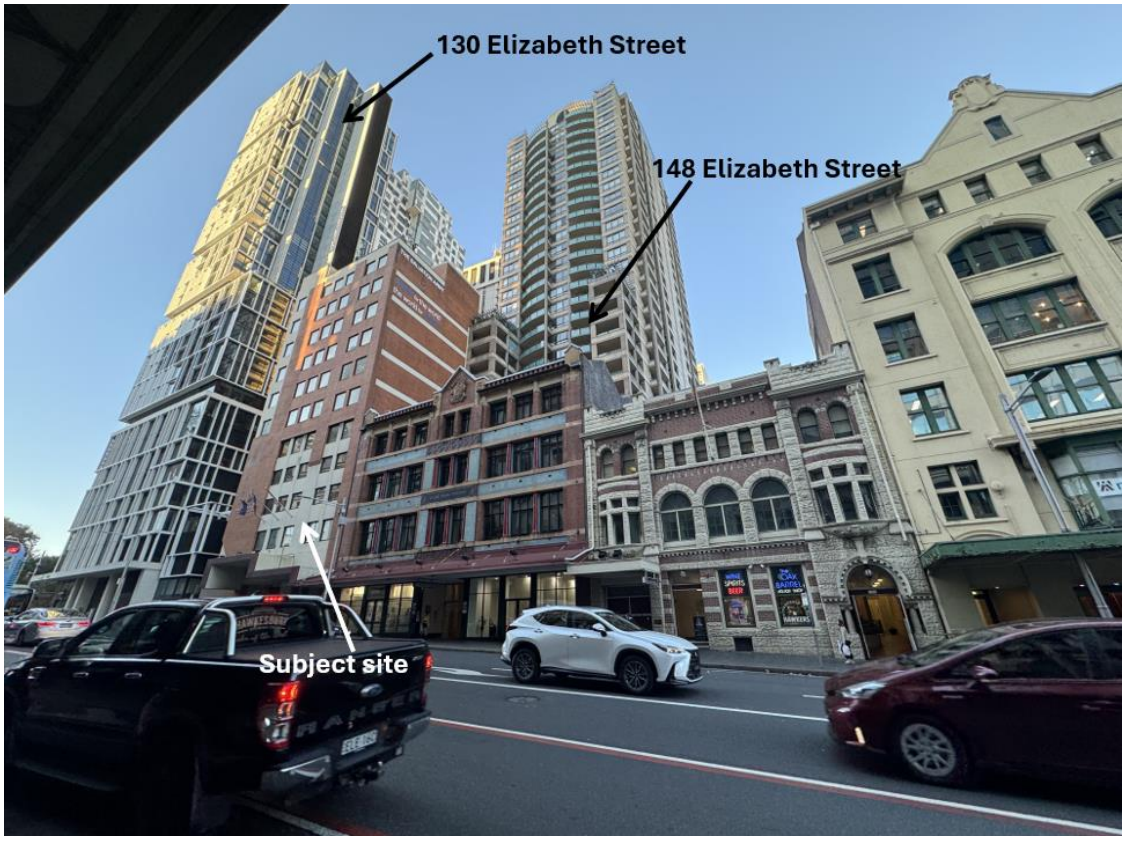


Figure 5: surrounding development to the north and south of the subject site

Figure 6: Existing pocket park opposite the site to the east along Nithsdale Street

Figure 7: Downing Centre courts complex located opposite the site to the east along Elizabeth Street

History Relevant to the Development Application

Design Advisory Panel

13. During pre-lodgement discussions, a preliminary proposal was submitted for review and discussion with the Design Advisory Panel. The Panel were presented with the preliminary proposal on 13 June 2024. The Panel noted the following:

    (a) Reconsider extensive open corridors for better habitation

    (b) Solar protection of north-facing glazing is recommended

    (c) Locate communal areas in areas that will have suitable access to light

    (d) Individual unit design should be refined and consider heating/cooling systems

    (e) The podium levels should respond to the height of the Mark Foy's building (Downing Centre) and align with the podium of the residential building to the north (130 Elizabeth Street)

    (f) Consideration should be given to acoustic protection of residential areas from services areas and street noise

14. Overall, the proposed amended submission satisfactorily addresses recommendations made by the Design Advisory Panel. The amended design addresses the street wall heights of surrounding significant buildings more appropriately, reduces the extent of open corridors, has consolidated and relocated the main communal indoor and outdoor spaces to allow better access to light and ventilation and includes balconies to north-facing units to reduce direct solar impact onto glazing.

15. The design development of the proposed scheme has resolved many issued raised by Council and the Design Advisory Panel during pre-lodgement discussions and presenting the amended scheme to the Panel was deemed unnecessary.

Amendments

16. Following a preliminary assessment of the proposed development by Council officers, a request for additional information and amendments was sent to the applicant on 29 September 2025. The request sought amendments to the facade, primarily fronting Clarke Street to better articulate the transition between the podium levels and upper floors. The request also sought clarification on floor to ceiling heights, co-living unit types and unit ventilation.

17. In addition to the above, the request sought further information on the technical function of proposed plenums to co-living units, landscape design and laundry function. In regard to building function, amendments were sought to the basement level, seeking an increase to waste storage allow a reduction in the frequency of collection days and an increase in bicycle parking facilities.

18. Additional technical information was also requested relating to stormwater quality assessment and flood management, stormwater drainage design and general public domain upgrade design.

19. The applicant responded to the request on 24 October 2025, and submitted an amended application including additional technical information and design amendments appropriately responding to Council's request.

20. On 23 January 2026, the applicant requested that the development be staged, with construction certificate stages reflected in conditions of consent.

Proposed Development

21. The application seeks consent for the following:

    (a) Demolition of the existing 11-storey building and associated basement structure

    (b) Construction of a 17-storey mixed use development comprising:

        (i) 15 storeys of co-living; and

        (ii) 2 storeys of community use

    (c) Construction of a ground floor on-site loading bay accessed off Nithsdale Street, two car parking spaces for community use and loading/servicing and plant

    (d) Provision of basement bicycle parking facilities, waste storage areas and plant equipment

(e) Signage zones

(f) Public domain improvements to Elizabeth Street, including footpath upgrades

22. The proposed co-living component comprises the following:

(a) 251 rooms (potential of 441 total residents)

(b) 524 square metres of communal indoor space located at levels 8 and 16

(c) 269 square metres of communal outdoor space located at levels 3, 8 and roof

23. Detailed drawings of the proposed development are provided in Attachment B, and selected drawings to illustrate the proposal generally are provided below.

Figure 8: Photomontage of Elizabeth Street and Clarke Street frontages

Figure 9: Photomontage of Elizabeth Street frontage

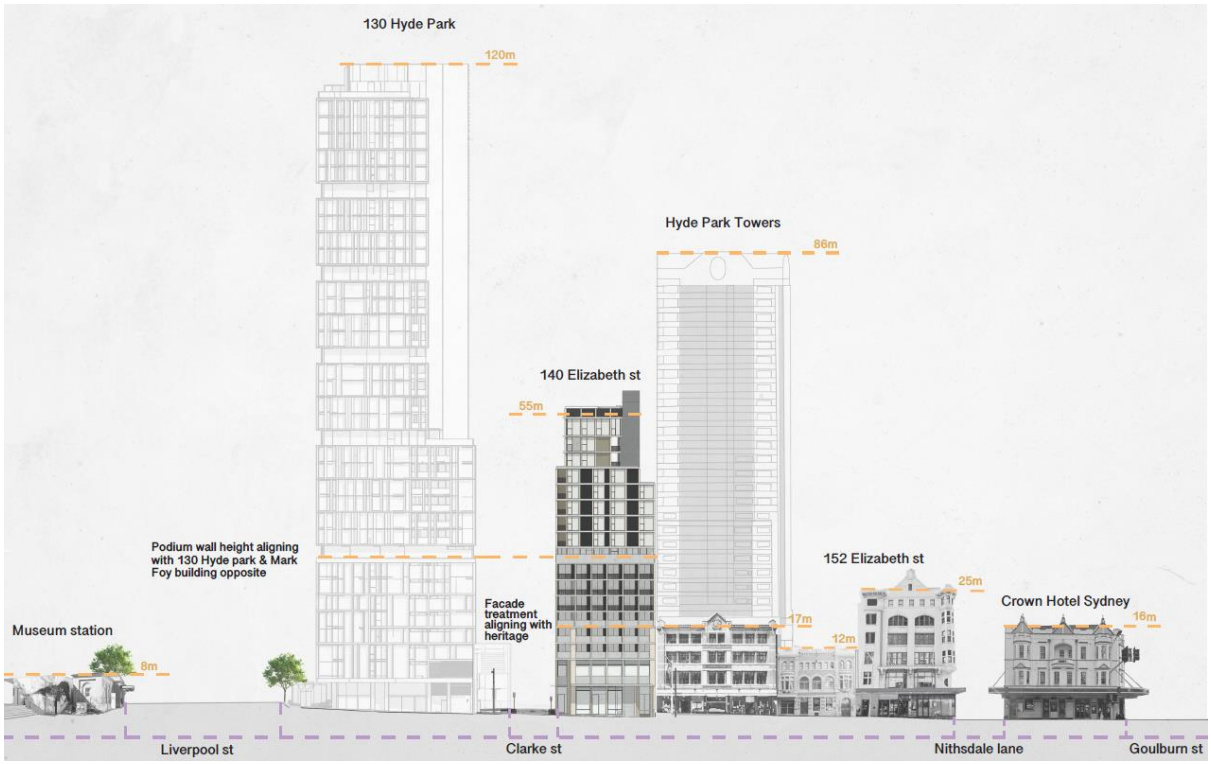


Figure 10: Elizabeth Street frontage with adjacent developments

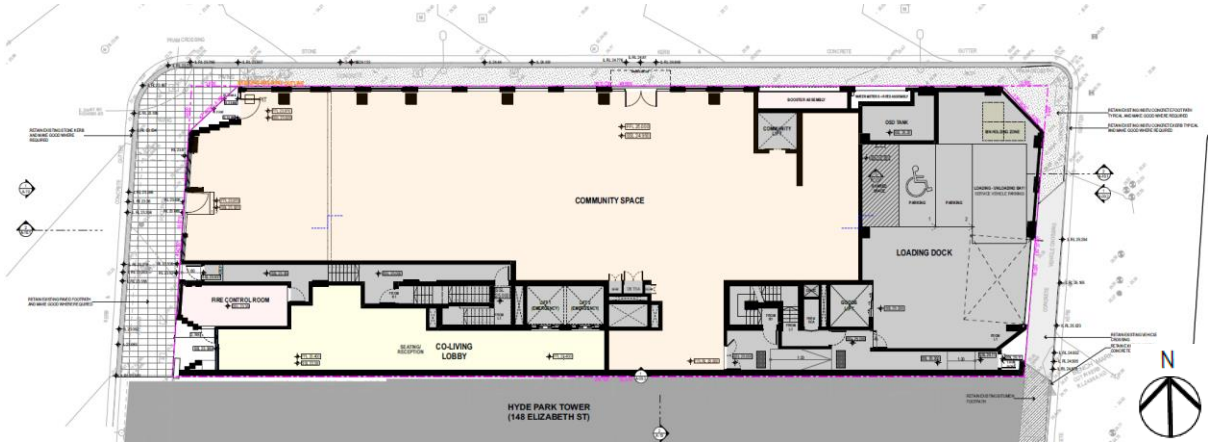


Figure 11: Proposed ground floor

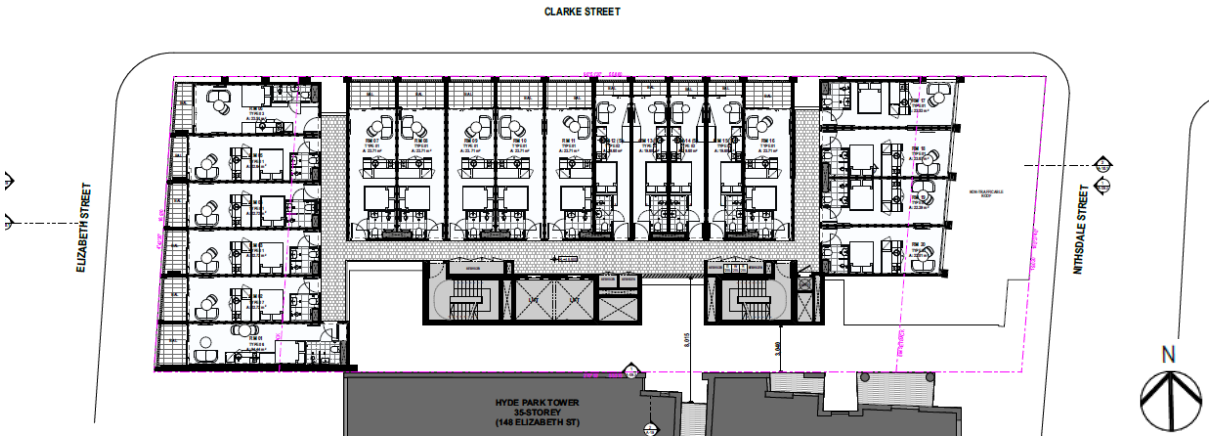


Figure 12: Typical proposed lower residential level

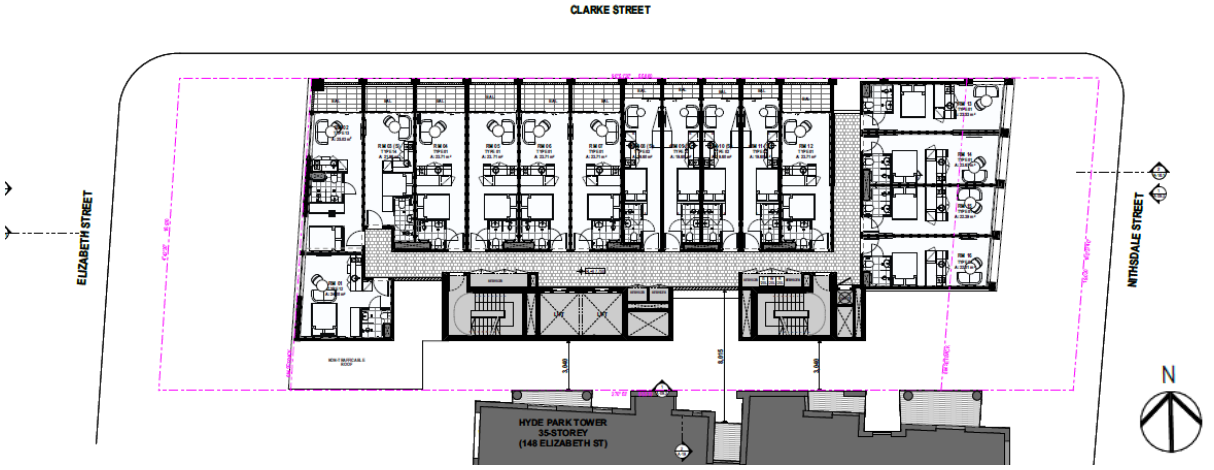


Figure 13: Typical proposed upper residential level

Assessment

24. The proposed development has been assessed under Section 4.15 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

State Environmental Planning Policies

Sydney Water Act 1994

25. Section 78 of the Sydney Water Act 1994 sets out various requirements for the determination of development applications which would:

    (a) increase the demand for water supplied by the Corporation; or

    (b) increase the amount of waste water that is to be removed by the Corporation; or

    (c) damage or interfere with the Corporation's works; or

    (d) adversely affect the Corporation's operation.

26. Subclauses (2) and (4) of Section 78 of the Sydney Water Act 1994 allow for a consent authority to approve an application at any time, subject to a condition requiring that a developer obtain a compliance certificate from the Sydney Water Corporation.

27. Several conditions have been recommended in Attachment A requiring various Sydney Water approvals and certification, including a condition requiring that the developer obtain a Section 73 Compliance Certificate from the Sydney Water Corporation.

State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 4 - Remediation of Land

28. The aim of SEPP (Resilience and Hazards) 2021 - Chapter 4 Remediation of Land is to ensure that a change of land use will not increase the risk to health, particularly in circumstances where a more sensitive land use is proposed.

29. A Detailed Site Investigation report was submitted with the application. The report assesses the historical and current land uses, analyses the detailed site inspection to identify potential AECs and other samples from the site investigation and determines the risk of harm from contamination and the suitability of the site for the proposed land use.

30. The report identified that the site has been under ownership of the Salvation Army Headquarters and Sydney Congress Hall since 1926, utilised for commercial use of the ground level and leased office spaces on the upper levels. The site surface is entirely sealed by concrete.

31. The application proposes to retain the existing basement with some drilling/excavation for footings and lift shafts proposed. The investigation report concluded that soil and groundwater samples analysed do not indicate any significant exceedances of the identified criteria for contaminants of potential concern.

32. As such, the submitted investigation report has determined that the site is suitable for the proposed uses for a community facility on the ground and first floor and residential uses above, concluding that site remediation is not required.

33. Council's Environmental Health Officer has reviewed the information provided and is satisfied that, subject to conditions, the site is suitable for the proposed use. As such, the application satisfied the relevant provisions of the SEPP.

State Environmental Planning Policy (Housing) 2021

34. The site is located within Central Sydney. Clause 1.9(2A) of the Sydney Local Environmental Plan 2012 (SLEP 2012) notes that the specific provisions for co-living as provided in Chapter 3, Part 3 of the Housing SEPP do not apply to land in Central Sydney. As such, the provisions for co-living are used as a guide only.

Chapter 3 Diverse Housing

Part 3 Co-living Housing

35. Under Clause 68, compliance with any of the following standards must not be used to refuse consent for co-living housing.

36. An assessment of the proposed co-living housing against each standard is provided in the table below.

Clause 68 – Non discretionary development standards

37. If the following non discretionary development standards are complied with the consent authority cannot require more onerous standards for the matters.

Standards that cannot be used to refuse a boarding house.

Provision	Compliance	Guiding Comment (control does not actually apply in Central Sydney)
Density and scale expressed as floor space ratio An FSR of up to 8:1 plus 10% is permitted.	N/A	The site is located within Central Sydney. Bonus floor space under the Housing SEPP is not applicable however additional floor space is available. See further discussion under the 'Sydney Local Environmental Plan 2012' heading.
Communal living area For co-living containing more than 6 private rooms a total of at least 30m² plus 2m² per additional room and a minimum dimension of 3m	Yes	The development satisfies the minimum requirement with communal living areas totalling approximately 524 square metres.
Communal open space Communal open space with a total area of at least 20% of the site area and a minimum dimension of 3m	Yes	The development satisfies the minimum requirement with communal open spaces totalling approximately 269 square metres.
Parking Unless a relevant planning instrument specifies a lower number 0.2 spaces per room in an accessible area and 0.5 spaces otherwise	Yes	The proposal does not seek consent for any parking spaces allocated to the co-living use. The Sydney LEP 2012 does not require the provision of private motor vehicle car parking.

38. The proposed development complies with the relevant provisions of clause 68.

39. Clause 69 (1) states that a consent authority must not grant development consent for the purpose of co-living unless it is satisfied of each of the following provisions.

Clauses 69 (1) – Standards for co-living housing

Provision	Compliance	Guiding Comment (control does not actually apply in Central Sydney)
1(a) No private room is to have a gross floor area (excluding private kitchen or bathroom facilities) of more than 25m² and less than 12m² for a single occupancy or 16m² otherwise	Yes	All boarding rooms are less than 25 square metres.
1(b) in R2 zone the minimum lot size is no less than minimum lot size for manor houses under a relevant planning instrument or 600m² on other land the minimum lot size is no less than minimum lot size under a relevant planning instrument	N/A	There are no minimum lot sizes relevant to the site. The site has an area of 1,046 square metres.
1(c) in R2 zone or equivalent the co-living housing will not contain more than 12 private rooms and will be in an accessible area	N/A	The site is not located in an R2 zone.
1(d) the co-living housing will contain an appropriate workspace for the manager, either within the communal living area or in a separate space	Yes	The development satisfies this requirement. The site provides appropriate workspaces for management within the co-living lobby.
(1e) for co-living in a business zone no part of the ground floor that fronts a street is to be used for residential purposes unless another environmental planning instrument permits the use	Yes	The site is located within the SP5 Metropolitan Centre zone. The only floor space associated with the co-living use located on the ground floor is a lobby and reception and satisfied this requirement.
1(f) adequate bathroom, laundry and kitchen facilities will be available within the co-living housing for the use of each occupant	Yes	Each co-living unit is equipped with private bathroom and kitchen facilities in addition to a common laundry and communal kitchen.

Provision	Compliance	Guiding Comment (control does not actually apply in Central Sydney)
1(g) each private room will be used by no more than 2 occupants	Yes	The development satisfies this requirement.

Clauses 69 (2) provides that development consent must not be granted for co-living housing unless the consent authority considers the following matters-

Provision	Compliance	Guiding Comment (control does not actually apply in Central Sydney)
2(a) in R2 zone the front, side and rear setbacks are no less than those required for multi dwelling housing in another relevant planning instrument	N/A	The site is not located within an R2 zone.
2(b) if the co-living has at least 3 storeys the building complies with the minimum building separation distances in the Apartment Design Guide	No	The development does not satisfy this requirement. This matter is discussed further under the heading 'Discussion'.
2(c) at least 3 hours of solar access will be provided between 9.00am and 3.00pm at mid winter in at least one communal living area	No	The communal living areas are provided on Level 8 and Level 16 of the proposed development. Due to the positioning of the communal living areas, and the existing extent of overshadowing across the site and broader locality, it is not possible to achieve 3 hours of direct solar access. Notwithstanding the communal open space located on Level 8 has been provided where maximum solar access (2 hours) is achieved during mid-winter and is considered satisfactory. Further, additional internal living areas located on Level 16 maximise direct solar access in the morning and afternoon.
2(d) at least one bicycle parking space will be provided for each private room	No	The development does not satisfy this requirement. This matter is further discussed under the heading 'Discussion'.

Provision	Compliance	Guiding Comment (control does not actually apply in Central Sydney)
2(e) at least one motorcycle parking space will be provided for every 5 private rooms	No	No motorcycle parking is provided on site. Given the site's location within Central Sydney and its proximity to several modes of public transport, the provision of motorcycle parking is not deemed necessary.
2(f) the design of the building is compatible with the desirable elements of the character of the local area or for precincts undergoing transition the desired future character of the precinct	Yes	The development satisfies this requirement. The design of the building is compatible with surrounding developments and is sympathetic to the character of the locality.

40. Clause 70 provides that development consent must not be granted for the subdivision of the co-living housing. A condition confirming that the co-living housing cannot be subdivided is recommended.

Chapter 4 - Design of Residential Apartment Development

41. Chapter 4 (Design of residential apartment development) specifically notes that the provisions of the chapter do not apply to co-living housing.

State Environmental Planning Policy (Industry and Employment) 2021

Chapter 3 - Advertising and Signage

42. The aim of SEPP (Industry and Employment) 2021 – Chapter 3 Advertising and Signage is to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high-quality design and finish.

43. The proposed signage has been considered against the objectives of the policy and an assessment against the provisions within the assessment criteria set out in Schedule 1 is provided in the table below.

Provision	**Compliance**	**Comment**
Character of the area	Yes	The proposed signage is generally consistent with the character of the area.
Special areas	Yes	The proposed signage generally does not detract from the amenity of visual quality of the locality, subject to conditions.

Provision	Compliance	Comment
Views and vistas	Yes	The proposed signage does not obscure or compromise any important views. It does not dominate the skyline and has no impact on the viewing rights of other advertisers.
Streetscape, setting or landscape	Yes	The proposed signage is generally of an appropriate scale, proportion and form and provides a positive contribution to the streetscape and setting of the area. Refer to further discussion under Section 3.16 of the Sydney Development Control Plan 2012.
Site and building	Yes	The scale of the proposed signage is acceptable, and the materiality is compatible with the finishes and colours of the building.
Associated devices and logos	N/A	Not applicable. The proposed signs are not advertising signs.
Illumination	Yes	Condition of consent are recommended to ensure that the illumination does not result in unacceptable glare, affect safety or detract from the amenity of any residential accommodation.
Safety	Yes	The proposed signage will not reduce the safety of pedestrians, cyclists or vehicles on public roads or areas.

44. The proposed signage is consistent with the objectives of SEPP (Industry and Employment) 2021 – Chapter 3 Advertising and Signage as set out in Clause 3.1 and satisfies the assessment criteria specified in Schedule 5.

State Environmental Planning Policy (Sustainable Buildings) 2022

45. The aims of this Policy are as follows—

(a) to encourage the design and delivery of sustainable buildings,

(b) to ensure consistent assessment of the sustainability of buildings,

(c) to record accurate data about the sustainability of buildings, to enable improvements to be monitored,

(d) to monitor the embodied emissions of materials used in construction of buildings,

(e) to minimise the consumption of energy,

(f) to reduce greenhouse gas emissions,

(g) to minimise the consumption of mains-supplied potable water,

(h) to ensure good thermal performance of buildings.

Chapter 2 Standards for residential development - BASIX

46. While a BASIX Certificate is generally required for residential development, the Environmental Planning and Assessment Regulation 2021 define a "BASIX building" as:

> "a building that contains at least one dwelling but does not include the following—
>
> (a) hotel or motel accommodation,
>
> (b) a boarding house, hostel or co-living housing that—
>
> (i) accommodates more than 12 residents, or
>
> (ii) has a gross floor area exceeding 300 square metres".

47. As the residential portion of the development is for co-living accommodation that comprises more than 12 rooms and exceeds 300 square metres, the proposal is not required to address BASIX requirements under Chapter 2 of the SEPP.

Chapter 3 Standards for non-residential development

48. Chapter 3 of the SEPP applies to development, other than development for the purposes of residential accommodation, that involves:-

(a) the erection of a new building, if the development has an estimated development cost of $5 million or more, or

(b) alterations, enlargement or extension of an existing building, if the development has an estimated development cost of $10 million or more.

Section 3.2 Development Consent for non-residential development

49. Section 3.2 Development consent for non-residential development provides that:

> (1) In deciding whether to grant development consent to non-residential development, the consent authority must consider whether the development is designed to enable the following—
>
> (a) the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,
>
> (b) a reduction in peak demand for electricity, including through the use of energy efficient technology,
>
> (c) a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,
>
> (d) the generation and storage of renewable energy,

(e) the metering and monitoring of energy consumption,

(f) the minimisation of the consumption of potable water.

(2) Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.

50. With regard to the above matters the applicant has submitted a City of Sydney Design for Environmental Performance report template to address the above. The template identifies design and technology responses for environmental performance that the applicant proposes to be incorporated in the development. This includes the full electrification of the building, passive architectural design, water capture and targeting a Green Star Buildings rating of 4 stars.

51. With regard to section (2) above the applicant has adequately quantified the embodied emissions attributable to the development. Section 35B of the Environmental Planning and Assessment Regulation determines the form in which embodied emissions are to be quantified. The embodied emissions attributable to the development have been appropriately quantified using the NABERS embodied energy form published on the NSW Planning Portal and certified by an appropriately qualified person as required by the regulations.

State Environmental Planning Policy (Transport and Infrastructure) 2021

52. The provisions of SEPP (Transport and Infrastructure) 2021 have been considered in the assessment of the development application.

Division 5, Subdivision 2: Development likely to affect an electricity transmission or distribution network

Clause 2.48 Determination of development applications – other development

53. The application is subject to Clause 2.48 of the SEPP as the development will be carried out immediately adjacent to an electricity substation.

54. As such, the application was referred to Ausgrid for a period of 21 days and no objection was raised.

Division 15, Subdivision 2: Development in or adjacent to rail corridors and interim rail corridors

Clause 2.99 – Excavation in, above, below or adjacent to rail corridors

55. The application is adjacent to the City Circle rail corridor and was subsequently referred to Transport for NSW (TfNSW) for concurrence. TfNSW have recommended conditions which are included in the Notice of Determination.

Sydney Environmental Planning Policy (Biodiversity and Conservation) 2021 – Chapter 6 Water Catchments

56. The site is located within the designated hydrological catchment of Sydney Harbour and is subject to the provisions of the above SEPP. The SEPP requires the Sydney Harbour Catchment Planning Principles to be considered in the carrying out of development within the catchment.

57. The site is within the Sydney Harbour Catchment and eventually drains into Sydney Harbour. However, the site is not located in the Foreshores Waterways Area or adjacent to a waterway and therefore, with the exception of the objective of improved water quality, the objectives of the SEPP are not applicable to the proposed development.

Local Environmental Plans

Sydney Local Environmental Plan 2012

58. An assessment of the proposed development against the relevant provisions of the Sydney Local Environmental Plan 2012 (SLEP 2012) is provided in the following sections.

Part 2 Permitted or prohibited development

Provision	Compliance	Comment
2.3 Zone objectives and Land Use Table	Yes	The site is located in the SP5 Metropolitan Centre zone. The proposed development is defined as co-living housing and community facility and are permissible with consent in the zone. The proposal generally meets the objectives of the zone.

Part 4 Principal development standards

Provision	Compliance	Comment
4.3 Height of buildings	Yes	A maximum building height of 110m is permitted. A height of 61.15m is proposed. The proposed development complies with the maximum height of buildings development standard.
4.4 Floor space ratio 6.4 Accommodation floor space	Yes	A maximum FSR of 8:1 is permitted under clause 4.4 of the SLEP 2012. In accordance with clause 6.4, the site is also subject to an additional 6:1 FSR for centre-based child care facilities, community facilities or hotel or motel accommodation.

Provision	Compliance	Comment
		As the application proposes a community facility use within the development, additional floor space granted under clause 6.4 of the SLEP 2012 is apportioned to the site based on the proportion of the community facility floor space contained within the building. Based on the above, the site is subject to a maximum FSR of 8.94:1. This ratio enables a maximum GFA of 9,353 square metres across the site. A FSR of 8.68:1 or 9,081 square metres is proposed. The proposed development complies with the maximum FSR development standard.

Part 5 Miscellaneous provisions

Provision	Compliance	Comment
5.10 Heritage conservation	Yes	The site is note identified as a heritage item and is not located within a heritage conservation area. The site is within proximity of several heritage items of local and state significance. Of note it the Downing Centre to the west of the site and the 'Former "Mark Foys Parking Station" including facades, internal structure and building elements', a local item adjoining the site to south at 148 Elizabeth Street. Council's Heritage Specialist has reviewed the proposal and raises no objection, subject to conditions, including amendments to the street awning, noting the proposal is not considered to have an adverse impact on the significance of surrounding heritage fabric.

Part 6 Local provisions – height and floor space

Provision	Compliance	Comment
Division 1 Additional floor space in Central Sydney		
Subdivision 3 Heritage floor space 6.11 Utilisation of certain additional floor space requires allocation of heritage floor space (HFS)	Yes	The proposal includes 713 square metres of accommodation floor space to be used for community facility purposes, which is the total GFA above the base 8:1 FSR control. Clause 6.11(a) of the SLEP 2012 requires that HFS is allocated to the site equal to 50% of the accommodation floor space proposed. As such, a total of 356 square metres of HFS is required to be allocated to the site. A condition is recommended in Attachment A to require this HFS to be purchased and allocated to the development.
Division 3 Height of buildings and overshadowing		
6.16 Erection of tall buildings in Central Sydney	Yes	The proposed development is consistent with the objectives of this clause in the following manner: • Wind conditions are expected to be similar to the existing site conditions at all locations on the ground level, not impacting amenity within the public domain • No key views from public places are expected to be adversely impacted • The proposal will have an acceptable heritage impact on surrounding heritage items • The proposal has been designed to acknowledge surrounding heritage items and the existing massing along Elizabeth Street, particularly referencing podium heights and vertical articulation of surrounding heritage items

Provision	Compliance	Comment
		• The separation distances and setbacks provided will enable free movement of air around the upper levels of the building Further, the proposal is considered to provide appropriate sun and daylight access to the public domain, noting there are no protected public places or significant publicly accessible places within proximity of the site. Additionally, the proposed development will provide appropriate outlook for future occupants of the building, having residential uses face the three street frontages of the site while the core and services are located along the southern boundary. The proposal is considered to appropriately respond to the height transitions of surrounding developments, including the adjacent heritage item and generally meets the requirements of this provision.
6.18 Overshadowing of certain places	Yes	The proposal does not overshadow any of the specified public spaces under this provision.
Division 4 Design excellence		
6.21C Design excellence	Yes	The built form is compatible with the character of the locality and providing an appropriate relationship with the retained heritage buildings on the site and with the adjacent development. The proposal achieves the principles of ecologically sustainable development (ESD) and has an acceptable environmental impact with regard to the amenity of the surrounding area and future occupants. The proposal presents a high standard of architectural design and the overall materiality, articulation and architectural expression of the development is in keeping with the relevant planning

Provision	Compliance	Comment
		controls and reflecting the desired future character of the area. The proposal will also have a positive contribution to the public domain through the retention and improvement of the active frontage along Elizabeth Street. Overall, the proposal satisfies the considerations in Clause 6.21C(2) of the SLEP 2012 and the development is considered to exhibit design excellence.
6.21D Competitive design process	Yes	The application seeks consent for the construction of a new building exceeding 55m in height, triggering the requirement for a competitive design process. A competitive design process has not been carried out for the proposal as the applicant justifies the process is unreasonable and unnecessary in this instance. See 'Discussion' section below for further details.

Part 7 Local provisions – general

Provision	Compliance	Comment
Division 1 Car parking ancillary to other development		
7.9 Other land uses	Yes	The application proposes co-living housing and community facility uses within the site. Neither land use has maximum car parking rates nominated in the SLEP 2012, however, the applicant nominates the proposed community facility use best relates to the rates for places of public worship and entertainment facilities. Based on the above rates, a maximum number of parking spaces allocated to the community facility use is 49 spaces. The application proposes two car parking spaces and is consistent with the requirements of this provision.

Provision	Compliance	Comment
		The application does not propose car parking associated with the co-living use however, draft LEP controls relating to co-living parking are discussed below.
Division 3 Affordable housing		
7.13 Contribution for purpose of affordable housing	Yes	The development site is located in Central Sydney and is subject to the requirements of section 7.13. Refer to the discussion below under the heading Financial Contributions heading.
Division 4 Miscellaneous		
7.14 Acid Sulfate Soils	Yes	The site is located on land with class 5 Acid Sulfate Soils. The application does not propose works requiring the preparation of an Acid Sulfate Soils Management Plan.
7.16 Airspace operations	Yes	The proposal does not penetrate the Obstacle Limitation Surface as shown on the Obstacle Limitation Surface Map for Sydney Airport. Separate consents must be obtained for any cranes or other objects associated with the development that may penetrate the Obstacle Limitation Surface.
7.19 Demolition must not result in long term adverse visual impact	Yes	While the proposal includes partial demolition of the existing building, the proposal also includes construction of a new building under the same application. Council officers are therefore satisfied that the site will be comprehensively redeveloped under the consent.

Provision	Compliance	Comment
7.20 Development requiring or authorising preparation of a development control plan	No	Clause 7.20(2) of the SLEP 2012 requires the preparation of a site specific DCP (or concept development consent) for development which is over 55 metres in height and located in Central Sydney. The site and proposed development are not subject to a site specific DCP or concept development consent. Refer to the 'Discussion' section below for further details, including Figure 32 illustrating in section detail the portions of the proposed building above 55 metres.
7.26 Public art	Yes	The proposal includes public art which will be integrated with the detailed design of the development. The application was accompanied by a public art strategy which was reviewed and supported by Council's Public Art team.

Development Control Plans

Sydney Development Control Plan 2012

59. An assessment of the proposed development against the relevant provisions within the Sydney Development Control Plan 2012 is provided in the following sections.

Section 3 – General Provisions

Provision	**Compliance**	**Comment**
3.1 Public Domain Elements	Yes	The proposed development is considered to have a positive impact on the public domain. A public art strategy has been reviewed by the City's Public Art Unit and is considered acceptable. A condition is included requiring a detailed public art plan to be submitted for approval, and the installation of public art to the City's satisfaction.

Provision	Compliance	Comment
3.2. Defining the Public Domain		
3.2.1 Improving the public domain	Yes	The proposed development will enhance the public domain by ensuring adequate sun access to publicly accessible spaces and considering public views.
3.2.2 Addressing the street and public domain	Yes	The proposed development provides increased building entries along Elizabeth Street and Clarke Street, positively contributing to the public domain through increased passive surveillance and a greater active frontage. The proposed vehicle entry is located at the rear of the site along Nithsdale Street and not parking protrudes above the street level or the public domain.
3.2.3 Active frontages	Yes	The site's Elizabeth Street frontage is nominated as a Category 2 active frontage. In accordance with the control, over 70% of the frontage is provided as an active frontage and locates entries to residential and community uses at suitable locations.
3.2.4 Footpath awnings	No but acceptable	The Elizabeth Street frontage is identified on the Footpath awnings and colonnades map and requiring a continuous footpath awning. The SDCP 2012 notes the purpose of awnings at particular heights are to provide appropriate solar and weather protection to the public domain. Recommended awnings heights above the footpath level are between 3.2m and 4.2m. Further, the SDCP 2012 recommends a footpath awning width be between 2m and 3.2m and should be set back a minimum 1m from the kerb to allow for smart poles. Whilst an awning is provided along this frontage, it has not been designed in accordance with the recommended heights in the SDCP 2012. The application proposes clearances

Provision	Compliance	Comment
		between 5.4m and 6m. While not strictly complying with the recommended footpath clearance heights, the concrete awning is integrated into the main grid structure of the building and continues the horizontal articulation of the surrounding built forms. Additionally, the awning follows the horizontal proportions of the site to the north. It is noted that submitted architectural drawings show inconsistent setbacks of the Elizabeth Street awning from the kerb. A condition of consent is recommended requiring drawings to be updated to ensure the awning is set back a minimum 1m from the kerb. Further, the application proposes a small awning above the ground floor entry along Clarke Street. While it is acknowledged the awning is for weather protection above the entry, the Clarke Street footpath is narrow, and the awning is set back less than 500mm from the kerb. This creates a potential hazard for vehicles passing. When considering additional provisions relating to projections over or into public roads in Schedule 4 of the SDCP 2012, a minimum 800mm setback is recommended for any projections. A condition of consent is recommended requiring the Clarke Street awning to be set back a minimum 800mm from the face of the kerb.
3.2.6 Wind effects	Yes	The application was accompanied by a Pedestrian Wind Study, confirming the proposed development will not adversely impact the existing wind conditions around the site.
3.2.7 Reflectivity	Yes	A condition in Attachment A is recommended to ensure that light reflectivity from the building facades in the development do not exceed 20%.

Provision	Compliance	Comment
3.2.8 External lighting	Yes	No external lighting is detailed as part of the proposed development beyond generalised references in the application documentation. A condition is recommended in Attachment A to require the lodgement of a separate application for external illumination of the building and/or site landscaping.
3.3 Design Excellence and Competitive Design Processes	No but acceptable	The proposal seeks to 'waive' the requirement to undertake a competitive design process. Refer to the 'Discussion' heading below for further details
3.5 Urban Ecology	Yes	The proposed development does not involve the removal of any trees and will not have an adverse impact on the local urban ecology.
3.6 Ecologically Sustainable Development	Yes	Refer to SEPP (Sustainable Buildings) section above.
3.9 Heritage	Yes	Although the site does not contain any heritage items, it is located within close proximity of several heritage items of local and state significance. The proposed development is not considered to have an adverse visual impact on surrounding heritage items and is generally in keeping with the historic built character of the locality.
3.11 Transport and Parking		
3.11.1 Managing transport demand	Yes	The proposal comprises a mixed-use development including co-living accommodation providing more than 25 dwelling units. As such, it generates the requirement for a Transport Impact Study and Transport Access Guide. A Transport Impact Assessment report has been submitted with the application in accordance with these requirements,

Provision	Compliance	Comment
		which has been reviewed by Council's Access and Transport Unit. Conditions are recommended in Attachment A to ensure the development of a Transport Access Guide for the development.
3.11.3 Bike parking and associated facilities	Yes	The DCP does not nominate bicycle parking requirements for co-living developments however, an alternate approach to the provision of bicycle parking in line with Austroads Guide to Traffic Management Part 11: Parking Management Techniques (AGTM-11) is provided and detailed in the submitted Transport Impact Assessment which is considered appropriate. A total of 146 bicycle storage spaces are proposed for co-living uses, including 10 visitor spaces. Given the proximity of the site to several modes of public transport and being within walking distance of several other amenities, less than one bicycle space per co-living unit is acceptable. An additional 10 bicycle spaces are provided for the community facility for staff and visitor use. A total of 8 lockers (3 for staff of both co-living and community uses, and 5 for community uses), with two shower and change spaces will be provided in the Basement Level and is considered to be sufficient to meet the needs of staff and workers of both uses. All spaces are proposed within the Basement Level and will be accessed from Ground Level via the internal lifts.
3.11.6 Service vehicle parking	Yes	Given the constraints of the site, one single service vehicle space is provided on site, located at the ground floor accessed directly from Nithsdale Street. As waste collection is proposed to utilise kerbside collection, the loading dock will be inaccessible during waste collection

Provision	Compliance	Comment
		activities and therefore must be managed through a Loading Dock and Servicing Management Plan. A condition is recommended requiring the submission of a comprehensive Loading Dock and Servicing Management Plan. The plan must also address the use of the loading dock during collection days as the temporary waste holding area encroaches into the service parking space and may be compromised while bins are being moved in and out.
3.11.9 Accessible parking	Yes	The application proposes a single accessible car parking space located at the ground floor, close to the community facility entrance and is consistent with the requirements of this provision.
3.11.10 Vehicle access for development greater than 1000 square metres GFA	Yes	Vehicle access is provided at the south-eastern former of the site from Nithsdale Street and satisfied the requirements of this provision.
3.11.11 Vehicle access and footpaths	Yes	The location of the driveway along Nithsdale Street is designed to minimise impacts on pedestrian movements and amenity.
3.11.13 Design and location of waste collection points and loading areas	Yes	Proposed waste storage and collection points are appropriately located close to the loading area at the ground level. Suitable arrangements are provided for collection vehicles and the proposal is suitable, subject to compliance with an approved Operational Waste Management Plan.
3.11.14 Parking area design	Yes	Conditions are recommended in Attachment A to require all loading to be carried out on site, parking design in accordance with Australian Standard AS 2890.1, and a parking, loading and servicing management plan to be developed.

Provision	Compliance	Comment
3.12 Accessible Design	Yes	The building has been designed to provide accessible entry to the community facility use and the co-living lobby and all shared spaces. The proposal also includes 11 co-living units designed to meet DDA requirements. The proposed development meets the requirements of this provision.
3.13 Social and Environmental Responsibilities	Yes	The safety and security of the public domain is enhanced by the proposed increase in activity within the site and casual surveillance of the surrounding streets from the development. The proposal provides separate and secure entrances to the different building uses, adequate passive surveillance and a range of other security measures.
3.14 Waste	No	The proposed development includes waste storage areas on basement Level 1 and a temporary holding area on the ground level while waste collection is proposed to be a wheel-out wheel-back arrangement. While onsite collection is preferred to avoid additional acoustic impacts on surrounding developments, it is acknowledged that the width of the site cannot accommodate a large vehicle and collection by a smaller waste truck is not an efficient solution for waste that will be generated on site. Waste storage areas for co-living uses however, have not been designed to cater for the estimated waste generation rates for co-living developments as provided in the draft Guidelines for Waste Management in New Developments. The Guidelines notes the estimated waste generation rates for co-living housing per occupant are 60L of waste, 60L of recycling and 8L of food organics per week, requiring approximately 21 x 1,100L waste bins to

Provision	Compliance	Comment
		be provided on site. The application proposes 17 x 1,100L bins, a deficit of 4,400L. The applicant's submission notes an audit of similar co-living developments suggests actual waste generation is lower than the estimated generation rates and a larger area is not warranted. Although this is acknowledged, waste areas should be designed in accordance with the estimated rates to ensure waste areas are capable of catering for future waste needs, should waste generation rates increase. A condition is recommended requiring the basement waste storage areas to be designed to provide space for 21 x 1,100L bins. Further, as the application proposes a wheel-out wheel-back arrangement for waste collection, utilising the loading space as a temporary waste holding area, a condition is recommended requiring the Loading Dock and Servicing Management Plan to address the use of the loading dock during collection days.
3.16 Signage and Advertising	Yes	The proposal seeks consent for four signage zones located along the Elizabeth Street frontage and corner of Elizabeth and Clarke Streets. The purpose of the zones will be to display building and business identification signage for the community facility signage and the future co-living operator. The proposed locations of wall and top hamper signs are generally consistent with the relevant requirements of the SDCP 2012. A condition is recommended requiring separate consent to be obtained for the detailed signage.

Section 4 – Development Types

4.2 Residential Flat, Non-Residential and Mixed Use Developments

Provision	Compliance	Comment
4.2.1 Building height	Yes	The application proposes generous floor to ceiling heights on the ground and first floor to cater for the community facility use while co-living floor to ceiling heights are generally 2.7m (except where there is a bulkhead for services).
4.2.2 Building setbacks	Yes	The application proposes a built form commensurate to the desired future character of the locality, including appropriate street wall heights and setbacks above street wall. The application also maintains the splayed corners at the lower levels of the podium at both street corners of the site.
4.2.3 Amenity	Partial compliance	Appropriate solar access is provided to communal living areas within the co-living component of the development. The application will result in additional overshadowing to the adjacent residential apartment building to the south. See further discussion below. In regard to acoustic privacy, the application demonstrates that appropriate acoustic levels can be achieved within co-living units through the provision of acoustic treatments to facades and balconies while still achieving appropriate ventilation.
4.2.4 Fine grain, architectural diversity and articulation	Yes	The proposal presents an appropriate architectural character, sympathetic in style to the surrounding locality.
4.2.6 Waste and recycling management	No	See discussion above in Section 3.14 of the SDCP 2012.The application does not propose an appropriately sized area for waste storage based on estimated waste generation rates for co-living housing.

Provision	Compliance	Comment
4.2.7 Heating and cooling infrastructure	Yes	The mechanical plant and services are generally located within consolidated areas on the roof level.

4.4 Other Development Types and Uses

4.4.1 Boarding houses and student accommodation

60. While the application does not propose a boarding house use, co-living housing is currently not addressed in the SDCP 2012. The following equivalent provisions relating to boarding houses are used as a guide.

Provision	Compliance	Comment
4.4.1.1 Subdivision	Yes	A condition is recommended restricting the subdivision of the co-living component of the development.
4.4.1.2 Bedrooms	Yes	All rooms have been designed to meet the minimum size requirements of the Housing SEPP co-living development standards and draft DCP provisions noted below. Rooms are provided with aspects north, east or west with some provided with dual aspects. Each room has been provided with large glazed areas in the form of a window or balcony doors that will facilitate natural light to enter into all rooms
4.4.1.3 Communal kitchen areas	Yes	Each room has been provided with a kitchenette in addition to larger kitchens incorporated within the communal living areas on Levels 8 and 16.
4.4.1.4 Communal living areas and open space	Partial compliance	The SDCP 2012 requires a minimum of 551.25 square metres of communal living space to accommodate residents. The application proposes 523.6 square metres, 25.25 square metres less than the recommendation. Although not compliant with the required minimum area, the provision of indoor space located adjacent to a large outdoor communal space provides adequate residential amenity and

Provision	Compliance	Comment
		generally meets the requirements of this provision. Additionally, a minimum area of 20 square metres should be provided as outdoor communal space. The application proposes 269 square metres of communal outdoor space located on Levels 3, 8 and at the roof level. Outdoor communal spaces have been designed generally in accordance with the DCP and provides appropriate landscaping and cover. Further, 67% of all rooms are provided with private balconies. Of these rooms, 79 have balconies of at least 4 square metres in size and meets the minimum 30% requirement.
4.4.1.5 Bathroom, laundry and drying facilities	Partial compliance	Each unit contains an ensuite and as such, communal bathroom facilities are not necessary. A communal laundry is located on Level 2 and contains 15 x 9kg washing machines, 10 x 5kg washing machines and 25 x 10.5kg dryers. Whilst less than the required number of washing machines per DCP requirements, larger capacity washing machines are provided, allowing lager loads for double occupancy rooms, also likely reducing water usage. Fewer dryers are also deemed acceptable as larger outdoor drying facilities are provided on site, reducing electricity usage. Drying areas with access to ambient natural light and ventilation are located adjacent to the communal laundry room.
4.4.1.6 Amenity, safety and privacy	Yes	The proposed co-living development provides a high level of residential amenity, safety and privacy.

Provision	Compliance	Comment
		Bedrooms are located away from communal areas or are appropriately screened or separated maintaining acoustic and visual privacy. The proposed communal outdoor areas are screened by planting or larger privacy screens to protect adjacent developments from overlooking. Further, the application was supported by a noise and vibration impact assessment, operational waste management plan and transport impact assessment that confirm appropriate noise levels can be achieved within boarding rooms and will not cause unacceptable acoustic impacts on surrounding developments, waste is appropriately stored and collection processes are managed, and that the development will not have an adverse impact on surrounding local traffic or pedestrian or cyclist safety.
4.4.1.7 Plan of Management	Partial compliance	The application was accompanied by a Plan of Management (POM). The POM has been prepared in accordance with the requirements of the DCP except in relation to hours of use of communal outdoor spaces. While the site is located within Central Sydney, several residential buildings adjoin the site, and outdoor activities should be limited in time to protect the amenity of surrounding uses. A condition is recommended requiring an amended POM to be submitted that restricts all outdoor activities until 10pm. It is also recommended that the plan of management be updated to include details on how building management will manage noise from planned gatherings within communal open spaces.

Section 5 – Specific Areas

5.1 Central Sydney

Provision	Compliance	Comment
5.1.1 Built form controls		
5.1.1.1 Street frontage height and street setbacks	Partial compliance	The application proposes street frontage heights consistent with recommended heights for Elizabeth Street and Nithsdale Street however, exceeds the recommended street frontage height along the Clarke Street frontage. Further, while the Elizabeth Street frontage provides an 8m setback above street wall height, inconsistent setbacks are provided to the Clarke Street and Nithsdale Street frontages. See the 'Discussion' section below for further details.
5.1.1.3 Side and rear setbacks and building form separations	Partial compliance	The proposal's side setbacks have been developed to respond to the proximity to Hyde Park Towers and specifically the apartments that have been built on the site's southern boundary. See the 'Discussion' section below for further details.
5.1.1.4 Built form massing, tapering and maximum dimensions	Yes	The proposed built design is consistent with the requirements of this provision.
5.1.2 Development outlook and demonstrating amenity compliance	Yes	The proposed development is designed to reduce the impact of additional overshadowing on surrounding public domain areas. Further, the proposal does not rely on neighbouring properties for access to view and light and is consistent with the requirements of this provision. All residential windows and balconies are provided with appropriate levels of outlook.

Provision	Compliance	Comment
		Impacts on neighbouring developments are discussed further under the 'Discussion' heading below.
5.1.4 Building exteriors	Yes	The proposal will contribute positively to the streetscape with high quality architecture, meeting the objectives in Section 5.1.4 of the SDCP 2012. The design, materials and detailing are considered to be of a high standard and suitable for the site.
5.1.6 Heritage floor space	Yes	As discussion in Section 6.11 of the SLEP 2012 table above, a condition is recommended requiring the allocation of heritage floor space.
5.1.7 Sun protection of public parks and places	Yes	The site will not impact the Belmore Park or Harmony Park Sun Access Planes as the proposed height of the development is significantly lower than the plane heights. The site is not within close proximity of any protected places that require no additional overshadowing.
5.1.8 Views from public places	Yes	The proposal will not affect views to any significant spaces from the public domain and is consistent with the requirements of this provision.
5.1.9 Managing wind impacts	Yes	The application was accompanied by a wind report confirming that the proposed development will not have an adverse impact on public safety and comfort at ground level in regard to wind.

Draft Sydney Local Environmental Plan and Development Control Plan

61. A draft environmental planning instrument has recently been exhibited by the City, which provides additional and more comprehensive controls relating to co-living accommodation within the Local Environmental Plan (LEP). The instrument was agreed to Gateway determination by the Department of Planning, Housing and Infrastructure (DPHI) on 8 October 2024. In accordance with section 4.15(1)(a)(ii) of the Act, the draft controls are a matter for consideration in the subject assessment.

62. In accordance with Planning Circular PS-24-007, weight should be given to a proposed EPI depending on the likely or unlikely certainty and imminence of the relevant provisions of a proposed EPI coming into force. In accordance with the Gateway determination issue by DPHI, the gazettal of the Draft LEP was estimated to occur in November 2025, now making the adoption overdue. Council's Strategic Planning and Urban Design unit has advised that the adoption of the controls has a moderate level of certainty and imminence given the public exhibition, consideration of public submissions and consideration of proposed amendments recommended by DPHI.

63. The changes in the LEP and accompanying DCP relevant to the subject application incorporates recent NSW Government planning policy changes for boarding houses and co-living housing into the DCP. The changes include amenity standards for co-living and boarding houses that are generally consistent with requirements for new apartments and provisions for plans of management and managing local amenity impacts. The proposed changes are to ensure consistency with recent SEPP amendments relating to co-living developments and to further protect the amenity of future occupants and surrounding developments. As such, it is considered that moderate weight is afforded to the draft LEP provisions.

64. In addition to draft LEP controls, draft Development Control Plan (DCP) controls were also prepared to incorporate updated provisions for boarding houses and co-living housing in accordance with changes to state government planning policy changes. While the Act does not require the consideration of draft DCP controls, they are considered below as a guide only and hold on weight.

65. Relevant provisions are discussed below.

Draft Sydney Local Environmental Plan 2012

Part 7 Local provisions – general

Provision	Compliance	Comment
Division 1 Car parking ancillary to other development		
7.5 Residential flat buildings, dual occupancies and multi dwelling housing, boarding houses and co-living housing	Yes	A maximum of 25 car spaces is applicable to the co-living portion of the development. No car parking is proposed for co-living uses and the proposal is consistent with the requirements of this provision.

Draft Sydney Development Control Plan 2012

4.4 Other Development Types and Uses

4.4.1 Boarding houses and co-living housing

Provision	Compliance	Comment
4.1.1.1 Subdivision	Yes	A condition is recommended restricting the subdivision of the co-living component of the development.
4.4.1.2 Private rooms	Yes	The application proposes a maximum of two residents per room and meets the size requirements for all single and double occupancy rooms. All kitchenettes and bathrooms generally meet the recommended sizes and rooms layouts allow for unimpeded, clear internal circulation. Whilst some rooms do not meet the minimum 3.5m dimension, these rooms are designed in a way to allow for appropriate zones for different uses, locating the sleeping areas further from balconies while kitchen and small living areas are located close to windows, to maximise amenity. All private rooms are provided with natural light and ventilation while approximately 67% of rooms are provided with private balconies. 79 rooms are also provided with balconies at least 4 square metres in size.
4.4.1.2 Communal kitchen, bathroom, laundry and drying areas	Partial compliance	Communal kitchen areas are provided within the indoor communal areas on both Level 8 and Level 16 of the proposed development. As each room is provided with a kitchenette, the minimum area required for a communal kitchen is 6.5m2. Two (2) communal kitchens are provided on Levels 8 and 16 and integrated with the communal living areas. The kitchen facilities will be provided with sufficient inclusions to accommodate the needs of residents.

Provision	Compliance	Comment
		As discussed above, communal laundry and drying facilities are located on Level 2.
4.4.1.3 Communal living areas	Partial compliance	The draft DCP requires a minimum area of 532 square metres of communal living areas. As discussed above, the application proposes 524 square metres of communal indoor space located on Levels 8 and 16 and is considered acceptable. The communal living areas are located in areas of the building that will maximise solar access and improve amenity.
4.4.1.4 Communal open spaces	Yes	Communal open spaces located within the site exceed the minimum size requirements of the draft DCP, are located directly adjacent to or are access directly from communal living areas and are located in areas that maximise access to direct sunlight.
4.4.1.5 Amenity and safety	Yes	Communal spaces are located throughout the building within safe and accessible locations with primary communal areas located on the upper levels of the building. Further, access to the property will be secured through controlled access measures as detailed in the submitted POM.
4.4.1.6 Managing local amenity impacts	Partial compliance	Building separation is generally consistent with the separation distances detailed in the Apartment Design Guide between the residential properties to the north. Varied separation distances are provided between the proposal and Hyde Park Towers to the south and are discussed further below. Communal areas and private room windows are located in areas of the building that reduce any potential overlooking impacts on adjacent buildings. Further, small open corridors on each level are provided with 1.8m tall privacy screens that facilitate visual

Provision	Compliance	Comment
		privacy between the subject site and the residential development to the south. Additionally, private rooms located close to Elizabeth Street include noise control measures to allow for access to natural ventilation while still achieving acoustic compliance.
4.4.1.7 Plan of Management	Partial compliance	As discussed above, the submitted POM is generally acceptable, subject to amendments relating to the use of communal outdoor areas being restricted to 10pm.
4.4.1.8 Waste and Recycling Management	Partial compliance	As discussed above, waste management is generally acceptable, subject to amendments to increase waste storage areas within the basement level to respond to estimated waste and recycling generation rates for co-living developments.

Discussion

Street frontage height and setbacks

66. Section 5.1.1.1 of the Sydney DCP prescribes a street frontage heights and above street frontage setbacks for buildings outside of Special Character Areas. The site is not located within a Special Character Area nor is it a heritage item. Whilst it is acknowledged the height of the building is greater than 55m, the only building elements exceeding 55m are the upper part of Level 16 and the roof. The building is not seen to present as a large tower in which the general tower controls of the SLEP 2012 and SDCP 2012 ordinarily apply.

Elizabeth Street

67. The proposal includes a 30.3m street frontage height to Elizabeth Street with an 8m setback above street frontage height, consistent with the SDCP 2012.

Clarke Street

68. The proposed Clarke Street elevation has a street frontage height of 47m and a setback above street wall height of 2m, exceeding DCP recommendations by 12m and 6m respectively.

69. A street frontage height of 47m along the Clarke Street frontage is deemed appropriate as follows:

    (a) Clarke Street currently does not provide a consistent street wall for the development to respond to as the only frontage in the block. All other developments fronting Clarke Street have no strong podium character or no podium at all or are separated from the site by a small park to the east.

    (b) Appropriate separation is provided between the subject site and existing residential developments to the north.

    (c) The massing along Clarke Street is of a similar scale to the existing built form which, which currently does not have a significant impact on the amenity of the public domain.

    (d) Visual separation of the lower and upper levels of the street wall along Clarke Street is provided with the introduction of a solid balustrade at Level 8, continuing around from the Elizabeth Street street frontage.

70. On balance, the proposed street frontage height along the Clarke Street elevation is appropriate as it is considered to provide a good contextual fit with the setting and character of neighbouring buildings, including alignments and datums and is unlikely to have an adverse impact on public amenity.

71. In regard to setback above street frontage heights, although Clarke Street comprises a width greater than 8m wide and is not identified as a lane in the Streets and Lanes Map within the SDCP 2012, its narrow dimensions (approximately 9.2m wide) characterise the street similarly to a laneway, particularly as the street comprises a narrow carriageway used for servicing, loading, waste pickup and basement entrance for the adjacent building at One30 Hyde Park. As such, there is limited opportunity for pedestrians to meaningfully interact with the public domain on Clarke Street given the narrowness of the footpaths. Noting these reasons, the 2m setback is considered suitable and in alignment with what would be required of a above street frontage setback for a laneway.

Nithsdale Street

72. The proposed Nithsdale Street elevation proposes a street frontage height of 21m, consistent with the SDCP 2012, and a setback above street wall height of 5.2m, 800mm less than that recommended.

73. Considering the neighbouring development adjoining the site to the south at 148 Elizabeth Street provides a setback less than 6m, a minor departure is acceptable.

Side and rear setbacks and building form separations

74. Section 5.1.1.3 of the SDCP 2012 notes a 4m setback above street frontage height should be provided from the boundary of a neighbouring development to provide building separation. The Housing SEPP, whilst co-living housing controls do not apply to the site, notes that developments are also to consider the building separation and setback controls of the Apartment Design Guide and SDCP 2012.

75. The proposal's setbacks have been developed to respond to the proximity to Hyde Park Towers and specifically the apartments that have been built to the boundary. Setbacks between the upper levels of the proposed development and the adjacent development to the south range between 3 metres and 8 metres and the southern elevation has been designed to ensure visual privacy is maintained and impacts on solar access are minimised.

Visual privacy

76. Between Levels 5 to 11, apartments located on both the eastern and western portions of Hyde Park Towers contain two (2) private open space areas however the primary private open space associated with the western apartments faces Elizabeth Street and does not directly interface with the proposed built form. From Levels 12 and above, the primary private open space off the western apartments is located on the northern interface which takes the form of a narrow balcony. Both apartments include windows which face north. Separation distances between 3m and 8m have been provided depending on the interface with the following treatments:

    (a) Blank wall (Hyde Park Towers) to proposed core (Levels 5 and above): 3m

    (b) Eastern secondary balconies off bedrooms (Hyde Park Towers) to proposed core (Levels 5 and above): 3m

    (c) Western primary living area narrow balconies (Hyde Park Towers) to proposed core (Levels 12 and above): 3m

    (d) Secondary balconies off bedrooms (Hyde Park Towers) between Levels 5 and above to proposed open corridor (with screening): 8m

    (e) Eastern primary living area balconies (Hyde Park Towers) to proposed blank wall (Level 5): 3m

    (f) Eastern primary living area balconies (Hyde Park Towers) to proposed blank wall (Levels 6 and above): 6.2m

77. Figures 14 to 16 depict proposed separation distances between the proposed development and Hyde Park Towers.

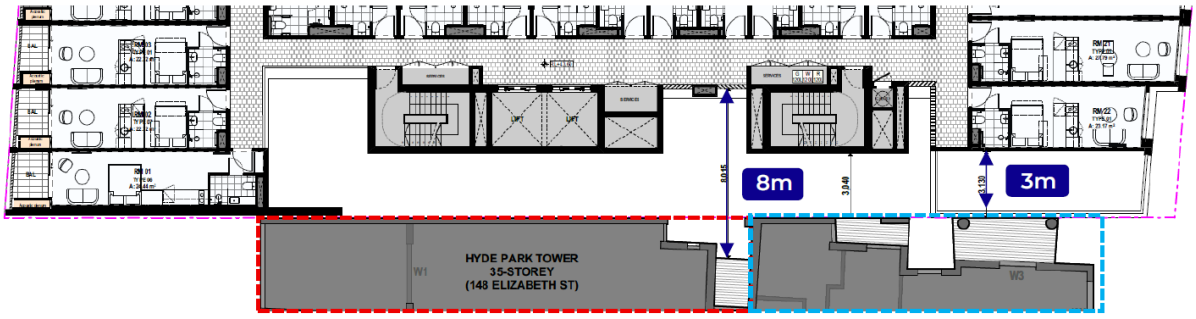


Figure 14: Level 5 separation distances (western apartment in red and eastern apartment in blue)

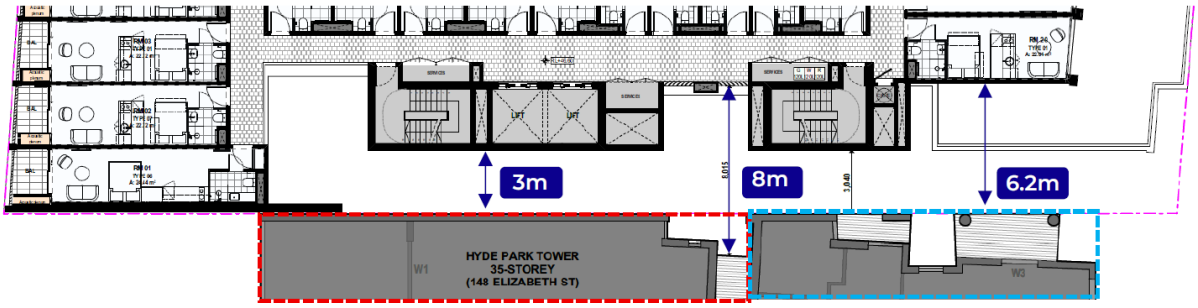


Figure 15: Levels 6 to 11 separation distances (western apartment in red and eastern apartment in blue)

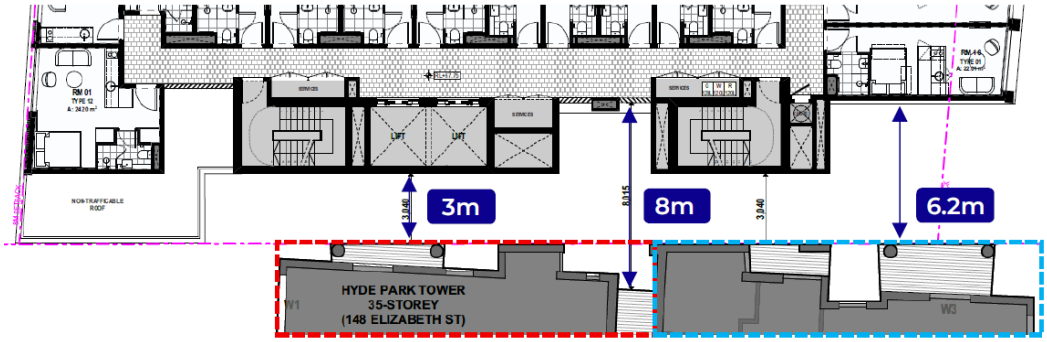


Figure 16: Level 12 to 15 typical upper level separation distances (western apartment in red and eastern apartment in blue)

78. The proposed separation distances are considered to provide appropriate amenity to the adjacent development, noting that separation to the proposed development is greater than what is required by the SDCP 2012 to ensure the apartments built to the boundary to the south are still provided with appropriate levels of light and ventilation.

79. To further mitigate visual privacy impacts, open corridors located within the proposed development are provided with 1.8m tall bladed louvre screens, angled to obstruct any direct views to windows or balconies to the south, also shown in Figure 17.

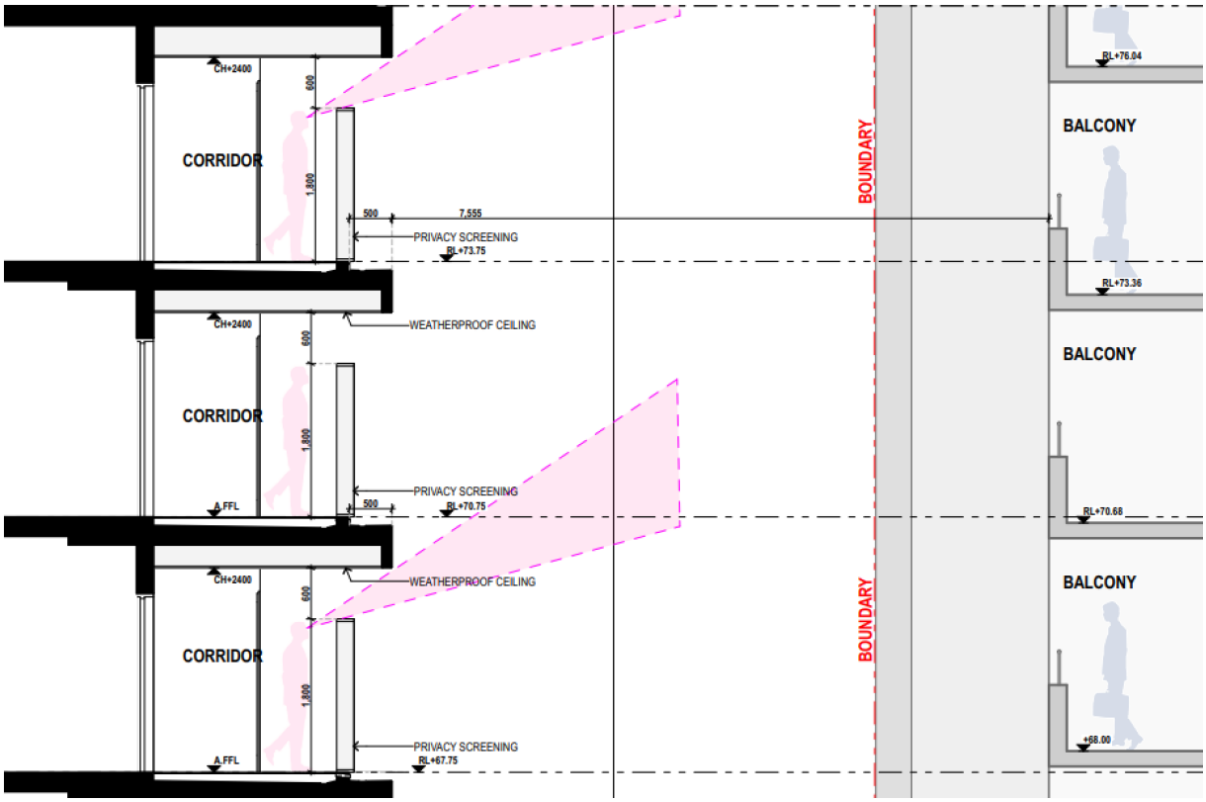


Figure 17: Typical section showing relationship between subject site and Hyde Park towers

80. When considering the balance of separation distances provided within the proposed development and the site to the south, in which the majority of the northern frontage has been built to the boundary, and is planned to provide all living areas at the east or west of the site and are not impacted by the development, and consideration of solar access and views and outlook (discussed further below), separation distances are acceptable.

Solar access and overshadowing

81. The application has been accompanied by an overshadowing study prepared by RWDI to assess the impact of the development on solar access to the adjacent residential development at 148 Elizabeth Street and the pocket park to the east. The analysis took into consideration Objective 4A-1, 3B-2 and 3D-1 of the Apartment Design Guide and Council's draft guideline for Minimising Overshadowing of Neighbouring Apartments.

82. Noting that the northern apartments currently do not receive 2 hours of direct solar access to living areas between 9.00am and 3.00pm on the winter solstice, the study found that the proposed development will result in a reduction of solar access to 20 apartments (primarily between 15 to 30 minutes with one apartment losing 45 minutes of direct solar access), equating to 11.5% of the total number of apartments, well below the maximum reduction of apartments within a building not already receiving the required direct solar access of 20% as noted in Objective 3B-2.

83. The study also found that there is a slight improvement in apartments receiving no solar access between 9.00am and 3.00pm (from 25% to 24%) as two apartments fronting Elizabeth Street will now receive at least 15 minutes of direct solar access due to the built form setback above street frontage height in addition to another four apartments receiving increased solar access.

84. Overall, the subject proposal does not exacerbate the Hyde Park Towers' existing noncompliant levels of solar access as assessed against the ADG solar access requirements contained in the design criteria to ADG objective 4A-1. Therefore, the proposal is consistent with ADG objective 3B-2 which is for overshadowing of neighbouring properties to be minimised.

85. It is acknowledged that any reasonable development on the site would have an impact on solar access to Hyde Park Towers, especially considering that 90% of apartments which are identified as losing a quantum of solar access are located immediately on the southern boundary of the subject site. The extent of solar access loss is considered acceptable for the following reasons:

    (a) The overshadowing impacts caused by the proposal does not change the quantum of units that already achieve 2 hours of solar access.

    (b) The proposal improves solar access to an additional 2 apartments that previously would not have received any solar access on the winter solstice.

    (c) If setbacks were increased, particularly the boundary setback, it is unlikely that solar access to northern windows would be improved greatly, given the proposed height of the building and existing shadows cast by developments to the north.

86. Noting the above and the constraints of the site, the proposal is considered to result in an appropriate response to overshadowing and the impacts are not dissimilar to the level of overshadowing impacts to residential developments within the immediate context. The proposal will not impact the existing non-compliant levels of solar access against the ADG solar access design criteria of Objective 4A-1 and overshadowing to neighbouring developments is generally acceptable.

View loss and outlook

87. A number of submissions received have raised concerns regarding the loss of views, outlook and ambient light from apartments adjacent to the site located within the Hyde Park Towers at 148 Elizabeth Street. Figure 18 below shows the location of the subject site and Hyde Park Towers.

Figure 18: Aerial image of the subject site and surrounding area

88. The application was accompanied by a view impact analysis study prepared by Virtual Ideas comprising 3D digital modelling and photomontages of existing and proposed views from impacted apartments within Hyde Park Towers. Although the view loss analysis did not provide specific heights, levels or camera angles, the view images have been reviewed by Council staff to be an accurate representation of views from each respective viewpoint at various heights.

89. Hyde Park Towers is a 34-storey mixed use building containing commercial tenancies on the ground floor to level 3 and 174 residential apartments and associated parking on the levels above. Hyde Park Towers has no building setback to the northern boundary with apartments along the northern boundary utilising lightwells for bedroom windows and small secondary balconies. Other main balconies off living areas are located either on the north-west or north-east corner of the building and are not set back from the boundary.

90. Figures 19 to 22 below provide a sample of the submitted view loss renders from locations within Hyde Park Towers prepared by Virtual Ideas.

Figure 19: Map illustrating viewpoint locations from Hyde Park Towers

Figure 20: Existing and proposed views from north-east balcony on Level 9 (viewpoint 1)

Figure 21: Existing and proposed views from north-facing balcony on Level 15 (viewpoint 2)

Figure 22: Existing and proposed views from north-west balcony on Level 20 (viewpoint 3)

91. Based on the view impact analysis, views from 16 levels within Hyde Park Towers will be impacted, noting that the majority of north-west facing apartments over the lower eight levels are already impacted by the existing building located on the subject site.

92. Council staff also conducted site visits to four apartments located on Levels 11 to 17 to confirm views from balconies and windows within the site. Figures 23 to 25 below show various views from apartments.

Figure 23: Existing view from north-east balcony from apartment 1306 (viewpoint 1)

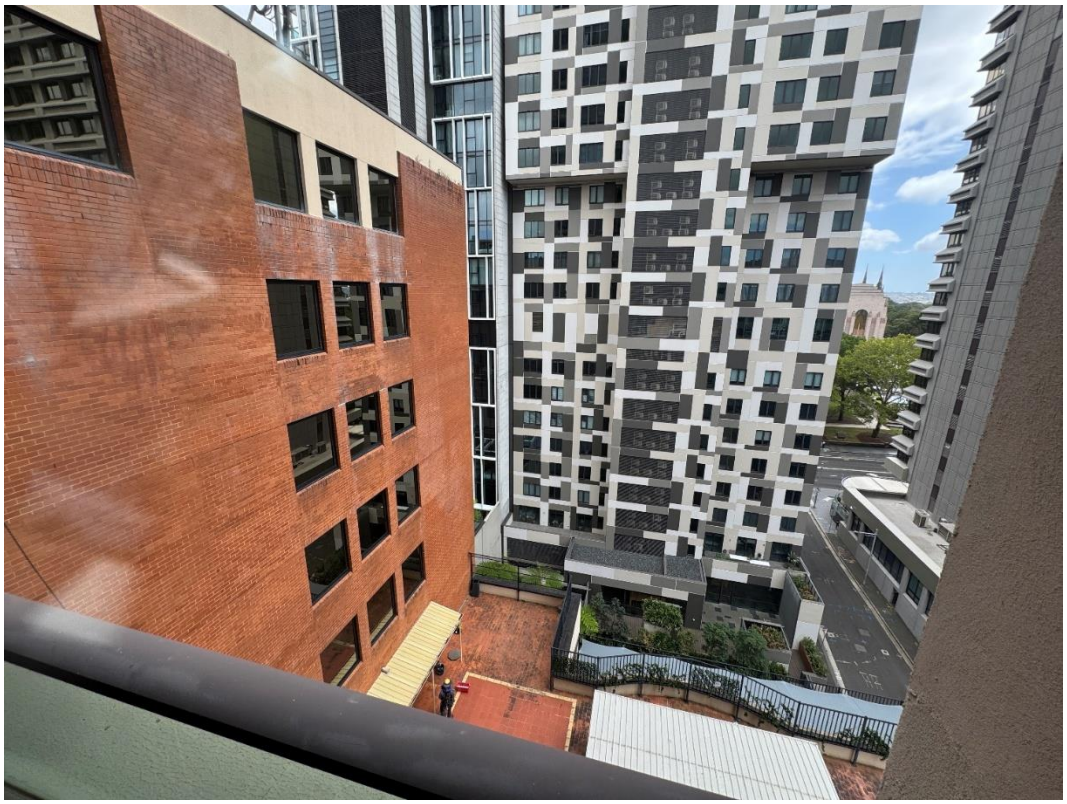


Figure 24: Existing views from north-facing balcony from apartment 1306 (viewpoint 2)

Figure 25: Existing views from north-west balcony from apartment 1901 (viewpoint 3)

93. While the relevant planning controls make no provision for the preservation of private views or outlook, in order to assess the impact of the proposal on existing views, an assessment has been made against the planning principles established by Senior Commissioner Roseth in the Land and Environment Court decision Tenacity Consulting v Warringah [2004] NSWLEC140 in relation to view sharing.

Assessment of views to be affected

94. Views with the potential to be affected consist of general skyline views and a small section of Hyde Park South and the ANZAC Memorial cascade water feature. It is noted in the context of this planning principle, these views are not considered iconic views. With the exception of general skyline views, views to Hyde Park south and the ANZAC Memorial are all partial views.

95. All views with the exception of direct east and direct west views, which will not be impacted by the development, are all across the side boundary.

Which part of the site is the view available from?

96. The views under assessment are available from the following locations:

    (a) North-facing kitchens

    (b) North-east balconies and living room windows

    (c) North-facing balconies from a bedroom

    (d) North-east windows from a bedroom

(e) North-west windows and balconies from a living room

97. The loss of views from living room windows and balconies are considered to be of greater impact than the loss of views from balconies off bedrooms and bedroom windows.

98. It is noted that all view loss resulting from the development is across side boundaries. It is unrealistic to expect that all existing views alongside boundaries can be protected, particularly when the loss of views are already identified as partial views and only impact some levels within the building.

Extent of the impact in relation to views available

99. Residential apartments are located between levels 7 to 33 of Hyde Park Towers. The general planning of apartments within the building contains two apartments along the northern side of the building. Apartments are dual aspect with bedrooms and kitchens running along the northern elevation and living areas facing predominantly east or west. Each apartment has two balconies, both north facing, with one small balcony accessed from bedrooms located closer to the centre of the building and balconies accessed from the living areas located close to the north-east and north-west corners of the building.

100. East-facing apartments contain living rooms with views facing directly east across Nithsdale Street. West-facing apartments contain living rooms with views facing directly west across Elizabeth Street.

101. Views from north-facing bedrooms and balconies located towards the centre of the building face directly north to the adjoining site and to the southern elevation of the residential buildings fronting Liverpool Street. Views from some bedroom balconies in the east-facing apartments currently have very limited views to Hyde Park south as well. View loss from bedroom balconies will be the most severe as balconies are located either on the boundary or slightly set back from the boundary. While there are no significant views to icons from these bedrooms or balconies, general outlook will be impacted as a result of the development.

102. Additionally, kitchen windows will have the same result from the proposed development with north-facing outlook being severely impacted.

103. Due to the orientation of living rooms within apartments, the potential views loss caused by the proposed development from living room windows within Hyde Park Towers will be negligible. Living room balconies in east-facing apartments will have moderate view loss as some partial views to Hyde Park south will be removed however, general outlook to the north-east and east will be maintained. West-facing apartments on lower floors contain balconies facing west. Views from these balconies will remain the same or improve as the proposed development is set back on the upper levels further than the existing building. Upper floor apartments which have north-facing apartments will have moderate view loss to the north but views to the north-west and west will remain the same.

104. Figures 26 to 31 below show existing views from various apartments along the northern boundary within Hyde Park Towers.

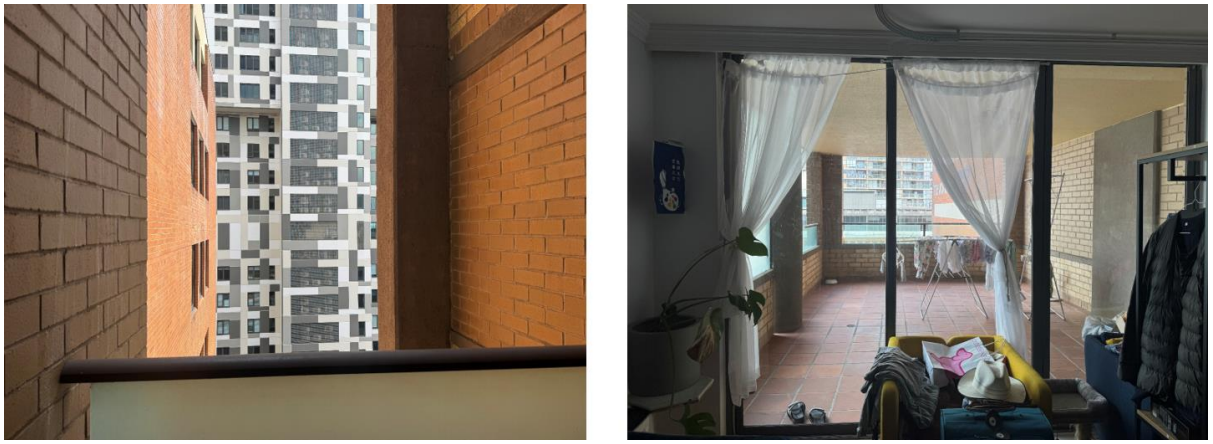


Figure 26: Existing views from Apartment 1201 bedroom balcony (left) and primary living room (right). Note primary living room and balcony are west-facing and outlook is not adversely impacted.

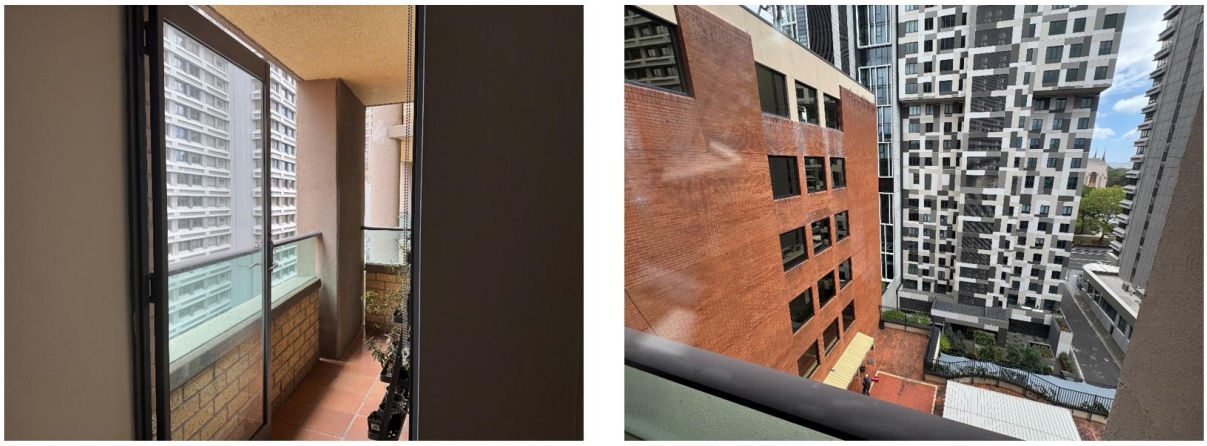


Figure 27: Existing views from Apartment 1206 primary bedroom window (left) and secondary balcony (right)

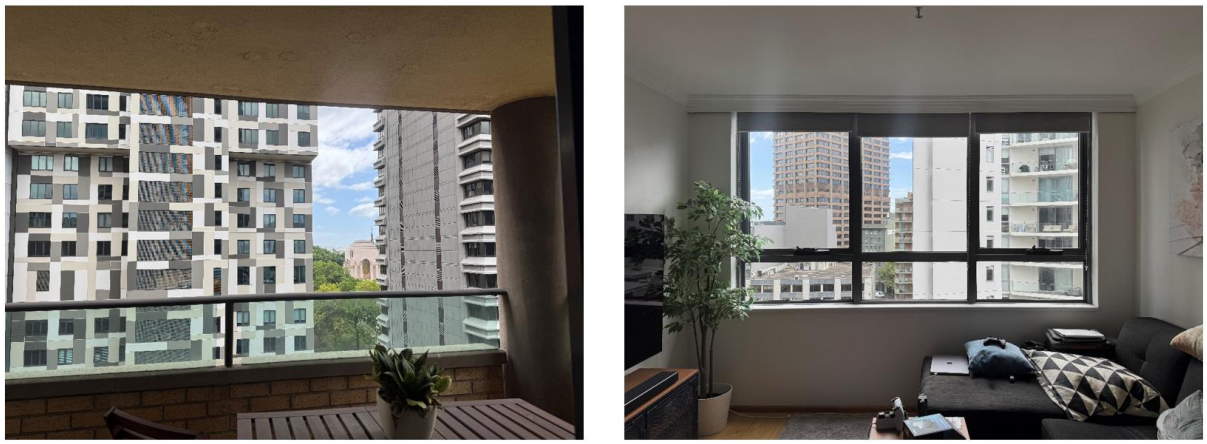


Figure 28: Existing views from Apartment 1206 primary balcony (left) and living room window (right)

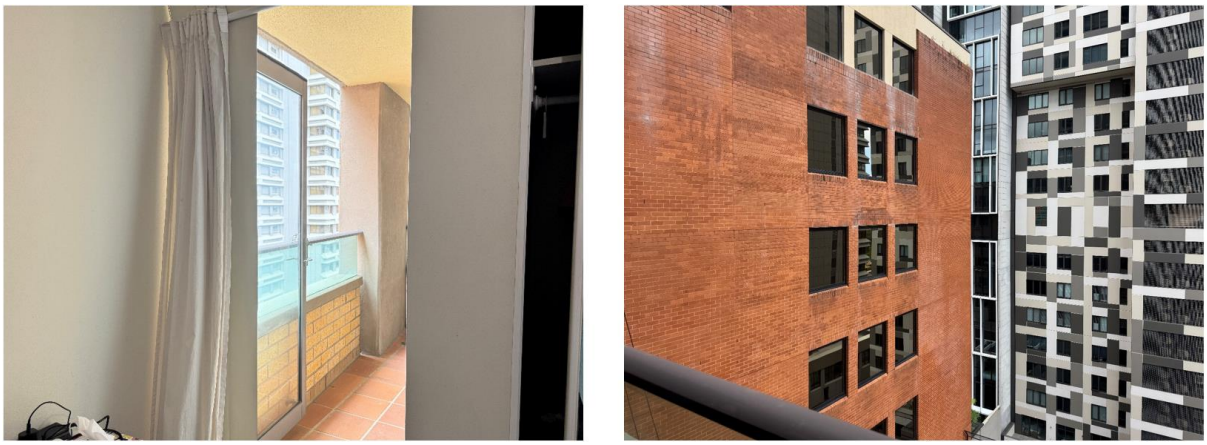


Figure 29: Existing views from Apartment 1306 primary bedroom window (left) and secondary balcony (right)

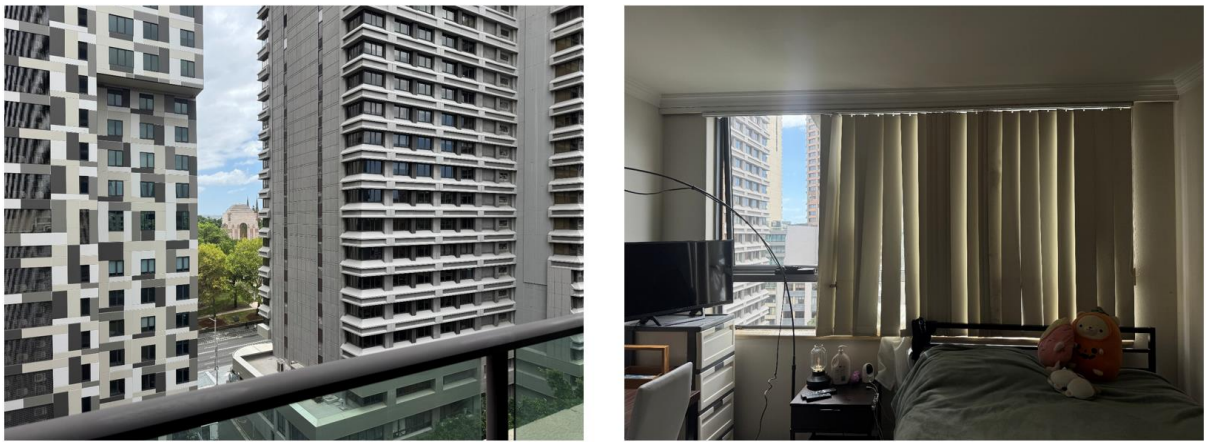


Figure 30: Existing views from Apartment 1306 primary balcony (left) and living room window (right)

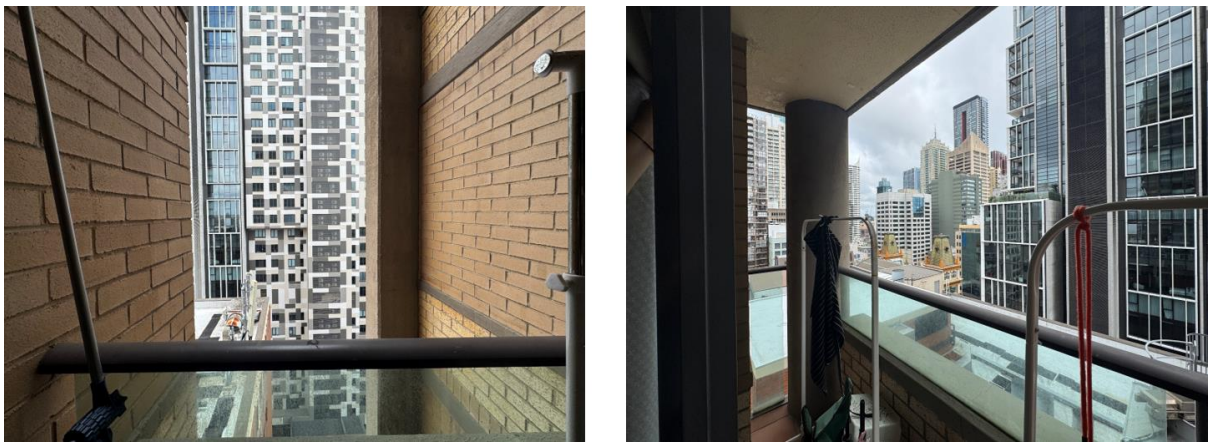


Figure 31: Existing views from Apartment 1901 bedroom balcony (left) and primary balcony (right)

Reasonableness

105. The degree to which an impact is considered to be reasonable depends on the extent to which the development complies with the relevant planning controls, and whether impacts could be mitigated by a more skilful design. In the case of the proposed development, most severe view and outlook impacts are as a result of a non-compliant southern setback.

106. As discussed above, the proposed development is adjacent to a site that provides windows and balconies with little to no setback to the boundary. Varied setbacks are provided to the proposed development and setbacks increase on the upper floors of the building, reducing the impacts on outlook loss on residential apartments. While there is a slight variation to the side setbacks where in some areas a 3m setback is proposed, there will be no major difference in outlook or views if the development did have compliant setbacks.

107. It is noted that the most important views from living areas of north-east and north-west apartments are not impacted. It is acknowledged that secondary balconies and views from bedrooms in these apartments will have significant outlook loss however, these are secondary vantage points which are not considered as important as living areas when considering the established test of the planning principle as above.

108. Being located in an urban context within Central Sydney, it is inevitable that any development will affect the views and outlook to an array of residential and commercial developments. An assessment of whether on not the proposed development adversely impacts from other developments has been undertaken and the proposal is considered to have an acceptable impact. The proposal does not significantly or unreasonably reduce the amenity enjoyed by surrounding residential uses while having a negligible impact on views and outlook from living areas. While it is acknowledged that outlook is impacted by the development from north-facing windows and balconies, living room windows are not obstructed by the development and setbacks allow for acceptable outlook and general city skyline views. Impacts on views and outlook from apartments within Hyde Park Towers are considered acceptable.

Competitive design process and site-specific DCP

109. The proposed development has a maximum height of 61.15 metres. As the proposed building is over 55 metres in height and is located within Central Sydney, the proposal triggers requirements for a site specific development control plan and competitive design process, under the provisions of Clauses 7.20(2)(a) and 6.21(5) (a) and (c) of the SLEP 2012, respectively.

110. Clause 7.20(4) of the SLEP 2012 sets out matters that must be addressed in a site specific development control plan. The proposal satisfies the criteria in Clause 7.20(4) as detailed below:

> Requirements as to the form and external appearance of proposed development so as to improve the quality and amenity of the public domain

(a) The proposed form and external appearance of the new building will provide a positive contribution to the public domain. It is appropriate to its context and is compatible with existing surrounding developments.

Requirements to minimise the detrimental impact of proposed development on view corridors

(b) The proposed development is located approximately 49 metres below the potential maximum height control and the siting, massing and setbacks of this building are contained within the extent of the bulk of the adjoining building to the south at 148 Elizabeth Street. Overall, the proposal will not result in any significantly detrimental impacts on view corridors.

how proposed development addresses the following matters—

(i) the suitability of the land for development,

(ii) the existing and proposed uses and use mix,

(iii) any heritage issues and streetscape constraints,

(iv) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,

(v) the bulk, massing and modulation of buildings,

(vi) street frontage heights,

(vii) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity,

(viii) the achievement of the principles of ecologically sustainable development,

(ix) pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network,

(x) the impact on, and any proposed improvements to, the public domain,

(xi) the impact on any special character area,

(xii) achieving appropriate interface at ground level between the building and the public domain,

(xiii) the excellence and integration of landscape design,

(xiv) the incorporation of high quality public art into the fabric of buildings in the public domain or in other areas to which the public has access.

(c) The proposal addresses the above matters in the following manner:

(i) It comprises community facility and co-living housing uses, permissible within the SP5 Metropolitan Centre. The proposes uses will replace existing community facility and commercial uses with a higher density mixed use development, which is consistent with the objectives of the land use zone.

(ii) The proposed bulk, scale and massing, including street frontage heights, responds to the adjoining developments and is consistent with the character of the streetscape.

(iii) Subject to conditions, it will not have adverse environmental impacts by way of overshadowing, visual and acoustic privacy, noise, wind and reflectivity.

(iv) The application is accompanied by environmental reporting which identifies a range of sustainability measures to be incorporated in the development.

(v) The proposed bulk, mass, scale and materiality is sympathetic to nearby heritage items.

(vi) The development will provide a positive contribution to the public domain and will improve the active frontage to Elizabeth Street.

(vii) Loading, servicing and waste management activities are concentrated to Nithsdale Street and reduces any impacts to pedestrian, vehicle and cyclist movements along Elizabeth Street.

(viii) Due to the small size of the site, there are limited opportunities for landscaping. Notwithstanding this, the outdoor terrace on Level 8 provides perimeter planting, improving residential amenity for co-living housing residents.

(ix) The Public Art Strategy submitted with the application indicates locations for the public artwork along the Elizabeth Street frontage. A condition of consent is recommended requiring the provision of a detailed public art plan to be submitted to determine the final location and type of artwork.

111. Clause 6.21C(2) of the SLEP 2012 sets out the matters which are required to be addressed for a development to be considered to exhibit design excellence, which are consistent with the matters set out in clause 7.20(4) of the SLEP 2012.

112. The development satisfies the design excellence criteria as detailed above and in the SLEP 2012 compliance table. Further, the proposal complies with the applicable height and FSR development standards and does not seek the award of the up to 10% additional height or FSR available under the City's design excellence provisions.

113. Importantly, the part of the building which rises above 55m is minor and limited to the upper ceiling areas of Level 16, rooftop and access stairs and lift to the roof as shown in Figure 32 below. As depicted, the extent of the exceedance is very minor and does not comprise any gross floor area.

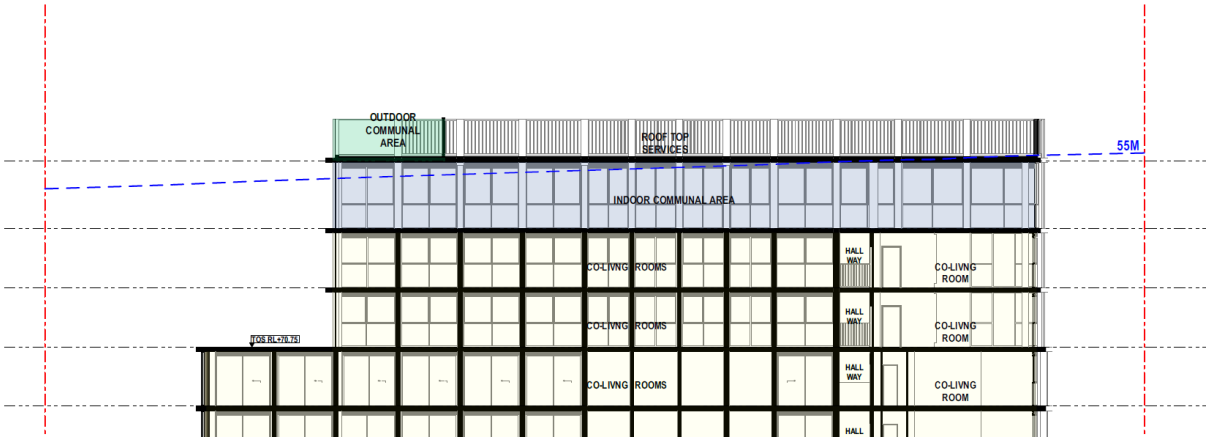


Figure 32: Long section (west - east) of upper levels showing portions of the building above 55 metres (dashed blue line)

114. Clauses 6.21D(2) and 7.20(3) of the SLEP 2012 notes that a competitive design process and site specific development control plan may not be required if the consent authority is satisfied that such a process or plan would be unreasonable or unnecessary. Given the proposal demonstrates appropriate responses to the matters for consideration under Clause 7.20 and 6.21C of the SLEP 2012 as detailed above, and the limited extent that the building projects above 55m, it is considered that a site specific development control plan and a competitive design process is unreasonable or unnecessary in this case.

Staged construction

115. The application proposes staging the construction through various construction certificates as follows:

(a) Stage 1 - Excavation, piling and shoring

(b) Stage 2 - Structure - up to and including ground floor

(c) Stage 3 - Structure - above ground

(d) Stage 4 - Façade

(e) Stage 5 - Fitout and services

(f) Stage 6 - External works and public domain upgrades

116. While the above staging is generally supported, it is not agreed to separate external works and public domain upgrades. To ensure all external works and public domain works are completed prior to the occupation of the building in any way, it is recommended that stages 5 and 6 are combined into one. Where necessary, the recommended conditions reflect the proposed staging.

Consultation

Internal Referrals

117. The application was discussed with Council's:

(a) City Access and Transport Unit

(b) Cleansing and Waste Unit

(c) Environmental Health Unit

(d) Environmental Projects Unit

(e) Heritage and Urban Design Unit

(f) Landscape Specialist

(g) Public Art Unit

(h) Public Domain Unit

(i) Specialist Surveyor

118. The above advised that the proposal is acceptable subject to conditions. Where appropriate, these conditions are included in the Notice of Determination.

External Referrals

119. The application was referred to external bodies including Ausgrid, Sydney Water Corporation and Transport for NSW (acting under delegation of Sydney Trains) in accordance with requirements of legislative requirements as discussed under the heading State Environmental Planning Policies. No objections were received from external referral bodies, subject to conditions.

Advertising and Notification

120. In accordance with the City of Sydney Community Participation Plan 2022, the proposed development was notified for a period of 30 days between 30 July 2025 and 28 August 2025, with 10 submissions received. Of the 10 submissions received, one made comment on the proposal, one was in support of the proposal and eight were objecting to the proposal.

121. The submission of support noted the benefit in providing an increased housing mix to the area, retaining an area of community floor space on the lower levels and the strategic placement of proposed artworks.

122. Comments and objections received raised the following issues:

Issue	**Response**
Loud construction activities should include appropriate respite periods.	A construction noise and vibration management plan is recommended to be prepared prior to the commencement of any works to ensure noise generated from construction activities is appropriately managed and protects the amenity of surrounding sensitive uses, including the provision of respite periods.
The building does not include appropriate setbacks and provides a blank wall to the boundary it shares with 148 Elizabeth Street.	As discussed above, the proposed setbacks to Hyde Park Towers are considered appropriate in the context of Central Sydney.
The proposed building reduces direct and ambient natural light to north-facing apartments within the adjacent development at 148 Elizabeth Street.	It is acknowledged that the proposed development will cause a reduction in direct and ambient light to north-facing apartments within Hyde Park Towers. While the loss of ambient light is not specifically a matter for consideration, the application was supported by comprehensive analysis on the impacts on solar access and justified variations to setbacks to neighbouring developments which are discussed in detail above and are supported.
The proposal removes all outlook from north-facing windows and balconies within the adjacent development at 148 Elizabeth Street. Views lost will include view to Hyde Park, St Mary's Cathedral, the ANZAC Memorial and distant harbour views. The applicant's assumptions regarding balconies off bedrooms is outdated and views from these spaces are just as important to residential amenity as primary balconies.	View loss, view sharing and impacts on outlook are discussed in detail above. The application was assessed against the relevant Planning Principle to consider view loss and the proposal is found to have an acceptable impact. This includes the consideration and ranking of importance of views from living areas (most important) to bedrooms and secondary balconies. The apartments within Hyde Park Towers which will be impacted by the development are not considered to have existing views to St Mary's Cathedral or have distant harbour views and the impact on these views were not considered in this report as they are not relevant to the proposal.

Issue	Response
External walkways will cause overlooking to the adjacent residential development.	Due to the level differences between the proposed building and apartments within Hyde Park Towers, the proposed 1.8m louvred privacy screens are considered to provide appropriate visual privacy between the two developments. Further, the only open areas along the southern elevation of the proposed building are walkways and it is unlikely that residents will be spending extended periods of time in these spaces.
Noise generated from outdoor communal spaces will cause unacceptable acoustic impacts to adjacent residential uses.	It is recommended that outdoor areas be restricted to 10pm to reduce acoustic impacts on neighbouring developments. The site is located within Central Sydney and outdoor activities until 10pm is considered appropriate.
The proposed demolition, excavation and construction works will increase dust in the area, will cause structural risks to the adjacent building and will result in unacceptable disruption to surrounding developments.	Conditions of consent are recommended to ensure impacts from construction are reduced as much as possible and managed appropriately. This includes the preparation of a Construction Management Plan.
The developer has not undertaken appropriate consultation with surrounding developments.	Applicants are not required to undertake consultation with stakeholders prior to lodgement. The application has been publicly exhibited in accordance with the City of Sydney Community Participation Plan 2022.
The proposal is taking advantage of co-living provisions and is an overdevelopment of the site.	The proposed development is generally in accordance with the relevant provisions for co-living as provided in the Housing SEPP, and for boarding houses provided in the SDCP 2012. Where there are non-compliances, these variations are generally minor and are discussed above. It is also noted that the proposed height of the development is significantly lower than the maximum height for the site as provided in the SLEP 2012.

Issue	Response
The application has not adequately addressed mitigation measures for construction, traffic and air quality impacts on surrounding developments.	Conditions of consent require the preparation of several mitigation measure documents to ensure construction impacts are managed appropriately. This includes the preparation of a Construction Traffic Management Plan and a Demolition, Excavation and Construction Noise and Vibration Management Plan.
The application does not comply with the design quality principles in the Housing SEPP nor does it meet the Apartment Design Guide separation standards.	As discussed above, the requirements of the Housing SEPP and ADG do not apply to the site. Nonetheless, these controls have been considered as a guide and the proposed development has been designed generally in accordance with these controls. Where there are inconsistencies, the variations are considered minor or will have an acceptable impact.
The applicant has not undertaken a competitive design process, required by the Sydney LEP 2012.	The application has demonstrated that a competitive design process is unreasonable and unnecessary and has been considered comprehensively above.
The significant increase in residents in the area will result in increased pedestrian traffic on surrounding streets and potential overcrowding and antisocial behaviour in the pocket park located at the rear of the site on Nithsdale Street. The pocket park should be made an alcohol-free zone and prohibit smoking.	While it is likely that the development will increase the number of pedestrians using the public domain areas surrounding the site, it is unlikely that this will result in overcrowding of surrounding streets or the rear pocket park. Communal open spaces are provided on site and the proposed development does not rely on surrounding open spaces to provide amenity to residents. A Plan of Management has been provided that outlines expected behaviour of residents. The pocket park to the east of the site is under private ownership and Council cannot enforce alcohol-free zones or prohibit smoking.

Issue	Response
The submitted Plan of Management is deficient in addressing resident behaviour, impact of late-night communal spaces, large-scale events for residents and residents/visitors gathering in outdoor spaces. The Plan of Management also does not consider noise impacts on public holidays.	The Plan of Management sufficiently outlines expected behaviour of residents, noting matters relating to general etiquette, noise, discrimination, harassment, antisocial behaviour, drugs and alcohol, and theft and vandalism. As noted above, it is recommended that the Plan of Management be updated to address noise management from planned gatherings within communal outdoor spaces.
It is unclear whether the intended residents are targeted to 'vulnerable' residents or if units will be leased to professionals and students. This may impact property prices in adjacent buildings.	There is no indication in the application that the proposed development is to be used as social or public housing.
Mixing students, professionals, and vulnerable individuals in a co-living model raises concerns about conflict, exclusion, and safety, with a high risk further suggested by the inclusion of an incident and complaints register in the Plan of Management. A clearer resident criterion should be considered further to ensure resident safety.	The application is not required to list a resident criterion. As noted, the submitted Plan of Management appropriately addresses expected resident behaviour and if not compliant, residents may face eviction.
The building should be a traditional strata-title apartment building or built-to-rent, with co-living for vulnerable residents to be piloted outside the CBD. There is lack of clarity around how incoming residents will be informed about the composition of the vulnerable population within the development and whether The Salvation Army, Investa or another state government agency will be responsible for any failures in the co-living model.	There is no legislative requirement that any future residential use should be a strata-title apartment building or built-to-rent. Co-living housing is permissible with consent within the SP5 Metropolitan Centre zone and has been assessed against the relevant planning controls as being an acceptable development. There is no requirement for the future operator to inform other residents of their residential population financial backgrounds and there is no indication that the building will be managed by a community housing provider.

Financial Contributions

Levy under Section 7.12 of the Environmental Planning and Assessment Regulation 2000

123. The Central Sydney Development Contributions Plan 2020 applies to the site. The cost of the development is over $250,000. The development is therefore subject to a s7.12 contribution under this Plan. A condition relating to this contribution has been included in the recommended conditions. The condition requires the contribution to be paid prior to the issue of a construction certificate.

Contribution under Section 7.13 of the Sydney Local Environmental Plan 2012

124. Section 7.32 of the Act outlines that the consent authority may grant consent to a development application subject to a condition requiring dedication of part of the land for the purpose of providing affordable housing, or payment of a monetary contribution to be used for the purpose of providing affordable housing where the section of the Act applies.

125. The Act applies with respect to a development application for consent to carry out development within an area if a State Environmental Planning Policy identifies that there is a need for affordable housing within the area. Clause 14 of the Housing SEPP identifies that there is a need for affordable housing within each area of the State.

126. An affordable housing condition may be reasonably imposed under Section 7.32(3) of the Act subject to consideration of the following:

    (a) the condition complies with all relevant requirements made by a State environmental planning policy with respect to the imposition of conditions under this section, and

    (b) the condition is authorised to be imposed by a local environmental plan, and is in accordance with a scheme for dedications or contributions set out in or adopted by such a plan, and

    (c) the condition requires a reasonable dedication or contribution required to be made by the applicant under this section or section 7.11.

127. Having regard to the provisions of Section 7.32 of the Act, the imposition of an affordable housing contribution is reasonable. A condition of consent is recommended requiring the payment of an affordable housing contribution prior to the issue of a construction certificate. The imposition of a condition requiring the payment of affordable housing contributions also satisfies the matters for consideration in Section 15 of the Housing SEPP in that contributions are to fund the delivery of affordable housing as further detailed in the City of Sydney Affordable Housing Program.

128. Section 7.13(1)(d)(iii) of the SLEP 2012 notes that contributions for the purpose of affordable housing applies to land in Central Sydney that involves the erection of a new building the gross floor area of which is more than 200 square metres.

129. In accordance with the SLEP 2012 and in lieu of the delivery of affordable housing, a contribution of 1% of the total floor area to for non-residential uses and 3% of the total floor area of residential uses is required at a rate of $11,646.80 per square metre. Based on the submitted Total Floor Area drawings, the proposal nominates 'community facility' and 'co-living housing' uses occurring within the development. Both uses are subject to affordable housing contributions.

130. The application proposes approximately 11,409.96 square metres of residential floor area and 1,572.95 square metres of non-residential floor area, resulting in a contribution of $4,169,884. A condition of consent is recommended requiring payment prior to the issue of a construction certificate.

131. The above monetary contributions are considered reasonable in accordance with Section 7.32(3)(c) of the Act.

Housing and Productivity Contribution

132. The development is subject to a Housing and Productivity Contribution (Base component) under the Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2023.

133. The site is located with the Greater Sydney region, the development is a type of residential development to which the Housing and Productivity Contribution applies, and the development is not of a type that is exempt from paying a contribution.

134. A condition relating to the Housing and Productivity Contribution has been included in the recommended conditions of consent.

Relevant Legislation

135. Environmental Planning and Assessment Act 1979.

136. City of Sydney Act 1988.

137. Sydney Water Act 1994.

Conclusion

138. The application seeks consent for the demolition of the existing structures on site and the construction of a 17-storey mixed use building including 2 storeys of community floor space and 15 storeys of co-living residential uses.

139. The proposal is largely compliant with the relevant planning provisions including the Housing SEPP, the SLEP 2012 and the SDCP 2012. Conditions are recommended to address non-compliances where appropriate.

140. The proposed development does not pose any significant or unreasonable impacts upon the existing or likely future development surrounding site. The proposed development will improve the interface between the private and public domain and exhibits design excellence in accordance with Clause 6.21C of the SLEP 2012.

141. Given the proposal demonstrates appropriate responses to the matters for consideration under Clause 7.20 and 6.21C of the SLEP 2012 as detailed above, it is considered that a site specific development control plan and a competitive design process is unreasonable and unnecessary in this case.

142. The proposal will provide new co-living land uses on a site which is highly accessible to existing and planned employment, services, public transport infrastructure and community facilities.

143. Subject to the imposition of the conditions, in Attachment A, the proposal responds appropriately to the site constraints and contributes positively to the existing and desired future character of Central Sydney. The proposed , development is therefore in the public interest and is recommended for approval by the CSPC.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

Marie Burge, Senior Planner

Attachment A

Recommended Conditions of Consent

Terms and Reasons for Conditions

Under section 88(1)(c) of the EP&A Regulation, the consent authority must provide the terms of all conditions and reasons for imposing the conditions other than the conditions prescribed under section 4.17(11) of the EP&A Act. The terms of the conditions and reasons are set out below in Schedules 1 and 2.

SCHEDULE 1

GENERAL CONDITIONS

(1) STAGED CONSTRUCTION CERTIFICATES

(a) The works may be carried out in stages, with the relevant conditions being satisfied prior to the issue of a construction certificate for each stage as follows:

Stage	Works
1	Excavation, piling and shoring
2	Structure – up to and including ground floor
3	Structure – above ground
4	Facade
5	Fitout, services, external works and public domain upgrades

Reason

To allow to development to be carried out in stages.

(2) APPROVED DEVELOPMENT

(a) Development must be in accordance with Development Application No. D/2025/675 dated 22 July 2025 and the following drawings prepared by Mostaghim:

Drawing Number	Revision	Drawing Name	Date
Architectural Drawings			
A-01	AC	COVER SHEET & DRAWING LIST	23/10/2025
A-02	AC	SITE ANALYSIS PLAN	23/10/2025
A-03	AC	EXISTING/DEMOLITION BASEMENT PLAN	23/10/2025

Drawing Number	Revision	Drawing Name	Date
A-04	AC	EXISTING/DEMOLITION GROUND - 1A & 1B-2A PLANS	23/10/2025
A-05	AC	EXISTING/DEMOLITION LEVEL 2B & 3 TO 3A PLANS	23/10/2025
A-06	AC	EXISTING/DEMOLITION LEVEL 3B & 4 PLANS	23/10/2025
A-07	AC	EXISTING/DEMOLITION LEVEL 5-10 & ROOF PLANS	23/10/2025
A-08.1	AC	BASEMENT 01	23/10/2025
A-08.2	AC	GROUND LEVEL PLAN	23/10/2025
A-08.3(a)	AC	LEVEL 01 PLAN	23/10/2025
A-08.3(b)	AC	MEZZANINE PLAN	23/10/2025
A-08.5	AC	LEVEL 02 PLAN	23/10/2025
A-08.6	AC	LEVEL 03 PLAN	23/10/2025
A-08.7	AC	LEVEL 04 PLAN	23/10/2025
A-08.8	AC	LEVEL 05 PLAN	23/10/2025
A-08.9	AC	LEVEL 06 PLAN	23/10/2025
A-08.10	AC	LEVEL 07 PLAN	23/10/2025
A-08.11	AC	LEVEL 08 PLAN	23/10/2025
A-08.12	AC	TYPICAL PLAN: LEVELS 09-11	23/10/2025
A-08.13	AC	LEVEL 12 PLAN	23/10/2025
A-08.14	AC	LEVEL 13 PLAN	23/10/2025
A-08.15	AC	LEVEL 14 PLAN	23/10/2025
A-08.16	AC	LEVEL 15 PLAN	23/10/2025
A-08.17	AC	LEVEL 16 PLAN	23/10/2025
A-08.18	AC	ROOF PLAN	23/10/2025
A-09.1	AC	WEST ELEVATION	23/10/2025

Drawing Number	Revision	Drawing Name	Date
A-09.2	AC	EAST & NORTH ELEVATIONS	23/10/2025
A-09.3	AC	SOUTH ELEVATION	23/10/2025
A-10.1	AC	SECTIONS	23/10/2025

and as amended by the conditions of this consent.

(b) In the event of any inconsistency between the approved plans and supplementary documentation, the drawings will prevail.

Reason

To ensure all parties are aware of the approved plans and supporting documentation that applies to the development.

(3) BUILDING HEIGHT

(a) The height of the building must not exceed RL 85.28m (AHD) to the top of the building and RL 82.25m (AHD) to the parapet of the building.

(b) Prior to an Occupation Certificate being issued, a Registered Surveyor must provide certification that the height of the building accords with (a) above, to the satisfaction of the Principal Certifier.

Reason

To ensure the constructed development complies with the approved height.

(4) FLOOR SPACE RATIO - CENTRAL SYDNEY

The following applies to Floor Space Ratio:

(a) The Floor Space Ratio of the proposal must not exceed 8.68:1 calculated in accordance with the *Sydney Local Environmental Plan 2012*. For the purpose of the calculation of FSR, the Gross Floor Area of the approved development is 9081sqm.

(b) Prior to an Occupation Certificate being issued, a Registered Surveyor must provide certification of the total and component Gross Floor Areas (by use) in the development, utilising the definition under *Sydney Local Environmental Plan 2012* applicable at the time of development consent, to the satisfaction of the Principal Certifier.

(c) Prior to a Stage 1 Construction Certificate being issued, Council's written verification must be obtained, confirming that 356sqm of heritage floor space was allocated (purchased, transferred and registered by Council as an allocation) to the development, being that gross floor area in excess of 8:1 as specified in the *Sydney Local Environmental Plan 2012*.

Reason

To ensure the constructed development complies with the approved floor space ratio.

(5) DESIGN MODIFICATIONS

The design of the building must be modified as follows:

(a) The basement level must be amended to provide residential waste storage areas to accommodate 21 x 1,100L bins, designed in accordance with the City of Sydney *Guidelines for Waste Management in New Developments 2018*.

(b) Detailed sectional room drawings are to be prepared confirming floor finish and build up (inclusive of any acoustic treatment) does not exceed 70mm thickness.

(c) Typical room details drawings and section drawings addressing Elizabeth Street are to be prepared and are to include the following:

(i) Details of acoustic treatments to walls and ceiling, including lining materials (product, material, finish and colour)

(ii) Details of operability of lower window

(d) Street awnings must be amended in design as follows:

(i) Elizabeth Street awning must be set back from the edge of the kerb by a minimum of 1m

(ii) Clarke Street awning must be set back from the edge of the kerb by a minimum of 800mm

The modifications are to be submitted to and approved by Council's Area Planning Manager prior to the issue of a Stage 2 Construction Certificate.

Reason

To require amendments to the approved plans and supporting documentation following assessment of the development.

(6) SECTION 7.12 CONTRIBUTIONS PAYABLE – SUBMITTED AND VERIFIED PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE

A monetary contribution is payable to the City of Sydney pursuant to Section 7.12 of the *Environmental Planning and Assessment Act 1979* and the *Central Sydney Development Contributions Plan 2020*.

The Section 7.12 levy is determined by the development cost, as per the following table:

Development cost * * Refer to Section 2.3 of the *Central Sydney Development Contributions Plan 2020* for information on determining the development cost.	Levy
Up to and including $250,000	NIL
More than $250,000, up to and including $500,000	1%
More than $500,000, up to and including $1,000,000	2%
More than $1,000,000	3%

The Section 7.12 levy is payable to the City of Sydney in accordance with the following:

(a) Prior to any Construction Certificate being issued, evidence must be provided of Council's written verification of the amount of the contribution as required in (b) below, and that the levy has been paid to the Council in accordance with this condition. Payments may be made by EFTPOS (direct card only), cash (up to $5,000 only), credit card (up to $300,000 only) or bank cheque made payable to the City of Sydney council. Larger payments to be by direct bank transfer in consultation with the City. Direct debit, personal cheques and company cheques will not be accepted.

(b) The contribution must not be paid to the City of Sydney until it is accompanied by separate written verification by the City of Sydney of the specific amount payable. In order to obtain such verification, one of the following must be submitted:

(i) **For development between $250,000 and $3,000,000 –** the City of Sydney *Cost Summary Report* must be completed by a suitably qualified person such as the Project Architect or Project Manager and submitted to the City of Sydney together with the copies of the plans the subject of the application for the Construction Certificate. An electronic copy of the *Cost Summary Report* is available from the City's website at www.cityofsydney.nsw.gov.au; or

(ii) **For development more than $3,000,000** – The City of Sydney *Registered Quantity Surveyor's Detailed Cost Report* must be completed by a Quantity Surveyor registered with the Australian Institute of Quantity Surveyors or a person who can demonstrate an equivalent qualification and submitted to the City of Sydney together with the copies of the plans the subject of the application for the Construction Certificate. An electronic copy of the *Registered Quantity Surveyor's Detailed Cost Report* is available from the City's website at www.cityofsydney.nsw.gov.au.

(c) The Council will consider the documentation submitted under subclause (b) and determine the cost of the proposed development having regard to the information submitted and to such other matters as it considers appropriate and will notify the Registered Certifier accordingly.

(d) The development cost is to be determined in accordance with Section 2.3 of the Central Sydney Development Contributions Plan 2020, located in the version in force at the date of the grant of this consent.

Please contact Council's Planning Administration staff at Planningsystemsadmin@cityofsydney.nsw.gov.au to request a written Statement of Contributions Owing, prior to payment.

Reason

To ensure development contributions are paid to support the provision of public facilities, amenities, and services in Central Sydney.

(7) HOUSING AND PRODUCTIVITY CONTRIBUTION

Before the issue of any Construction Certificate the housing and productivity contribution (HPC) set out in the table below is required to be made.

Housing and productivity contribution	**Amount**
Housing and productivity contribution (base component)	$248,512.51
Total housing and productivity contribution	$248,512.51

The HPC must be paid using the NSW planning portal.

At the time of payment, the amount of the HPC is to be adjusted in accordance with the *Environmental Planning and Assessment (Housing and Productivity Contributions) Order 2024* (HPC Order).

The HPC may be made wholly or partly as a non-monetary contribution (apart from any transport project component) if the Minister administering *the Environmental Planning and Assessment Act 1979* agrees.

The HPC is not required to be made to the extent that a planning agreement excludes the application of Subdivision 4 of Division 7.1 of the *Environmental Planning and Assessment Act 1979* to the development, or the HPC Order exempts the development from the contribution.

Reason

To require contributions towards the provision of regional infrastructure.

(8) AFFORDABLE HOUSING CONTRIBUTION – RESIDUAL LAND OR CENTRAL SYDNEY – PAYMENT IN LIEU OF FLOOR SPACE CONTRIBUTION – PRIOR TO CONSTRUCTION CERTIFICATE

(a) In accordance with the City of Sydney Affordable Housing Program and prior to the issue of any Construction Certificate, the applicant must provide evidence that a monetary contribution towards the provision of affordable housing has been paid to the City of Sydney Council.

(b) The contribution is $4,169,884 (indexed at March 2025). This is calculated by establishing the sum of the equivalent monetary contribution $11,646.80 multiplied by 1% of the total floor area for non-residential development (1,572.95sqm) and the equivalent monetary contribution $11,646.80 multiplied by 3% of the total floor area for residential development (11,409.96sqm).

(c) If the contribution is paid after the indexation period in which the consent is granted, being March 2025 to February 2026, the above contribution will be adjusted according to the Sydney LGA median strata dwelling price ('MDP') using the following formula.

(d) Contribution payable at Time of Payment = C x MDP2 / MDP1, where:

(i) C is the original total contribution amount payable to the City of Sydney as shown above;

(ii) MDP2 is the Median Strata Dwelling Price in Sydney LGA taken from the most recent NSW Government Rent and Sales Report at the time of indexation of the equivalent monetary contribution rate; and

(iii) MDP1 is the Median Strata Dwelling Price in Sydney LGA taken from the NSW Government Rent and Sales Report used to establish the current equivalent monetary contribution rate, being March 2025 to February 2026.

Contact Council's Planning Assessment Unit at planningsystemsadmin@cityofsydney.nsw.gov.au for written confirmation of the amount payable, with indexation as necessary, prior to payment.

Reason

To ensure development contributions are paid to contribute to the provision of essential affordable rental housing infrastructure.

(9) RESTRICTION ON STRATA SUBDIVISION

In accordance with the provisions of Section 70 of the *State Environmental Planning Policy (Housing) 2021,* co-living housing cannot be subdivided into separate lots.

Reason

To restrict subdivision of the site containing co-living housing uses.

(10) RESTRICTION ON THE USE OF LAND - RESIDENTIAL DEVELOPMENT

The following restriction applies to buildings approved for residential use:

(a) The accommodation portion of the building must be used as permanent residential accommodation (co-living) only and not for the purpose of a boarding house or hostel, hotel or motel accommodation, serviced apartments, tourist and visitor accommodation or the like, other than in accordance with the Sydney Local Environmental Plan 2012.

(b) A restriction on the use of land is to be registered on the title of the development site in the above terms and restricting any change of use of those levels from residential accommodation as defined in the Sydney Local Environmental Plan 2012. The restriction is to be registered on title prior to any Occupation Certificate being issued or the use commencing, whichever is earlier. The restriction must contain terms reasonably required by Council and will be drafted by Council's solicitor, at the cost of the applicant, in accordance with the City's Fees and Charges.

(c) If a unit contains tenants, it must be subject to a residential tenancy agreement for a term of at least three months.

(d) No person can advertise or organise the use of residential apartments approved under this consent for short term accommodation or share accommodation.

Reason

To ensure the residential accommodation portion of the site is used for permanent residential purposes.

(11) SERVICE VEHICLE SIZE LIMIT

The size of vehicles servicing the property must be a maximum length of 6.4m.

Reason

To maintain the orderly operation of vehicle parking and loading areas.

(12) ASSOCIATED ROADWAY COSTS

All costs associated with the construction of any new road works including kerb and gutter, road pavement, drainage system and footway shall be borne by the developer. The new road works must be designed and constructed in accordance with the City's "Sydney Streets Technical Specification" including amendments and "Sydney Streets Design Code".

Reason

To ensure all roadway works are designed and constructed in accordance with Council requirements.

(13) COST OF SIGNPOSTING

All costs associated with signposting for any kerbside parking restrictions and traffic management measures associated with the development shall be borne by the developer.

Reason

To ensure all associated roadway works costs are borne by the developer.

(14) VEHICLE ACCESS

All vehicles are to enter and depart the site travelling in a forward direction.

Reason

To increase pedestrian safety at the site access.

(15) SWINGING DOORS OVER PUBLIC WAY

Any access doors to enclosures housing building services and facilities, such as hydrant and sprinkler booster assemblies or the like, must not open over the footway/roadway.

Reason

To ensure no element of the development obstructs the use of the public way.

(16) WASTE AND RECYCLING MANAGEMENT - GENERAL

The proposal must comply with the relevant provisions of the Sydney Development Control Plan 2012 and Council's *Guidelines for Waste Management in New Developments 2018*, which requires facilities to promote the safe and efficient storage, separation, collection and handling of waste to maximise resource recovery.

Reason

To ensure that waste and recycling is appropriately managed throughout all phases of the development.

(17) TACTILE GROUND SURFACE INDICATORS AND HANDRAILS

All tactile ground surface indicators, handrails and other elements required to provide access into the building / property must be located entirely within the private property boundary.

Reason

To ensure ground surface indicators, handrails and other elements required to provide access into the building/property are appropriately located.

(18) NO OBSTRUCTIONS

All public footways and paths of travel must be free from obstructions. If services are required to be relocated to clear paths of travel, then this must be undertaken at the developer's expense. All obstructions are to be removed prior to the issue of any type of Occupation Certificate.

Reason

To ensure there are no obstructions on public footways and paths of travel.

(19) PUBLIC ART

Public art must be installed to the City's satisfaction prior to the issue of any Occupation Certificate.

(a) The public artwork must be in accordance with Public Art Strategy prepared by UAP (Ref P4094 Rev 1) dated July 2025, the *Sydney DCP 2012*, the *Public Art Policy*, and the *Interim Guidelines: Public art in private developments*.

(b) A Detailed Public Art Plan with final details of the proposed public artwork must be submitted to and approved by Council's Executive Director City Planning Development & Transport prior to issue of a Stage 4 Construction Certificate.

(c) Public artwork must be installed to the City's satisfaction, inspected and approved and the Final Public Art Report submitted and approved by Council's Area Planning Manager prior to the issue of any Occupation Certificate.

Note: Public Art must be reviewed and endorsed by the City's Public Art Team and/or the Public Art Advisory Panel prior to submission for Council approval. Further information is available online at https://www.cityofsydney.nsw.gov.au/public-art please contact the Public Art Team at publicartreferrals@cityofsydney.nsw.gov.au for further information.

Reason

To ensure public art is installed to the City's satisfaction.

(20) EXTERNAL LIGHTING

A separate development application is required to be lodged and approved prior to any external floodlighting or illumination of the building and/or landscaping.

Reason

To clarify that consent has not been granted for the external floodlighting or illumination of the development.

(21) SIGNS - SEPARATE DA REQUIRED

A separate development application for any proposed signs additional to those approved as part of this consent (other than exempt or complying signs) must be submitted to and approved by Council prior to the erection or display of any such signs.

Reason

To require separate consent to be obtained for any additional signs.

(22) LAND SUBDIVISION – SEPARATE DA REQUIRED

Any proposal for land subdivision will require a separate application to Council to obtain development consent and the subsequent approval of the plan of subdivision and issue of a Subdivision Certificate under Section 6.15 of the *Environmental Planning and Assessment Act 1979*.

Reason

To ensure separate development consent is sought for land subdivision.

BUILDING WORK

BEFORE ISSUE OF A CONSTRUCTION CERTIFICATE

(23) COMPLIANCE WITH THE ACOUSTIC REPORT PRIOR TO CONSTRUCTION CERTIFICATE

(a) All relevant performance parameters (including but not limited to requirements, engineering assumptions and recommendations) in the DA Acoustic Report prepared by RWDI, dated 4th July 2025, reference: RWDI #2508230, Council Ref: 2025/437273 and Detailed Groundborne Noise Survey – 140 Elizabeth Street, Sydney RWDI Project # 2508230, dated 11th November 2025 (Council Ref: 2025/684128) must be implemented in the development prior to the commencement of its use.

(b) Prior to the issue of any relevant Construction Certificate, the final construction drawings and final construction methodology must be assessed and reported to be in accordance with the requirements of the DA Acoustic Report in (a) above, with reference to relevant documentation. This must be done by a Suitably Qualified Acoustic Consultant* (see definition below). This work will be to the satisfaction of the Registered Certifier.

(c) Prior to the issue of any Occupation Certificate, a Suitably Qualified Acoustic Consultant* is to provide a written Acoustic Verification Report to the satisfaction of the Principal Certifier that the development complies with the requirements set out in the Report and in (a) and (b) above.

Note: *Suitably Qualified Acoustic Consultant means a consultant who possesses the qualifications to join the Australian Acoustical Society, Institution of Engineers Australia (grade of member) or the Association of Australasian Acoustical Consultants (grade of member firm).*

(d) All physical aspects of the building's structure installed in order to meet performance parameters in accordance with this condition must be maintained at all times.

Reason

To ensure all parties are aware of the supporting documentation that applies to the development.

(24) ACOUSTIC COMPLIANCE

Prior to the issue of a relevant construction certificate, the Certifier must ensure the following:

(a) A suitably qualified acoustic consultant must be appointed in accordance with the definition noted in the City of Sydney – Environmental Noise Technical Requirements, dated October 2025.

(b) The consultant is required to review the relevant building plans, specifications, and associated documentation, and must:

(i) Verify that the construction plans, drawings, and construction methodology for the development are consistent with the approved acoustic report and comply with all relevant conditions and documentation of this consent.

(ii) Resolve any non-compliances through amended construction plans, drawings, and construction methodology as necessary.

(iii) Ensure that all requirements under this clause are completed to the written satisfaction of the Certifier.

(c) Following completion of the above tasks, the consultant must provide written notification to the Certifier outlining compliance with this condition any identified non-compliances.

Reason

To ensure detailed construction and fit plans comply with the relevant standards in the approved acoustic report.

(25) DEMOLITION, EXCAVATION AND CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN

A site-specific noise management plan must be submitted to the Council for comment and approval prior to issue of any Construction Certificate. The Plan must be prepared by a suitably qualified acoustic consultant who is a person who possesses the qualifications to join the Australian Acoustic Society, Institution of Engineers Australia (grade of member) or the Association of Australasian Acoustic Consultants (grade of member firm).The plan must include but not be limited to the following:-

(a) identification of noise sensitive receivers near to the site.

(b) A prediction as to the level of noise impact likely to affect the nearest noise sensitive receivers from the use and proposed number of high noise intrusive appliances intended to be operated onsite. A statement should also be submitted outlining whether or not predicted noise levels will comply with the noise criteria stated within the *City of Sydney Construction Hours /Noise Code of Practice 1992* for the typical construction hours of 07.00am to 7.00pm. Where resultant site noise levels are likely to be in exceedance of this noise criteria then a suitable proposal must be given as to the duration and frequency of respite periods that will be afforded to the occupiers of neighbouring property.

(c) A representative background noise measurement ($L_{A90,\ 15\ minute}$) should be submitted, assessed in the vicinity of any potentially affected receiver locations and measured in accordance with AS 1055:1.2.1997.

(d) Confirmation of the level of community consultation that has/is and will be undertaken with Building Managers/ occupiers of the main adjoining noise sensitive properties likely to be most affected by site works and the operation of plant/machinery particularly during the demolition and excavation phases.

(e) Confirmation of noise monitoring methodology that is to be undertaken during the main stages of work at neighbouring noise sensitive properties in order to keep complaints to a minimum and to ensure that noise from site works complies with the noise criteria contained within City's Construction Noise Code.

(f) What course of action will be undertaken following receipt of a complaint concerning offensive noise.

(g) Details of any noise mitigation measures that have been outlined by an acoustic consultant or otherwise that will be deployed on site to reduce noise impacts on the occupiers of neighbouring noise sensitive property to a minimum.

(h) What plant and equipment is to be used on site, the level of sound mitigation measures to be undertaken in each case and the criteria adopted in their selection taking into account the likely noise impacts on the occupiers of neighbouring property and other less intrusive technologies available.

Reason

To ensure an adequate construction noise and vibration management plan is prepared.

(26) PARKING DESIGN

The design, layout, signage, line marking, lighting and physical controls of all off-street parking facilities must comply with the minimum requirements of Australian Standard AS/NZS 2890.1 Parking facilities Part 1: Off-street car parking, AS/NZS 2890.2 Parking facilities Part 2: Off-commercial vehicle facilities and AS/NZS 2890.6 Parking facilities Part 6: Off-street parking for people with disabilities. The details must be submitted to and approved by the Registered Certifier prior to the relevant Construction Certificate being issued.

Reason

To ensure parking facilities are designed in accordance with the Australian Standards.

(27) ALLOCATION OF PARKING

The number of car parking spaces to be provided for the development must comply with the table below. Details confirming the parking numbers must be submitted to the satisfaction of the Registered Certifier prior to the issue of a Construction Certificate.

Car Parking Type	**Number**
Community Facility	1
Accessible Community Facility	1
Subtotal	2
Small Rigid Vehicle loading dock(s)	1
Total	3

Reason

To ensure the allocation of parking is in accordance with the Council's DCP.

(28) BICYCLE PARKING AND END OF TRIP FACILITIES

(a) The minimum number of bicycle parking spaces and end of trip facilities to be provided within the site boundary for the development must comply with the table below.

Bicycle Parking Type	Number	Requirements
Residential/Co-Living	146	Spaces must be a Class 2 parking facility in accordance with AS2890.3
Residential/Co-Living visitor	10	Spaces must be Class 3 bicycle parking facility in accordance with AS2890.3
Community Facility/Staff/Employee	10	Spaces must be Class 2 bicycle parking facility in accordance with AS2890.3
End of Trip Facility Type	Number	
Showers with change area	1	
Personal lockers	10	

All bicycle parking spaces and end of trip facility must be provided on private land. The public domain cannot be used to satisfy this condition.

Notes:

(i) If a basement storage area on title that is large enough to store a bike and is no smaller than a class 1 bike locker this can be counted as a space.

(b) The layout, design and security of bicycle facilities must comply with the minimum requirements of Australian Standard AS 2890.3 Parking Facilities Part 3: Bicycle Parking Facilities. The details must be submitted to and approved by the Registered Certifier confirming prior to and form part of the Construction Certificate being issued.

Reason

To ensure the allocation of bicycle parking onsite that is in accordance with Australian Standards and the Council's DCP.

(29) PHOTOGRAPHIC ARCHIVAL DOCUMENTATION (MINOR WORKS)

Prior to the commencement of any demolition work or a Construction Certificate being issued, whichever is earlier, an archival photographic recording of the building, including interiors and exteriors is to be prepared to Council's satisfaction. The recording is to be in digital form and prepared in accordance with the NSW Heritage Division guidelines titled 'Photographic Recording of Heritage Items using Film or Digital Capture'. One digital copy of the record is to be submitted to Council.

The form of the recording is to be as follows:

(a) The Development Application number must be noted on the submitted information.

(b) Include a summary report detailing the project description, date and authorship of the photographic record, method of documentation and limitations of the photographic record.

(c) Include written confirmation, issued with the authority of both the applicant and the photographer that the City of Sydney is granted a perpetual non-exclusive licence to make use of the copyright in all images supplied, including the right to make copies available to third parties as though they were Council images. The signatures of both the applicant and the photographer must be included.

(d) The report is to be submitted via digital file transfer in PDF/A format, (created directly from the digital original), with the digital catalogue of images containing the following data for each location, image subject/description and date.

(e) The electronic images are to be saved as JPEG, TIFF or PDF files with a size of approximately 4-6MB, and cross referenced to the digital catalogue sheets and base plans. Choose only images that are necessary to document the process and avoid duplicate images.

Reason

To ensure appropriate archival documentation of the building.

(30) SITES IN THE VICINITY OF A HERITAGE ITEM

(a) The approved works must ensure that the neighbouring heritage building at 148 Elizabeth Street is to be suitably protected during the construction process. The contractor or developer must conduct consultations with the stakeholders of the neighbouring heritage site, record and monitor the conditions of the heritage building and take suitable measures to control and minimize any risks to the heritage fabric during construction. The protection measures must be incorporated into the construction management plan.

(b) Details of the protection plan must be submitted to and approved by Council's Area Coordinator Planning Assessments / Area Planning Manager prior to the commencement of demolition or the issue of any Construction Certificate, whichever is earlier.

Reason

To ensure the protection of adjacent/nearby heritage items.

(31) CONSTRUCTION TRAFFIC MANAGEMENT PLAN

(a) A Construction Traffic Management Plan must be submitted to and approved by Council prior to a Construction Certificate being issued.

(b) The approved plan must be complied with during any demolition and/or construction work.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure that the impacts of construction traffic is appropriately managed.

(32) INSTALLATION OF DUAL-FLUSH TOILETS

All toilets installed within the development must be of water efficient dual-flush or other water-saving capacity with at least a 4-star rating under the Water Efficiency and Labelling Scheme (WELS). The details must be submitted for the approval of the Registered Certifier, prior to a Stage 5 Construction Certificate being issued.

Reason

To ensure the provision of water efficient toilets.

(33) INSTALLATION OF WATER EFFICIENT URINALS

New urinal suites, urinals and urinal flushing control mechanisms must use waterless technology. Where it is submitted that this is not feasible, it must be demonstrated that products have been selected with at least a 4-star rating under the Water Efficiency and Labelling Scheme (WELS). Systems must include "smart controls" to reduce unnecessary flushing. Continuous flushing systems are not approved. Details are to be submitted to and approved by the Registered Certifier, prior to a Stage 5 Construction Certificate being issued.

Reason

To ensure the provision of water efficient urinals.

(34) INSTALLATION OF WATER EFFICIENT TAPS

All taps installed must be water efficient with at least a 5-star rating under the Water Efficiency and Labelling Scheme (WELS). The details are to be submitted for the approval of the Registered Certifier, prior to any Occupation Certificate being issued.

Reason

To ensure the provision of water efficient taps.

(35) INSTALLATION OF WATER EFFICIENT SHOWER HEADS

All shower heads installed must be water efficient with at least a 4-star rating under the Water Efficiency and Labelling Scheme (WELS). The details are to be submitted for the approval of the Registered Certifier, prior to any Occupation Certificate being issued.

Reason

To ensure the provision of water efficient shower heads.

(36) DESIGN FOR ENVIRONMENTAL PERFORMANCE

(a) Prior to the issue of any Construction Certificate, the Registered Certifier must be satisfied that those matters listed in the following sections of the approved Design for Environmental Performance report prepared by Jordan Janos dated Monday 14 2025 (Council Ref: 2025/437289) are incorporated into the relevant construction plans and accompanying documentation:

(i) Section 4 – Energy Efficiency and Greenhouse Gas Emissions Abatement

(ii) Section 5 – Passive Design for Thermal Performance – Building Envelope Design

(iii) Section 6 – On site Renewable Energy Generation and Storage

(iv) Section 7 – Design for Resilience to Climate Change

(v) Section 8 – Designing for mains potable water savings and water efficiency

(vi) Section 9 – Storm water quality

(vii) Section 10 – City Greening

(viii) Section 11 – Promoting Active Transport and Reducing Transport Emissions

(ix) Section 12 – Materials, Embodied Carbon and Circularity

(x) Section 13 – Waste Management and Resource Recovery

(xi) Section 14 – Third Party Certification and Design, Construction or Technology Innovations

(c) Changes to any commitments as listed in the approved Design for Environmental Performance report must be submitted to and approved by Council's Area Planning Manager/Coordinator prior to the issue of any relevant Construction Certificate.

Reason

To ensure the environmental performance of the development.

(37) EMBODIED EMISSIONS REPORTING

Prior to the issue of a Stage 5 Construction Certificate, as per requirements under the Sustainable Buildings SEPP, embodied emissions reporting is to be updated to reflect finalised material specifications and increased design detail. If the NABERS Embodied Emissions Tool is active prior to submission of construction certificate documentation, then reporting is to be provided through the tool.

Reason

To ensure quantification of embodied emissions from the development.

(38) DEMOLITION/SITE RECTIFICATION

The following conditions apply to the development:

(a) Prior to the commencement of any demolition or the issue of any Construction Certificate being issued, whichever is earlier, documentary evidence must be provided to Council that the owner of the site has entered into a Deed with Council, the cost of preparation and execution of such Deed (including stamp duty and registration fees) to be borne by the applicant, which contains such conditions as the Council reasonably requires to ensure the matters set out in this condition are adequately provided for.

(b) Without limiting the generality of paragraph (b), the Deed must provide for:

(i) A bank guarantee to be provided in the sum of $261,500 dollars as security for the costs of such works provided that:

a. the maximum liability under the Deed must not exceed $261,500 dollars; and

b. the Council may accept a lesser amount as security if substantiated by detailed design and Quantity Surveyor costing for works which meet the objectives of the condition.

(ii) Council to be given sufficient contractual rights to be able to ensure that in any of the following events namely:

a. demolition of the existing building has commenced but not been completed;

b. the existing building has been demolished; or

c. the site has been excavated; or

d. the erection of the structure has commenced.

(iii) that it, or any person authorised by it, may enter the site and carry out such works at the cost of the applicant (or such other person as the Consent Authority may approve) as may be then appropriate in the circumstances in each of the abovementioned events, to:

a. make the building safe and of an appearance acceptable to Council at ground level;

b. allow the ground level to be landscaped and of an appearance acceptable to Council from any public vantage point; or

c. for the hole to be covered to allow it to be landscaped and of an appearance acceptable to Council from any public vantage point; or

d. in the event that the new building is constructed beyond the ground floor, to allow any hoardings to be removed and the ground floor development to be completed to a tenantable stage.

AND to call on such bank guarantee to cover the cost thereof.

(c) If the site is commenced to be developed and there is suspension in activity for 6 months (or suspensions of activity which in the aggregate exceed 6 months), resulting in a building site which has an appearance not acceptable to Council, then the Council will have the readily enforceable rights to:

(i) require certain works including but not limited to those works necessary to achieve the results referred to in sub-clause (c) (iii) to take place on the site; and

(ii) in the event of default, have the right to enter and carry out these works and to call upon security in the nature of a bank guarantee to cover the cost of the works.

(d) The Deed may, if the Director City Planning is satisfied, provide for an adjustment of the guarantee amount during the course of construction to reflect that, as the development progresses, the likelihood and nature of the appropriate site rectification works may change. The stages of reduction will be:

(i) Stage 1 – Completion of the site excavation and all construction works necessary to complete all parts of the Development to street level, including sealing of the slab at that level.

(ii) Stage 2 – Completion of all construction works necessary to complete the structure of the Development to the roof level.

(iii) Stage 3 – Issue of the Occupation Certificate.

(e) If a claim for an adjustment is made, the Deed must also provide that any such claim is to be supported by the following:

(i) Certification (from the principal certifier) that the relevant stage is complete;

(ii) Detailed schedule of completed works carried out in the relevant stage;

(iii) Quantity Surveyors costing of the likely site rectification works required at each remaining stage.

Reason

To allow for the appropriate management of sites where development (demolition/excavation/construction) has commenced and there is a suspension in activity resulting in a building site which has an unacceptable appearance.

(39) PUBLIC DOMAIN DAMAGE BOND

(a) A Public Domain Damage Bond calculated on the basis of 100 square metres of granite along Elizabeth Street site frontage and 125 square metres of concrete along Clarke Street and Nithsdale Street frontages must be lodged with Council in accordance with the City of Sydney's adopted Schedule of Fees and Charges. The bond must be provided as security for repairing any damage to the public domain in the vicinity of the site.

(b) The City's Public Domain Unit must be contacted to determine the bond amount prior to lodgement. The Bond must be lodged with the City prior to an approval for demolition being granted or any Construction Certificate being issued, whichever is earlier.

(c) The bond in this condition will be released in full when the Public Domain Damage Bond is lodged with the City.

Reason

To allow for the appropriate management and rectification of damage to the public domain.

(40) PROTECTION OF STONE KERBS

(a) The existing stone kerbs on the Elizabeth Street and Clarke Street frontages of the site are to be retained and properly protected during demolition, excavation and construction works.

(b) To avoid damage to stone kerbs during excavation and construction works for the development, temporary removal and storage of the stone kerbs may be approved by Council. Removed, serviceable stone kerbs (i.e. those that are in good condition as agreed by Council officers) must be re-installed in accordance with the City of Sydney's standard details and specifications after the construction works have been completed. A temporary concrete kerb will need to be constructed to retain the footpath until the stone kerbs can be reinstalled.

(c) Note the following:

(i) all costs associated with the works are to be borne by the developer.

(ii) Damaged kerbs are to be replaced to match existing to Council's satisfaction or as otherwise advised by Council officers.

(iii) Where new vehicle crossings or temporary crossings are to be constructed to access the property, the affected kerb stones should be salvaged and reused wherever possible.

(iv) All new driveway laybacks and kerbs are to be constructed with stone kerbs to match existing stones or as specified by City officers.

(v) Council approval is required before kerbs are removed.

(vi) Council approval is required prior to the cutting of existing stone kerbs for stormwater kerb outlets.

(vii) Stone kerbs and gutters may be bonded in accordance with the City of Sydney's adopted Schedule of Fees and Charges. If so, this will be included with the Public Domain Damage Bond.

(viii) Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure the protection of stone kerbs.

(41) SURVEY INFRASTRUCTURE – IDENTIFICATION AND RECOVERY

Under Section 24 of the Surveying and Spatial Information Act 2002, it is an offence to remove, damage, destroy, displace, obliterate or deface any survey mark unless authorised to do so by the Surveyor-General. Accordingly, the applicant must, where possible, ensure the preservation of existing survey infrastructure undisturbed and in its original state or else provide evidence of the Surveyor-General's authorisation to remove or replace marks.

Prior to the issue of any Construction Certificate, documentary evidence must be prepared by a Registered Surveyor and submitted to and approved by Council's Area Planning Manager / Coordinator. This evidence must include either:

(a) A copy of any Surveyor-General's Approval for Survey Mark Removal granted by NSW Spatial Services for the subject site, including all documentation submitted as part of that application (for example the survey mark audit schedule, strategy plan and strategy report); or

(b) A letter, signed by a current NSW Registered Land Surveyor and including his or her Board of Surveying and Spatial Information (BOSSI) identification number, stating that all investigations required under Surveyor-General's Direction No.11 have been made for the subject site and that no survey infrastructure will be affected by the proposal.

Council's Principal Surveyor may request further information and/or add conditions to any Surveyor-General's Approval at their discretion.

Note: Refer to Clause 4.7 in the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure the preservation of existing survey infrastructure.

(42) PUBLIC DOMAIN CONCEPT PLAN

The Public Domain Civil Drawings submitted with this application are not approved. A revised public domain concept plan, showing all the site frontages and extending a minimum of 5m past the boundary and to the road centreline, must be prepared in accordance with the City's *Public Domain Manual* and *Sydney Streets* Code. It must be submitted to the City's Public Domain Unit and approved by the Executive Director City Planning Development & Transport prior to the issue of a Stage 2 Construction Certificate for the development other than for demolition or excavation.

Note: A detailed Public Domain Plan will be required prior to construction (refer to Public Domain Plan Detailed Documentation for Construction condition).

Reason

To ensure public domain works comply with Council's requirements.

(43) PUBLIC DOMAIN LEVELS AND GRADIENTS

The public domain levels and gradients plan submitted with this application are not approved. Prior to the issue of a Stage 1 Construction Certificate, a revised Public Domain Levels and Gradients submission for the building and site frontages must be submitted to and approved by the City's Public Domain Unit. The submission must be prepared in accordance with the City's *Public Domain Manual* and submitted with a completed Application for *Public Domain Levels and Gradients*. Information on how to complete the submission can be downloaded from the City's website at https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works.

Any requirements to comply with Disability Discrimination Act at the entrance to a building or publicly accessible space must be resolved inside the site boundary.

Note: Public Domain Levels and Gradient plans are to be included with the Public Domain Plan – Detailed Documentation for Construction condition submission.

Reason

To ensure public domain levels and gradients comply with Council's requirements.

(44) STORMWATER DRAINAGE DESIGN

The concept stormwater plan submitted with the application is not approved. Prior to issue of a Stage 1 Construction Certificate a detailed stormwater management plan prepared by suitable qualified and experienced professionals must be submitted to and approved by the City's Public Domain Unit and must include:

(i) Council's Sydney Streets Technical Specifications, Part A4 Drainage Design;

(ii) Council's Sydney Streets Technical Specifications, Standard Drawings;

(iii) Council's Sydney Streets Technical Specifications, Part B10: Stormwater Drainage Construction;

(iv) Council's Stormwater Drainage Manual; and

(v) All relevant Australian Standards.

This information is available for download from the City's website at https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works.

Note: A Deed of Agreement (Stormwater Deed) for all proposed connections to the City's drainage system, and a Positive Covenant for all OSD systems may be required prior to issue of any Occupation Certificate.

Reason

To ensure stormwater drainage design complies with Council's requirements.

(45) STORMWATER ON-SITE DETENTION

The requirements of Sydney Water with regard to the on-site detention (OSD) of stormwater must be ascertained and complied with. Evidence of the approval must be submitted to Council prior to issue of any Construction Certificate other than demolition.

Where an OSD is not required by Sydney Water one may still be required by the City.

Reason

To ensure the requirements of Sydney Water are complied with.

(46) STORMWATER QUALITY ASSESSMENT

The development must comply with the MUSIC Link report dated 22 October 2025 approved with this development application.

Prior to issue of any Construction Certificate a design certification report prepared by a suitably qualified practitioner engineer (NPER) demonstrating compliance with approved music link targets and parameters must be submitted to and approved by the City's Public Domain Unit.

The report must include a response to all stormwater quality improvement devices structural integrity, treatment train and their treatment properties demonstrating compliance with the approved MUSIC link reports.

Reason

To ensure appropriate stormwater quality on the site.

(47) FLOOD PLANNING LEVELS

The development must be constructed to comply with the recommended flood planning levels indicated in the report titled *Flood Assessment Report* (Ref: 241026 Rev 05) prepared by TTW dated 24 October 2025.

Details must be submitted to the Registered Certifier prior to the issue of a Stage 1 Construction Certificate demonstrating that the development will comply with the recommended flood planning levels.

Reason

To ensure the development complies with the recommended flood planning levels.

(48) PUBLIC DOMAIN LIGHTING UPGRADE

Prior to issue of Stage 2 Construction Certificate for excavation, civil construction, drainage or building work (whichever is earlier), a concept Public Domain Lighting Upgrade Plan for pedestrian and street lighting in the public domain must be submitted to and approved by City's Public Domain Unit. The Lighting Plan must be prepared in accordance with the *Sydney Streets Technical Specifications* A5 and B8, *Sydney Lights Design Code* and *Public Domain Manual*. This information is available for download from the City's website at https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works.

The lighting upgrade plan must cover all adjacent street frontages, being Clarke Street and Nithsdale Street and shall be designed to include the following requirements:

(a) Clarke Street and Nithsdale Street

(i) Supply and install City of Sydney standard smart poles with new LED luminaires as listed below

(ii) Remove existing galvanised poles on Clarke Street

(iii) Clarke Street: Lighting to comply with requirement of AS1158.3.1 Category PR1 on the roadway and PP1 on the footways

(iv) Nithsdale Street: Lighting to comply with requirement of AS1158.3.1 Category PR1 on the roadway and PP1 on the footways

(v) Provide Obtrusive lighting assessment to comply with requirement of AS4282 where required

Notes:

(a) Lighting designs must be certified by a suitably qualified practising lighting engineer and must consist of two parts: illumination design and electrical supply reticulation design. City of Sydney (CoS) can only review electrical reticulation design once receiving final illumination designs.

(b) Lighting design submission requirements are specified in "Sydney Streets Technical Specifications A5: Street Lighting Design". Notes:

(c) Plans should show calculation points as per Australian Standards.

(d) Plans plot scale should not be smaller than 1:250 @ A1

(e) Provide a Calculation Summary table showing all relevant light technical parameters and compliance, including Maximum lux levels

(f) Highlight all areas of noncompliance

(g) If applicable, developers must submit site-specific structural footing designs certified by a practicing structural engineer for council review before footing construction.

(h) If applicable, provide temporary lighting complying with CoS public domain lighting specifications prior to removal of existing public lights.

(i) If applicable, undertake ASP works required to modify and remove redundant Ausgrid assets and carry out all electrical/civil works to ensure continuity of supply to the remainder of Ausgrid assets on the affected circuits.

(j) All works shall comply with the requirements of all applicable standards and guidelines, including (but not limited to) AS1158, AS4282, and the City of Sydney’s A5, B8 and Ausgrid NS119 documents.

(k) Any non-standard installation due to site constraint must be reviewed and approved by the CoS' Technical Services.

(l) All relevant engineering design plans (including electrical and lighting), design certificates, As-Builts plans, WAE plans, and construction certificates must be submitted for CoS review.

(m) For As-built plans, handover documents, testing and commissioning requirements to be referred to the City's technical specification A5.

(n) All new CoS lights must be connected to CoS’ nearest metered supply point (subject to suitability assessment by Developer’s electrical contractor). Otherwise, if required, supply and install a new CoS 3 phase MSB.

(o) All new CoS lights will have Schreder NEMA 7P smart controller, including mesh node and DataLift node. The smart controller will be supplied by Schreder and installed by electrical contractor.

(p) Asset ID process: Contractor to create Geodatabase details for each asset IDs using the template file supplied by CoS' GIS team. File will be issued to GIS team to review and uploaded after being verified.

(q) Wall mount lights: Installation must be accessible for maintenance and upgrade by CoS-authorised technicians/contractors along the entire length. All cabling shall be installed on the building surface within galvanised steel conduits, or a similar approved method. Establish an access easement in favour of CoS for ongoing maintenance and upgrade of wall-mounted council lighting, if applicable.

(r) If applicable, under-awning lighting must comply with the requirements of CoS Awnings Policy using new CoS' LED luminaires.

(s) Proposals for Building exterior lighting, signage lighting, terrace lighting and lighting of landscape features are to be assessed under a separate DA.

New Luminaries:

City of Sydney has approved and included new luminaires in its official list for new installation across the LGA.

(a) Vehicular and Local Road Categories:

(i) Philips RoadFlair PRO BRP593 LED96/840 60W DWV SR P7T SRB ANZ

(ii) Philips RoadFlair PRO BRP593 LED192/840 125W DWV SR P7T SRB ANZ

(iii) NSTAR MINI 840 5304GL DA ZH PES7 7043T 12W

(iv) Signify TownTune BDP260 LED27/840 SR I DX10 DGR P17 SRB

(b) Footpath and Cycleway, shared path:

(i) Signify TownTune BDP260 LED27/840 SR I DM10 DGR P17 SRB

(ii) Signify TownTune BDP260 LED27/840 SR I DM11 DGR P17 SRB

(c) Laneway, narrow streets:

(i) NEOS 1 LED 16L_600mA_HP2_STD5139ASGL01

Please contact the following to obtain photometric files:

- Signify Phillip:
  - Andrew Chase
  - Andrew.chase@signify.com
  - M: +61 411 258 509
- Schreder Sylvania
  - Belinda Sahlman
  - bsahlman@sylvania-schreder.com

- T: 1300 489 780 M: +61 412 802 880

Advice on site specific lighting requirements must be obtained from City's Public Domain Unit before proceeding with the preparation of any final lighting design proposals.

Reason

To ensure pedestrian and street lighting in the public domain complies with Council's requirements.

(49) DILAPIDATION REPORT – PUBLIC DOMAIN

Prior to an approval for demolition and preparatory works being granted or the issue of any Construction Certificate, whichever is earlier, a photographic recording of the public domain site frontages is to be prepared as described in the Public Domain Manual and submitted for approval by Council's Public Domain Unit. The City's *Public Domain Manual* is available for download from the City's website at https://www.cityofsydney.nsw.gov.au/

The submission is to include written confirmation, issued with the authority of both the applicant and the photographer that the City of Sydney is granted a perpetual non-exclusive license to make use of the copyright in all images supplied, including the right to make copies available to third parties as though they were Council images. The signatures of both the applicant and the photographer must be included.

Reason

To establish and document the condition of the public domain for comparison as building work progresses and is completed.

(50) WASTE AND RECYCLING MANAGEMENT – RESIDENTIAL

The Operational Waste Management Plan accompanying this Development Application has not been approved by this consent. An Operational Waste Management Plan is to be submitted to and reviewed by Council's City Cleansing & Resource Recovery Unit and approved by Council's Area Planning Manager prior to the issue of a Stage 3 Construction Certificate. The plan must comply with Council's Development Control Plan and *Guidelines for Waste Management in New Developments.* The plan must address:

(a) Updated architectural plans showing increased waste storage area for 21 x 1,100L bins

(b) Confirm that all residential bins will be presented in the loading dock on collection day blocking vehicle movement

Reason

To document agreed waste management facilities and arrangements and ensure good waste management outcomes.

(51) WASTE INFRASTRUCTURE – RESIDENTIAL

Prior to the issue of **Construction Certificate**, detailed plans, and specifications for the construction of waste management facilities must be submitted for review by Council's City Cleansing & Resource Recovery Unit and approved by Council's Area Planning Manager. The waste management facilities to be provided responsive to Council's controls, policies, and guidelines, including but not limited to:

(a) Waste and recycling stream(s) storage area(s) to be designed and constructed in accordance with Reference D of *Council's Guidelines for Waste Management in New Developments.*

(b) Waste chute system to be designed in accordance with Section B and Reference E of the City of Sydney Guidelines for Waste Management in New Developments.

Reason

To allow for the safe and hygienic storage of waste and recycling and support provision of a safe and efficient waste collection service.

(52) DILAPIDATION REPORT

(a) Subject to the receipt of permission of the affected landowner, dilapidation report/s, including a photographic survey of 148 Elizabeth Street (and any other properties identified by the qualified structural engineer engaged to undertake the report) are to be prepared by an appropriately qualified structural engineer prior to commencement of demolition/excavation works. A copy of the dilapidation report/s together with the accompanying photographs must be given to the above property owners, and a copy lodged with the Registered Certifier and the Council prior to the commencement of any demolition or the issue of a Construction Certificate, whichever is earlier.

UPON COMPLETION OF EXCAVATION/DEMOLITION

(b) A second Dilapidation Report/s, including a photographic survey must then be submitted at least one month after the completion of demolition/excavation works. A copy of the second dilapidation report/s, together with the accompanying photographs must be given to the above property owners, and a copy lodged with the Principal Certifier and the Council prior to the issue of any Occupation Certificate.

Any damage to buildings, structures, lawns, trees, sheds, gardens and the like must be fully rectified by the applicant or owner, at no cost to the affected property owner.

Note: Prior to the commencement of the building surveys, the applicant/owner must advise (in writing) all property owners of buildings to be surveyed of what the survey will entail and of the process for making a claim regarding property damage. A copy of this information must be submitted to Council.

Reason

To ensure that dilapidation reports are prepared and to identify damage to adjoining/nearby properties resulting from building work on the development site.

(53) MATERIALS AND SAMPLES BOARD

A physical material sample board which specifies all proposed materials, finishes and colours, (including visible rainwater goods and services) keyed to each building elevation must be submitted to and approved by Council's Director City Planning, Development and Transport prior to a Stage 4 Construction Certificate being issued.

The materials and samples board must not include generic material or colour descriptions or use terminology such as 'or similar'.

Reason

To require the submission of a materials and samples board following assessment of the development.

(54) LANDSCAPE OF THE SITE

(a) A detailed landscape design including plans and details drawn to scale, and technical specification, by a qualified landscape architect or landscape designer, must be submitted to and approved by Council's Area Coordinator Planning Assessments / Area Planning Manager prior to the issue of a Stage 5 Construction Certificate. These documents must include:

(i) Location of existing and proposed planting on the site including planting on structure.

(ii) Location and details of existing and proposed structures on the site including, but not limited to, paving, walls, services, furniture, shade structures, lighting and other features.

(iii) Details of earthworks and soil depths including finished levels and any mounding. The minimum soil depths for planting on structure must be 1000mm for trees, 450mm for shrubs and 200mm for groundcovers, excluding mulch and drainage layers.

(iv) Planting details, and location, numbers, type and supply size of plant species, with reference to Australian Standards and preference for drought resistant species that contribute to habitat creation and biodiversity.

(v) Details of drainage, waterproofing and watering systems.

(vi) Landscape maintenance plan. This plan is to be complied with during occupation of the property.

(b) All landscaping in the approved plan is to be complete prior to any Occupation Certificate being issued.

Reason

To ensure the development is supported by a good quality, buildable landscape scheme that meets the City's controls.

(55) REFLECTIVITY

Prior to issue of a Stage 4 Construction Certificate the Registered Certifier must ensure that the visible light reflectivity from building materials used on the facade of the building does not exceed 20%.

Reason

To ensure the development does not result in adverse reflectivity impacts and to protect the amenity of the public domain.

(56) INSTALLATION OF ARTWORK AND IMAGES ON SCAFFOLDING (DEMOLITION / CONSTRUCTION WRAPS)

(a) Where scaffolding is to be installed to undertake the proposed development an approved artwork / historic image installation must be provided on the scaffolding system to screen the development from the public place, minimise adverse visual impacts on the locality, add visual interest and public art in the streetscape.

(b) The installation must be printed, installed and maintained in accordance with the City's Code of Practice: Construction related Temporary Structures On and Above Roads. Details of the proposed installation must be submitted to and approved by Council prior to the issue of a construction certificate or work commencing.

Note: Refer to Table 1 and Clause 6.1.8 in Part 06 of the City's Code of Practice for further information and requirements.

Reason

To minimise adverse visual impacts on the locality.

(57) UTILITY SERVICES

To ensure that utility authorities are advised of the development:

(a) Prior to the issue of any Construction Certificate a survey is to be carried out of all utility services within and adjacent to the site including relevant information from utility authorities and excavation if necessary, to determine the position and level of services.

(b) Prior to the commencement of work the applicant is to obtain written approval from the utility authorities (e.g. Energy Australia, Sydney Water, and Telecommunications Carriers) in connection with the relocation and/or adjustment of the services affected by the construction of the underground structure. Any costs in the relocation, adjustment or support of services are to be the responsibility of the developer.

Reason

To ensure that utility authorities are advised of the development and their approval is obtained in connection with the relocation and/or adjustment of services affected by the development.

BEFORE BUILDING WORK COMMENCES

(58) SURVEY

All footings, walls and floor slabs adjacent to a boundary must be set out by a registered surveyor. On commencement of brickwork or wall construction a survey and report, prepared by a Registered Surveyor, must be submitted to the Principal Certifier indicating the position of external walls in relation to the boundaries of the allotment. Any encroachments by the subject building over adjoining boundaries or roads must be removed prior to continuation of building construction work.

Reason

To ensure the development does not encroach onto neighbouring properties.

(59) CHECK SURVEYS DURING CONSTRUCTION

Prior to the concrete pour of the main slab at each level, a survey shall be made by a surveyor registered under the Surveying and Spatial Information Act, 2002, confirming that the formwork adjacent to existing or proposed boundaries is clear of those existing or proposed boundaries and is in accordance with approved setbacks and levels. This survey shall be provided to the Principal Certifier prior to the concrete pour. The concrete pour must not take place until the Principal Certifier receives a survey proving that the formwork has been constructed within the existing and proposed boundaries of the site, and is compliant with the setbacks and levels approved under this consent.

Reason

To ensure the development does not encroach onto neighbouring properties.

(60) PUBLIC DOMAIN WORK – CONSTRUCTION APPROVAL UNDER SECTION 138 ROADS ACT 1993

Prior to the construction of any public domain works, approval under Section 138 / 139 of the Roads Act 1993 must be issued by the City's Public Domain Unit.

Reason

To ensure relevant approvals for public domain work are obtained.

(61) OPERATING HOISTING DEVICES INCLUDING BUILDING MAINTENANCE UNITS OVER A PUBLIC ROAD

If it is proposed to install a building maintenance unit or operate a hoisting device above a road (typically footways) including swinging, hoisting material/equipment and slewing any part of the device, a separate application under Section 68 of the *Local Government Act 1993* and Sections 138/139 of the *Roads Act 199*3 must be submitted to and approved by Council prior to the installation of such devices.

Note 1: Building maintenance unit means a power operated suspended platform and associated equipment on a building specifically designed to provide permanent access to the faces of the building for maintenance (*Work Health and Safety Regulation 2025*).

Note 2: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure appropriate approvals are sought for operating hoisting devices.

(62) DEMOLITION, EXCAVATION AND CONSTRUCTION MANAGEMENT

(a) Prior to the commencement of demolition and/or excavation work the following details must be submitted to and be approved by the Principal Certifier:

(i) Plans and elevations showing distances of the subject building from the location of adjoining and common/party walls, and (where applicable) the proposed method of facade retention.

(ii) A Demolition Work Method Statement prepared by a licensed demolisher who is registered with SafeWork NSW. (The demolition by induced collapse, the use of explosives or on-site burning is not permitted.)

(iii) An Excavation Work Method Statement prepared by an appropriately qualified person.

(iv) A Waste and Recycling Management Plan – Demolition and Construction for the demolition and or excavation of the proposed development. The plan is to include details of materials that will be excavated and their proposed destination or reuse.

(v) Plans and elevations showing the location, construction and installation of temporary site fencing and any construction related temporary structures placed on and/or above roads used in connection with the development.

Note: Construction related temporary structures, including hoardings and scaffolding, proposed for erection on and/or above City-owned and controlled land (footways and roadways), and other activities, must comply with Council's Code of Practice: Construction related Temporary Structures On and Above Roads and the Code of Practice: Hoisting and Construction Activities On and Above Roads including obtaining all required approvals from Council under the provisions of the Local Government Act 1993 and the Roads Act 1993 prior to installation.

(b) Such statements must, where applicable, be in compliance with AS2601-2001 Demolition of Structures, the *Work, Health and Safety Act 2011* and Regulation; Council's *Guidelines for Waste Management in New Developments 2018*, the *Waste Avoidance and Resource Recovery Act 2001*, and all other relevant acts and regulations and must include provisions for:

(i) A Materials Handling Statement for the removal of refuse from the site in accordance with the *Waste Avoidance and Resource Recovery Act 2001*.

(ii) The name and address of the company/contractor undertaking demolition/excavation works.

(iii) The name and address of the company/contractor undertaking off site remediation/disposal of excavated materials.

(iv) The name and address of the transport contractor.

(v) The type and quantity of material to be removed from site.

(vi) Location and method of waste disposal and recycling.

(vii) Proposed truck routes, in accordance with this development consent.

(viii) Procedures to be adopted for the prevention of loose or contaminated material, spoil, dust and litter from being deposited onto the public way from trucks and associated equipment and the proposed method of cleaning surrounding roadways from such deposits. (Note: With regard to demolition of buildings, dust emission must be minimised for the full height of the building. A minimum requirement is that perimeter scaffolding, combined with chain wire and shade cloth must be used, together with continuous water spray during the demolition process. Compressed air must not be used to blow dust from the building site).

(ix) Measures to control noise emissions from the site.

(x) Measures to suppress odours.

(xi) Enclosing and making the site safe.

(xii) Induction training for on-site personnel.

(xiii) Written confirmation that an appropriately qualified Occupational Hygiene Consultant has inspected the building/site for asbestos, contamination and other hazardous materials, in accordance with the procedures acceptable to SafeWork NSW.

(xiv) An Asbestos and Hazardous Materials Clearance Certificate by a person approved by the SafeWork NSW.

(xv) Disconnection of utilities.

(xvi) Fire Fighting. (Fire fighting services on site are to be maintained at all times during demolition work. Access to fire services in the street must not be obstructed).

(xvii) Access and egress. (Demolition and excavation activity must not cause damage to or adversely affect the safe access and egress of the subject building or any adjacent buildings).

(xviii) Waterproofing of any exposed surfaces of adjoining buildings.

(xix) Control of water pollution and leachate and cleaning of vehicles tyres (proposals must be in accordance with the *Protection of the Environmental Operations Act 1997*).

(xx) Working hours, in accordance with this development consent.

(xxi) Any SafeWork NSW requirements.

(c) The approved work method statements and a waste management plan as required by this condition must be implemented in full during the period of construction.

(d) All waste records from the recycling and/or disposal of any demolition and construction waste generated from the works must be retained on site. These records must be available for sighting on request by an authorised Council officer.

Reason

To ensure that impacts arising from demolition, excavation and construction are appropriately managed.

(63) ROAD OPENING APPLICATION

A separate road opening application under Sections 138/139 of the *Roads Act 1993* must be submitted to and approved by Council prior to the commencement of any:

(a) excavation in or disturbance of a public way, or

(b) excavation on land that, if shoring were not provided, may disturb the surface of a public road (including footpath).

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure that approval under the Roads Act is obtained.

(64) CONNECTION TO SEWERS OF SYDNEY WATER CORPORATION

Wastewater arising from the use must be directed to the sewers of the Sydney Water Corporation (SWC) under a Trade Waste License Agreement. The pre-treatment of wastewater may be a requirement of the Corporation prior to discharge to the sewer. Details of the Corporation's requirements should be obtained prior to the commencement of construction work.

Reason

To ensure wastewater is managed appropriately.

(65) APPLICATION FOR HOARDINGS AND SCAFFOLDING INSTALLED ON AND/OR ABOVE A PUBLIC ROAD AND OPERATING HOISTING DEVICES INCLUDING BUILDING MAINTENANCE UNITS OVER A PUBLIC ROAD

(a) Where a hoarding and/or scaffolding (temporary structures) are proposed to be installed on or above a road reservation (footway and/or roadway), a separate application under Section 68 of the *Local Government Act 1993* and Sections 138/139 of the *Roads Act 1993* must be submitted to and approved by Council for such structures.

(b) Where an approval (Permit) is granted allowing the placement of construction related temporary structures (hoardings/scaffolding) on and/or above a public road the structures must comply fully with Council's Code of Practice: Construction related Temporary Structures On and Above Roads*;* and the conditions of approval (Permit) granted including:

(i) maintaining a current and valid approval for the full duration that the temporary structure/s is in place;

(ii) maintaining temporary structure/s in a structurally sound and stable condition for the full duration of installation (Clause 2.8);

(iii) bill posters and graffiti being removed within 24 hours of their placement (Clause 2.12.2);

(iv) maintaining temporary structures and the public space adjoining the worksite in a clean and tidy condition including repainting and/or repair of graphics (Clauses 2.12.2, 2.12.1(d), 3.8.17(c), and 3.10.2(g));

(v) maintaining a watertight deck (Type-B hoardings) to prevent liquids including rainwater, falling onto the footway/roadway surfaces (Clauses 3.5.2(h) and 3.11.3);

(vi) approved site sheds and equipment on the decks of a Type-B hoarding being fully screened from the public place (Clause 3.5.2(c));

(vii) material and equipment not being placed or stored on the deck of Type-B hoardings, unless specifically approved by Council (Clause 3.15.5(a));

(viii) providing and maintaining operational artificial lighting systems under Type-B hoardings including at high-bay truck entry points (Clause 3.16); and

(ix) ensuring all required signage, artwork or historic images are provided and fully maintained to the City's requirements (Part 06).

If it is proposed to operate a hoisting device including a building maintenance unit above a public road which swings, hoists material/equipment and/or slews/wind vanes any part of the device over the public road, a separate application under Section 68 of the *Local Government Act 1993* and Sections 138/139 of the *Roads Act 1993* must be made to Council to obtain approval.

Note 1: 'Building maintenance unit' means a power-operated suspended platform and associated equipment on a building specifically designed to provide permanent access to the faces of the building for maintenance (*Work Health and Safety Regulation 2025*).

Note 2: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure the necessary approval is obtained for construction related temporary structures and hoisting activities over a public road.

(66) OTHER REQUIRED APPROVALS

Any structure, attachment or activity which is proposed to be undertaken in, on or above a road reserve or the public domain (including a public footway) must have separate approval(s) obtainable through the lodgement of an application under Section 68 of the Local Government Act 1993 and/or Section 138/139 of the Roads Act 1993 prior to the commencement of work/activities within the road reserve/public domain. Such activities include but not limited to:

(a) installation of construction-related temporary structures including hoardings/scaffolding which must comply with the Code of Practice; Construction related Temporary Structures On and Above Roads;

(b) installation and/or alterations to advertising/business signs;

(c) installation and/or alterations to street awnings;

(d) crane operation and hoisting activities over roads and which must comply with the Code of Practice: Hoisting and Construction Activities On and Above Roads;

(e) temporary works (e.g. barricading, road openings, mobile hoisting devices) which must comply with Code of Practice: Hoisting and Construction Activities On and Above Roads;

(f) works zones (for loading and unloading from the roadway); and

(g) temporary ground-anchoring and shoring to support a roadway when excavating; and

(h) any other structure or encroachment including facade elements/architectural features.

Reason

To ensure use of a public place is managed appropriately.

DURING BUILDING WORK

(67) ASBESTOS REMOVAL WORKS

(a) All works removing asbestos containing materials must be carried out by a suitably licensed asbestos removalist duly licensed with Safework NSW, holding either a Friable (Class A) or a Non-Friable (Class B) Asbestos Removal Licence which ever applies.

A copy of the relevant licence must be made available to any authorised Council officer on request within 24 hours.

(b) Five days prior to the commencement of licensed asbestos removal, Safework NSW must be formally notified of the works. All adjoining properties and those opposite the development must be notified in writing of the dates and times when asbestos removal is to be conducted. The notification must identify the licensed asbestos removal contractor and include a contact person for the site together with telephone number and email address.

(c) All work must be carried out in accordance with the *Work Health and Safety Regulation 2025* and the NSW Government and SafeWork NSW document entitled *How to manage and control asbestos in the work place: Code of Practice (Safework NSW)* December 2011 and the *City of Sydney Managing Asbestos Policy dated 21 October 2013 and associated guidelines.*

(d) The asbestos removalist must use signs and barricades to clearly indicate the area where the asbestos removal work is being performed. Signs must be placed in positions so that people are aware of where the asbestos removal work area is and should remain in place until removal is completed and clearance to reoccupy has been granted. Responsibilities for the security and safety of the asbestos removal site and removal must be specified in the asbestos removal control plan (where required). This includes inaccessible areas that are likely to contain asbestos.

(e) Warning signs must be placed so they inform all people nearby that asbestos removal work is taking place in the area. Signs must be placed at all of the main entry points to the asbestos removal work area where asbestos is present. These signs must be weatherproof, constructed of light-weight material and adequately secured so they remain in prominent locations. The signs must be in accordance with AS 1319 -1994 *Safety Signs for the Occupational Environment* for size, illumination, location and maintenance.

(f) Asbestos waste must only be transported and disposed of at an EPA licensed waste facility.

(g) No asbestos products are to be reused on the site (i.e. packing pieces, spacers, formwork or fill etc).

(h) No asbestos laden skips or bins are to be left in any public place without the written approval of Council.

(i) A site notice board must be located at the main entrance to the site in a prominent position and must have minimum dimensions of 841mm x 594mm (A1) with any text on the notice to be a minimum of 30 point type size.

The site notice board must include the following:

(i) contact person for the site;

(ii) telephone and facsimile numbers and email address; and

(iii) site activities and time frames.

Reason

To ensure that the handling and removal of asbestos from the site is appropriately managed.

(68) COMPLIANCE WITH DEMOLITION, EXCAVATION & CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN

(a) All works conducted on site which form part of this development must be carried out in accordance with the submitted Demolition, Excavation and Construction Management Plan approved in this consent.

(b) Where all such control measures have been implemented and the resultant noise and/ or vibration levels at any sensitive receiver still exceed the council's applicable criteria stated in the Construction Hours/Noise Code 1992 and are giving rise to sustained complaints then the contractor must provide regular, appropriate and sustained periods of respite in consultation with Council's Health and Building unit. Approval to vary the authorised noise and vibration levels must be received in writing by the proponent from Council prior to activities being undertaken that exceed sanctioned emission levels. (Use where respite periods not specified under the approved DEC NMP)

Such periods must be set and agreed to by Council's Health and Building Unit.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure all parties are aware of the supporting documentation that applies to the development.

(69) ARCHAEOLOGICAL DISCOVERY DURING EXCAVATION

(a) Should any relics be unexpectedly discovered on the site during excavation, all excavation or disturbance to the area is to stop immediately and the Heritage Council of NSW should be informed in accordance with section 146 of the Heritage Act 1977.

(b) Should any Aboriginal objects be unexpectedly discovered then all excavation or disturbance of the area is to stop immediately and NSW Government Office of Environment and Heritage is to be informed in accordance with Section 89A of the *National Parks and Wildlife Act 1974.*

(c) Should any archaeological remains or Aboriginal objects be discovered, a copy of recording of the finds and the final archaeological summary report is to be submitted to Council prior to the issue of any Occupational Certificate.

(d) If the discovery is on Council's land, Council must be informed.

Reason

To ensure that the archaeology of the site is appropriately managed and protected.

(70) NOTIFICATION – NEW CONTAMINATION EVIDENCE

(a) Council and the Certifier must be notified immediately of any new information which arising during remediation, demolition or construction works which has the potential to alter previous conclusions about site contamination.

(b) Once identified, remediation, demolition or construction work must immediately cease.

(c) A certified environmental consultant must be appointed to undertake an assessment of the potential contaminants and works required to make the site safe from potential human health and environmental harm.

(d) If the duty to report contamination to the NSW EPA under Section 60 of the Contaminated Land Management Act 1997 is triggered, the NSW EPA and Council must be notified immediately.

Reason

To ensure that any new contamination evidence or unexpected finds is reported and the site is appropriately remediated.

(71) IMPORTED FILL MATERIALS

(a) All fill material imported to the site must be certified and validated by a certified environmental consultant. It should be accompanied by documentation from the consultant that confirms its classification and suitability for the intended use. The fill must also be compatible with the existing soil characteristics to support site drainage.

(b) Imported fill must be limited to the following:

(i) Virgin excavated natural material (VENM), classified in accordance with the Protection of the Environment Operations Act 1997.

(ii) Excavated natural material (ENM), certified in accordance with the Protection of the Environment Operations (Waste) Regulation 2014.

(iii) Waste-derived materials subject to a Resource Recovery Exemption under Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 and recognised by the NSW EPA as “fit for purpose” for the proposed development.

(c) Any waste-derived material received under a resource recovery exemption must be accompanied by documentation from the NSW EPA confirming compliance with the exemption conditions. This documentation must be provided to the Certifier and Council:

(i) Upon request.

(ii) Before the commencement of works under the Protection of the Environment Operations Act.

(iii) Before the issue of a construction certificate or occupation certificate or

(iv) As part of the validation report for the remediation, as applicable.

(d) All imported fill must be accompanied by certification from the supplier confirming the material is not contaminated, based on analysis of the source site’s history and/or sampling and analysis must be conducted in accordance with the NSW EPA (2022) Sampling Design Guidelines.

(e) Any existing soils proposed for reuse onsite must be analysed and classified by a suitably qualified and experienced environmental consultant. This assessment must follow the relevant NSW EPA guidelines and the National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended in 2013), to confirm suitability for the proposed land use. The results must be included in the validation report for the remediation

Reason

To ensure that imported fill is not contaminated.

(72) CLASSIFICATION OF WASTE

(a) All excavated material removed from the site must be classified in accordance with the EPA’s Waste Classification Guidelines before it is disposed of at an approved waste management facility or otherwise lawfully managed.

(b) The classification, and the volume of material removed, and the receival facility’s details must be reported to the Certifier or Council (where a Certifier is not required).

Reason

To ensure that waste from site is classified and disposed of appropriately.

(73) DISCHARGE OF CONTAMINATED GROUNDWATER

(a) Contaminated groundwater must not be discharged into the City's stormwater drainage system.

(b) Options for the disposal of groundwater include disposal to sewer with prior approval from Sydney Water or off-site disposal by an EPA NSW licensed liquid waste contractor and disposed of by transporter to an appropriate licensed waste treatment/processing facility.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure that the discharge of ground water is appropriately managed.

(74) STOCKPILES

(a) Soil or other materials must not be stockpiled on footpaths or nature strips without prior written approval from Council.

(b) All stockpiles must be managed to prevent contamination of the underlying soil.

(c) Potentially contaminated soil must be stockpiled on a hardstand surface or over polyethylene sheeting.

(d) Stockpiles must:

(i) Be bunded to prevent runoff of potentially contaminated materials.

(ii) Be stabilised through compaction and contouring to minimise wind exposure and allow access for water trucks.

(iii) Not exceed the height of perimeter fencing to assist in controlling dust and odour emissions.

(iv) Be clearly labelled with a unique identification number and include records of the soil's volume and origin to enable tracking from excavation to final disposal or reuse.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure that stockpiles of soil or other materials are appropriately managed.

(75) PUBLIC DOMAIN WORKS SECURITY BOND

A Public Domain Works Security Bond will be required for the public domain works and for repairing damage that may be caused to the public domain in the vicinity of the site, in accordance with the City of Sydney's adopted fees and charges and the Public Domain Manual.

The City's Public Domain Unit must be contacted to determine the bond amount prior to lodgement. The bond must be lodged with the City prior to an approval being issued for the approval of the Public Domain Plan.

The bond will be retained in full until all public domain works, including rectification of damage to the public domain, are completed to City's standards and approval and the required works-as-executed documentation are approved. On satisfying the above requirements, and the issue of the Public Domain Works Letter of Completion Operational Acceptance by the City, 90% of the bond will be released. The remaining 10% will be retained for the duration of the specified Defects Liability Period.

Reason

To ensure public domain works are completed and any damage to the public domain is rectified.

(76) DRAINAGE AND SERVICE PIT LIDS

All existing or proposed drainage and service pit lids throughout the public domain must be to City of Sydney specifications and heel/bicycle safe, slip resistant, infill with material to match surrounding surface, finished flush with the adjacent pavement to avoid trip hazards and be clear of obstructions for easy opening and cleaning. Infill pit lids are to be detailed where specified by Council's Public Domain Officer. Private pits are not permitted within the public domain. All details of pit lids must be shown on the public domain plan and must be approved by the City's Public Domain Unit prior to the issue of an approval for public domain works.

Reason

To ensure drainage and service pit lids within the public domain are appropriately designed and installed.

(77) PUBLIC DOMAIN PLAN DETAILED DOCUMENTATION FOR CONSTRUCTION

A detailed public domain plan and all relevant documentation must be submitted to and approved by City's Public Domain Unit prior to the construction of any public domain works. This Plan must document all works required to ensure that the public domain upgrade work complies with the City's specifications and requirements, as outlined in documents such as City of Sydney's *Public Domain Manual*, *Sydney Streets Code, Sydney Street Tree Masterplan, Sydney Lights: Public Domain Design Code and Sydney Streets Technical Specification*. The documentation must be *checked, accurate, and comply with specified requirement*s. Plans must be based on an accurate survey prepared, signed and dated by a registered surveyor, to scale and fully coordinated across all disciplines and submissions. The supplied documentation must be for Construction issue and will be approved under Section 138 of the Roads Act.

The Public Domain Manual and all other relevant documents are available for download from Council's website at https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works.

The Public Domain Plan documentation must be submitted with an Application for Public Domain Plan Assessment and include the approved Public Domain Levels and Gradients documentation. If the proposed detailed design of the public domain requires changes to any previously approved levels, details must be submitted for approval with the public domain plan and additional fees may apply.

Reason

To ensure the public domain complies with Council's requirements.

(78) HOLD POINTS

Prior to an approval being issued for the construction of public domain and / or planning agreement works, including civil, drainage and subsurface works, a set of hold points will be provided by the City's Public Domain Unit in accordance with the City's Public Domain Manual and Sydney Streets Technical Specification. The list of hold point inspections will be included in the Public Domain works approval letter.

These hold point inspections must be adhered to during construction works. Prior to the issue of any Occupation Certificate, confirmation from the City's Public Domain Unit, that hold point inspections have been completed and works have been accepted by the City must be provided to the Principal Certifier.

Reason

To ensure hold points are adhered to during construction works.

(79) STORMWATER DRAINAGE CONNECTION

For approval of a connection into the City of Sydney's drainage system an "*Application for Approval of Stormwater Drainage Connections*" must be submitted to the City, together with an application fee in accordance with the City of Sydney's adopted Schedule of Fees and Charges. This must be approved prior to approval being issued for the construction of public domain work.

Reason

To ensure approval of connection into the Council's drainage system is sought.

(80) PUBLIC DOMAIN LIGHTING RETICULATION

Prior to the issue of any relevant approval for the construction of public domain works, a detailed Public Domain Lighting Reticulation Plan for pedestrian and street lighting in the public domain must be submitted to and approved by the City's Public Domain Unit in accordance with the City's *Sydney Lights Design Code, Sydney Streets Code, Sydney Streets Technical Specification* and *Public Domain Manual*.

The Public Domain Manual and all other relevant documents are available for download from Council's website at https://www.cityofsydney.nsw.gov.au/development/public-domain-works/da-associated-works.

If applicable, this public domain lighting documentation must include pole footing locations and structural details, location and details of underground electrical reticulation including connections and conduits, pit cabling and certifications as described in the City's *Public Domain Manual.* The public domain lighting is to be superimposed on the public domain plan to show any conflicts between lighting and the proposed landscape design.

Reason

To ensure the public domain lighting documentation complies with Council requirements.

(81) HOURS OF WORK AND NOISE – CBD

The hours of construction and work on the development must be as follows:

(a) All work, including demolition, excavation and building work, and activities in the vicinity of the site generating noise associated with preparation for the commencement of work (eg loading and unloading of goods, transferring of tools etc) in connection with the proposed development must only be carried out between the hours of 7.00am and 7.00pm on Mondays to Fridays, inclusive, and 7.00am and 5.00pm on Saturdays, and no work must be carried out on Sundays or public holidays.

(b) All work, including demolition, excavation and building work must comply with the City of Sydney Code of Practice for Construction Hours/Noise 1992 and Australian Standard 2436-2010 Guide to Noise Control on Construction, Maintenance and Demolition Sites.

(c) Notwithstanding the above, the use of a crane for special operations, including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on site tower cranes which warrant the on-street use of mobile cranes outside of above hours can occur, subject to a separate application being submitted to and approved by Council under Section 68 of the Local Government Act 1993 and Sections 138/139 of the Roads Act 1993.

Note: Works may be undertaken outside of hours, where it is required to avoid the loss of life, damage to property, to prevent environmental harm and/or to avoid structural damage to the building. Written approval must be given by the Construction Regulation Team, prior to works proceeding.

The *City of Sydney Code of Practice for Construction Hours/Noise 1992* allows extended working hours subject to the approval of an application in accordance with the Code and under Section 4.55 of the *Environmental Planning and Assessment Act 1979*.

Note: Refer also to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To protect the amenity of the surrounding area.

(82) SITE NOTICE OF PROJECTS DETAILS AND APPROVALS

A site notice is to be prominently displayed at the boundary to each frontage of the site for the purposes of informing the public of appropriate project details and relevant approvals. The notice(s) is to satisfy all of the following requirements:

(a) Minimum dimensions of the notice are to measure 841mm x 594mm (A1) with any text on the notice to be a minimum of 30 point type size;

(b) The notice is to be durable and weatherproof and is to be displayed throughout the construction period;

(c) A copy of the first page of the development approval, building approval (including any modifications to those approvals) and any civic works approvals is to be posted alongside the notice in weatherproof casing;

(d) The approved hours of work, the Principal Certifier including contact address and certification details, the name of the site manager, the responsible managing company, its address and 24 hour contact phone number for any enquiries, including construction/noise complaint, and the estimated date of completion of the project are to be displayed on the site notice;

(e) The notice(s) is to be mounted at eye level on the perimeter hoardings and is also to state that unauthorised entry to the site is not permitted.

(f) All notices and signs must be displayed in locations as specified in the City's Code of Practice: Construction related Temporary Structures On and Above Roads.

Reason

Prescribed condition EP&A Regulation 2021, Section 70.

(83) USE OF HIGH NOISE EMISSION APPLIANCES / PLANT

(a) The operation of high noise emission appliances, plant and/or machinery such as pile – drivers, rock breakers and hydraulic hammers and those which are not listed in Groups B, C, D, E or F of Schedule 1 of the *City of Sydney Code of Practice for Construction Hours/Noise 199*2 and Australian Standard 2436-2010 *Guide to Noise Control on Construction, Maintenance and Demolition Sites* is restricted to the hours of:

(i) Mondays to Fridays - 8am to 12pm and 1pm to 5pm

(ii) Saturdays - 8am to 1pm

(iii) Sundays and Public Holidays - No work

(b) All reasonable and feasible steps must be undertaken to ensure that the work, including demolition, excavation and building complies with the *City of Sydney Code of Practice for Construction Hours/Noise 1992* and Australian Standard 2436- 2010 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*.

Reason

To protect the amenity of the surrounding area.

(84) NOTIFICATION OF EXCAVATION WORKS OR USE OF HIGH NOISE EMISSION APPLIANCES/PLANT

The immediately adjoining neighbours must be given a minimum of 48 hours notice that excavation, shoring or underpinning works or use of high noise emission appliances / plant are about to commence.

Reason

To protect the amenity of the surrounding area.

(85) EROSION AND SEDIMENT CONTROL

The Soil and Water Management Plan (SWMP) or Erosion and Sediment Control Plan (ESCP) which has been approved by the Principal Certifier must be implemented in full during the construction period.

During the construction period:-

(a) erosion and sediment controls must be regularly inspected, repaired and maintained in working order sufficient for a 10 year Average Recurrence Interval (ARI) rainfall event;

(b) erosion and sediment control signage available from Council must be completed and attached to the most prominent structure visible at all times when entering the site for the duration of construction; and

(c) building operations and stockpiles must not be located on the public footway or any other locations which could lead to the discharge of materials into the stormwater system.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure no substance other than rainwater enters the stormwater system and waterways.

(86) HAZARDOUS AND INDUSTRIAL WASTE

Hazardous and/or industrial waste arising from the demolition/operational activities must be removed and/or transported in accordance with the requirements of the NSW Work Cover Authority pursuant to the provisions of the following:

(a) *Protection of the Environment Operations Act 1997*

(b) *Protection of the Environment Operations (Waste) Regulation 2005*

(c) *Waste Avoidance and Resource Recovery Act 2001*

(d) *Work Health and Safety Act 2011*

(e) *Work Health and Safety Regulation 2017.*

Reason

To ensure hazardous/ industrial waste is managed appropriately.

(87) COVERING OF LOADS

All vehicles involved in the excavation and/or demolition process and departing the property with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information and requirements.

Reason

To ensure loads are managed appropriately and do not impact local amenity.

(88) VEHICLE CLEANSING

Prior to the commencement of work, suitable measures are to be implemented to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site. It is an offence to allow, permit or cause materials to pollute or be placed in a position from which they may pollute waters.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information and requirements.

Reason

To ensure sediment is not tracked onto the roadway.

(89) LOADING AND UNLOADING DURING CONSTRUCTION

The following requirements apply:

(a) All loading and unloading associated with construction activity must be accommodated on site, where possible.

(b) If, it is not feasible for loading and unloading to take place on site, a Works Zone on the street may be considered by Council.

(c) A Works Zone may be required if loading and unloading is not possible on site. If a Works Zone is warranted an application must be made to Council at least 8 weeks prior to commencement of work on the site. An approval for a Works Zone may be given for a specific period and certain hours of the days to meet the particular need for the site for such facilities at various stages of construction. The approval will be reviewed periodically for any adjustment necessitated by the progress of the construction activities.

(d) Where hoisting activity over the public place is proposed to be undertaken including hoisting from a Works Zone, a separate application under Section 68 of the Local Government Act 1993 and Sections 138/139 of the Roads Act 1993 must be submitted to and approved by Council.

Note: Refer also to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To protect the amenity of the public domain.

(90) NO OBSTRUCTION OF PUBLIC WAY

Unless otherwise approved by Council, the public way must not be obstructed by any materials, vehicles, waste receptacles, skip-bins or the like. Non-compliance with this requirement may result in the issue of a notice by Council to stop all work on the site.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To protect the amenity of the public domain.

(91) USE OF MOBILE CRANES

The following requirements apply:

(a) Mobile cranes operating from the road must not be used as a method of demolishing or constructing a building.

(b) For special operations including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on site tower cranes which warrant the on-street use of mobile cranes, permits must be obtained from Council for the use of a mobile crane. The permits must be obtained 48 hours beforehand for partial road closures which, in the opinion of Council will create minimal traffic disruptions and 4 weeks beforehand in the case of full road closures and partial road closures which, in the opinion of Council, will create significant traffic disruptions.

(c) The use of a crane for special operations, including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on site tower cranes which warrant the on-street use of mobile cranes outside of approved hours of construction can occur, subject to a separate application being submitted to and approved by Council under Section 68 of the Local Government Act 1993 and Sections 138/139 of the Roads Act 1993.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure mobile cranes are used appropriately.

BEFORE ISSUE OF AN OCCUPATION CERTIFICATE

(92) SURVEY CERTIFICATE AT COMPLETION

Prior to the issue of any Occupation Certificate, a Final Survey Plan and Certificate prepared and signed by a Surveyor, registered under the Surveying & Spatial Information Act, 2002 must be submitted at the completion of the building work certifying the location and height of the building, and showing offsets, in relation to the boundaries of the allotment.

Reason

To ensure the development does not encroach onto neighbouring properties and is in accordance with the approved plans.

(93) VERIFICATION OF ACOUSTIC REPORT PRIOR TO OCCUPATION CERTIFICATE

Prior to the issue of any occupation certificate, the Certifier must ensure the following:

(a) A suitably qualified acoustic consultant must be appointed in accordance with the definition noted in the City of Sydney - Environmental Noise Technical Requirements, dated October 2025.

(b) The consultant must inspect and review the completed development and ensure that:

(i) The final building work is assessed for compliance with the relevant acoustic Construction Certificate(s), the approved acoustic report, and all applicable noise-related conditions and documentation of this consent.

(ii) Any non-compliances identified under (i) above are documented in writing, with specific reference to the relevant acoustic criteria, and must include a scope of work necessary to rectify the issues and achieve compliance.

(iii) All requirements under this clause are completed to the written satisfaction of the Certifier.

(c) Following completion of item (b), the consultant must notify the Certifier in writing of any identified non-compliances.

Reason

To ensure the development complies with construction and fit out plans and the relevant standards in the approved acoustic report.

(94) WASTE AND RECYCLING MANAGEMENT – RESIDENTIAL

(a) Prior to the issue of an **Occupation Certificate**, Council's review and written approval of the as-built waste infrastructure, facilities, and vehicle access is required. The City Cleansing & Resource Recovery Unit of Council must be satisfied that:

(i) All waste management facilities, storage, and collection infrastructure comply with the stamped plans, approved Operational Waste Management Plan and Council's *Guidelines for Waste Management in New Developments*, the City of Sydney's DCP, and the developments Conditions of Consent.

(ii) All waste rooms, corridors, doors, and gates to be accessed by Councils collection contractor(s) are to be fitted and accessible via Council's master key system. Specifications of locks, barrels, and supporting infrastructure are to be submitted to Council's City Cleansing & Resource Recovery Unit.

(b) Site inspections are to be conducted by Council's City Cleansing & Resource Recovery Unit to review the site on-site waste collection, storage and loading bay infrastructure prior to the issue of an **Occupation Certificate**. The inspections are to be conducted a minimum 6-months prior to projects anticipated construction completion. Prior to the inspection an electronic copy of the latest architectural plans are to be submitted.

(c) An updated Operational Waste Management Plan is to be submitted to Council's City Cleansing & Resource Recovery Unit that aligns with the latest version of architectural plans and waste related updates identified during the site inspections. The plan is to be reviewed by Council's City Cleansing & Resource Recovery Unit and approved by Council's Area Planning Manager prior to the issue of an **Occupation Certificate**.

(d) The developer is to enter into a formal agreement with the City of Sydney Council for the utilisation of Councils Waste Collection Service. A signed agreement is to be submitted to Council's City Cleansing & Resource Recovery unit prior to the issue of an **Occupation Certificate**.

(e) The assigned facilities manager for the development and direct contact details are to be provided to Council's City Cleansing & Resource Recovery Unit prior to the issue of an **Occupation Certificate**.

Reason

To ensure that facilities and arrangements are in place to enable the provision of a safe and efficient waste collection service responsive to Council's policies and contractual service provisions.

(95) COMPLIANCE WITH HAZARDOUS MATERIALS SURVEY REPORT

(a) All of the recommendations for management and/or removal of hazardous materials on the site, as outlined in the Hazardous Materials Survey Report prepared by JBS&G, Ref. 165,933 Rev 1 dated 26th May 2025, as approved must be complied with.

(b) Prior to the issue of any Occupation Certificate, certification must be submitted to the Principal Certifier from a certified Occupational Hygienist (*Australia Institute of Occupational Hygienists*) confirming that all hazardous materials identified have been contained, managed or removed in accordance with the recommendations given in the approved Hazardous Materials Survey Report and that the site is safe for future occupation in accordance with the approved use.

Reason

To ensure that hazardous materials on the site are appropriately managed.

(96) PUBLIC DOMAIN WORKS COMPLETION

The Public Domain works are to be constructed in accordance with the Public Domain Works Approval letter, stamped plans for Public Domain Levels and Gradients, Stormwater, Public Domain Lighting, the City's *Public Domain Manual,* Stormwater *Drainage Manual, Sydney Lights Design Code* and *Sydney Streets Technical Specification.*

The public domain work must be inspected and a Public Domain Work Letter of Completion Operational Acceptance must be issued by Council's Public Domain Officer prior to the issue of any Occupation Certificate or before the commencement of use, whichever is earlier.

Reason

To ensure the public domain works are completed in accordance with the approved documents and Council's requirements.

(97) PUBLIC DOMAIN COMPLETION – WORK AS EXECUTED DOCUMENTATION

Prior to a Public Domain Works Letter of Completion Operational Acceptance being issued for public domain works, works-as-executed (As-Built) plans and documentation, must be submitted to and accepted by the City of Sydney for all public domain works, including where required Stormwater, Public Domain Lighting and road construction. These works must be certified by a suitably qualified, independent professional. Details of the documentation required for approval will be advised by the City's Public Domain Unit.

Reason

To ensure Council receives works-as-executed documentation for public domain works.

(98) STORMWATER COMPLETION DEED OF AGREEMENT AND POSITIVE COVENANT

Prior to the issue of any Occupation Certificate:

(a) The Owner is required to enter into a Deed of Agreement (Stormwater Deed) with the City of Sydney and obtain registration of Title of a Positive Covenant for all proposed connections to the City's underground drainage system. The deed and positive covenant will contain terms reasonably required by the City and will be drafted by the City's Legal Services Unit at the cost of the applicant, in accordance with the City's Fees and Charges.

(b) A Positive Covenant must be registered on the property title for all drainage systems involving On-Site Detention (OSD) to ensure maintenance of the approved OSD system regardless of the method of connection. The positive covenant will contain terms reasonably required by the City and will be drafted by the City's solicitor at the cost of the applicant, in accordance with the City's Fees and Charges.

Reason

To protect underground drainage system.

(99) SURVEY INFRASTRUCTURE – RESTORATION

(a) Prior to any Occupation Certificate being issued for the development, documentary evidence of restoration must be prepared by a Registered Surveyor and submitted to and approved by Council's Area Planning Manager / Coordinator. This evidence must include:

(i) Certification that all requirements requested under the Surveyor-General's Approval for Survey Mark Removal or by the City's Principal Surveyor under condition "Survey Infrastructure – Identification and Recovery" have been complied with;

(ii) Certification that all requirements requested under any Surveyor-General's Approval for Deferment of Survey Marks from condition "Survey Infrastructure – Pre Subdivision Certificate works" have been complied with and;

(iii) Time-stamped photographic records of all new survey infrastructure relating to the site clearly showing the mark itself and sufficient context to aid in identifying the mark on site.

Note: Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Reason

To ensure all requirements for survey mark removal are complied with.

(100) CONSTRUCTED FLOOR LEVELS

A certification report prepared by a suitably qualified practitioner engineer (NPER) must be submitted to the Principal Certifier prior to issue of any Occupation certificate stating that the development has been constructed and the required levels achieved in accordance with the recommendations of the report titled *Flood Assessment Report* (Ref: 241026, Rev 05) prepared by TTW dated 24 October 2025.

Reason

To ensure the development achieves the required floor levels.

(101) PHYSICAL MODELS

(a) Prior to the issue of any Occupation Certificate an accurate 1:500 scale model of the development as constructed must be submitted to and approved by Council's Area Coordinator Planning Assessments/Area Planning Manager for the City Model in Town Hall House.

Note:

(i) The models must be constructed in accordance with the Model Specifications available online at http://www.cityofsydney.nsw.gov.au/development/application-guide/application-process/model-requirements Council's modellers must be consulted prior to construction of the model.

(ii) The models are to comply with all of the conditions of the Development Consent.

(iii) The models must be amended to reflect any further modifications to the approval (under Section 4.55 of the *Environmental Planning and Assessment Act*) that affect the external appearance of the building.

Reason

To ensure the provision of an appropriate physical model of the development.

(102) SUBMISSION OF ELECTRONIC CAD MODELS PRIOR TO OCCUPATION CERTIFICATE

(a) Prior to any Occupation Certificate being issued, an accurate 1:1 electronic CAD model of the completed development must be submitted to and approved by Council's Area Coordinator Planning Assessments/Area Planning Manager for the electronic Visualisation City Model.

(b) The data required to be submitted within the surveyed location must include and identify:

(i) building design above and below ground in accordance with the development consent;

(ii) all underground services and utilities, underground structures and basements, known archaeological structures and artefacts;

(iii) a current two points on the site boundary clearly marked to show their Northing and Easting MGA (Map Grid of Australia) coordinates, which must be based on Established Marks registered in the Department of Lands and Property Information's SCIMS Database with a Horizontal Position Equal to or better than Class C.

The data is to be submitted as a DGN or DWG file on a Compact Disc. All modelling is to be referenced to the Map Grid of Australia (MGA) spatially located in the Initial Data Extraction file.

(c) The electronic model must be constructed in accordance with the City's 3D CAD electronic model specification. The specification is available online at http://www.cityofsydney.nsw.gov.au/development/application-guide/application-process/model-requirements Council's Modelling staff should be consulted prior to creation of the model. The data is to comply with all of the conditions of the Development Consent.

Reason

To ensure the provision of an appropriate electronic model of the development.

OCCUPATION AND ONGOING USE

(103) MANAGING NOISE

The premises must be operated and managed in accordance with the approved acoustic report for this consent.

All physical aspects of the building's structure must be installed to meet performance parameters in accordance with this condition, and requirements of this consent, must be maintained and correctly used at all times. Where there is a conflict with the approved acoustic report and a requirement of this development consent, this consent prevails.

Reason

To protect the amenity of the local area.

(104) NOISE – STRUCTURE BORNE IMPACT ON RESIDENTIAL USES

Structure borne noise emanating from the premises is not to exceed the following criterion when measured within any separate residential accommodation:

(a) LA1, Slow 15 minute ≤ LA90, 15 minute dB(A).

Reason

To protect the acoustic amenity of surrounding properties.

(105) NOISE – STRUCTURE BORNE IMPACT ON COMMUNITY USES

Structure borne noise emanating from the premises is not to exceed the following criterion when measured within any separate community uses:

(a) LA1, Slow 15 minute ≤ LA90, 15 minute dB(A).

Reason

To protect the acoustic amenity of surrounding properties.

(106) VIBRATION

The use is not to result in the transmission of any perceptible vibration to an occupiable area within a separate premises.

Reason

To protect the amenity of surrounding properties.

(107) COMMERCIAL AND INDUSTRIAL DEVELOPMENT NOISE

During ongoing use of the premises, the cumulative emission of noise from commercial and industrial activities must comply with Requirement 4 – *NOISE FROM COMMERCIAL AND INDUSTRIAL ACTIVITIES,* as specified in the City of Sydney – Environmental Noise Technical Requirements, dated October 2025.

Reason

To protect the acoustic amenity of surrounding properties.

(108) NOISE FROM ENTERTAINMENT ACTIVITIES

During ongoing use of the premises, the cumulative emission of noise from any entertainment activities must comply with Requirement 3, *NOISE FROM ENTERTAINMENT ACTIVITIES,* as specified in the City of Sydney – Environmental Noise Technical Requirements, dated October 2025.

Reason

To protect the acoustic amenity of surrounding properties.

(109) ON SITE LOADING AREAS AND OPERATION

All loading and unloading operations associated with servicing the site must be carried out within the confines of the site, at all times and must not obstruct other properties/units or the public way.

At all times the service vehicle docks, car parking spaces and access driveways must be kept clear of goods and must not be used for storage purposes, including garbage storage.

Reason

To maintain the orderly operation of vehicle parking areas and to ensure the public domain is kept free from physical obstructions.

(110) TRANSPORT ACCESS GUIDE

A Transport Access Guide must be implemented and maintained by the operators of the premises and be made available to staff, clients, customers and visitors at all times.

The following information shall be submitted to and approved by Council's Area Planning Manager prior to the issue of an Occupation Certificate for the site/use:

(a) A Transport Access Guide detailing sustainable transport options to access the site including public transport, cycling and walking or a combination of these modes.

(b) Communication methods by which the Transport Access Guide will be made available to staff, clients, customers and visitors.

Reason

To ensure that sustainable transport options are considered and communicated effectively.

(111) LOADING DOCK MANAGEMENT PLAN

A Loading Dock Management Plan is to be prepared for distribution to relevant occupants outlining how the loading dock will be managed and used by all relevant occupants. The Plan must include, but is not limited to, management of deliveries to ensure vehicles are not waiting on public streets to enter the site.

The on-site SRV loading dock shall be managed either by a schedule showing residents when they can use the dock, or by a register managed on site to allow residents to reserve a time period for their deliveries. The plan must address the wheeling-in and wheeling-out process for kerbside garbage collection by the Council waste vehicle. It must also ensure that the SRV parking area is appropriately managed and available for bin operations on Council collection days. This information is to be made available to all residents/tenants of the building.

The plan is to be prepared and submitted to and approved by Council's Area Planning Manager prior to issue of an Occupation Certificate.

Once approved, this management plan is to be provided to all relevant tenants and external users of the loading area.

Reason

To ensure that the loading dock is appropriately managed.

(112) SCHEDULED COLLECTIONS – COMMERCIAL

(a) Commercial waste collection arrangement(s) are to be conducted in accordance with the approved Operational Waste Management Plan, Council's *Guidelines for Waste Management in New Developments*, the City of Sydney's DCP, the developments Conditions of Consent and Local Approvals Policy for *Managing Waste in Public Places.*

(b) In accordance with the approved waste management plan, waste and recycling stream(s) bins must not be placed on the street for collection. The waste contractor must wheel the bins from the waste storage area of the property to the waste collection vehicle upon arrival and return them to the waste storage area following collection. Unimpeded access must be provided to the waste and recycling storage area(s) at all times.

(c) Unobstructed access is to be provided for waste collection vehicles to set down within 10m of the waste storage and collection area(s) during zone collection times on collection days.

(d) The collection of waste and recycling stream(s) is to only occur during designated zone collection times outlined within the Local Approvals Policy for *Managing Waste in Public Places* to minimise impacts to residential amenity.

Reason

To minimise the impacts on amenity and safety caused by the presentation and collection of commercial waste.

(113) ONGOING WASTE MANAGEMENT – RESIDENTIAL

(a) The ongoing use of development must be in accordance with the approved Operational Waste Management Plan, Council's *Guidelines for Waste Management in New Developments*, the City of Sydney's DCP, and the developments Conditions of Consent.

(b) All general waste and recycling stream(s) materials emanating from the premises must be stored in the designated waste storage area(s) integrated within the built form and must not be stored outside the premises (including any public place) at any time.

(c) The property manager is responsible for lodging requests for damaged/broken bins, managing the rotation of bins, ensuring the full allocation of relevant bins are available for scheduled collections, management of odour and the routine cleaning and maintenance of all waste storage areas.

(d) Contracts (or agreements) with cleaners, building managers and tenants must clearly outline the waste management and collection arrangements, identifying clear roles and responsibilities outlined within the approved Operational Waste Management Plan.

(e) The property manager is responsible for the installation and maintenance of all education signage for the respective waste stream(s) as requested by the City of Sydney Council responsive to the approved Operational Waste Management plan.

(f) Commercial waste and recycling stream(s) and supporting infrastructure to be stored in a separate lockable, enclosed, and walled area free from the residential waste and recycling stream(s) rooms. The residential rooms to have relevant locks to inhibit commercial tenants access to Councils residential waste streams.

Reason

To support the safe and efficient scheduled Council waste collection service and ensure the impacts of waste management on the public domain and public health are minimised.

(114) SCHEDULED COLLECTIONS - RESIDENTIAL

(a) Scheduled collections and waste management arrangements of Council's residential waste stream(s) is to be conducted in accordance with the stamped plans, approved Operational Waste Management Plan, the developments Conditions of Consent and the City's Local Approvals Policy Managing Waste in Public Spaces.

(b) Council's Domestic Waste Charge is applied to all residential rate accommodation properties in accordance with section 496 of the *Local Government Act 1993.* Residential accommodation is defined in accordance with the *Sydney Local Environmental Plan 2012* dictionary.

(c) Unobstructed access to be provided for Councils standard waste collection vehicles to access the waste and recycling storage area(s), loadings bays and supporting infrastructure between the hours 6am and 6pm on collection day(s) to support the provision of a safe and efficient waste collection service to the site.

Reason

To support the safe and efficient scheduled residential waste collection service and minimise the impacts on public amenity and safety.

(115) DEFECTS LIABILITY PERIOD – PUBLIC DOMAIN WORKS

All works to the City's public domain, including rectification of identified defects, are subject to a 6 month defects liability period from the date of Completion. The date of Completion will be nominated by Council on the Public Domain Works – Letter of Completion Operational Acceptance.

Reason

To ensure all works to the City's public domain are protected under a liability period.

(116) ENCROACHMENTS – PUBLIC WAY

No portion of the proposed structure (excluding awnings), including gates and doors during opening and closing operations, shall encroach upon Council's footpath area.

Reason

To protect the public way.

(117) ENCROACHMENTS – NEIGHBOURING PROPERTIES

No portion of the proposed structure shall encroach onto the adjoining properties.

Reason

To protect neighbouring properties.

(118) CO-LIVING – USE AND OPERATION

The use and operation of the premises must comply with the requirements of Schedule 2 (Standards for Places of Shared Accommodation) of the Local Government (General) Regulation, 2021 under the Local Government Act 1993, and the Public Health Act, 2010.

Reason

To ensure the development operates as long-term residential accommodation.

(119) NUMBER OF ADULTS PER ROOM

(a) The total capacity of residents within the co-living housing development is 441 residents allocated to the following rooms:

(i) 61 single occupant units

(ii) 190 double occupant units

(b) No more than the maximum allotted occupants as per part (a) above shall permanently occupy any bedroom and no bedroom shall contain more than two beds.

Reason

To prevent overcrowding.

(120) PLAN OF MANAGEMENT

(a) The Plan of Management submitted with this application has not been endorsed. Prior to the issue of any Occupation Certificate, an updated Plan of Management must be submitted and endorsed by Council's Area Planning Manager. The updated plan of management must include but not be limited to the following:

(i) Restrict all outdoor activities until 10.00pm daily.

(ii) Outline how facilities management will manage noise from planned gatherings in all communal spaces.

(b) The use must always be operated / managed in accordance with the Plan of Management submitted to satisfy part (a) above.

(c) The endorsed Plan of Management can be updated at any time by submitting a revised Plan of Management and subject to endorsement by Council's Area Planning Manager.

Reason

To ensure all parties are aware of the approved supporting documentation that applies to the development.

(121) COPIES OF CONSENTS AND MANAGEMENT PLANS

A copy of the current development consent(s) for the operation of the licensed premises, and the Plan of Management must be kept on-site and made available to Authorised Officers.

Reason

To ensure all relevant approved documents are available on-site upon request.

(122) OCCUPATION CERTIFICATE TO BE SUBMITTED

An Occupation Certificate must be obtained from the Principal Certifier and a copy submitted to Council prior to commencement of occupation or use of the whole or any part of a new building, an altered portion of, or an extension to an existing building.

Reason

To ensure the site is authorised for occupation.

SCHEDULE 2

PRESCRIBED CONDITIONS

The applicant must comply with all relevant conditions contained in Part 4, Division 2, Subdivision 1 of the *Environmental Planning and Assessment Regulation 2021* which apply to the development:

Refer to the NSW State legislation for full text of the clauses under Part 4, Division 2, Subdivision 1 of the *Environmental Planning and Assessment Regulation 2021*. This can be accessed at: http://www.legislation.nsw.gov.au

SCHEDULE 3

STATE AUTHORITY CONDITIONS

(123) TRANSPORT FOR NSW

(a) Prior to the issue of a Construction Certificate, the Applicant shall undertake a Dial Before You Dig search to establish the existence and location of any rail services. Persons performing the Dial Before You Dig search shall use equipment that will not have any impact on rail services and signalling. Should rail services be identified within the subject development site, the Applicant must discuss with Sydney Trains as to whether these services are to be relocated or incorporated within the development site.

(b) Prior to the issue of a Construction Certificate, the Applicant shall provide an accurate survey locating the development with respect to the rail corridor, rail infrastructure, TAM Land/easements and tunnel reserves. This work is to be undertaken by a registered surveyor, to the satisfaction of Sydney Trains' representative.

(c) Prior to the issue of a Construction Certificate, the Applicant shall provide Cross Sectional Drawings (both architectural and structural) to Sydney Trains showing the rail corridor, sub soil profile, proposed basement excavation and/or structural design of sub ground support adjacent to the rail corridor, TAM Land/easements and tunnel reserves. The measured distances between the proposed development, property boundary and rail asset(s) at the closest point must be shown. All measurements are to be verified by a Registered Surveyor.

(d) Prior to the issue of a Construction Certificate, a geotechnical report is needed to evaluate the impact of the development on the rail tunnel below the subject site. The Applicant shall submit a Geotechnical Report for review by Sydney Trains to ensure that the proposed development is structurally sound and will not jeopardise the structural integrity of the existing rail tunnel.

(e) Prior to the undertaking of works, the Applicant shall provide Sydney Trains documentation detailing how the proposed works are to be undertaken and confirmation from an appropriately qualified engineer(s) that there will be no negative impact on rail infrastructure (including below ground tunnels) or rail operations. This documentation shall also include details of any loading impacts on below ground tunnels that may arise due to the use of scaffolding for the facade works and/or machinery used during and post construction for maintenance which may remain in a stationary position for any given time. All work is to comply with the standard "T HR CI 12051 ST Development Near Rail Tunnels".

(f) Prior to the issuing of a Construction Certificate, the following final version rail specific items are to be submitted to Sydney Trains for review, comment, and written endorsement:

(i) Machinery to be used during demolition/excavation/construction.

(ii) Demolition, excavation, and construction methodology and staging.

The Certifier is not to issue the Construction Certificate until it has received written confirmation from Sydney Trains that this condition has been complied with.

(g) Prior to the issuing of a Construction Certificate, the Applicant must submit to Sydney Trains a plan showing all craneage and other aerial operations for the development and must comply with all Sydney Trains' requirements. If required by Sydney Trains, the Applicant must amend the plan showing all craneage and other aerial operations to comply with all Sydney Trains' requirements. The Certifier is not to issue the Construction Certificate until written confirmation has been received from the Sydney Trains confirming that this condition has been satisfied.

(h) The Applicant/Developer may need power outages (shutting of power to Sydney Trains/TAHE's facilities) to be able to undertake the proposed development. If required, prior to the issue of a Construction Certificate, the Applicant/Developer shall enter into an Agreement with Sydney Trains, enabling this work to be planned and to proceed in a safe and controlled manner. The Certifier shall not issue the Construction Certificate until written confirmation has been received from Sydney Trains that this condition has been satisfied.

(i) If required by Sydney Trains, prior to the issue of a Construction Certificate a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to Sydney Trains for review and comment on the impacts on rail corridor. The Certifier is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(j) If required by Sydney Trains, prior to the commencement of works or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The submission of a detailed dilapidation report will be required within 10 days following the undertaking of the inspection, unless otherwise notified by Sydney Trains.

(k) If required by Sydney Trains, prior to the issue of the Occupation Certificate, or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The Certifier is not to issue the final Occupation Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(l) Prior to the issuing of an Occupation Certificate the Applicant is to submit as-built drawings to Sydney Trains and Council. The as-built drawings are to be endorsed by a Registered Surveyor confirming that there has been no encroachment into TAM (Transport Asset Manager of NSW, formerly TAHE) property or easements, unless agreed to by TAM (Transport Asset Manager of NSW, formerly TAHE). The Certifier is not to issue the final Occupation Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

(m) Prior to the issue of an Occupation Certificate (whether an interim or final Occupation Certificate), a report must be prepared and submitted to the Certifying Authority and Council certifying that the completed development meets the requirements of State Environmental Planning Policy (Transport and Infrastructure) 2021 and with the Department of Planning and Infrastructure's Development Assessment Guideline titled "Development Near Rail Corridors and Busy Roads - Interim Guidelines" as set down in the subject condition of this consent. Such a report must include external and internal noise levels to ensure that the external noise levels during the test are representative of the typical maximum levels that may occur at this development, and that internal noise levels meet the required dB(A) levels. Where it is found that internal noise levels are greater than the required dB(A) level, necessary corrective measures must be carried out to ensure that internal noise levels are compliant with the requirements of this consent.

(n) No work is permitted within the rail corridor or any easements which benefit Sydney Trains/ TAM (Transport Asset Manager of NSW), at any time, unless the prior approval of, or an Agreement with, Sydney Trains/ TAM (Transport Asset Manager of NSW) has been obtained by the Applicant.

(o) Unless advised by Sydney Trains in writing, all excavation, shoring, and piling works within 25m of the rail corridor are to be supervised by a geotechnical engineer experienced with such excavation projects and who holds current professional indemnity insurance.

(p) Sydney Trains or Transport for NSW, and persons authorised by those entities for the purpose of this condition, must be permitted to inspect the site of the development and all structures to enable it to consider whether those structures have been or are being constructed and maintained in accordance with the approved plans and the requirements of this consent, on giving reasonable notice to the principal contractor for the development or the owner or occupier of the part of the site to which access is sought.

(q) Where a condition of consent requires Sydney Trains or Transport for NSW endorsement the Certifier is not to issue a Construction Certificate or Occupancy Certificate, as the case may be, until written confirmation has been received from those entities that the particular condition has been complied with. The issuing of staged Construction Certificates dealing with specific works and compliance conditions can be issued subject to written agreement from those entities to which the relevant conditions applies.

(r) The Applicant must ensure that at all times they have a representative (which has been notified to Sydney Trains in writing), who:

(i) oversees the carrying out of the Applicant's obligations under the conditions of this consent and in accordance with correspondence issued by Sydney Trains;

(ii) acts as the authorised representative of the Applicant; and

(iii) is available (or has a delegate notified in writing to Sydney Trains that is available) on a 7 day a week basis to liaise with the representative of Sydney Trains, as notified to the Applicant.

(s) Without in any way limiting the operation of any other condition of this consent, the Applicant must, during demolition, excavation and construction works, consult in good faith with Sydney Trains in relation to the carrying out of the development works and must respond or provide documentation as soon as practicable to any queries raised by Sydney Trains in relation to the works.

(t) Where a condition of consent requires consultation with Sydney Trains, the Applicant shall forward all requests and/or documentation to the relevant Sydney Trains External Interface Management team. In this instance the relevant interface team is Central Interface, and they can be contacted via email on **Central_Interface@transport.nsw.gov.au**.

(u) Copies of any certificates, drawings, approvals/certification, or documents endorsed by, given to, or issued by Sydney Trains or TAM (Transport Asset Manager of NSW) must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.

(124) AUSGRID

Ausgrid Underground Cables are in the vicinity of the development.

(a) Special care should be taken to ensure that driveways and any other construction activities do not interfere with existing underground cables located in the footpath or adjacent roadways.

(b) It is recommended that the developer locate and record the depth of all known underground services prior to any excavation in the area. Information regarding the position of cables along footpaths and roadways can be obtained by contacting Before You Dig Australia (BYDA)

(c) In addition to BYDA the proponent should refer to the following documents to support safety in design and construction:

(i) SafeWork Australia – Excavation Code of Practice.

(ii) Ausgrid's Network Standard NS156 which outlines the minimum requirements for working around Ausgrid's underground cables.

(d) The following points should also be taken into consideration.

(i) Ausgrid cannot guarantee the depth of cables due to possible changes in ground levels from previous activities after the cables were installed.

(ii) Should ground levels change above Ausgrid's underground cables in areas such as footpaths and driveways, Ausgrid must be notified, and written approval provided prior to the works commencing.

(iii) Should ground anchors be required in the vicinity of Ausgrid underground cables, the anchors must not be installed within 300mm of any cable, and the anchors must not pass over the top of any cable.

New Driveways - Proximity to Existing Poles

(a) Proposed driveways shall be located to maintain a minimum clearance of 1.5m from the nearest face of the pole to any part of the driveway, including the layback, this is to allow room for future pole replacements. Ausgrid should be further consulted for any deviation to this distance.

New or modified connection

(a) To apply to connect or modify a connection for a residential or commercial premises. Ausgrid recommends the proponent to engage an Accredited Service Provider and submit a connection application to Ausgrid as soon as practicable. Visit the Ausgrid website for further details; https://www.ausgrid.com.au/Connections/Get-connected

(b) Additional information can be found in the Ausgrid Quick Reference Guide for Safety Clearances "Working Near Ausgrid Assets - Clearances". This document can be found by visiting the following Ausgrid website: www.ausgrid.com.au/Your-safety/Working-Safe/Clearance-enquiries

(125) SYDNEY WATER

Prior to the issue of an Occupation/Subdivision Certificate:

Section 73 Compliance Certificate

(a) A compliance certificate must be obtained from Sydney Water, under Section 73 of the Sydney Water Act 1994. Our assessment will determine the availability of water and wastewater services, which may require extensions, adjustments, or connections to our mains. Make an early application for the certificate, as there may be assets to be built and this can take some time. A Section 73 Compliance Certificate must be obtained before an Occupation or Subdivision Certificate will be issued.

(b) Applications can be made either directly to Sydney Water or through a Sydney Water accredited Water Servicing Coordinator.

(c) Go to the Sydney Water website or call 1300 082 746 to learn more about applying through an authorised WSC or Sydney Water.

Prior to the issue of a Construction Certificate/Complying Development Certificate:

Building Plan Approval (including Tree Planting Guidelines)

(a) The plans must be approved by Sydney Water prior to demolition, excavation or construction works commencing. This allows Sydney Water to determine if sewer, water or stormwater mains or easements will be affected by any part of your development. Any amendments to plans will require re-approval. Please go to Sydney Water Tap in® to apply.

(b) Sydney Water recommends developers apply for a Building Plan Approval early as to reduce unnecessary delays to further referrals or development timescales.

Tree Planting

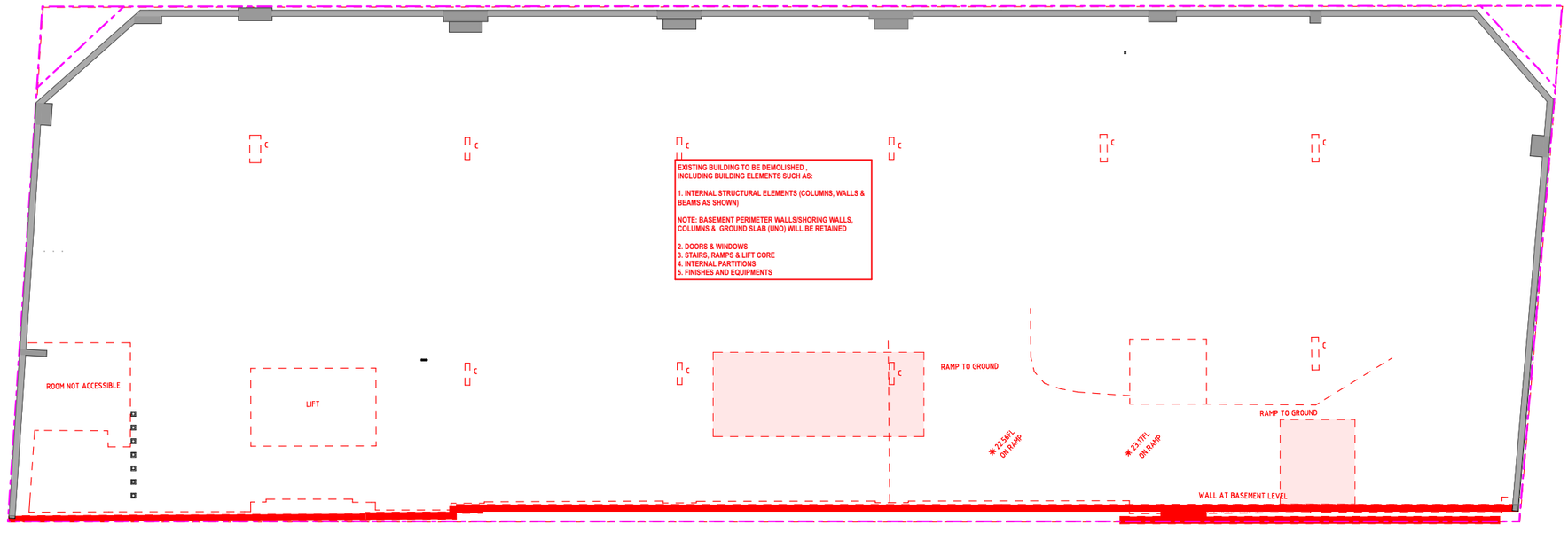
(a) Certain tree species placed in proximity to Sydney Water's underground assets have the potential to inflict damage through invasive root penetration and soil destabilisation. Section 46 of the Sydney Water Act specifies what might occur when there is interference or damage to our assets caused by trees.

(b) For any trees proposed or planted that may cause destruction of, damage to or interference with our work and are in breach of the Sydney Water Act 1994, Sydney Water may issue an order to remove that tree or directly remove it and seek recovery for all loss and associated compensation for the removal.

(c) For guidance on types of trees that can cause damage or interference with our assets see Sydney Water webpage Wastewater blockages. For guidance on how to plant trees near our assets, see Diagram 5 – Planting Trees within Sydney Water's Technical guidelines – Building over and adjacent to pipe assets.

Attachment B

Selected Drawings



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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EXISTING/DEMOLITION BASEMENT PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

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PROJECT NUMBER: 23024

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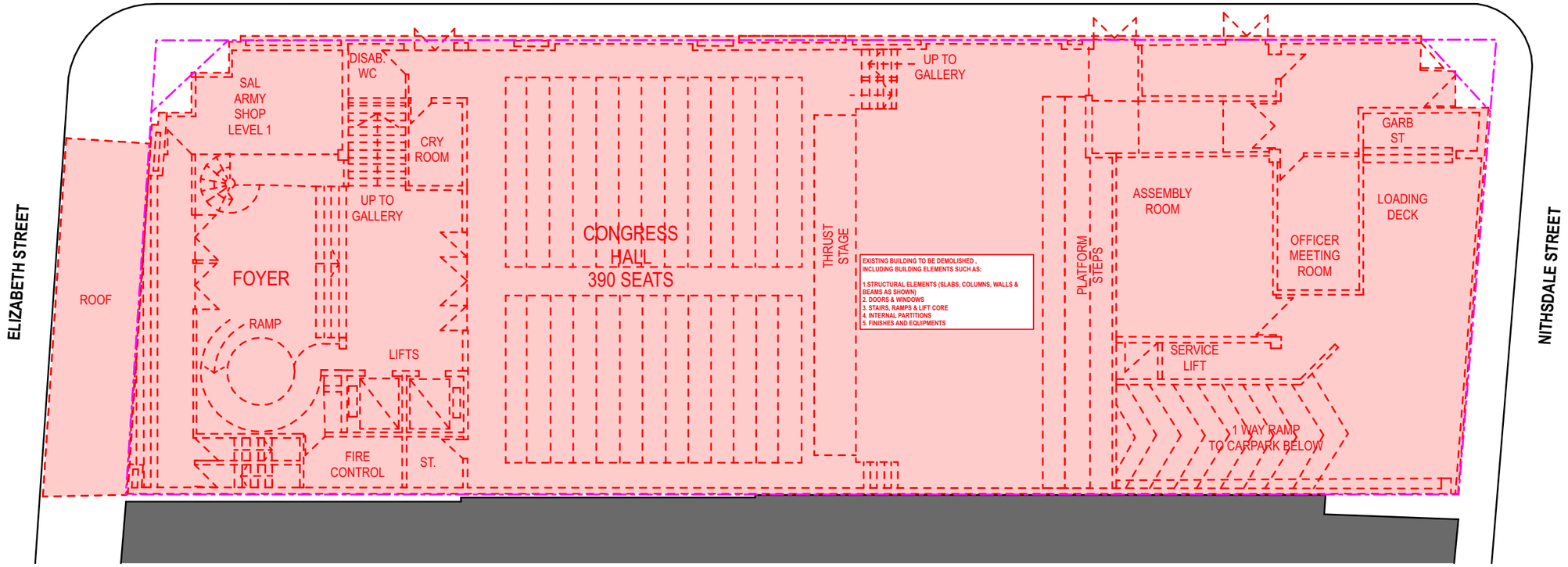
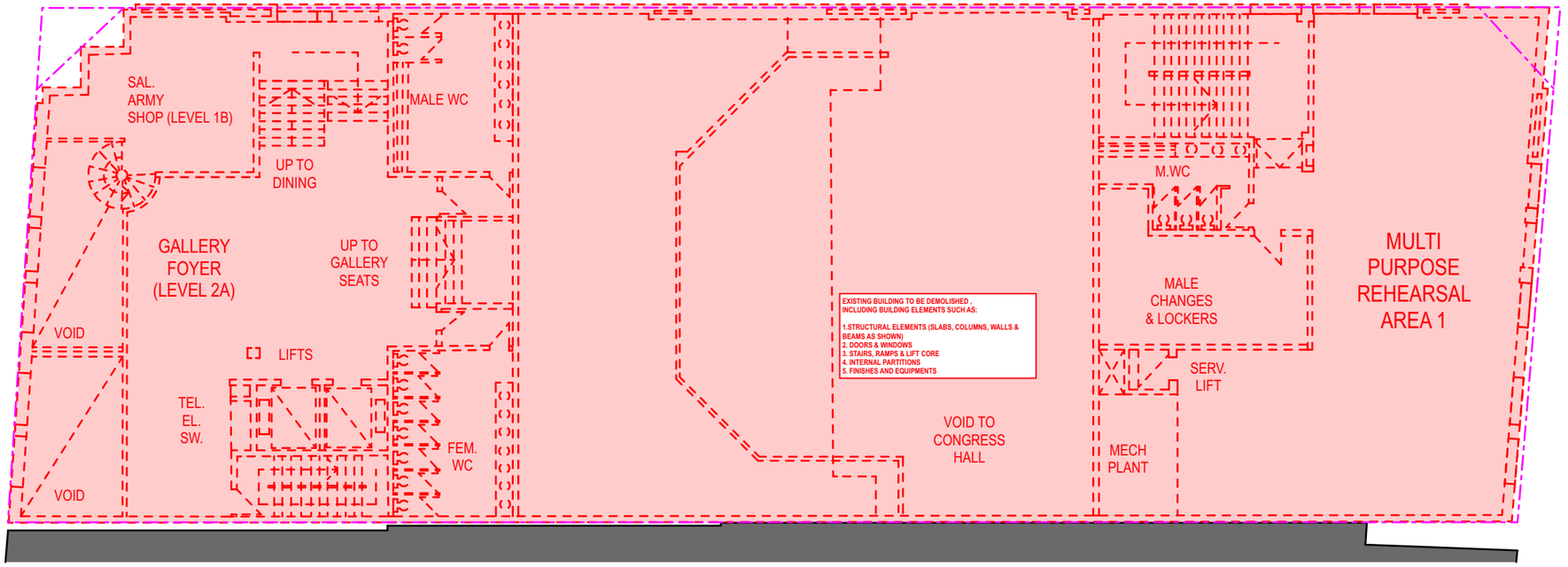
disc	stage	dwg no.	revision



1 LEVEL GROUND TO 1A PLAN
1:200



2 LEVEL 1B TO 2A PLAN
1:200

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Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EXISTING/DEMOLITION GROUND - 1A & 1B-2A PLANS

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PROJECT NUMBER: 23024

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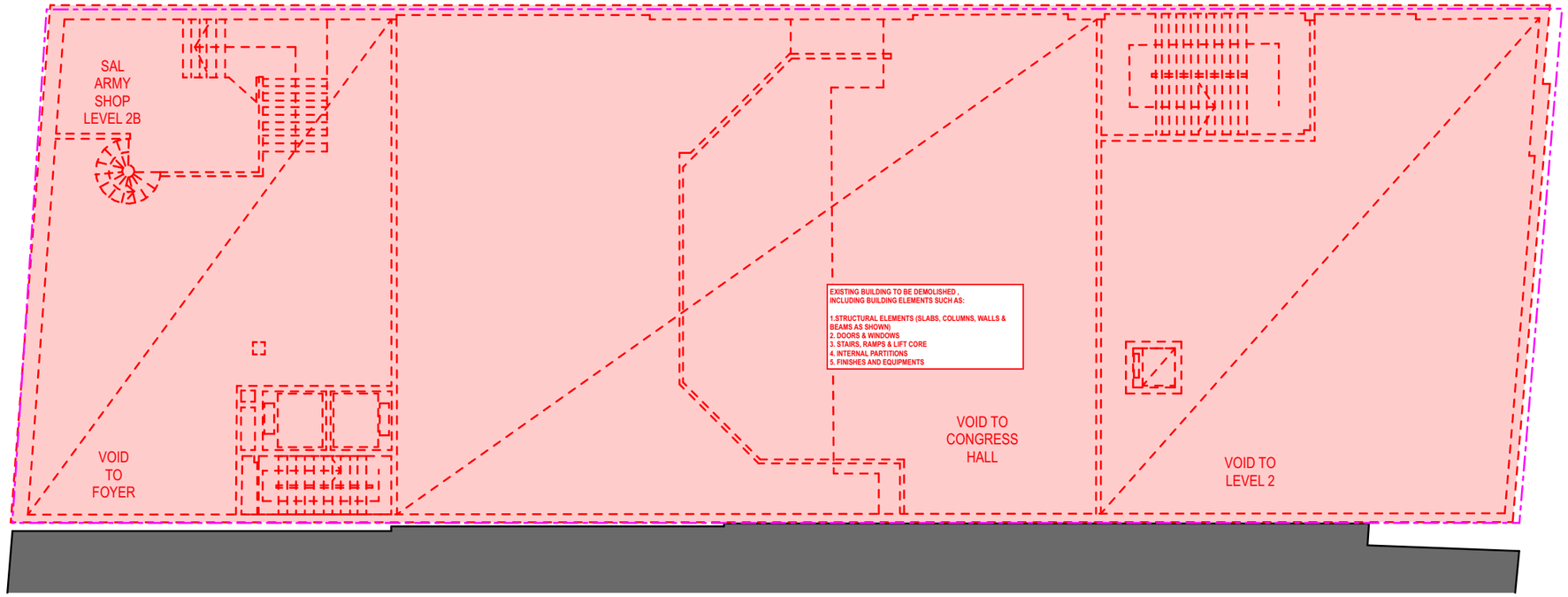
disc	stage	dwg no.	revision



1 LEVEL 2B PLAN
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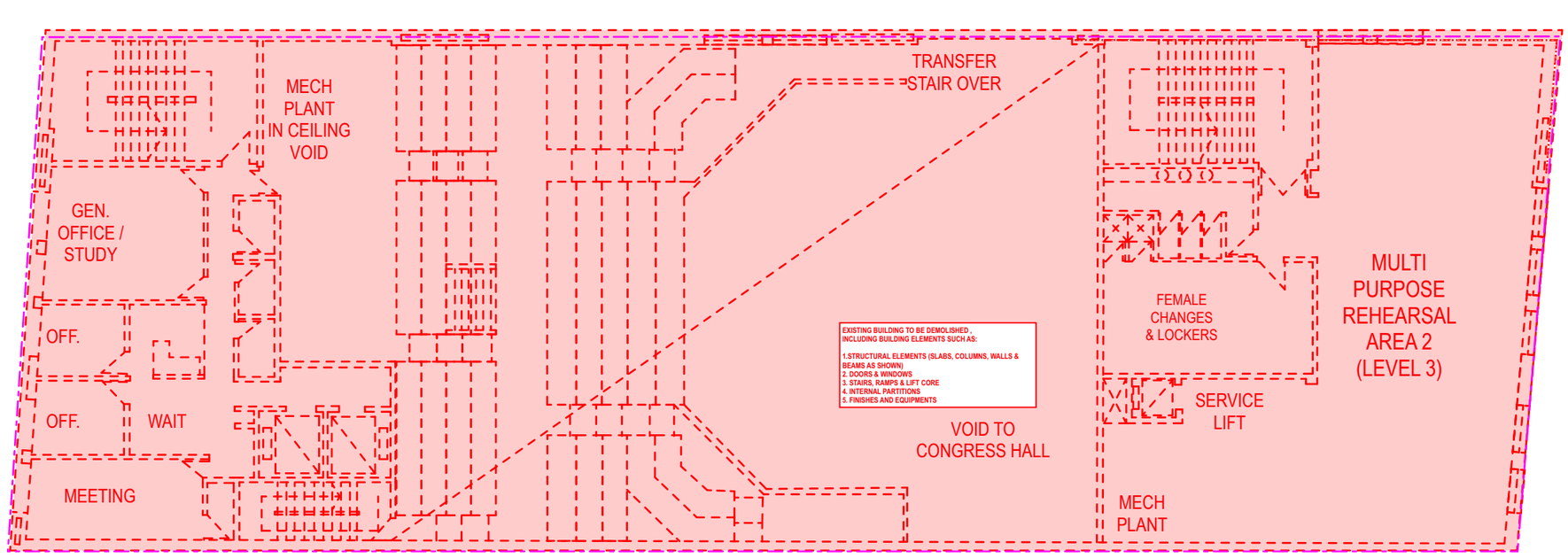

2 LEVEL 3 TO 3A PLAN
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Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EXISTING/DEMOLITION LEVEL 2B & 3 TO 3A PLANS

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CHECKED BY: AM/MO/KL

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SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

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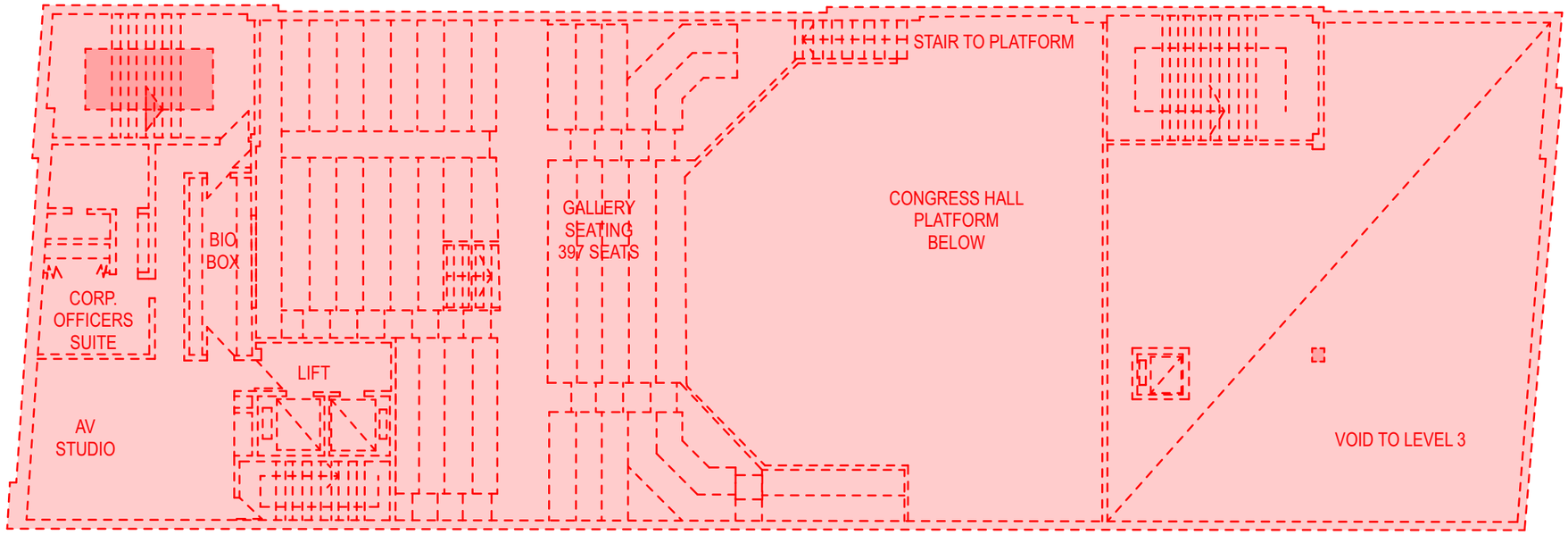
disc	stage	dwg no.	revision



1 LEVEL 3B PLAN
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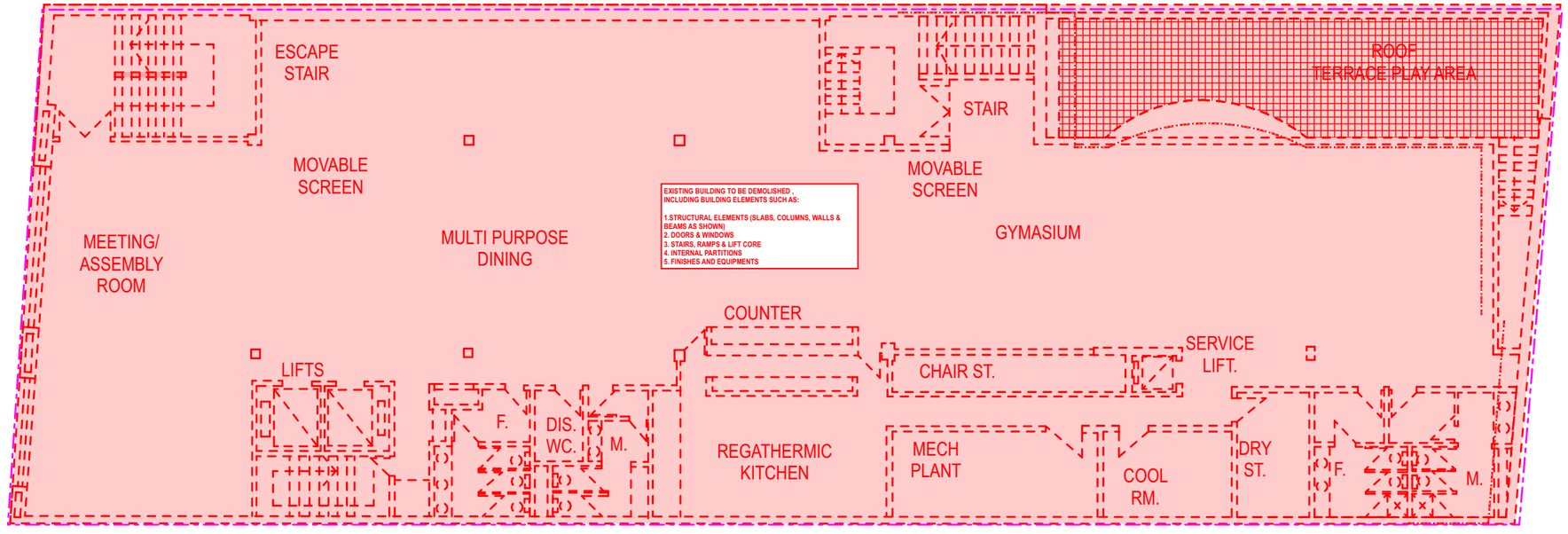
150



2 LEVEL 4 PLAN
1:200

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CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EXISTING/DEMOLITION LEVEL 3B & 4 PLANS

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

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SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

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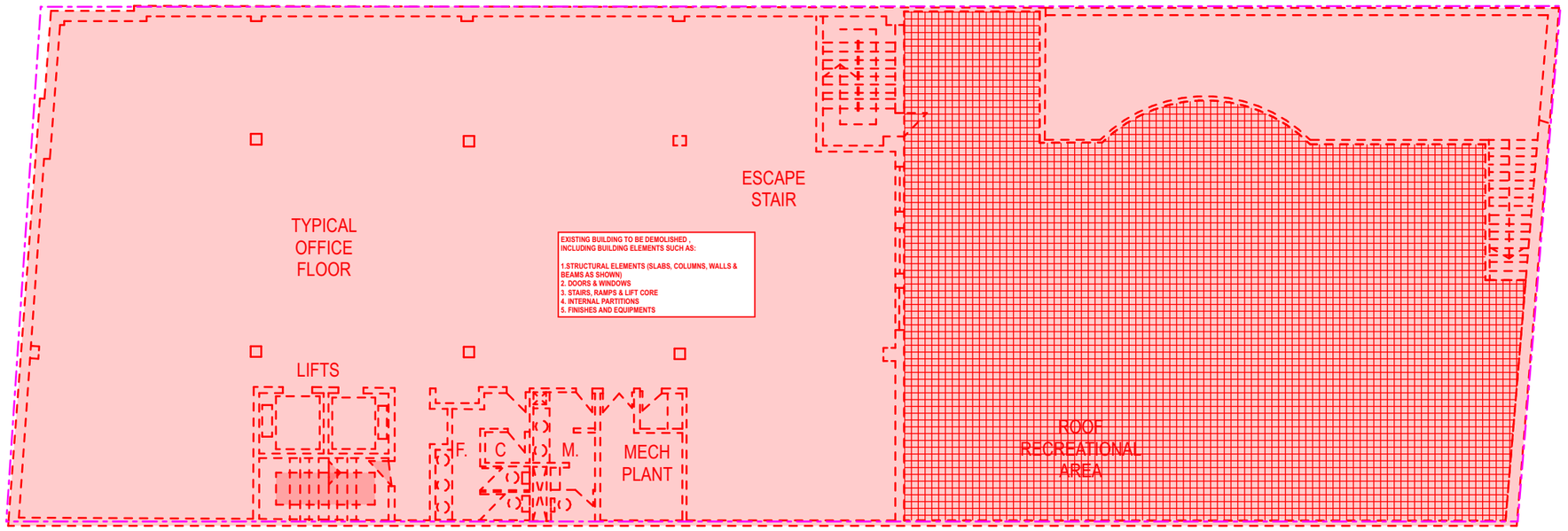
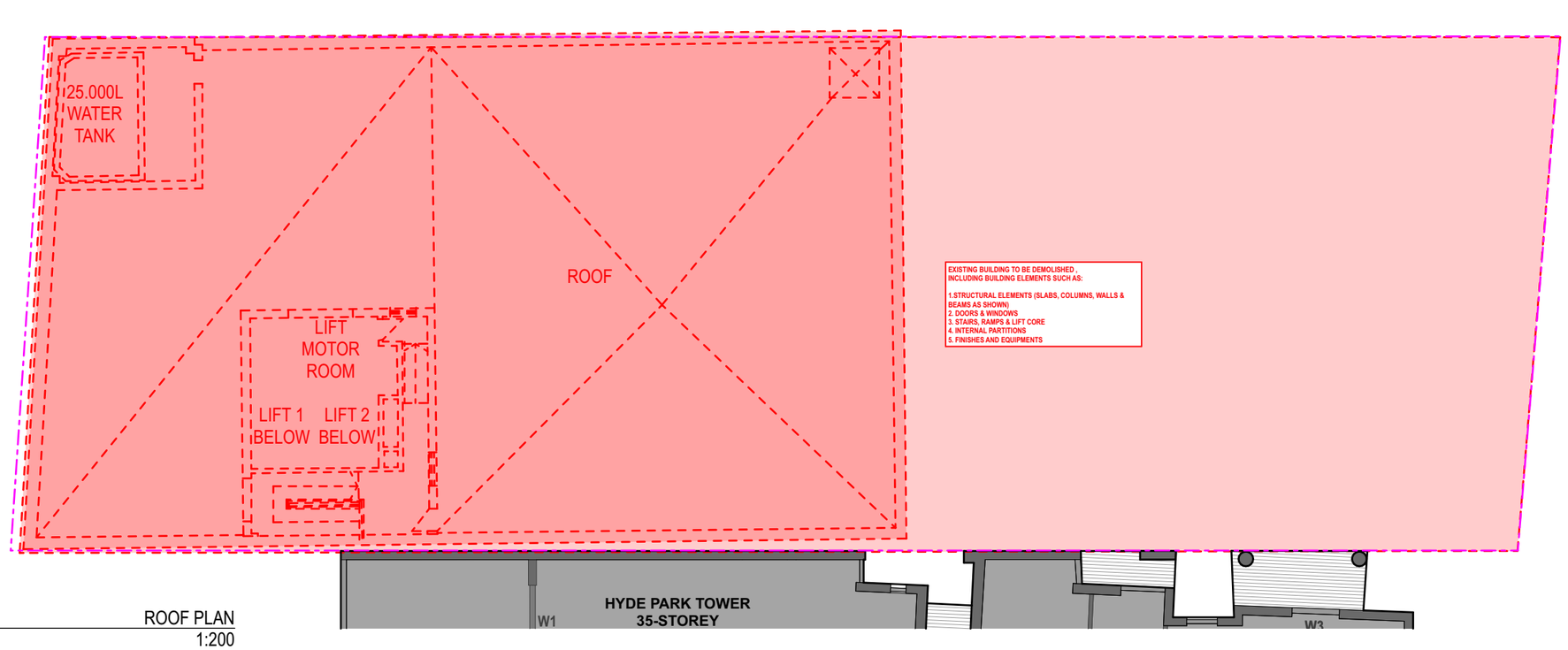
disc	stage	dwg no.	revision



1 LEVEL 5 TO 10 PLAN
1:200



2 ROOF PLAN
1:200

151

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PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EXISTING/DEMOLITION LEVEL 5-10 & ROOF PLANS

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SCALE: 1:200 @ A3
PROJECT NUMBER: 23024

A	DA	A-07	AC
disc	stage	dwg no.	revision

152

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NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: BASEMENT 01

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CHECKED BY: AM/MO/KL

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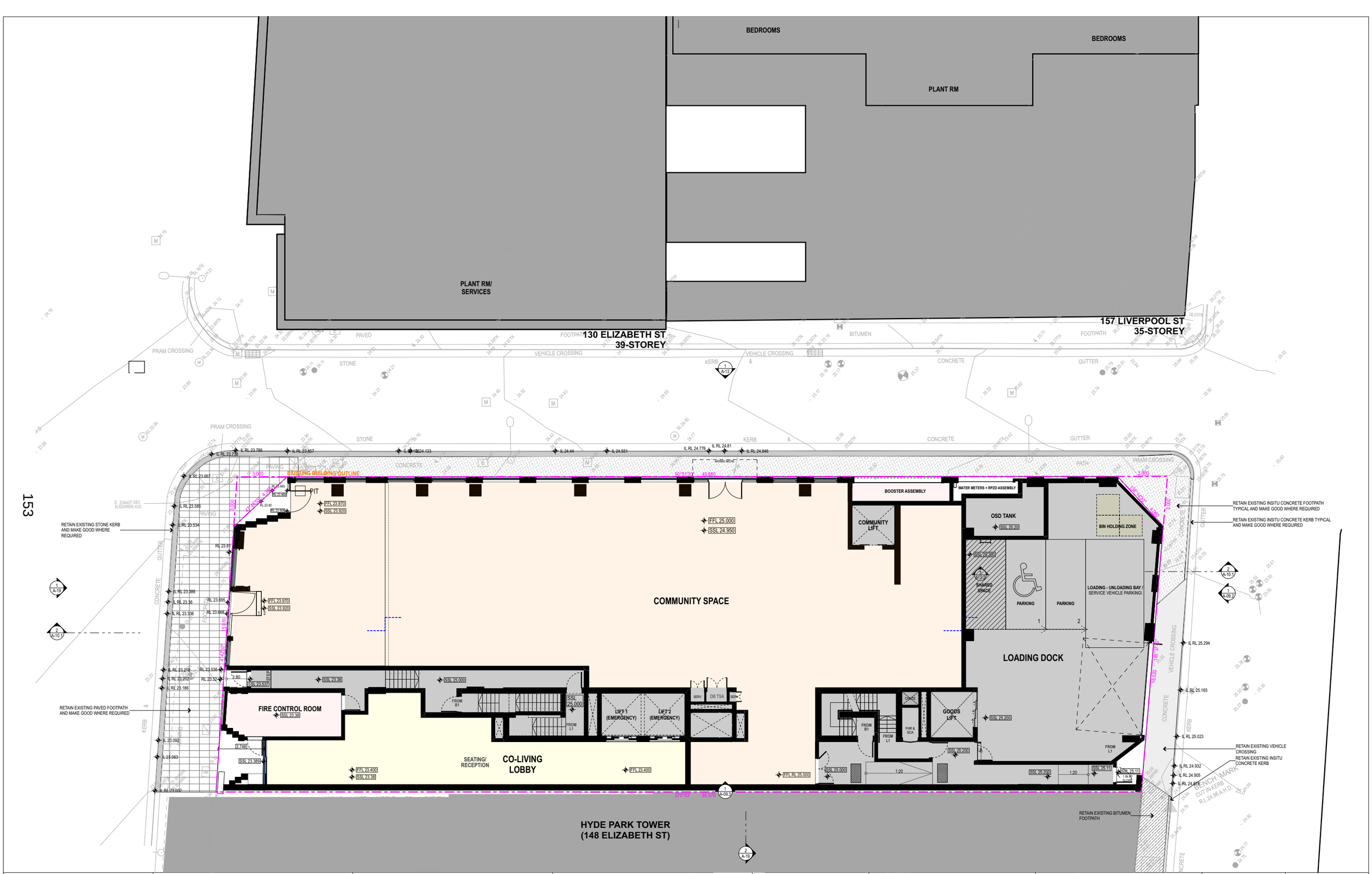
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.1	AC
disc	stage	dwg no.	revision



153

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REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

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MOSTAGHIM
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NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: GROUND LEVEL PLAN

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CHECKED BY: AM/MO/KL

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SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

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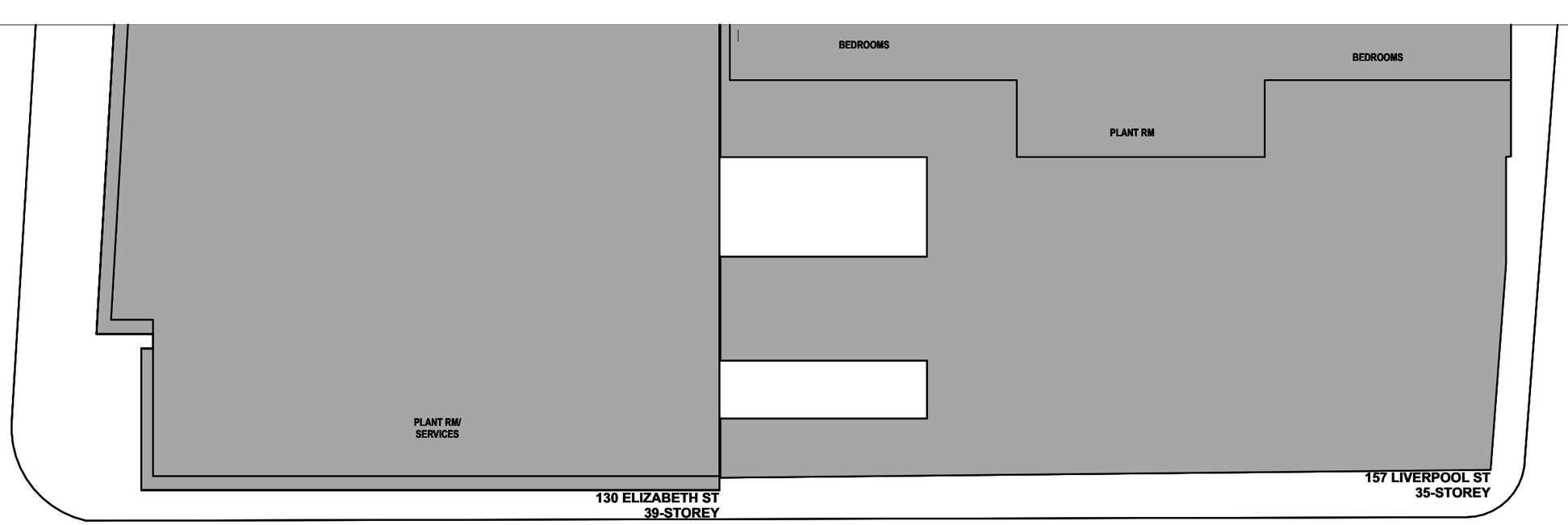
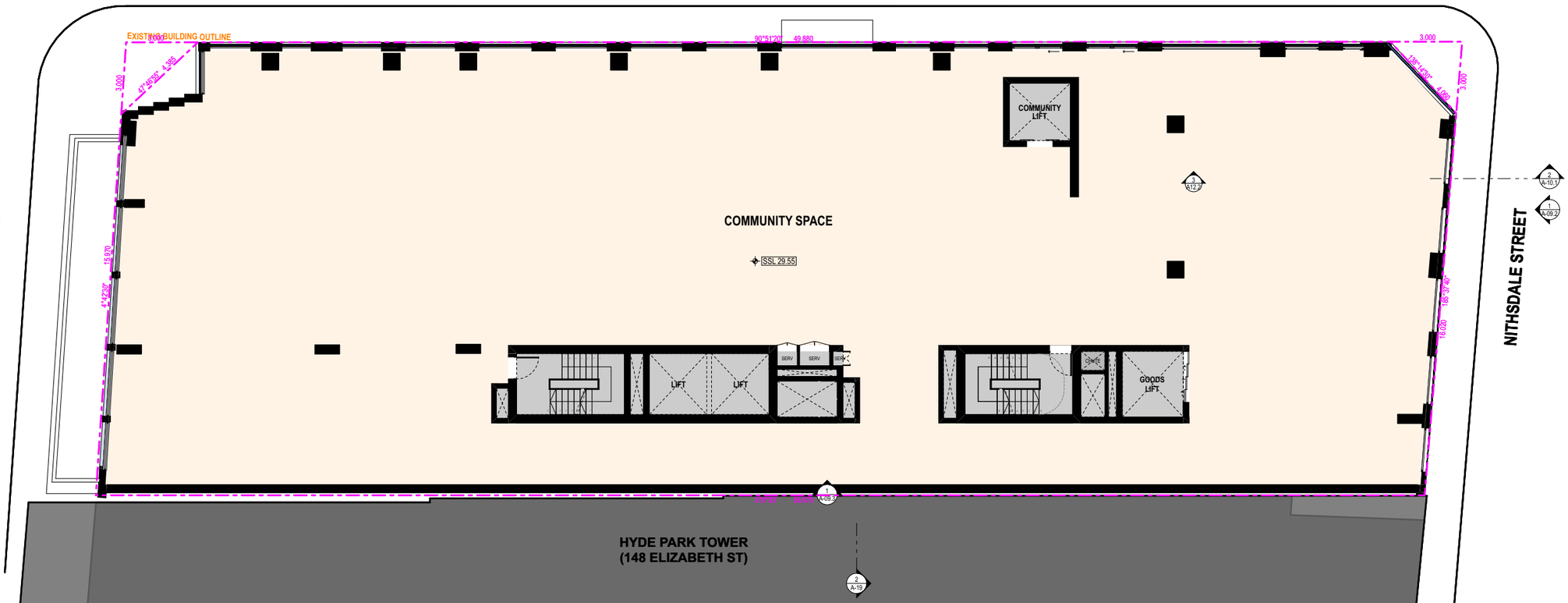


CLARKE STREET



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CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 01 PLAN

DRAWN BY: MO/KL/HH/CC

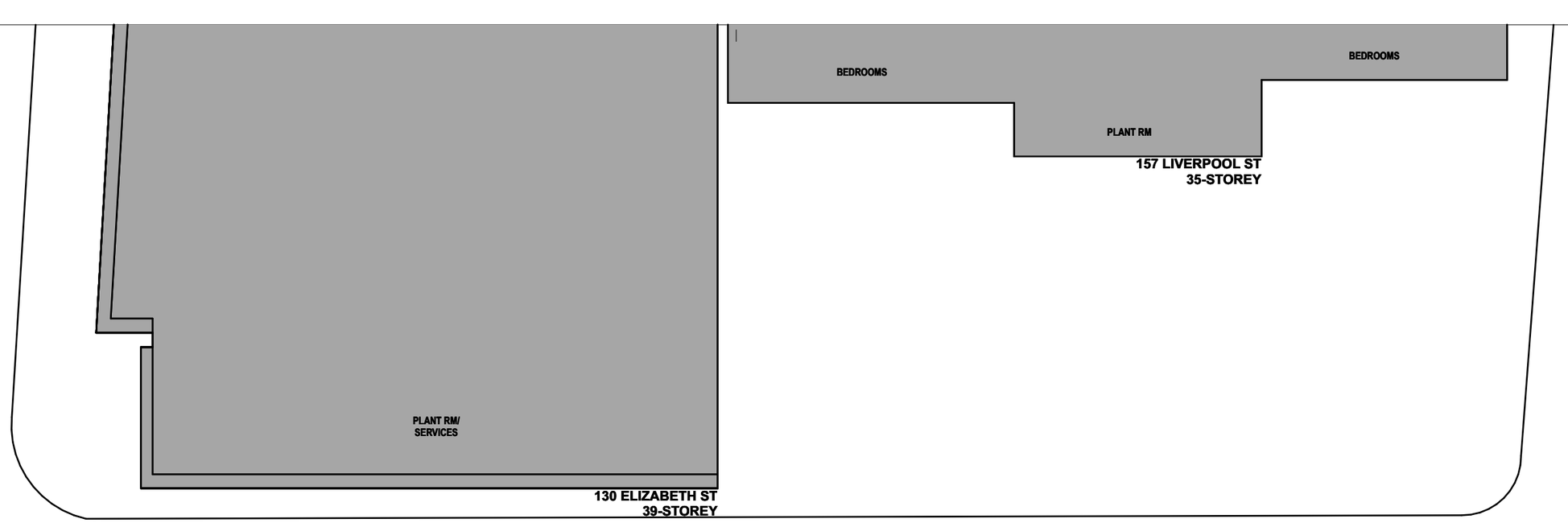
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.3(a)	AC
disc	stage	dwg no.	revision



NOTE

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: MEZZANINE PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL
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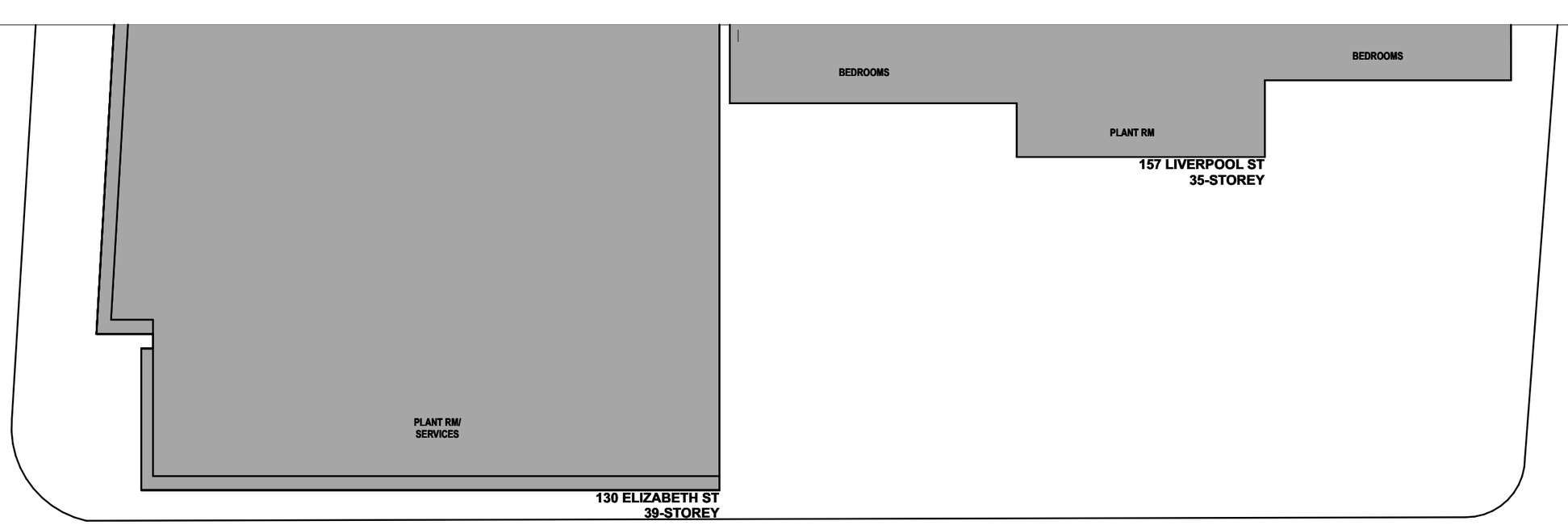
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.3(b)	AC
disc	stage	dwg no.	revision



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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 02 PLAN

DRAWN BY: MO/KL/HH/CC

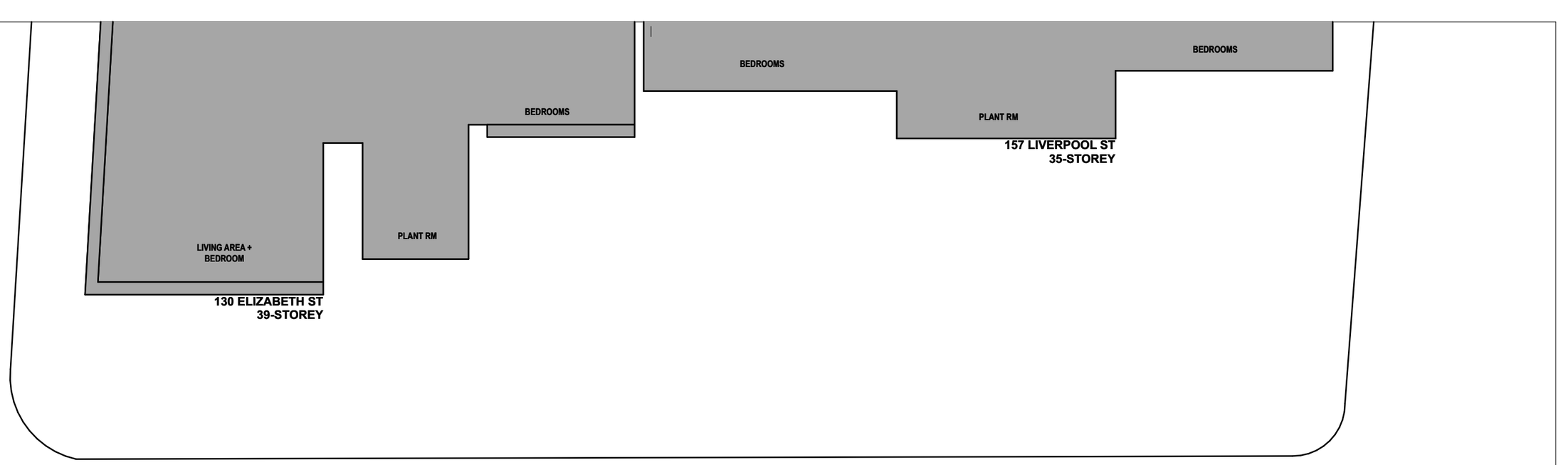
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.5	AC
disc	stage	dwg no.	revision



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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: LEVEL 03 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

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IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.6	AC
disc	stage	dwg no.	revision

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 04 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL
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SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.7	AC
disc	stage	dwg no.	revision

NOTE

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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

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MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: LEVEL 05 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

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SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

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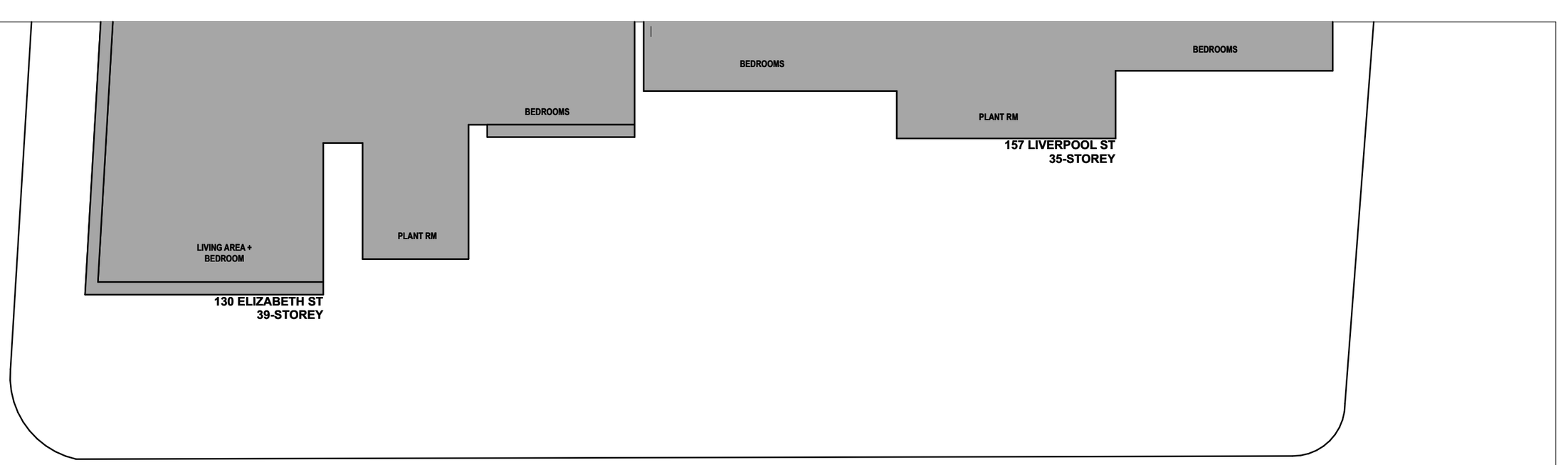
disc	stage	dwg no.	revision



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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 06 PLAN

DRAWN BY: MO/KL/HH/CC

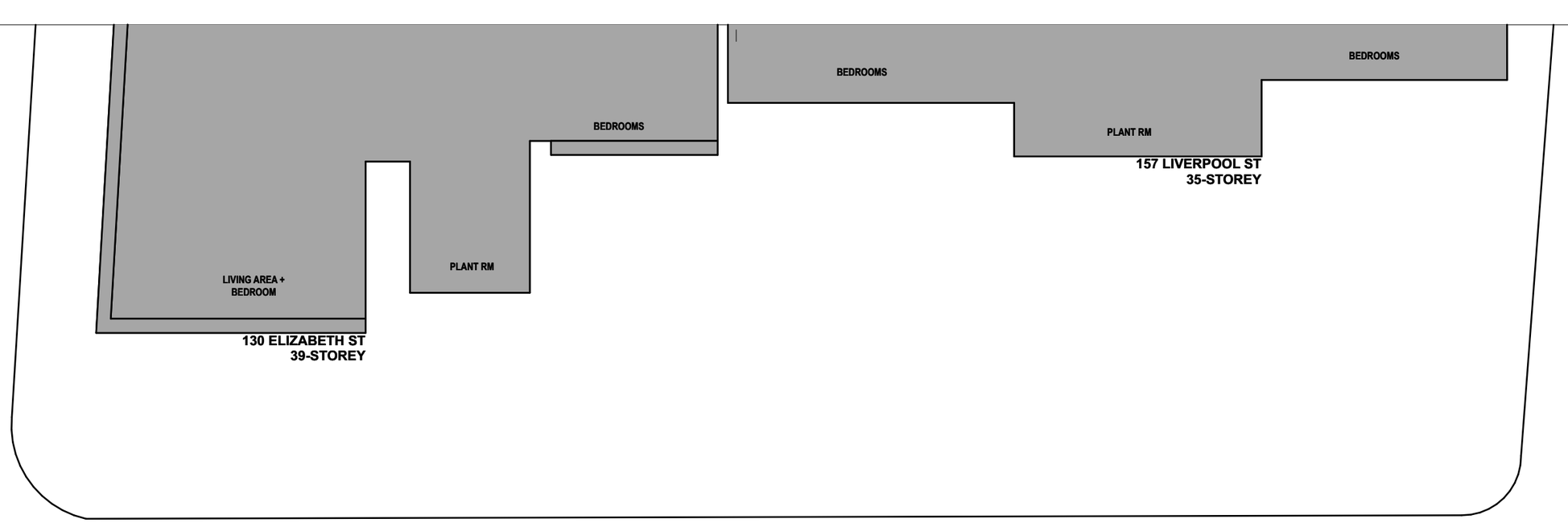
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.9	AC
disc	stage	dwg no.	revision



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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
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e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 07 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.10	AC
disc	stage	dwg no.	revision

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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM

Nominated architect Ashkan Mostaghim 8358

a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 08 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL

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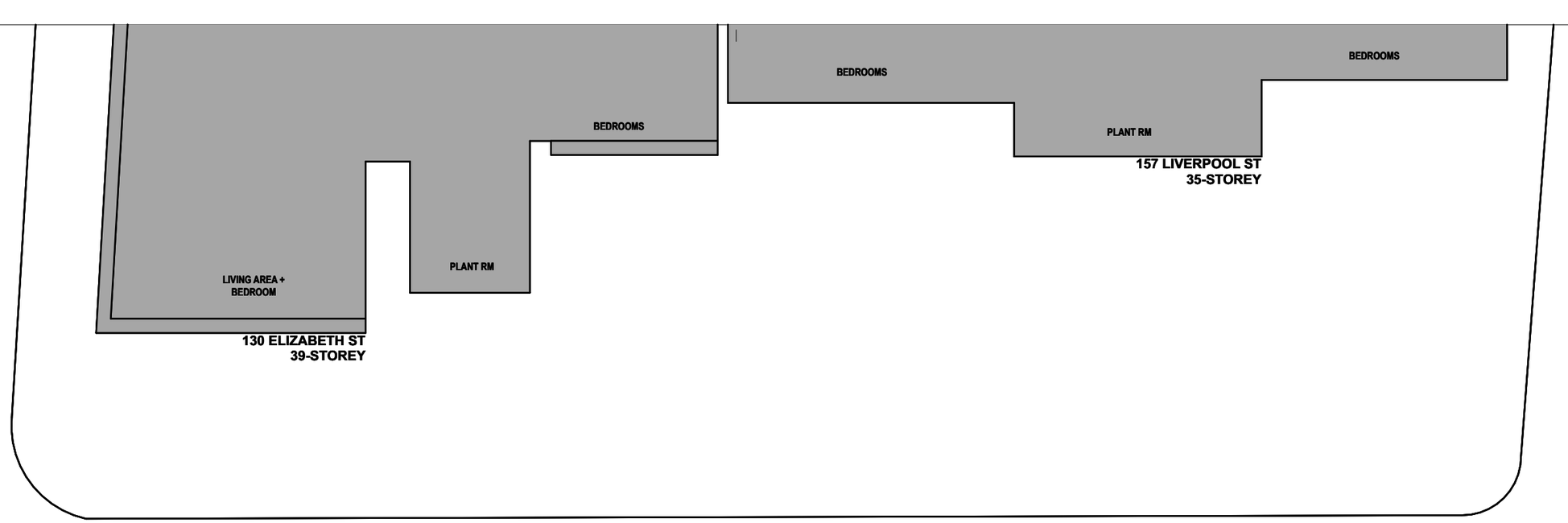
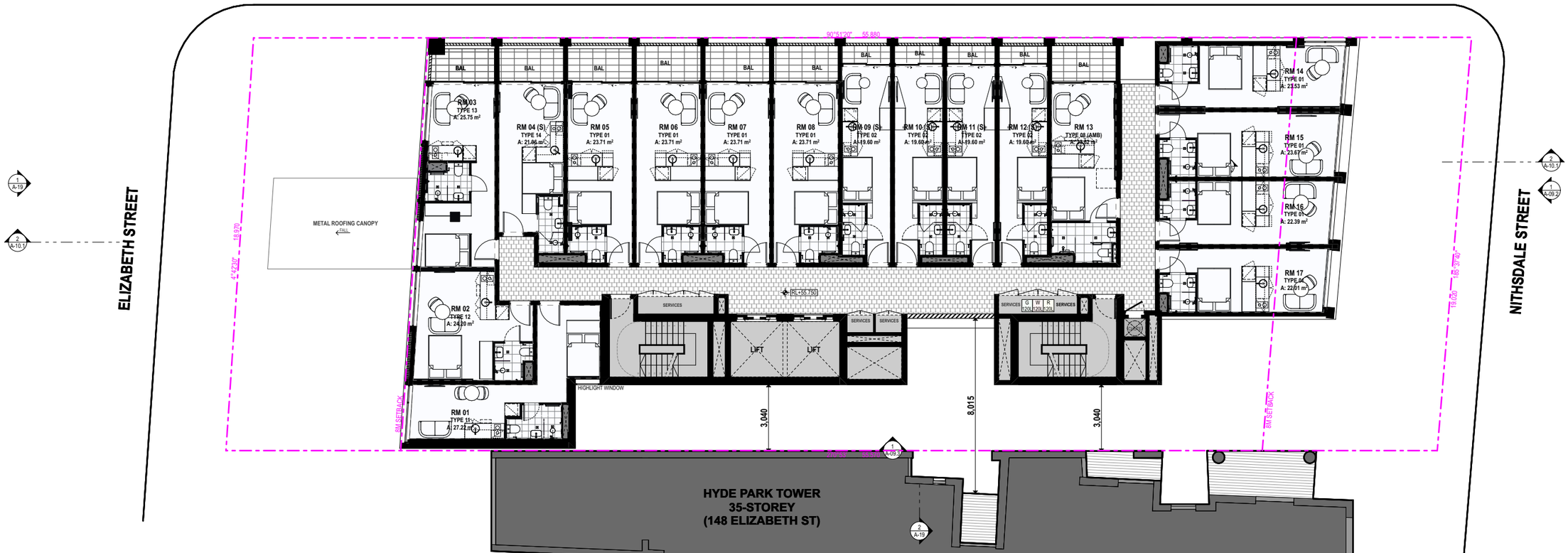
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.11	AC
disc	stage	dwg no.	revision



CLARKE STREET



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REVISION NOTE

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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: TYPICAL PLAN: LEVELS 09-11

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

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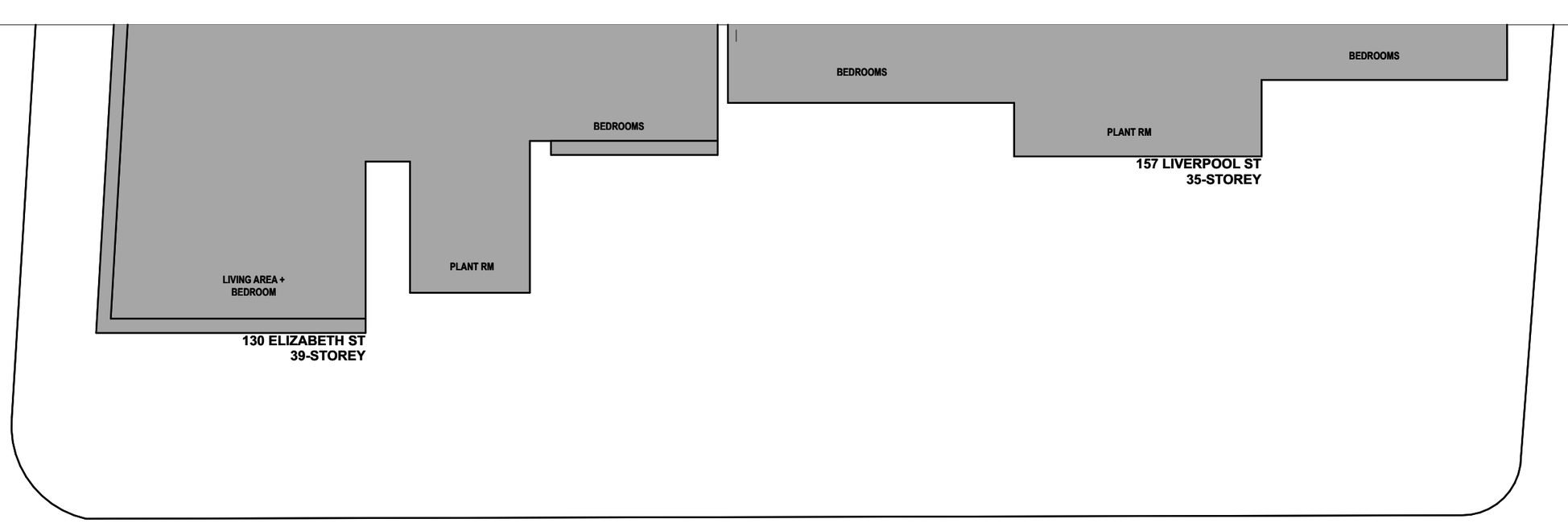
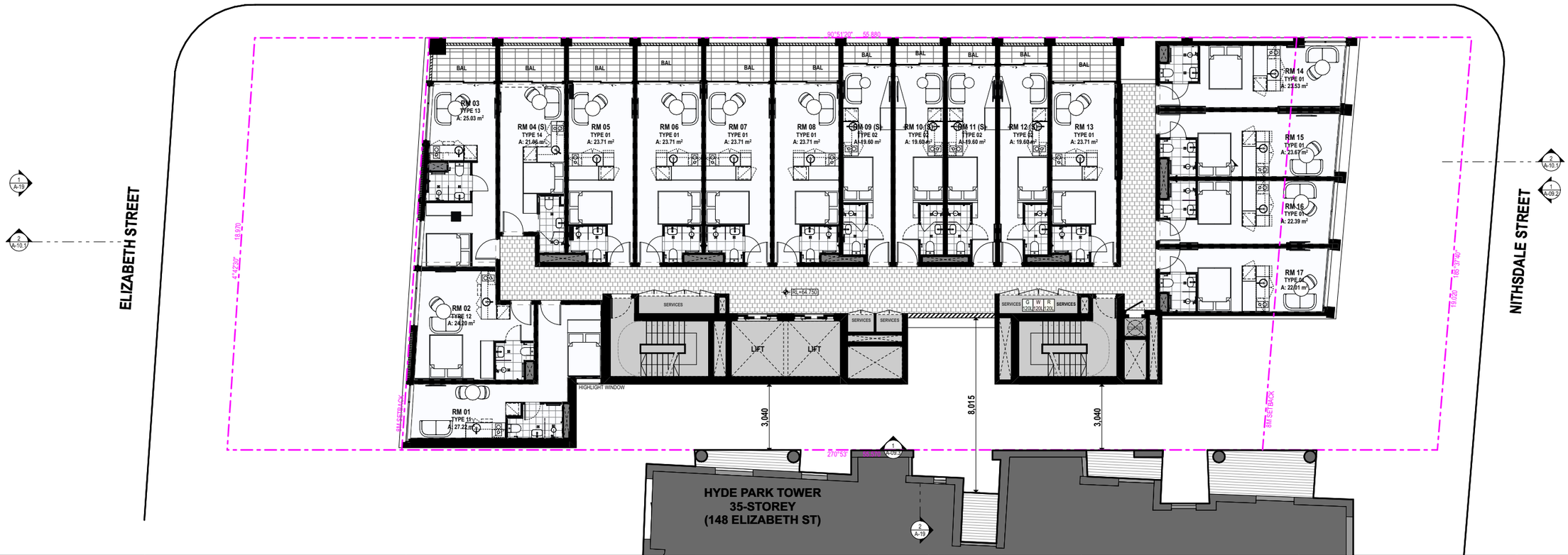
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.12	AC
disc	stage	dwg no.	revision





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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM

Nominated architect Ashkan Mostaghim 8358

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NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 12 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL

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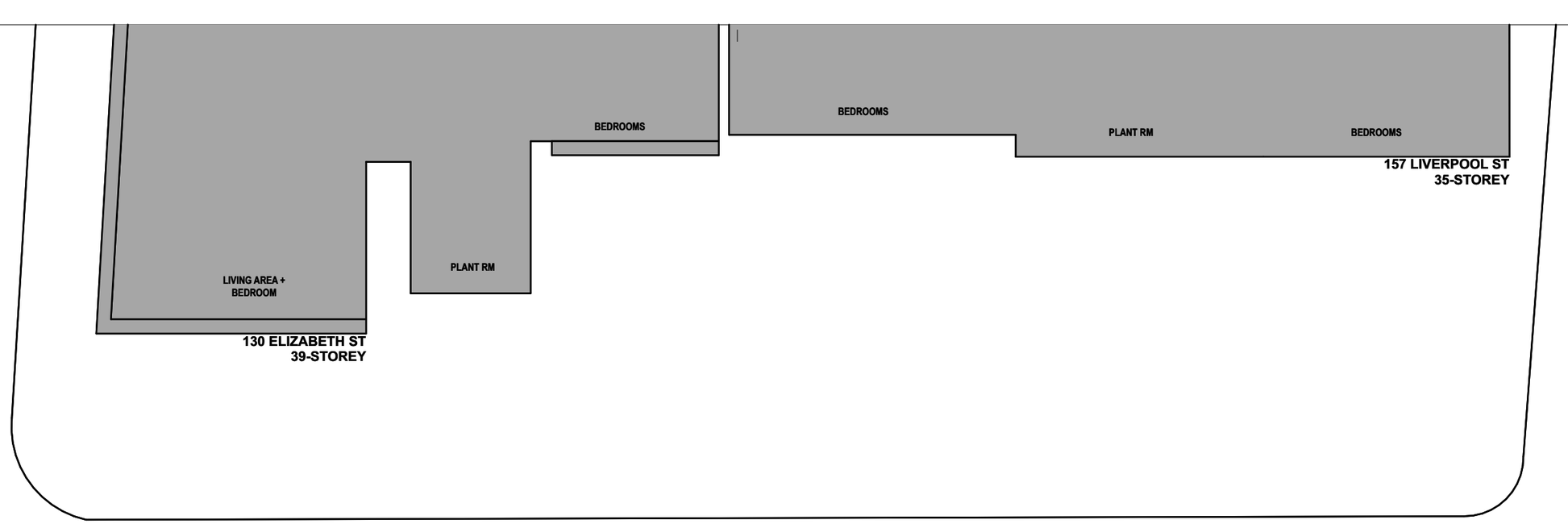
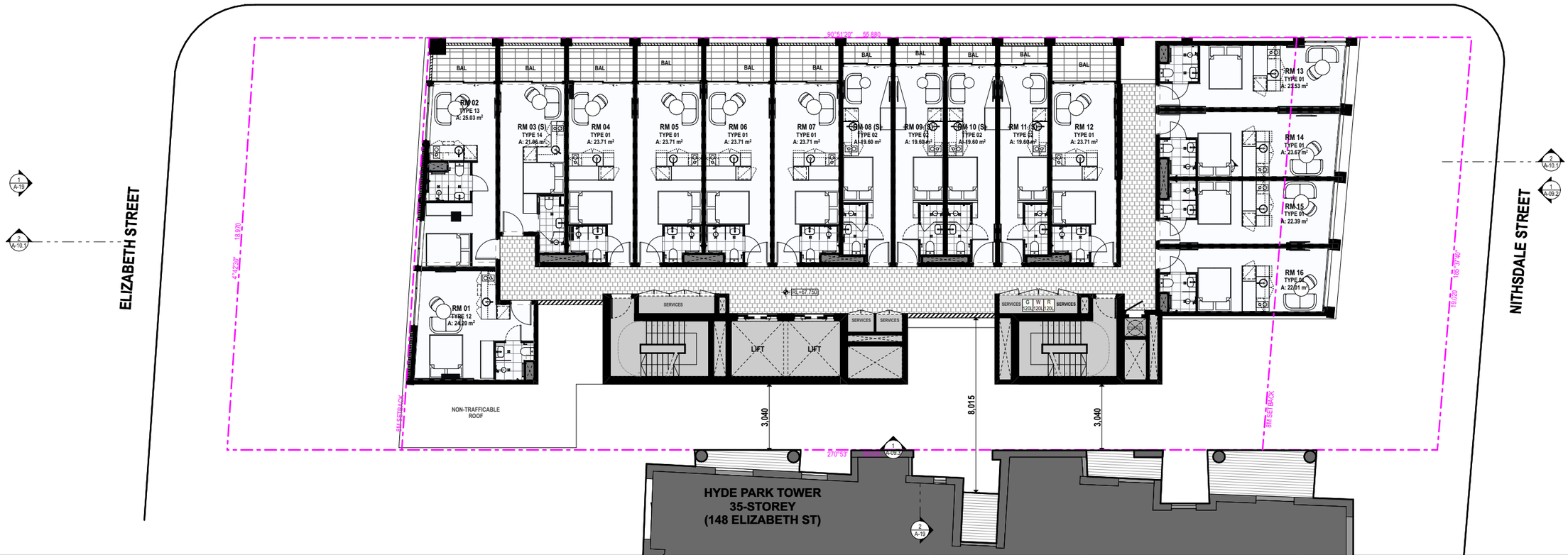
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.13	AC
disc	stage	dwg no.	revision





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MOSTAGHIM

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p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: LEVEL 13 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL

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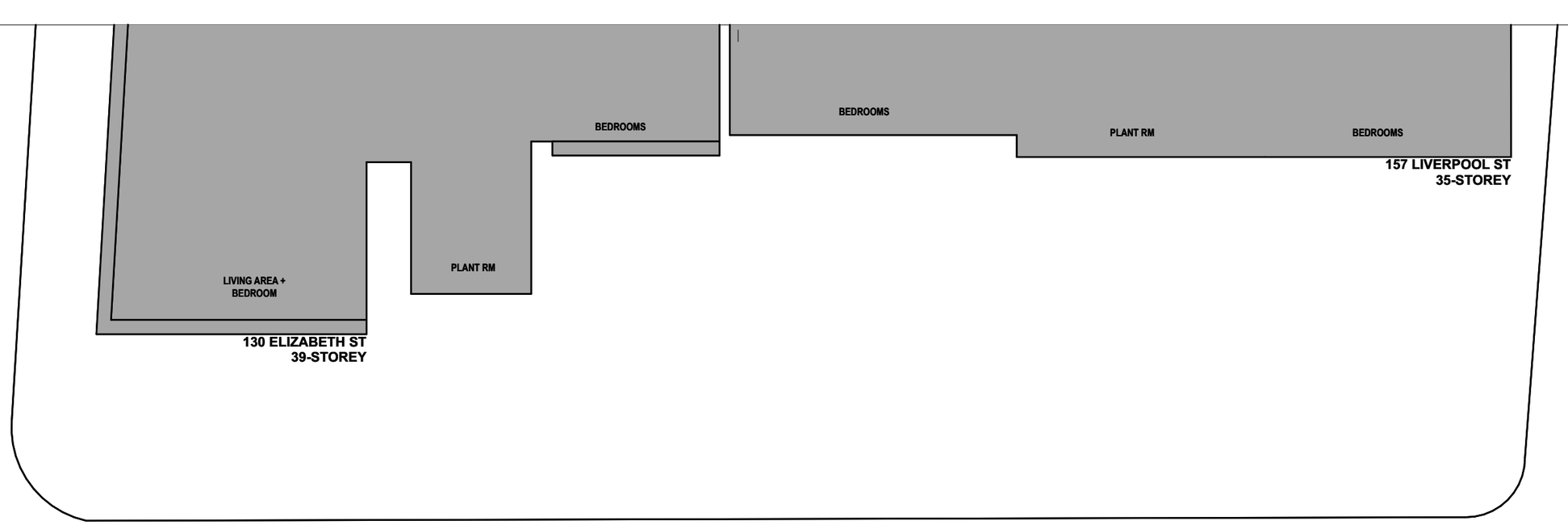
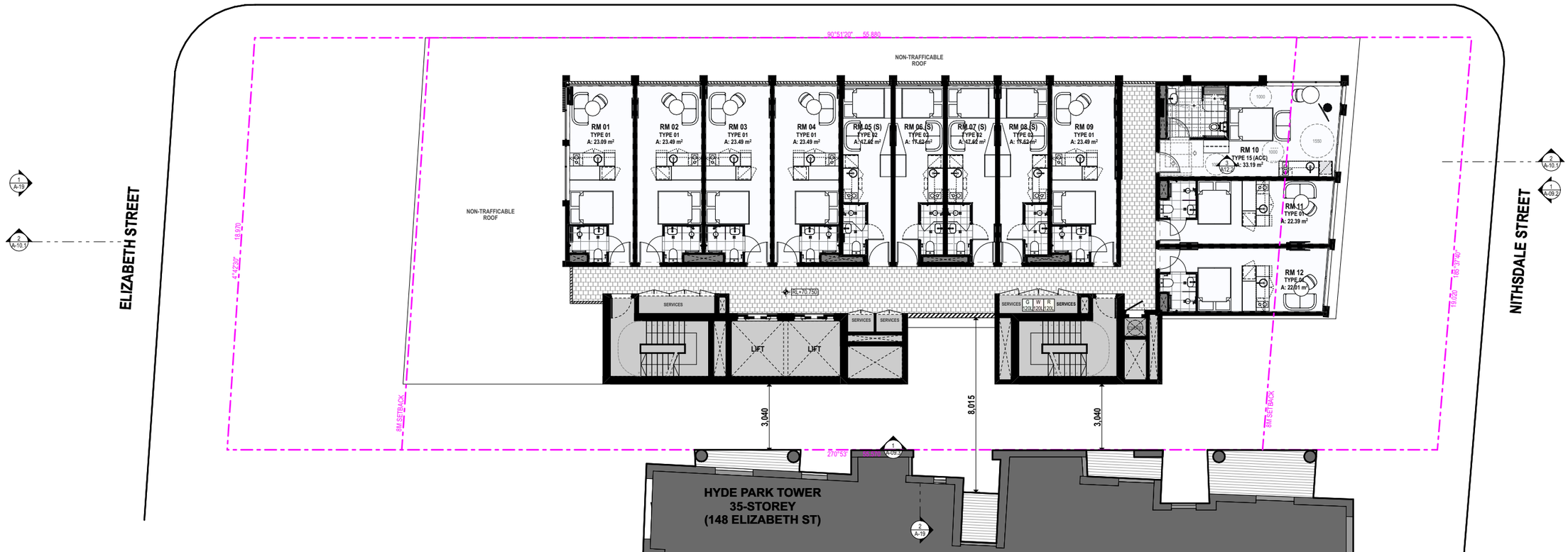
SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.14	AC
disc	stage	dwg no.	revision





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NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 14 PLAN

DRAWN BY:	CHECKED BY:
MO/KL/HH/CC	AM/MO/KL

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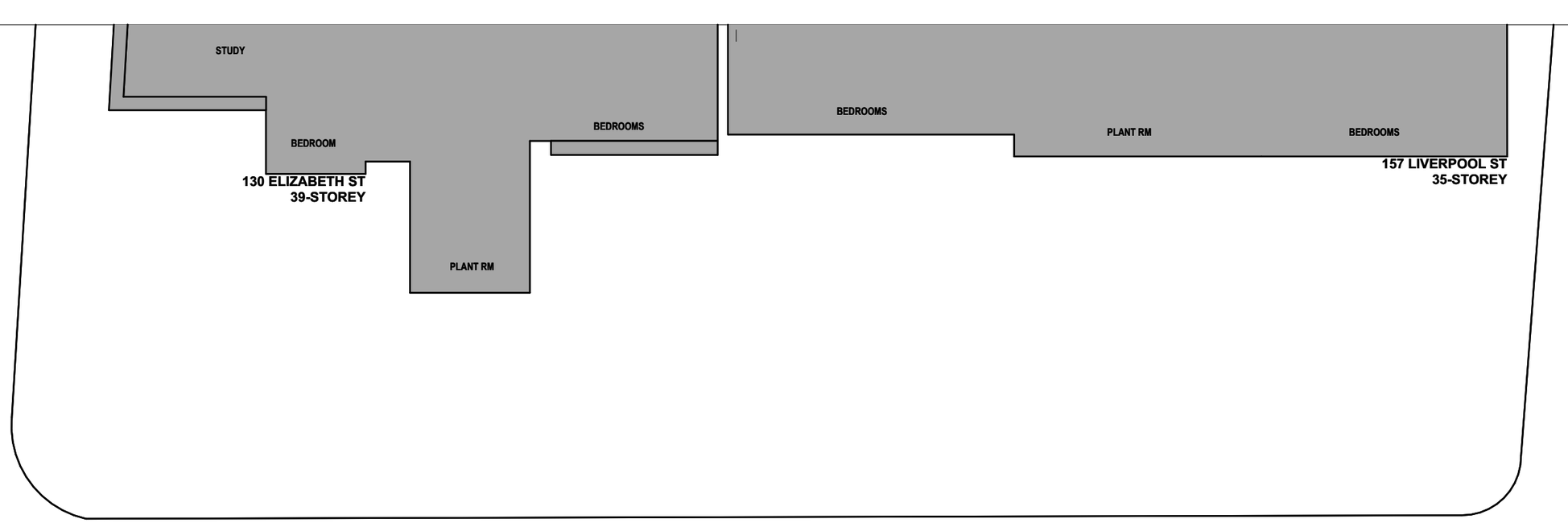
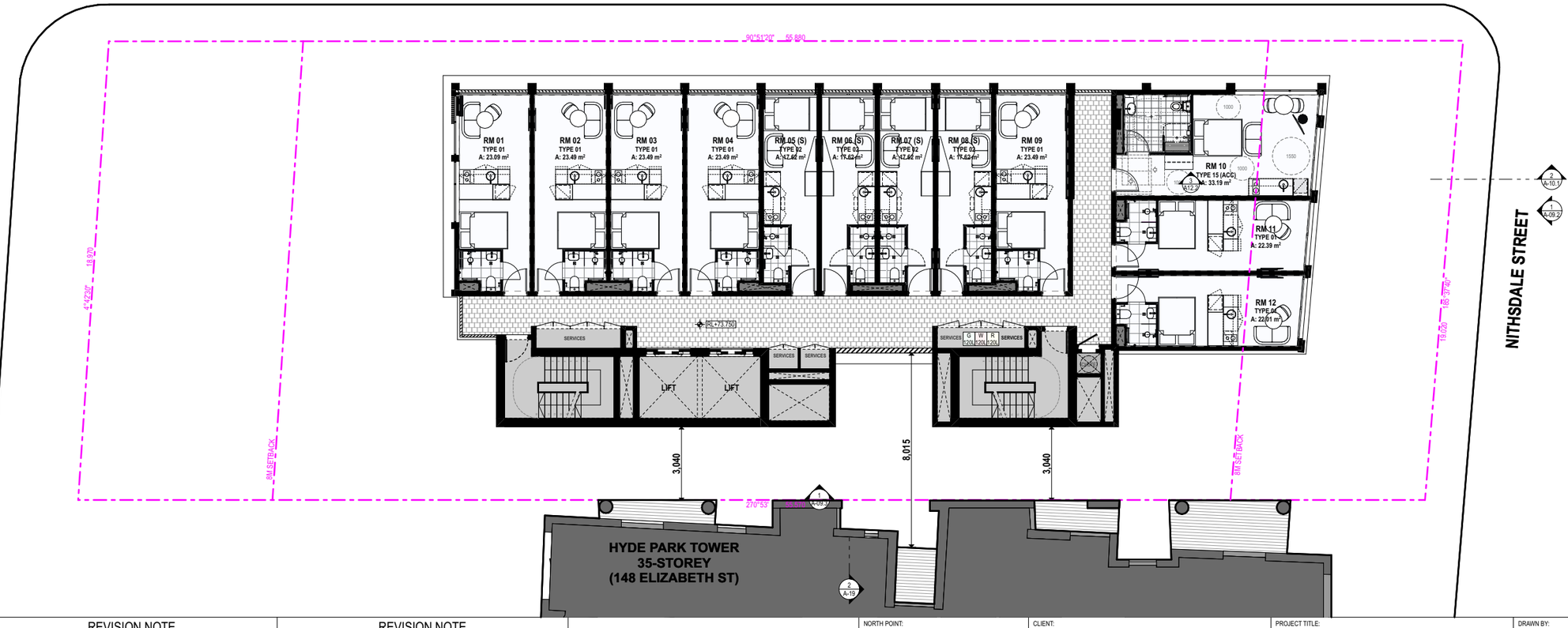
SCALE:	PROJECT NUMBER:
1:200 @ A3	23024

disc	stage	dwg no.	revision
A	DA	A-08.15	AC



CLARKE STREET

167



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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM

Nominated architect Ashkan Mostaghim 8358

a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: LEVEL 15 PLAN

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

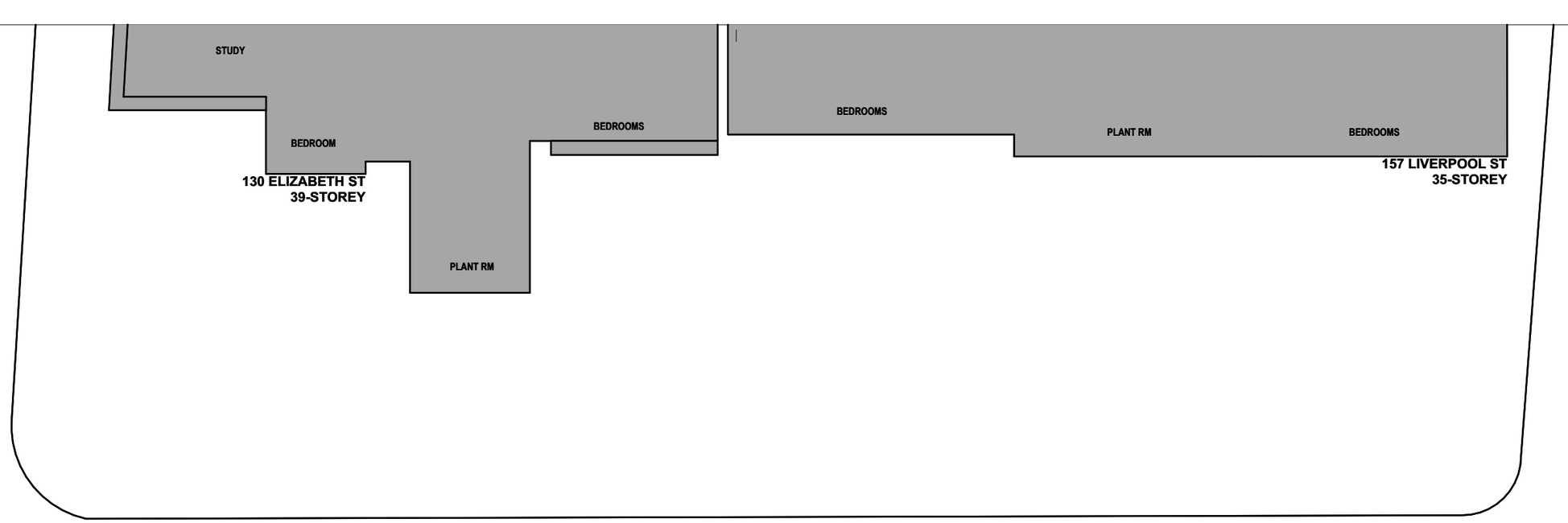
50 mm ACTUAL

IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

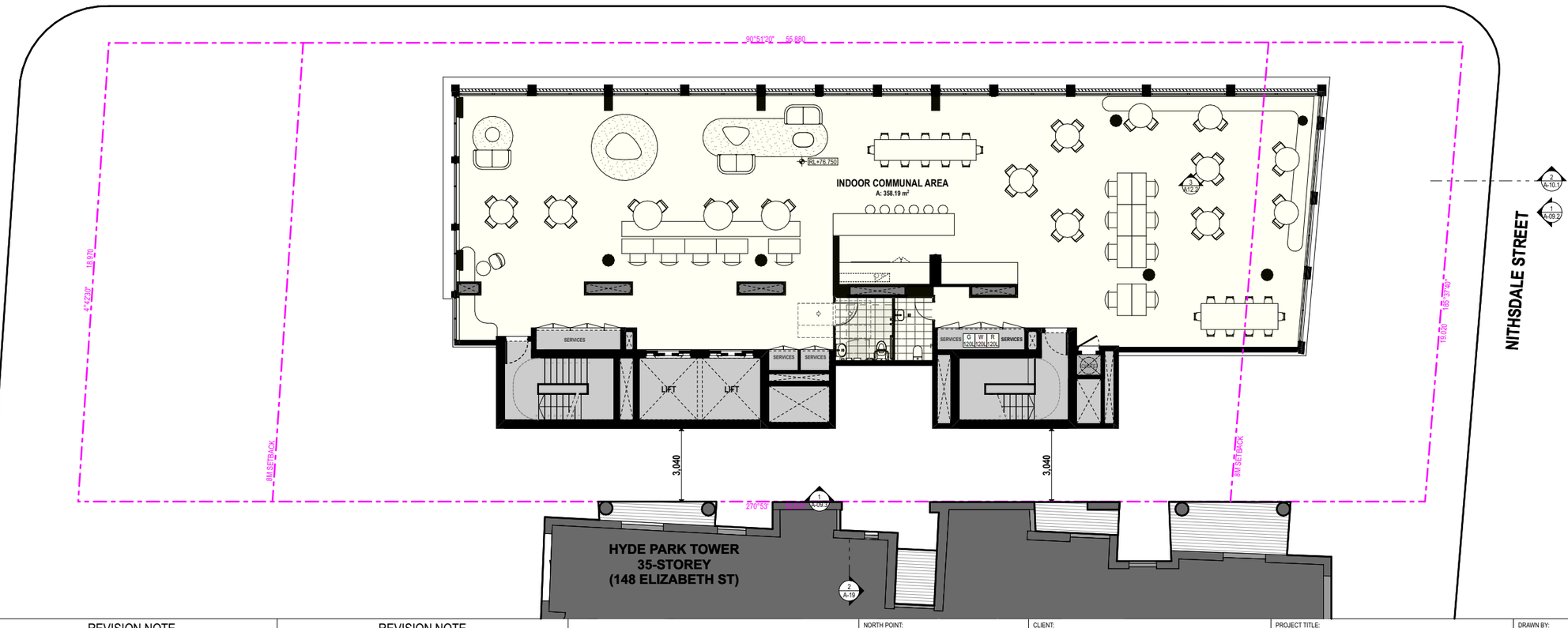
PROJECT NUMBER: 23024

A	DA	A-08.16	AC
disc	stage	dwg no.	revision



CLARKE STREET

168



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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: LEVEL 16 PLAN

DRAWN BY: MO/KL/HH/CC

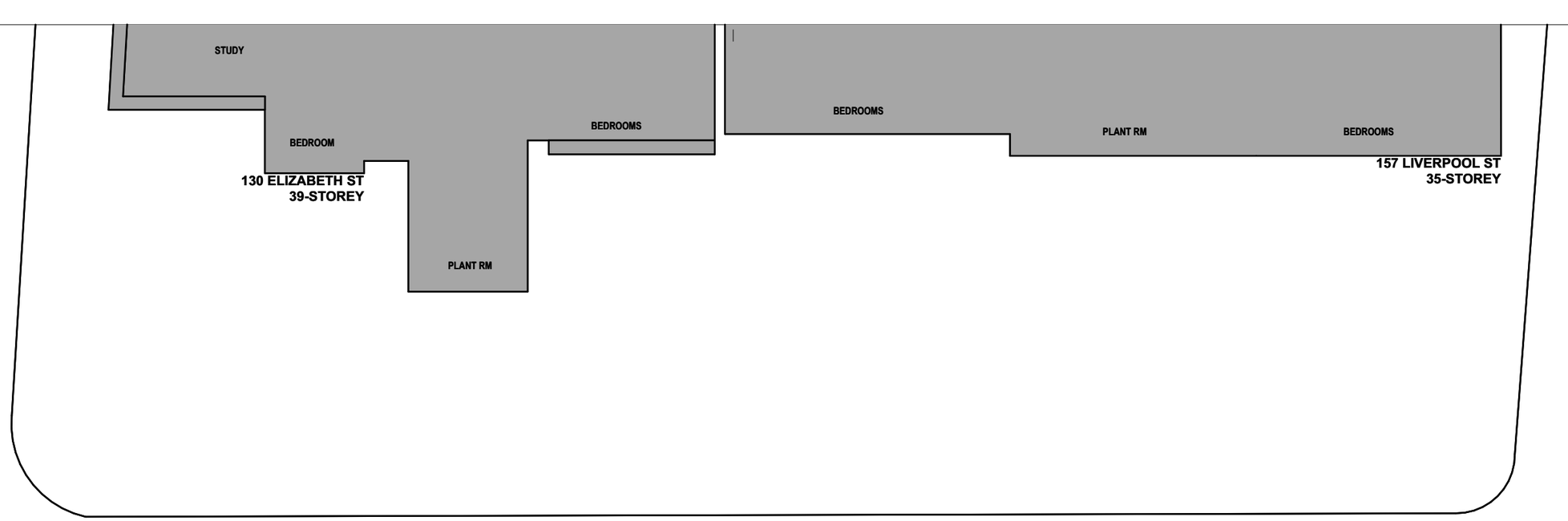
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.17	AC
disc	stage	dwg no.	revision



1 A-13

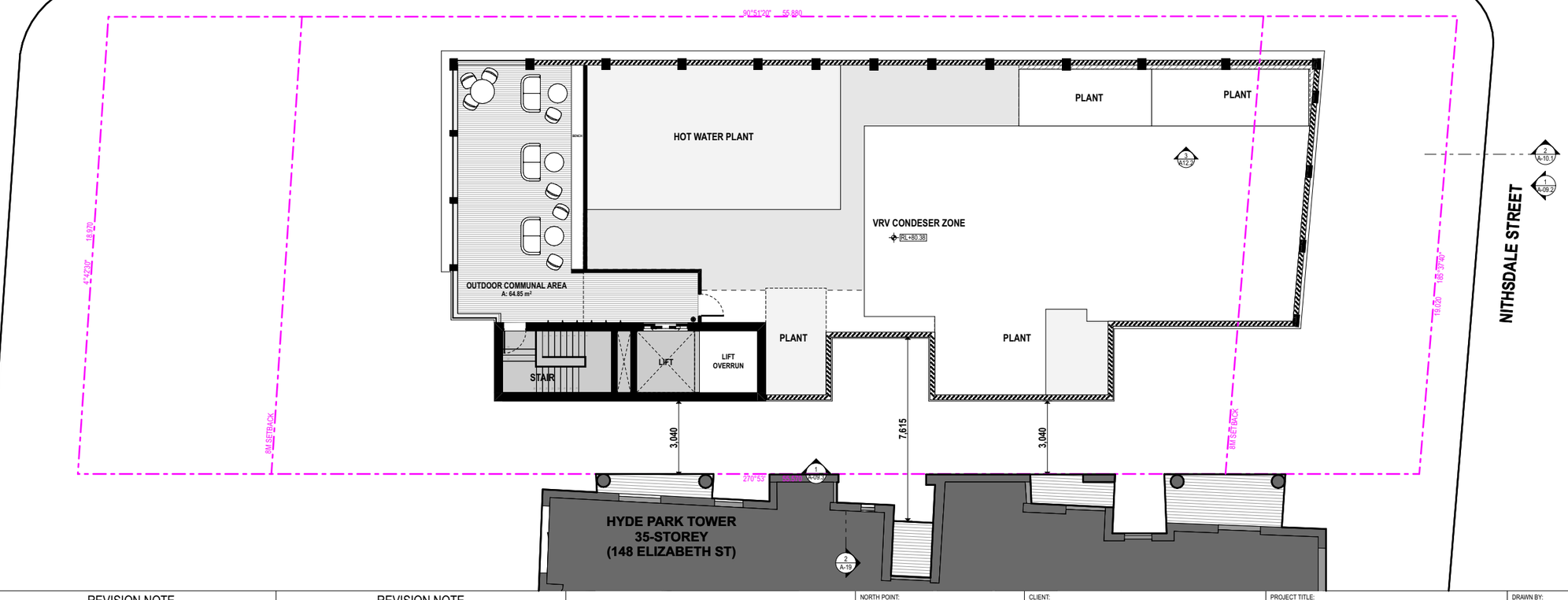
CLARKE STREET

169

1 A-18

2 A-10.1

ELIZABETH STREET



2 A-10.1

1 A-09.2

NITHSDALE STREET

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
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e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT: N

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: ROOF PLAN

DRAWN BY: MO/KL/HH/CC

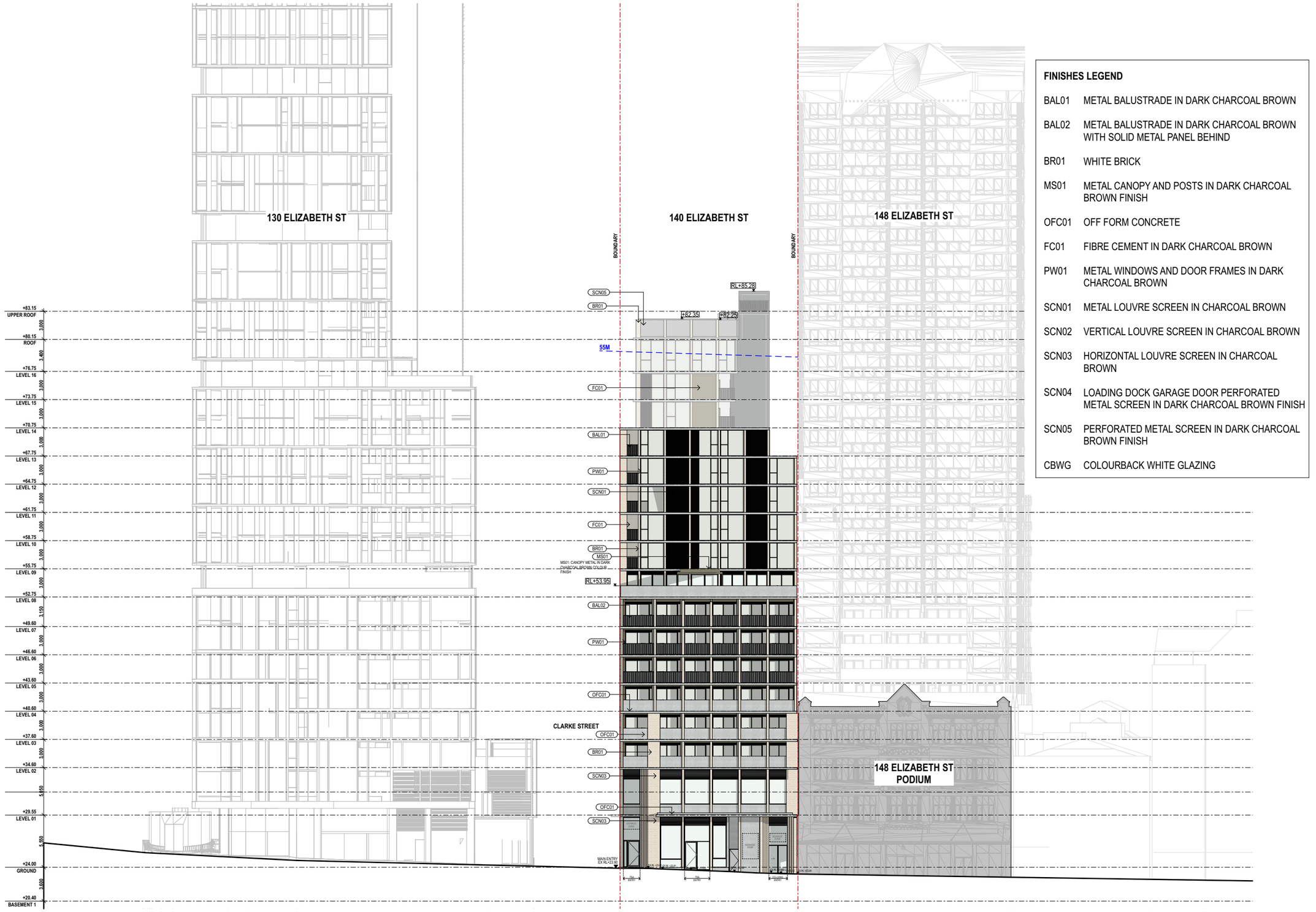
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:200 @ A3

PROJECT NUMBER: 23024

A	DA	A-08.18	AC
disc	stage	dwg no.	revision



1 WEST ELEVATION (ELIZABETH STREET
1:400

FINISHES LEGEND

BAL01	METAL BALUSTRADE IN DARK CHARCOAL BROWN
BAL02	METAL BALUSTRADE IN DARK CHARCOAL BROWN WITH SOLID METAL PANEL BEHIND
BR01	WHITE BRICK
MS01	METAL CANOPY AND POSTS IN DARK CHARCOAL BROWN FINISH
OFC01	OFF FORM CONCRETE
FC01	FIBRE CEMENT IN DARK CHARCOAL BROWN
PW01	METAL WINDOWS AND DOOR FRAMES IN DARK CHARCOAL BROWN
SCN01	METAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN02	VERTICAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN03	HORIZONTAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN04	LOADING DOCK GARAGE DOOR PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
SCN05	PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
CBWG	COLOURBACK WHITE GLAZING

170

NOTE

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AB	Development Application Model update	CC	15/10/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
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e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

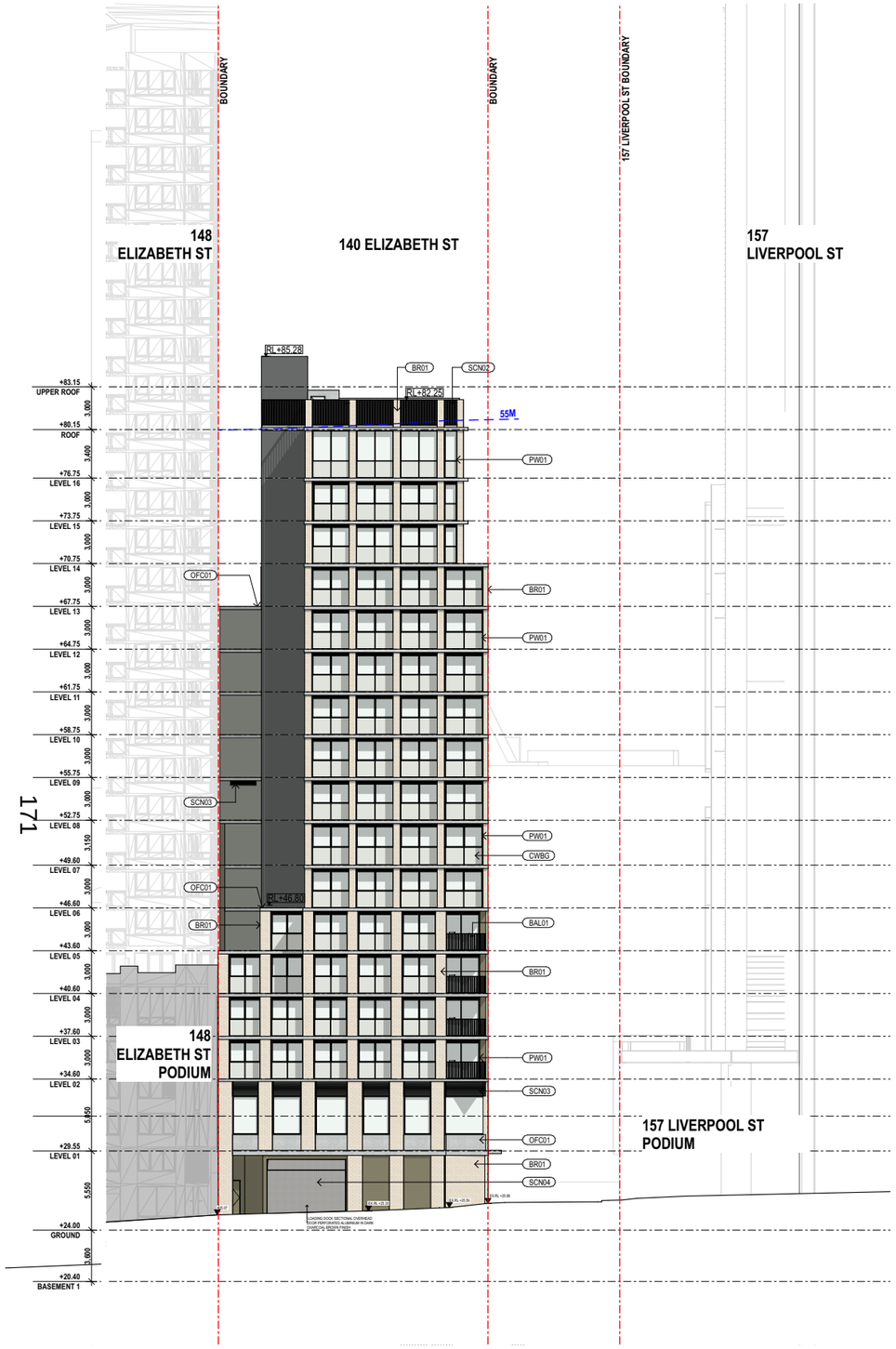
DRAWING TITLE: WEST ELEVATION

DRAWN BY: MO/KL/HH/CC
CHECKED BY: AM/MO/KL

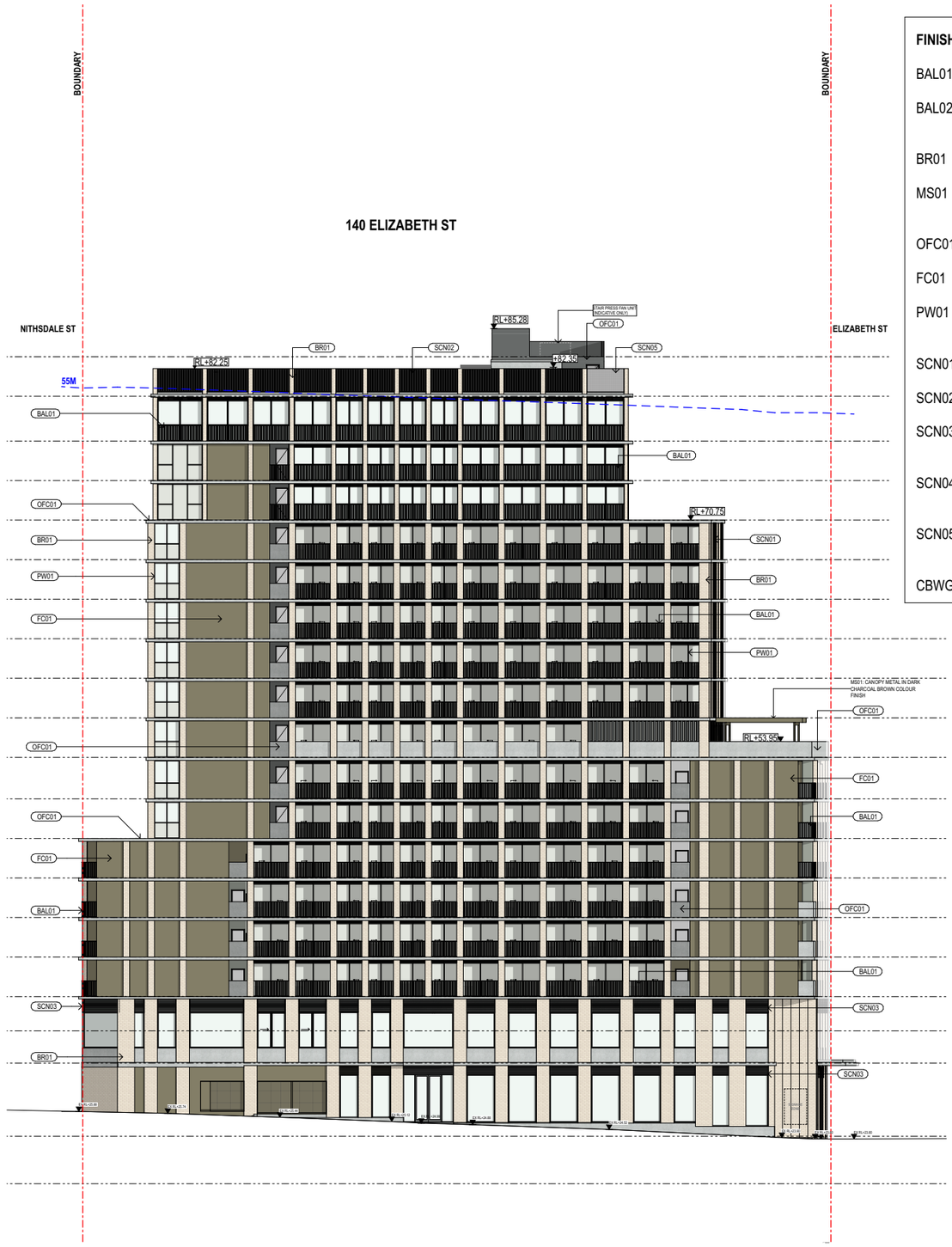
50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:400 @ A3
PROJECT NUMBER: 23024

A	DA	A-09.1	AC
disc	stage	dwg no.	revision



1 EAST ELEVATION (NITHSDALE STREET)
1:400



2 NORTH ELEVATION (CLARKE STREET)
1:400

FINISHES LEGEND

BAL01	METAL BALUSTRADE IN DARK CHARCOAL BROWN
BAL02	METAL BALUSTRADE IN DARK CHARCOAL BROWN WITH SOLID METAL PANEL BEHIND
BR01	WHITE BRICK
MS01	METAL CANOPY AND POSTS IN DARK CHARCOAL BROWN FINISH
OFC01	OFF FORM CONCRETE
FC01	FIBRE CEMENT IN DARK CHARCOAL BROWN
PW01	METAL WINDOWS AND DOOR FRAMES IN DARK CHARCOAL BROWN
SCN01	METAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN02	VERTICAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN03	HORIZONTAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN04	LOADING DOCK GARAGE DOOR PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
SCN05	PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
CBWG	COLOURBACK WHITE GLAZING

NOTE

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AB	Development Application Model update	CC	15/10/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	28/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: EAST & NORTH ELEVATIONS

DRAWN BY: MO/KL/HH/CC

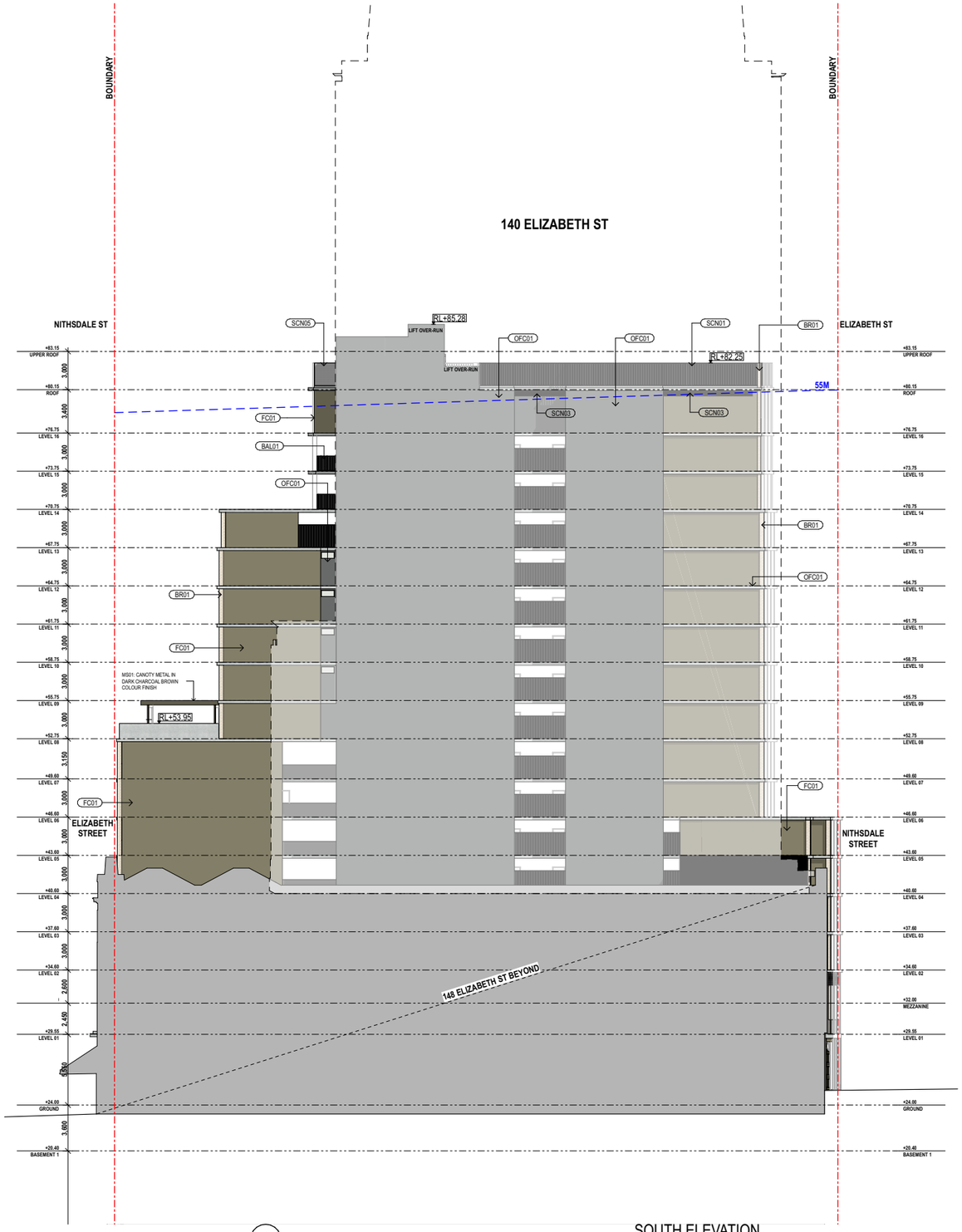
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:400 @ A3

PROJECT NUMBER: 23024

A	DA	A-09.2	AC
disc	stage	dwg no.	revision



1 SOUTH ELEVATION
1:400

FINISHES LEGEND

BAL01	METAL BALUSTRADE IN DARK CHARCOAL BROWN
BAL02	METAL BALUSTRADE IN DARK CHARCOAL BROWN WITH SOLID METAL PANEL BEHIND
BR01	WHITE BRICK
MS01	METAL CANOPY AND POSTS IN DARK CHARCOAL BROWN FINISH
OFC01	OFF FORM CONCRETE
FC01	FIBRE CEMENT IN DARK CHARCOAL BROWN
PW01	METAL WINDOWS AND DOOR FRAMES IN DARK CHARCOAL BROWN
SCN01	METAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN02	VERTICAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN03	HORIZONTAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN04	LOADING DOCK GARAGE DOOR PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
SCN05	PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
CBWG	COLOURBACK WHITE GLAZING

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AB	Development Application Model update	CC	15/10/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: SOUTH ELEVATION

DRAWN BY: MO/KL/HH/CC

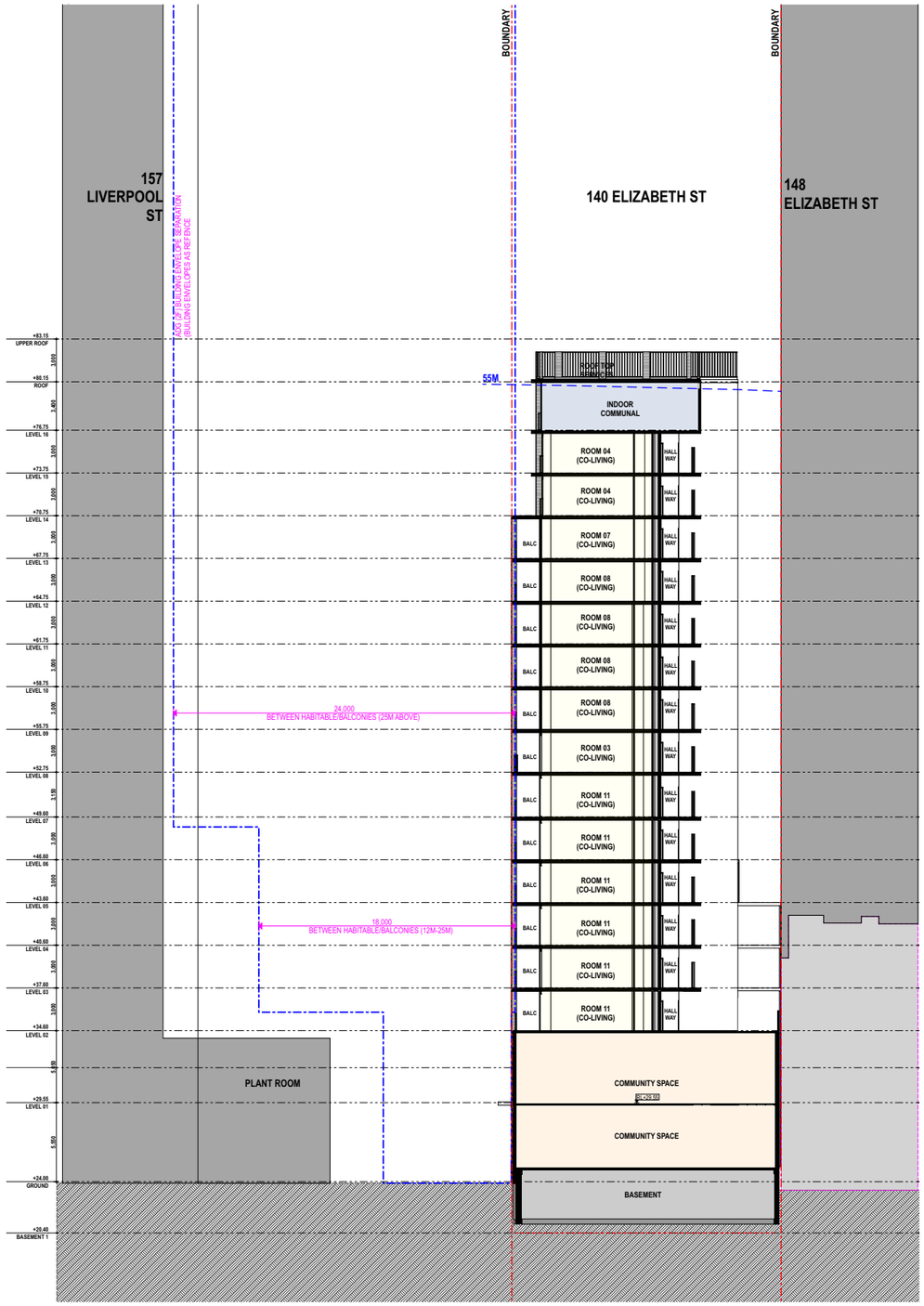
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

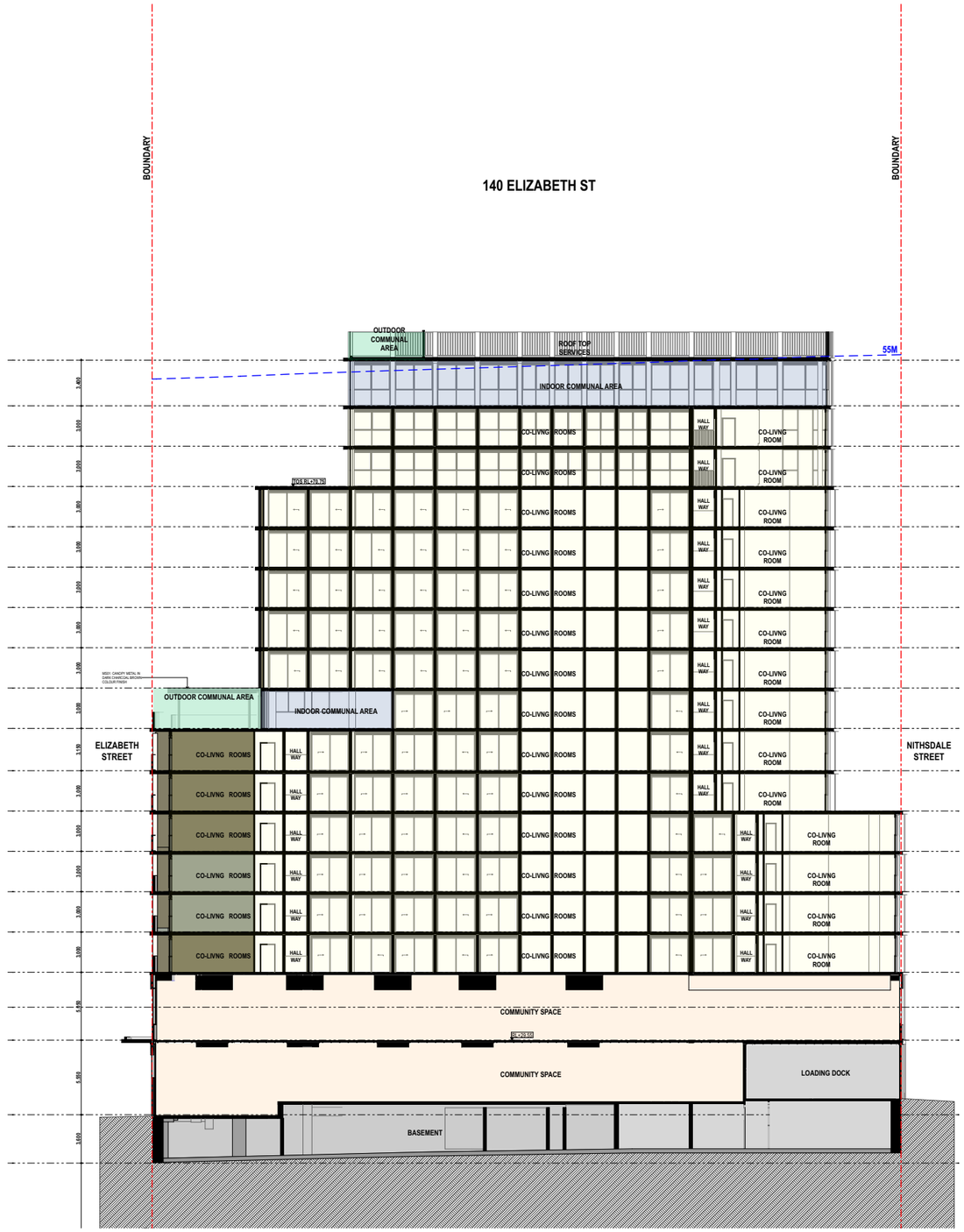
SCALE: 1:400 @ A3

PROJECT NUMBER: 23024

A	DA	A-09.3	AC
disc	stage	dwg no.	revision



1 CROSS SECTION
1:400



2 LONG SECTION
1:400

173

NOTE

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AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

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Nominated architect Ashkan Mostaghim 8358
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w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

DRAWING TITLE: SECTIONS

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:400 @ A3

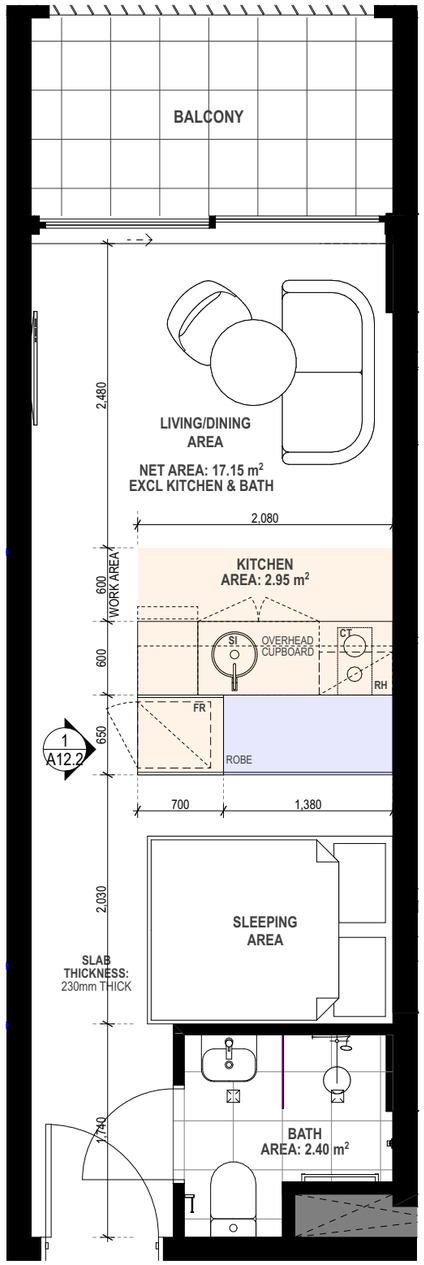
PROJECT NUMBER: 23024

A	DA	A-10.1	AC
disc	stage	dwg no.	revision

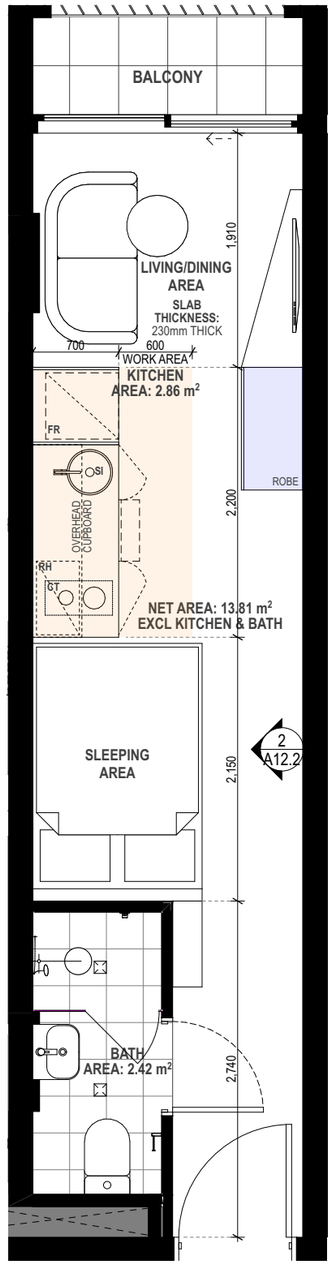
174

FF&E / JOINERY LEGEND

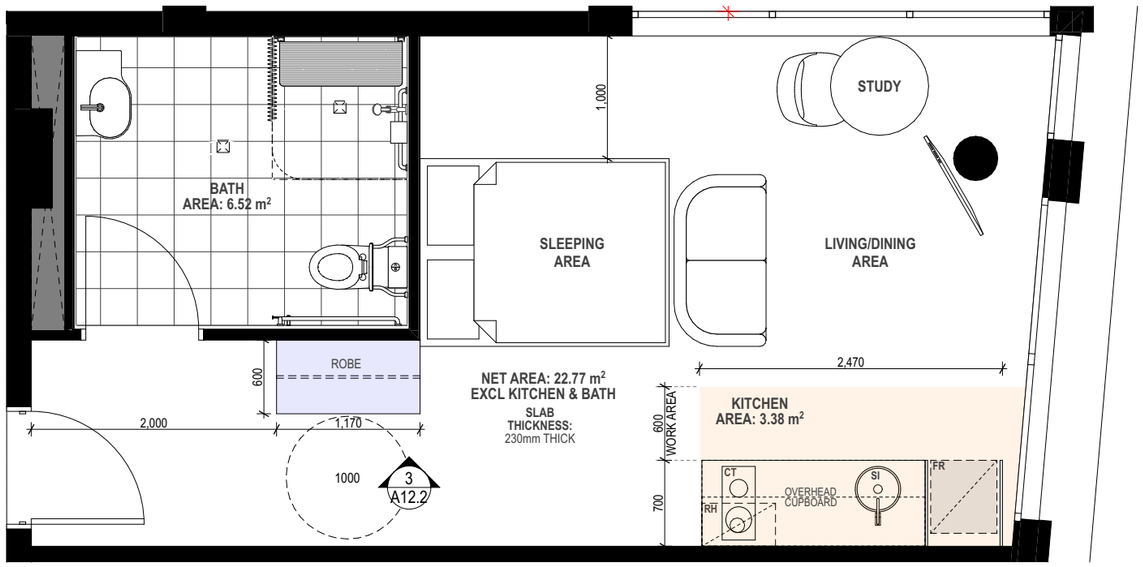
CH	CHAIR
CT	COOKTOP
DR	DRAWER
FR	FRIDGE / FREEZER
RH	RANGE HOOD



TYPE 01
DUAL OCCUPANCY



TYPE 02
SINGLE OCCUPANCY



ACCESSIBLE ROOM

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REVISION NOTE

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AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: TYPICAL ROOM: LAYOUTS

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

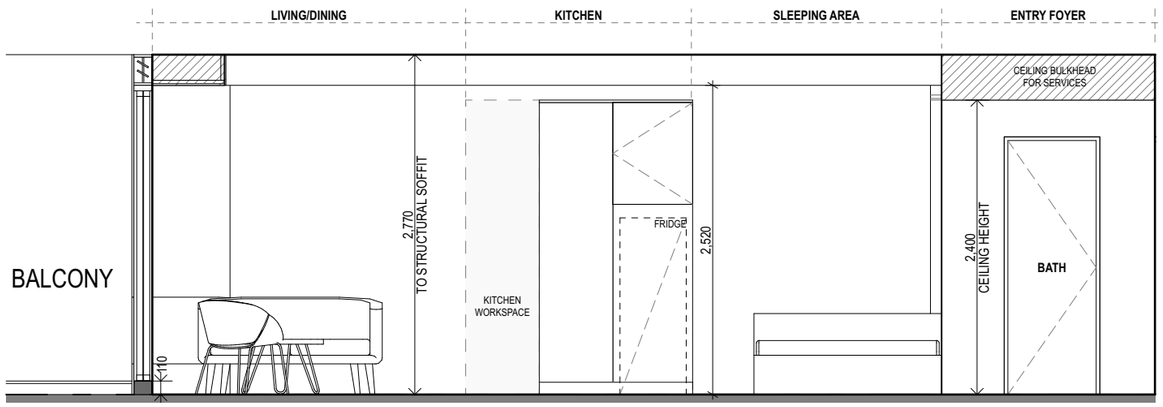
SCALE: 1:50 @ A3

PROJECT NUMBER: 23024

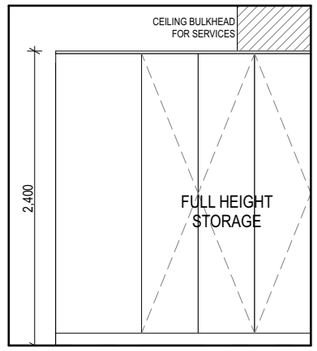
A	DA	A-12.1	AC
disc	stage	dwg no.	revision

FF&E / JOINERY LEGEND

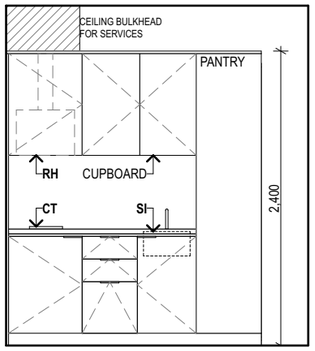
CH	CHAIR
CT	COOKTOP
DR	DRAWER
FR	FRIDGE / FREEZER
RH	RANGE HOOD



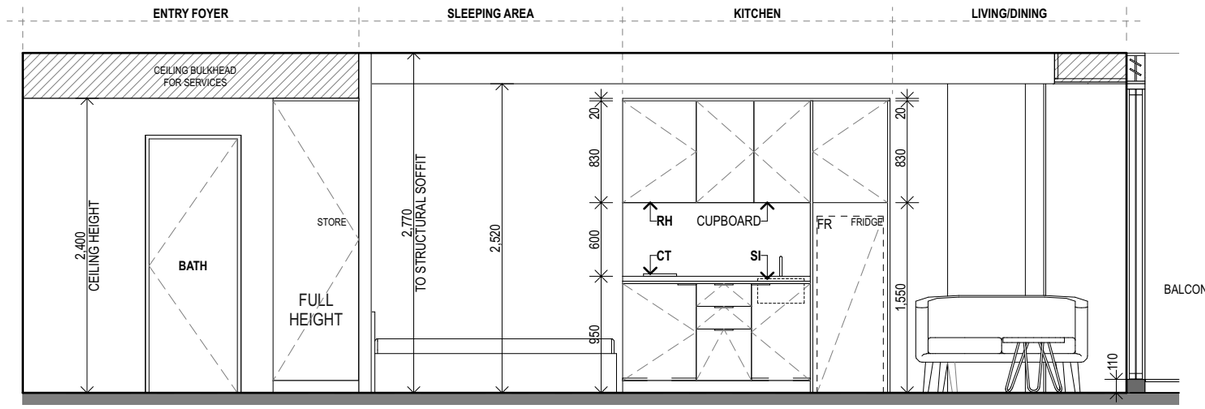
TYPE 01 ELEVATION
DUAL OCCUPANY



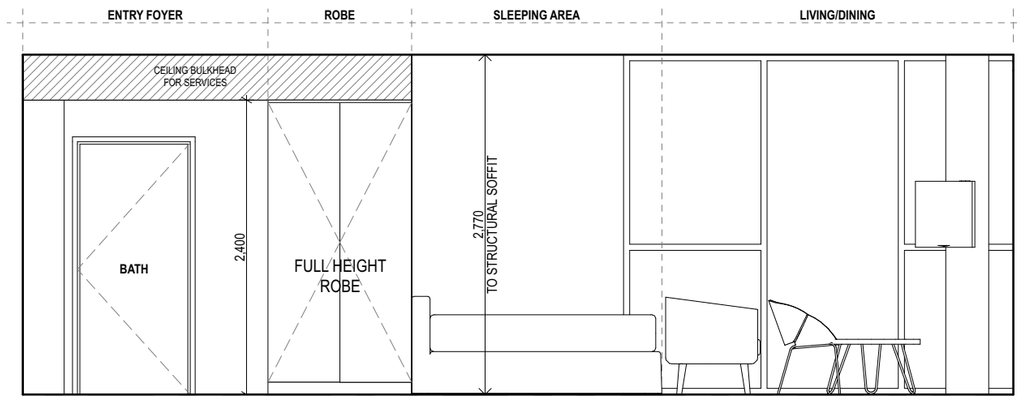
TYPICAL ROBE



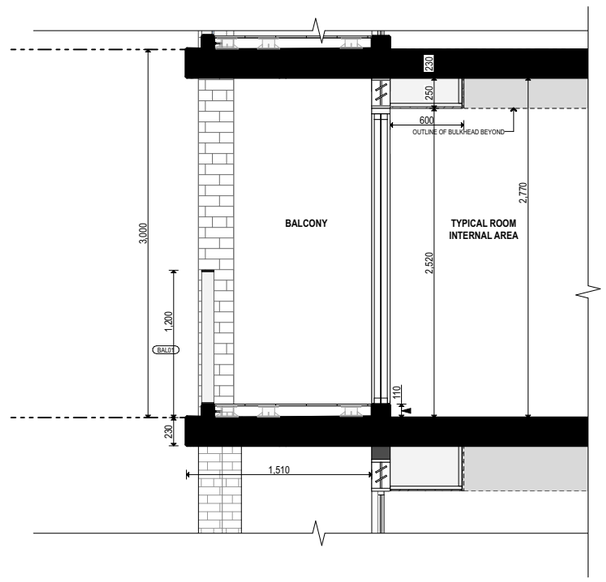
TYPICAL KITCHEN



TYPE 02 ELEVATION
SINGLE OCCUPANY



ACCESSIBLE ROOM ELEVATION



1 / - TYPICAL DETAIL SECTION
1:50

175

NOTE

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2. Any discrepancies between drawings of differing scales or between drawings and specification where appropriate to be notified to superintendent and/or the architects for decision.
3. Figured dimensions to be taken in preference to scaled dimensions.
4. Critical dimensions to be taken from site.
5. This drawing is to be read in conjunction with the specification and engineers' drawings.

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS:
136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE:
140 ELIZABETH STREET

DRAWING TITLE:
TYPICAL ROOM: ELEVATIONS

DRAWN BY: MO/KL/HH/CC
CHECKED BY: AM/MO/KL

50 mm ACTUAL
IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: 1:50 @ A3
PROJECT NUMBER: 23024

A	DA	A-12.2	AC
disc	stage	dwg no.	revision

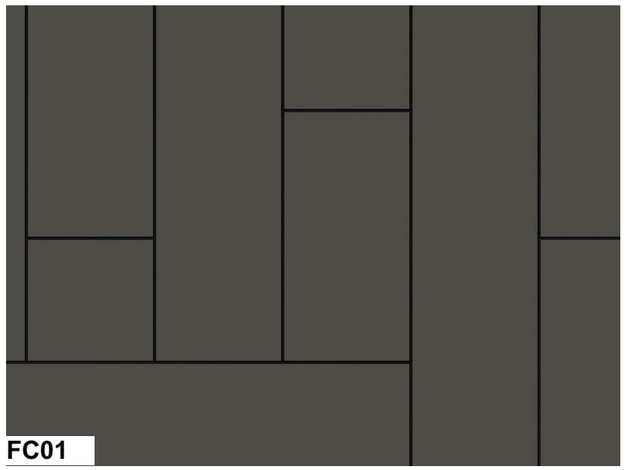
BAL01

BR01

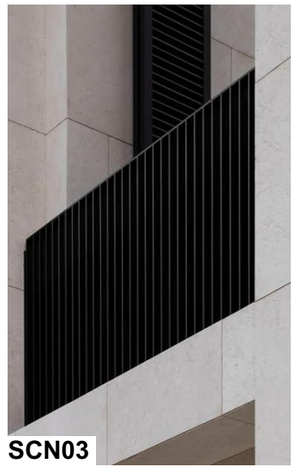
FINISHES LEGEND

BAL01	METAL BALUSTRADE IN DARK CHARCOAL BROWN
BAL02	METAL BALUSTRADE IN DARK CHARCOAL BROWN WITH SOLID METAL PANEL BEHIND
BR01	WHITE BRICK
MS01	METAL CANOPY AND POSTS IN DARK CHARCOAL BROWN FINISH
OFC01	OFF FORM CONCRETE
FC01	FIBRE CEMENT IN DARK CHARCOAL BROWN
PW01	METAL WINDOWS AND DOOR FRAMES IN DARK CHARCOAL BROWN
SCN01	METAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN02	VERTICAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN03	HORIZONTAL LOUVRE SCREEN IN CHARCOAL BROWN
SCN04	LOADING DOCK GARAGE DOOR PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
SCN05	PERFORATED METAL SCREEN IN DARK CHARCOAL BROWN FINISH
CBWG	COLOURBACK WHITE GLAZING

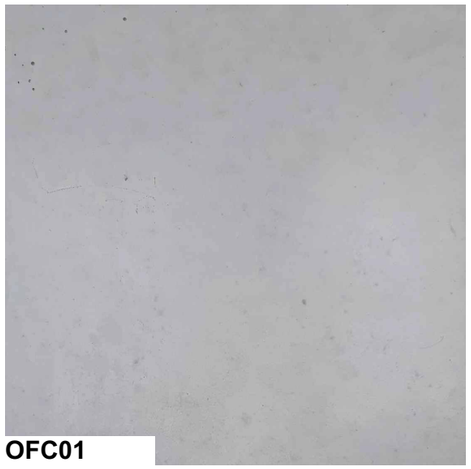
FC01



FC01



SCN03



OFC01

176

NOTE

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REVISION NOTE

REV	DESCRIPTION	BY	DATE
AA	Development Application	KL/CC/HH	04/07/2025
AC	Development Application: Response to RFI	MO/KL/HH/CC	23/10/2025

REVISION NOTE

REV	DESCRIPTION	BY	DATE

MOSTAGHIM
Nominated architect Ashkan Mostaghim 8358
a l1 7 kelly st, ultimo nsw 2007
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

NORTH POINT:

CLIENT: investa
Level 30, 420 George Street Sydney NSW 2000

PROJECT ADDRESS: 136-140 Elizabeth Street Sydney NSW 2000

PROJECT TITLE: 140 ELIZABETH STREET

DRAWING TITLE: MATERIALS PALETTE

DRAWN BY: MO/KL/HH/CC

CHECKED BY: AM/MO/KL

50 mm ACTUAL

IF THE ABOVE DIMENSION DOES NOT MEASURE FIFTY MILLIMETERS (50 mm) EXACTLY, THIS DRAWING WILL HAVE BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES.

SCALE: NTS

PROJECT NUMBER: 23024

A	DA	A-13.1	AC
disc	stage	dwg no.	revision

Attachment C

Submissions

From: Scott Reid [redacted] on behalf of Scott Reid [redacted] Scott Reid [redacted]

Sent on: Sunday, August 3, 2025 3:09:41 AM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Hi City of Sydney,

Whilst acknowledging that development will always be occurring in the city, we have just been subjected to months of intrusive noise and vibration (jack hammering by heavy excavators etc) with the demolition of 133 Castlereagh St.

Is it possible to condition any consent for the above development to provide some short periods of respite from the noise during the demolition please.

Regards,
Scott Reid
3002, 148 Elizabth St Sydney

Important Note

This email message and any attachments may contain information of a legally privileged and confidential nature for use only by the intended recipient. If you are not the intended recipient you have received this email in error and any use, circulation, forwarding, printing or copying whatsoever by you is strictly prohibited. If you have received this message in error, please inform us immediately and delete this email and any attachments. While Local Certification Services Pty Ltd and Local Consultancy Services Pty Ltd employs Anti-Virus Software, we cannot guarantee that this email is free from viruses and we recommend that the email and any attachments be tested before opening.

From: Bassam Aflak [redacted] on behalf of Bassam Aflak [redacted] <Bassam Aflak [redacted]

Sent on: Monday, August 4, 2025 9:30:44 AM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Attachments: 250804 DA Letter of Support - 136-140 Elizabeth St Sydney (signed).pdf (523.31 KB)

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Hi Maria,

Please find attached a submission.

Regards.

Bassam Aflak
Ecove Group

ecove®

T [redacted] ecove.com.au

This email may be confidential and is intended solely for the use of the individual to whom it is addressed. If you are not the intended recipient of this email, you must neither take any action based upon its contents, nor copy or show it to anyone. Kindly reply to the sender if you believe you have received this email in error.

Disclaimer: The content of this email is confidential and intended for the recipient specified in message only. It is strictly forbidden to share any part of this message with any third party, without a written consent of the sender. If you received this message by mistake, please reply to this message and follow with its deletion, so that we can ensure such a mistake does not occur in the future.

4 August 2025

To: City of Sydney Planning Department

Dear Sir/Madam,

Proposed Development at 136-140 Elizabeth St Sydney - Letter of Support

We are the neighbouring property owners, Retail Corporation Pty Limited, located at 128 Elizabeth St, 132 Elizabeth St, 153 Liverpool St & 155 Liverpool St Sydney.

We write to express our support for the proposed redevelopment at 136-140 Elizabeth St by The Salvation Army (Salvos) in partnership with Investa.

We believe this project will bring vital social, economic and urban benefits to the local precinct. The planned 17-storey mixed-use building including 251 studio apartments, expanded community spaces and modern amenities responds directly to Sydney's growing need for diverse, affordable accommodation options in the CBD.

The ongoing presence of the Salvos on this site is of immense value to all in the neighbourhood. The Salvation Army has been a pillar in the Sydney community, delivering services that reach the most vulnerable.

The redevelopment is a commitment to future generations. Enhanced facilities will allow the Salvos to expand their mission, ensuring effective assistance remains available for all who need it. The inclusion of modern, affordable apartments and community infrastructure ensures the site continues to serve the broad and evolving needs of our city.

The proposed art locations are well thought out and serves as a welcoming and identifying feature for the local precinct and increases street level interest.

We commend The Salvation Army and Investa for their vision. As neighbours, we support a proposal that celebrates the Salvos ongoing legacy and brings renewed life, safety and opportunity to Elizabeth Street.

Yours faithfully,
Retail Corporation Pty Limited

[redacted]

Bassam Aflak
Director

Office Level 1, 3 Australia Avenue Sydney Olympic Park NSW 2127
Correspondence Locked Bag 1451, Meadowbank NSW 2114
Tel [redacted]
Retail Corporation Pty Limited **ACN** 115 741 930

From: Elie Daher [redacted] on behalf of Elie Daher [redacted] <Elie Daher [redacted]

Sent on: Tuesday, August 5, 2025 2:17:44 PM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Formal Objection to Proposed Development

Date: 5th August 2025

RE: STRONG OBJECTION to DA – Proposed Overdevelopment at 136–140 Elizabeth Street, Sydney

Dear Council Assessment Team,

I write to express my strongest objection to the development application for the proposed 17-storey co-living development at 136–140 Elizabeth Street, directly adjacent to Hyde Park Towers. This proposal is not only grossly inappropriate for the site but also represents a flagrant disregard for the amenity, privacy, and well-being of long-standing residents in neighbouring buildings.

If approved, this development will cause irreversible harm to Hyde Park Towers. It is a textbook case of overdevelopment—squeezing an intensive, high-density, transient living facility into a site with no meaningful separation from a residential community.

1. Offensive Bulk and Massing

The proposed structure overwhelms the boundary it shares with Hyde Park Towers. The lack of proper setbacks, excessive height, and relentless vertical wall facing our building are an affront to responsible urban design. They demonstrate a blatant disregard for built form transitions, overshadowing, and spatial equity.

2. Gross Invasion of Privacy

The external walkways and communal terraces directly face our homes. No amount of louvres or 'screening' can undo the impact of over 400 strangers with a direct line of sight into private balconies and bedrooms. This unacceptable intrusion into private life sets a dangerous precedent for future development.

3. Unacceptable Noise and Disorder

Co-living, by its nature, brings higher turnover and more noise. Communal areas operating late into the night, including a rooftop terrace open until midnight, guarantee disturbances for adjacent residents. This design fails to protect the fundamental right to quiet enjoyment of one's home.

4. Threat to Health, Safety, and Amenity

The scale of this build, demolition, and excavation on a narrow inner-city plot is a recipe for dust, disruption, structural risks, and a construction nightmare. The developer's lack of commitment to meaningful protection for neighbouring buildings is alarming.

5. Planning Cynicism and Lack of Respect

The developer's engagement with the community has been superficial at best. There has been no direct consultation with Hyde Park Towers despite us being most affected. The proposal relies on minimal compliance and technical loopholes rather than good-faith, community-minded design.

6. Misuse of Co-Living Policy

This is not innovative housing—it is an exploitation of co-living provisions to shoehorn an unsuitably large number of people into a building with minimal oversight. It prioritises profit over community interest and long-term sustainability.

I urge Council to send a clear message: this is not the future Sydney wants. I call on the City of Sydney to protect existing communities from unjustified and harmful development. This application must be refused outright.

Sincerely,

Elie Daher

Resident, Hyde Park Towers

148 Elizabeth Street, Sydney NSW 2000

From: Penny Qi [redacted]on behalf of Penny Qi <[redacted] <Penny Qi [redacted]

Sent on: Tuesday, August 12, 2025 11:07:29 AM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Attachments: DA_Visual Impact.pdf (63.97 KB)

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Dear City of Sydney Council,

I am the owner of Unit 1201 in Hyde Park Towers and wish to lodge a formal objection to the proposed development at 136–140 Elizabeth Street, Sydney (DA 2547394).

The proposed building will have a severe and permanent impact on my apartment and the amenity of other Hyde Park Towers residents. My concerns are informed by the DA's own Statement of Environmental Effects, architectural drawings, and overshadowing simulations. I have attached a two-page visual impact summary extracted directly from the DA to illustrate these impacts.

1. Excessively Minimal Setback
The proposed building will have only a minimal setback from my secondary balcony. In a high-density CBD setting, such close separation creates an oppressive, enclosed outlook and significantly reduces privacy for both existing residents and future occupants.

This is inconsistent with planning principles that aim to preserve daylight access, privacy, and outlook.

2. Loss of Natural Light
While my unit does not receive direct winter sunlight, it benefits from substantial indirect light reflected from open areas and surrounding buildings. The bulk and height of the proposed development will greatly reduce this, leaving my apartment noticeably darker year-round.

The developer's own simulations show a marked drop in daylight penetration in winter. Loss of indirect light — critical to high-rise amenity — is not adequately addressed in the DA.

3. Visual Impact and Outlook Loss
The proposal will completely remove my north-facing views from the secondary balcony, replacing them with a close-up building façade. These balconies are not ornamental; they are important private open spaces, often used for fresh air, quiet recreation, or working from home.

The DA's view that these are "secondary" spaces and therefore less significant is outdated and inconsistent with contemporary apartment living.

4. Construction Impacts
The scale of the proposed building will require an extended construction period, causing:

- Prolonged noise, dust, and vibration impacts for residents, especially those facing the site.
- Heavy vehicle movements and street closures, adding to traffic congestion and reducing pedestrian safety.
- Reduced air quality during demolition and construction, affecting residents' health and wellbeing.

The DA does not adequately address mitigation measures for these impacts.

Requested Action
I am not opposed to redevelopment in principle. However, I request that Council require the applicant to:

- Increase the setback from Hyde Park Towers
- Reduce building bulk and height to protect daylight access.
- Mitigate privacy and visual amenity impacts for neighbouring residents.
- Provide clear, enforceable measures to minimise noise, dust, traffic, and safety impacts during construction.

I ask that these concerns, together with the attached visual evidence, be considered when assessing the DA to ensure any redevelopment respects the rights and livability of existing residents.

Yours sincerely,
Xiao Qi
Owner – Unit 1201, Hyde Park Towers

Levels 7 to 21 Looking North East

Figure 40 View 1 – Existing

Source: Virtual Ideas

Figure 41 View 1 – Proposed

Source: Virtual Ideas

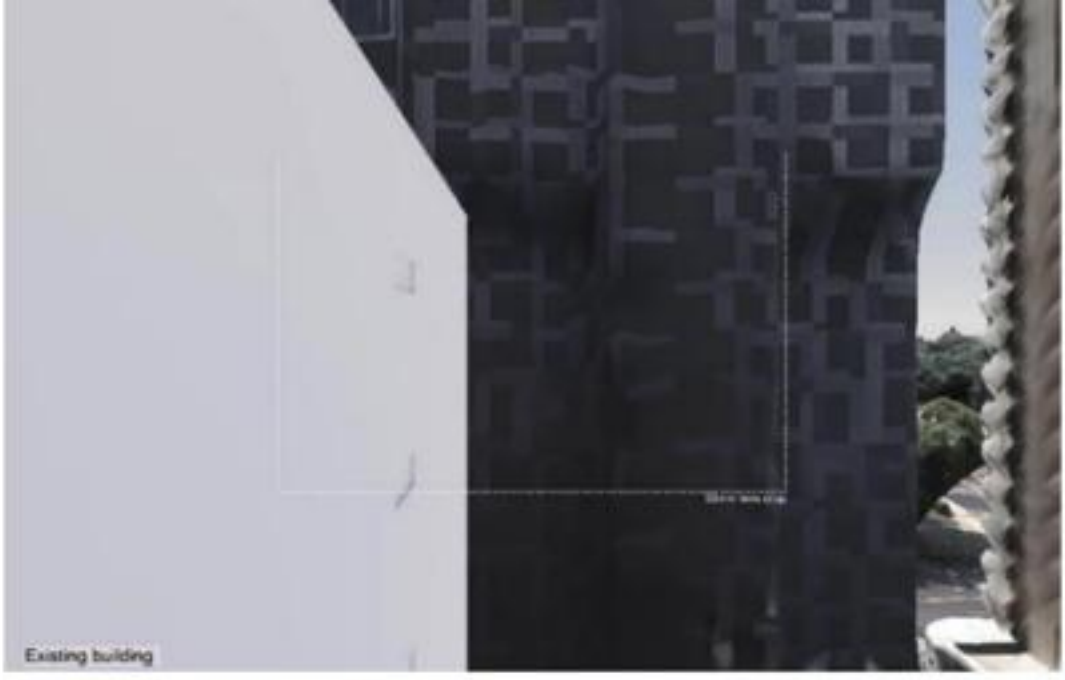

Figure 42 View 2 – Existing

Source: Virtual Ideas

Figure 43 View 2 – Proposed

Source: Virtual Ideas

This would also resemble the view from secondary balconies of North East aspect units.

From: peterluo [redacted] on behalf of peterluo [redacted] <peterluo [redacted]

Sent on: Tuesday, August 12, 2025 5:56:34 PM

To: dasubmissions@cityofsydney.nsw.gov.au

CC: [redacted]

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

To the Decision-Makers at the City of Sydney Council,

My name is Pan, and I am an owner at Unit 2601, 148 Elizabeth Street. I am writing to you not as a planning expert, but as a resident whose unit, and whose small piece of Sydney, is being threatened by the development at 136-140 Elizabeth Street (DA D/2025/675).

You are the professionals who can read the plans and see the technical specifications. You know the overshadowing diagrams and the setback calculations better than I ever will. But I know what it will feel like.

It will feel like a concrete wall stealing our sky.
This proposal is so aggressive that our new neighbours will be close enough for us to shake hands with them from our living rooms. Is this the future of Sydney living? Are we meant to live in a city where our windows look directly into another family's home, with no privacy, no breathing room, and no sunlight?
Sydney is supposed to be a world-class city, famous for its quality of life. This development is a blueprint for a world-class slum. It promotes a dark, suffocating, and frankly inhumane style of architecture that belongs in a dystopian novel, not in the heart of our beautiful city. We are people who have invested our lives here, not animals to be packed into a concrete jungle.

I appeal to you on a human level. Look beyond the documents and imagine living in the shadow of this building. Imagine your sunlight being extinguished and your privacy erased.
This isn't just another project. It's a test of what we value.

Actually my unit will not be heavily affected as the new DA building will be much lower than mine. However as I said above, I want to speak for my lower level neighbours and the future of Sydney living.

Please, I implore you to stand up for the residents of this city and reject this DA. Defend our quality of life and do not approve this monstrous proposal.

Sincerely,
Pan
A Concerned Neighbour
Unit 2601 / 148 Elizabeth St

Sent from my Galaxy

From: Jyoti Dubey [redacted] on behalf of Jyoti Dubey [redacted] <Jyoti Dubey [redacted]
Sent on: Tuesday, August 12, 2025 8:23:25 PM
To: dasubmissions@cityofsydney.nsw.gov.au
Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Dear Assessment Officer,

I am the owner of Unit 1901 at Hyde Park Towers, directly adjoining the proposed development site at 136–140 Elizabeth Street. I wish to lodge my strong objection to this Development Application in its current form, as it will cause significant, irreversible harm to the amenity, value, and liveability of my property.

1. Unacceptable Loss of Direct Sunlight

According to the proponent's own architect's Winter Solstice sunlight modelling (Appendix 2 of resident's summary), Unit 1901 will lose:

50% of direct sunlight to my primary outdoor space (balcony and living area POS)

Substantial loss of indirect light due to reduced setback and overshadowing.

This is non-compliant with the City of Sydney Development Control Plan (DCP) solar access requirements

that seek to preserve a minimum of 3 hours of sunlight in at least one living area during mid-winter.
The DA materially breaches this objective, harming both my quality of life and the environmental sustainability of my unit by increasing reliance on artificial lighting and heating.

2. Inadequate Setback – Oppressive Visual Impact

The proposed building will be as little as 3 metres from my primary balcony. This fails to provide adequate separation between habitable spaces in neighbouring towers, breaching the Apartment Design Guide (ADG) recommendations for:

12 metres minimum separation between balconies/living spaces of adjacent high-rise buildings (for privacy, outlook, and daylight).

This minimal separation will directly result in:

A severe sense of enclosure and visual dominance when viewed from my balcony and living room.

Loss of privacy, with direct overlooking into my indoor and outdoor living spaces.

Complete loss of my north-facing outlook, which is currently a defining amenity of my unit.

3. Significant Deterioration in Residential Amenity

The existing building has a modest height and setback. The proposed structure will be substantially taller and closer, producing:

Visual bulk and overbearing massing when viewed from my apartment.

Loss of sky views and daylight penetration.

Reduced residential amenity for all north-facing units in my vertical stack (Levels 16–22), but most severely

for mine due to direct facing alignment.

4. Outdated Assumptions in Visual Impact Argument

The developer's visual impact assessment attempts to downplay the effect by claiming my balcony is "off a bedroom" and therefore secondary. This is factually incorrect in the context of modern apartment living:

My balcony is regularly used for work, relaxation, and social gatherings.

In many apartments (including mine), secondary balconies off bedrooms serve as a critical source of daylight, ventilation, and outdoor amenity.

Reducing these spaces to "non-primary" status ignores the City's own planning goal to maximise private open space usability for health and wellbeing.

5. Planning Principle Conflicts

The DA's reduced setback, overshadowing and visual intrusion:

Breach SEPP 65 design quality principles (Daylight Access, Visual Privacy, Solar Amenity, and Bulk & Scale).

Fail to meet Apartment Design Guide separation standards.

Are inconsistent with City of Sydney DCP objectives to protect existing amenity and ensure equitable development outcomes between neighbours.

Requested Outcome

Given the severity of the amenity loss to my property and other Hyde Park Towers units, I request that Council refuse this DA in its current form.

If the proposal is to be reconsidered, it must be redesigned to:

Increase building setback to meet the 12m separation guideline from all Hyde Park Towers balconies.

Reduce bulk and height adjacent to residential windows to minimise overshadowing.

Retain north-facing daylight access in compliance with DCP solar access provisions.

Conclusion

This proposal represents an unacceptable overdevelopment of the site, with excessive bulk, height, and proximity that will permanently reduce the amenity, sunlight, privacy, and property value of my home.
I strongly urge Council to protect existing residents' rights to light, air, and outlook by rejecting this DA in its current form.

I highly appreciate your help and understanding.

Kind Regards,
Mukesh Dubey

Owner – Unit 1901
Hyde Park Towers, 148 Elizabeth Street Sydney NSW 2000

From: Mukesh [redacted] on behalf of Mukesh [redacted] <Mukesh [redacted]

Sent on: Tuesday, August 12, 2025 8:24:49 PM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Dear Assessment Officer,

I am the owner of Unit 1901 at Hyde Park Towers, directly adjoining the proposed development site at 136–140 Elizabeth Street. I wish to lodge my strong objection to this Development Application in its current form, as it will cause significant, irreversible harm to the amenity, value, and liveability of my property.

1. Unacceptable Loss of Direct Sunlight

According to the proponent's own architect's Winter Solstice sunlight modelling (Appendix 2 of resident's summary), Unit 1901 will lose:

- 50% of direct sunlight to my primary outdoor space (balcony and living area POS)
- Substantial loss of indirect light due to reduced setback and overshadowing.

This is non-compliant with the City of Sydney Development Control Plan (DCP) solar access requirements that seek to preserve a minimum of 3 hours of sunlight in at least one living area during mid-winter. The DA materially breaches this objective, harming both my quality of life and the environmental sustainability of my unit by increasing reliance on artificial lighting and heating.

2. Inadequate Setback – Oppressive Visual Impact

The proposed building will be as little as 3 metres from my primary balcony. This fails to provide adequate separation between habitable spaces in neighbouring towers, breaching the Apartment Design Guide (ADG) recommendations for:

- 12 metres minimum separation between balconies/living spaces of adjacent high-rise buildings (for privacy, outlook, and daylight).

This minimal separation will directly result in:

- A severe sense of enclosure and visual dominance when viewed from my balcony and living room.
- Loss of privacy, with direct overlooking into my indoor and outdoor living spaces.
- Complete loss of my north-facing outlook, which is currently a defining amenity of my unit.

3. Significant Deterioration in Residential Amenity

The existing building has a modest height and setback. The proposed structure will be substantially taller and closer, producing:

- Visual bulk and overbearing massing when viewed from my apartment.
- Loss of sky views and daylight penetration.
- Reduced residential amenity for all north-facing units in my vertical stack (Levels 16–22), but most

severely for mine due to direct facing alignment.

4. Outdated Assumptions in Visual Impact Argument

The developer's visual impact assessment attempts to downplay the effect by claiming my balcony is "off a bedroom" and therefore secondary. This is factually incorrect in the context of modern apartment living:

- My balcony is regularly used for work, relaxation, and social gatherings.
- In many apartments (including mine), secondary balconies off bedrooms serve as a critical source of daylight, ventilation, and outdoor amenity.

Reducing these spaces to "non-primary" status ignores the City's own planning goal to maximise private open space usability for health and wellbeing.

5. Planning Principle Conflicts

The DA's reduced setback, overshadowing and visual intrusion:

- Breach SEPP 65 design quality principles (Daylight Access, Visual Privacy, Solar Amenity, and Bulk & Scale).
- Fail to meet Apartment Design Guide separation standards.
- Are inconsistent with City of Sydney DCP objectives to protect existing amenity and ensure equitable development outcomes between neighbours.

Requested Outcome

Given the severity of the amenity loss to my property and other Hyde Park Towers units, I request that Council refuse this DA in its current form.

If the proposal is to be reconsidered, it must be redesigned to:

1. Increase building setback to meet the 12m separation guideline from all Hyde Park Towers balconies.
2. Reduce bulk and height adjacent to residential windows to minimise overshadowing.
3. Retain north-facing daylight access in compliance with DCP solar access provisions.

Conclusion

This proposal represents an unacceptable overdevelopment of the site, with excessive bulk, height, and proximity that will permanently reduce the amenity, sunlight, privacy, and property value of my home.
I strongly urge Council to protect existing residents' rights to light, air, and outlook by rejecting this DA in its current form.

I highly appreciate your help and understanding.

Kind Regards,
Mukesh Dubey

Owner – Unit 1901
Hyde Park Towers, 148 Elizabeth Street Sydney NSW 2000

From: [redacted] on behalf of [redacted]

Sent on: Thursday, August 21, 2025 8:12:14 PM

To: City of Sydney <council@cityofsydney.nsw.gov.au>

Subject: D/2025/675, 136-140 Elizabeth Street, Sydney NSW 2000

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Dear Ms. Burge,

I would like to raise concerns and object to the following development application D/2025/675, 136-140 Elizabeth Street, Sydney NSW 2000. I would like to submit the below. Please do not make public my email address or apartment number.

Thank you for considering what I have raised below and look forward to the outcome in due course.

Dear City of Sydney Council,

RE: Development Application D/2025/675

Site: 136-140 Elizabeth Street, Sydney NSW 2000

I am an owner of an apartment in the adjoining site at 148 Elizabeth Street, Sydney NSW 2000. I thank the City of Sydney Council for the opportunity to respond to the proposed development.

From review of the documents made available, my apartment will be detrimentally impacted if the development was to proceed. Accordingly, I object to this development based on my concerns as detailed below.

I refer to the lodged document **Overshadowing Study (Appendix F)**. Using the terminology from this report, my apartment would be described as a '*North-East Facing Apartment*'. Based on the results contained in this report, should the proposed development proceed, my apartment will suffer a 50% reduction in direct sunlight and a reduction in indirect natural light from the proposed new building. As the proposed development will directly face the main outlook of my apartment, such reduction in sunlight will therefore adversely affect both balconies (and therefore both bedrooms), living area and kitchen areas of the apartment. As Council would be aware the impacted residential apartments of 148 Elizabeth Street obtain a considerable amount of their natural light (both direct / indirect) via it entering through open areas and reflections from existing neighbouring surfaces.

With reference to **Visual Impact Renders and Methodology Report (Annexure GG)** it is evident that adverse visual impacts will occur to a significant number of residential apartments at 148 Elizabeth Street (including my apartment). These visual impacts will occur to both balconies of these apartments. For my apartment, based on the proposed visual impacts provided in the above report, the following views will be totally lost:

1. Loss of view of iconic Hyde Park (Sydney's oldest park).
2. Loss of view of the iconic site being St Mary's Cathedral.
3. Loss of view of the iconic site being the Hyde Park ANZAC Memorial.
4. Loss of distant iconic water views of Sydney Harbour.

It is noted that the above views will be lost totally from the apartment, in which they are currently seen from the main balcony and the kitchen window. From the second bedroom and secondary balcony existing views of 1, 2, and 3 will be lost (view 4 is not currently visible from these locations). There is no ability for any 'view sharing'.

In assessing the view impact of the proposed development, I respectfully submit that Council considers the principles established in *Tenacity Consulting v Warringah* [2004] NSWLEC 140. In applying the four-step test in this decision, my assessment is as follows:

> Step 1 (Assessment of View) – as outlined above the removal of significant / iconic sites such as Hyde Park, St. Mary's Cathedral, ANZAC Memorial, and Sydney Harbour. Should Council attend multiple North-East facing apartments at 148 Elizabeth Street, such views can be substantiated.
>
> Step 2 (Reasonableness to keep views) – 148 Elizabeth Street (i.e. Hyde Park Towers residential apartments) was approved by Council over ~25 years ago. At the time of approval, apartments (which are now impacted by the proposed development) were built to face north with both balconies facing north and the majority of windows. At

that point in time, the current existing site for the proposed development (136-140 Elizabeth Street) would have been in existence. It is reasonable to determine that Council would have considered this adjoining property when approving the residential development of 148 Elizabeth Street. It is unsound to conclude that their approval would have considered (and found it reasonable) that a future development of the current site, which if proceeds will result in residential apartments facing an adjoining building which at some points will only be setback by 3 metres.

Step 3 (Extent of impact) – as confirmed in the above referenced report, the current established views will be lost forever. This would amount to a devastating loss.

Step 4 (Reasonableness of proposal) – this would require assessment of Council if the development complies with all planning controls. However as raised throughout there are concerns with possible loss of sunlight, view impacts and overall building height.

Upon review of the **Building Code of Australia report (Appendix EE)** it is confirmed that the building height of the proposed development will be 56.35m, and per the application will cost ~$105,068,700.00. It is not clear from the lodged application why or if a competitive design process has been undertaken. My interpretation of the *Sydney Local Environment Plan 2012*, is that pursuant to cl.6.21D, development consent must not be granted unless a competitive design process has been held regarding the proposed development, if (notably):

- The development will have a height greater than 55m on land in Central Sydney;
- The development having an estimated development cost of more than $100,000,000.

As outlined above, it is submitted that the proposed development will have significant adverse impacts on adjoining buildings therefore it would not be unreasonable or unnecessary to require a competitive design process to be undertaken (if not already completed).

Thank you again for allowing me the opportunity to raise my objections based on my above concerns.

I look forward to hearing the outcome of the development proposal assessment in due course.

Yours sincerely

[redacted]

Owner of apartment 1[redacted]5/148 Elizabeth Street, Sydney NSW 2000

From: Philip Archer and Nicolas Mulder [redacted] on behalf of Philip Archer and Nicolas Mulde [redacted] d Nicolas Mulder [redacted]

Sent on: Sunday, August 24, 2025 1:19:47 PM

To: dasubmissions@cityofsydney.nsw.gov.au

Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Attachments: 2025-08-24 Letter to Council.pdf (105.82 KB)

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Dear Ms Burge

Please see **attached** submission.

Regards

Nicolas Mulder
[redacted]

24 August 2025

Marie Burge
Senior Planner
City of Sydney
Town Hall House
Sydney NSW 2000

Dear Ms Burge,

Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000

I am writing to comment on the above application, which is currently on exhibition. I am an owner-occupier in the neighbouring building 'Aspire' at 11 Alberta Street, Sydney NSW 2000. I was not consulted by Ethos Urban, which prepared the Consultation Outcomes Report accompanying the development application.

While I am not opposed to development in the area, nor even the (increased) size and external design of the proposed development, I have grave concerns regarding the development as 'co-living housing' or (as referred to in the relevant statutory instruments) a boarding house. The area surrounded by Liverpool Street, Wentworth Avenue, Goulburn Street and Elizabeth Street is a quiet residential neighbourhood (even though it is technically in the 2000 postcode) and the development of a boarding house in the area will have a detrimental impact on neighbouring residents.

My primary concern is excessive noise. Communal spaces in boarding houses become akin to bars or clubs, featuring both music and loud voices (particularly when people are intoxicated). It is presumably for that reason that s 4.4.1.7(1)(d) of the Sydney Development Control Plan 2012 requires, "*For boarding houses located within residential areas or where adjoining sites contain residential activities this use of open space should be restricted to before 10pm*". This provision is applicable to this development, as the immediately adjoining building at 148 Elizabeth Street is a residential apartment building. However, the Plan of Management accompanying the development application allows some open communal spaces to operate until *10:30 pm on weeknights* and all open communal spaces to operate until *midnight* on weekends. In that regard, the proposed development does not comply with the Sydney DCP 2012.

However, my concern about noise extends beyond the noise emanating from the open communal spaces. There will also be increased noise from the street as a result of the increased pedestrian traffic (particularly as residents return home late at night). Worse, I fear that, after the communal spaces in the building close at night, gatherings will relocate to the street or the 'pocket park' located just across Nithsdale Street (which is to be redeveloped as part of the approved development at 169-183 Liverpool Street). I used to live near a number of boarding houses, and my sleep was disrupted by the noise of parties; intoxicated residents returning home late at night; and people gathering in the park next door to my apartment, having climbed the fence after the park had closed.

I also observed binge drinking, public intoxication, smoking, drug use (particularly marijuana, which has an offensive smell), urinating, vomiting, littering (including broken bottles and cigarette butts) and damage to property. There was, in short, a general loss of neighbourhood amenity caused by presence of the boarding houses.

The Plan of Management accompanying this development application fails "*to ensure that* [the boarding house] *operates with minimal impact on adjoining owners*" or "*include details of ... measures to minimise unreasonable impact to the habitable areas of adjoining properties, including the management of communal open spaces*", as required by s 4.4.1.7(1) of the Sydney DCP 2012. For example, in addition to the hours of operation described above, the 'general etiquette' rules in s 4.1 concern the impacts on "*another occupier, the building owner, the building manager or any other person in the building*" but not neighbours and local residents; the 'drug and alcohol' rules in s 4.6 do not apply outside of the building; and the 'smoking and vaping' rules in s 4.5 will, in fact, push this behaviour out onto the street and into the 'pocket park'.

The Noise and Vibration Impact Assessment Report is also deficient. While it focusses primarily on noise intrusion, rather than noise emission, it gives cursory mention to noise emission at section 6. Its conclusions regarding 'patron noise' (at section 6.1.3) are based on unjustified assumptions; namely, that "[u]*se of the indoor and outdoor communal spaces is anticipated to be for 'low intensity' activities, with small numbers of residents gathering informally*" and "*large events or use of amplified music in these spaces will be minimal*". The Plan of Management contains no limit on the number of guests each resident may invite, nor any prohibition on amplified music, which might make good these assumptions.

The Noise and Vibration Impact Assessment Report also specifies (at table 5-1) a lower glazing performance for indoor communal spaces than any other room type, demonstrating its lack of concern for noise emissions.

For those reasons, I submit that the development application should be rejected and the development should be reimagined as a traditional strata apartment building or build-to-rent.

Alternatively, if approved, the development must be subject to conditions of consent:

1. restricting the hours of operation of the open communal spaces to no later than 10:00 pm every day (in line with s 4.4.1.7(1)(d) of the Sydney DCP 2012) and, preferably, 9:00 pm on weeknights;
2. mandating a minimum glazing performance of Rw 37 for the windows of the indoor communal spaces (being the same glazing performance as is specified for the West-facing co-living rooms on levels 2-7), or, alternatively, requesting an acoustic report addressing noise emissions, including details of any acoustic control measures that will be incorporated into the proposal, pursuant to s 4.4.1.6(3) of the Sydney DCP 2012;
3. mandating a minimum lease term of 12 months (which would not pose an issue for people who work or study in the city, who Ethos Urban suggest are the target demographic, but which would reduce negative behaviours associated with short-term occupants with limited ties to, a lack of accountability to, and a lack of respect for the local community); and
4. deferring commencement of the consent until a satisfactory Plan of Management is submitted, which plan ensures that the boarding house operates with minimal impact on adjoining owners, including by:
    a. limiting the number of guests each resident may invite;
    b. prohibiting amplified music in open communal spaces at any time; and
    c. expressly regulating behaviour towards neighbours and local residents, and behaviour outside of the building.

In addition:

5. the roads and footpaths in the area surrounded by Liverpool Street, Wentworth Avenue, Goulburn Street and Elizabeth Street will need to be alcohol-free zones and the 'pocket park' will need to be an alcohol-prohibited area; and
6. smoking will need to be prohibited in the 'pocket park'.

These six measures would alleviate most of the adverse impact of the proposed development on neighbouring residents.

Please do not hesitate to contact me if you wish to discuss any of the above matters.

Yours sincerely,

Nicolas Mulder

From: Kim Yu [redacted] on behalf of Kim Yu [redacted] <Kim Yu [redacted]

Sent on: Tuesday, August 26, 2025 9:57:10 PM

To: City of Sydney <council@cityofsydney.nsw.gov.au>

Subject: Feedback for DA of 136-140 Elizabeth Street Sydney NSW 2000

Attachments: DA Feedback Elizabeth St.docx (20.02 KB)

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D/2025/675

Address

136-140 Elizabeth Street SYDNEY NSW 2000

Applicant

INVESTA 140E DEVCO PTY LTD

Description

Demolition of existing building, excavation and construction of a 17-storey mixed use building comprising 2 storeys of community floor space and 15 storeys of co-living residential uses (251 rooms).

City of Sydney contact
Marie Burge

Dear Ms Burge

The attached Feedback is for your attention please and kindly note that we do not wish to have our address and mobile number disclosed to the public.

Regards
Kim and Peggy Yu

D/2025/675

Address

136-140 Elizabeth Street SYDNEY NSW 2000

Applicant

INVESTA 140E DEVCO PTY LTD

Description

Demolition of existing building, excavation and construction of a 17-storey mixed use building comprising 2 storeys of community floor space and 15 storeys of co-living residential uses (251 rooms).

City of Sydney contact
Marie Burge

To: City of Sydney Planning Team

Subject: Development Application D/2025/675 – 136-140 Elizabeth Street, Sydney

Dear Planning Team,

We are writing to formally object to the Development Application (DA) submitted by Investa in partnership with The Salvation Army (TSA) for a co-living development at 136-140 Elizabeth Street, Sydney. While the initiative seeks to promote housing diversity, it raises serious concerns regarding planning compliance, amenity impacts, public safety, and broader reputational risks for the city.

1. Privacy and Solar Access

- The proposed minimal setbacks from north-facing units—as little as 3 metres to balconies—compromise the privacy of existing Hyde Park Towers (HPT) residents.
- The development will reduce direct sunlight and solar access for north-facing residents, contrary to the principles of equitable amenity outlined in the Sydney DCP 2012.

2. View Loss and Setback Non-Compliance

- The loss of northern and eastern views is substantial, particularly due to the reduced setback on Nithsdale Street (5.2m proposed vs. 6m required).
- The proposal fails to comply with setback requirements on Clarke Street (2m vs. 8m) and Nithsdale Street, despite clear DCP guidance.

Setback and Height Compliance Summary (Table 10 of SEE, p52)

Frontage	Permissible Height	Proposed Height	Compliant?	Min. Setback	Proposed Setback	Compliant?
Elizabeth Street	20–35m	30.3m	✓	8m	8m	✓
Clarke Street	20–35m	47m	✗	8m	2m	✗
Nithsdale Street	20–35m	21m	✓	6m*	5.2m	✗

3. Noise and Amenity

- Communal living areas operating until midnight on Fridays and Saturdays are disruptive, particularly for HPT shift workers and weekend professionals.
- The proposal does not address noise impacts on public holidays, which should be considered in the Plan of Management.

4. Impact on Resale Value

- The Environmental Statement (p78) asserts no adverse impact on surrounding developments. However, the inclusion of "vulnerable" residents—defined as individuals facing social disadvantage, illness, or homelessness—contradicts earlier assurances at a consultation meeting for HPT owners that the building would be leased exclusively to professionals and students.
- This shift may influence buyer confidence and perceived property values in adjacent buildings.

5. Safety and Social Cohesion

- Mixing students, professionals, and vulnerable individuals in a co-living model raises concerns about conflict, exclusion, and safety.
- The Plan of Management (p13, section 5.8) anticipates incidents, requiring a complaints and incidents register accessible to Sydney City Council, NSW Police, and other authorities—suggesting a risk of disruption.
- The Singapore co-living model excludes homeless individuals, underscoring the need for clearer resident criteria and safeguards.

6. Reputational Risk to Sydney

- Establishing a high-density, socially complex development directly adjacent to Hyde Park—a cherished public space frequented by families, tourists, and locals—and the Downing Centre Court, places the city under an intensified public spotlight. This

location not only amplifies visibility but also increases the likelihood of reputational scrutiny. In such a prominent and symbolic setting, any misstep could undermine public trust and detract from the city's image. Strategic foresight is essential to ensure that development enhances, rather than compromises, the integrity of these civic landmarks. A more prudent approach would be to pilot this model outside the CBD with larger, more dignified accommodation for vulnerable residents, rather than units of under 14sqm.

7. Accountability and Transparency

- There is a concerning lack of clarity around how incoming residents will be informed about the composition of the vulnerable population within the development. Full transparency is critical to fostering community cohesion and preventing future conflict or misunderstanding.
- Although the proposal highlights the inclusion of "multi-purpose community floor space to accommodate the evolving needs of TSA"(p78 of SEE), the DA lacks critical detail regarding the maximum number of vulnerable individuals to be housed, as well as a robust contingency plan should the co-living model fail. There is no clarity around which entity—Investa, TSA, or a relevant government authority—would bear responsibility in the event of such a failure, nor are there any defined mechanisms to manage the potential consequences. This absence of clear accountability and risk management protocols raises significant concerns about the long-term governance, sustainability, and resilience of the development.

Conclusion

This proposal, while well-intentioned, presents serious planning, social, and reputational challenges. We urge Council to request Investa and TSA to revise the application to better align with DCP controls, community expectations, and urban integrity.

Yours sincerely,
Kim and Peggy Yu
Please withhold this information)
Mobile lease withhold this information)
26 August 2025

From: Alan Shen [redacted] on behalf of Alan Shen [redacted] <Alan Shen [redacted]

Sent on: Wednesday, August 27, 2025 9:49:00 PM

To: dasubmissions@cityofsydney.nsw.gov.au

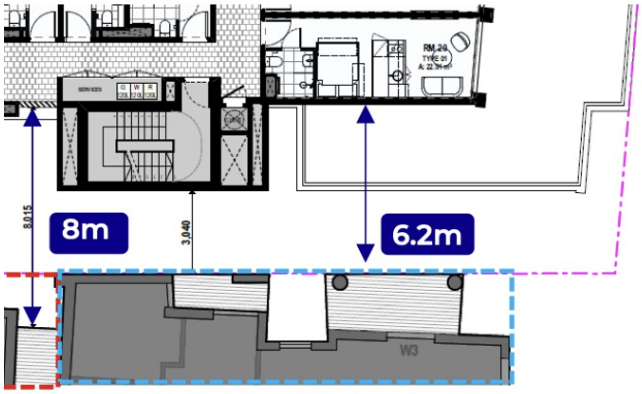
Subject: Submission - D/2025/675 - 136-140 Elizabeth Street SYDNEY NSW 2000 - Attention Marie Burge

Caution: This email came from outside the organisation. Don't click links or open attachments unless you know the sender, and were expecting this email.

Dear Marie and Development Application Review team,

As a resident and current owner of unit #1306 in Hyde Park Towers (148 Elizabeth St), I strongly object to the current development application. As you may already be aware, the development has extremely limited setbacks to key amenities in my unit, particularly against my north-facing balconies and windows. This issue is not limited to my unit but affects many other units with north-facing balconies in the low to middle-rise buildings - many of whom have also written to you after my personal efforts to make affected residents more aware of the key impacts.

For further reference this is the proposed development against the north side of the unit coming straight from the DA documents (Statement of environmental effects)



Evidently, as north-facing balconies, these are primary sources of natural light (both direct and indirect), views, and ventilation for the unit. By permitting the development in its current form, the functionality of both balconies is significantly diminished due to these impacts.

While I recognise that the direct sunlight impacts during winter solstice falls within the council's guidelines, having the new building set back 3 metres will severely impact the amount of natural light coming from the north in the unit. Whilst the amount of direct sunlight is limited during winter solstice, much of the natural light also comes indirectly from the openness of the area.

I note that in the statement of environmental impact, the 3m setback on one of my balconies is justified using the concept of Tenacity where "views from bedrooms are considered less significant than views from living rooms". The justification for this design heavily relies on an invalid assumption that bedrooms are solely used for overnight sleeping. Personally, I use the affected bedroom as my home office, and natural light, ventilation, and views are crucial for its comfort.

As an initial suggestion, the existing structure on the development site seems to have been shaped around the balconies and other facilities within Hyde Park Towers especially on the lower floors, can the new development simply follow the same footprint? Why does the new development have to render our balconies virtually useless just for the purpose of building a large structure on such a small non heritage site?

To wrap up I'm generally supportive of more affordable rental housing in the inner city, but this particular development doesn't adequately consider the impact on existing properties. I believe this site is too small for such a large development. There should be available sites elsewhere that could support projects of this scale.

If you think that would be helpful, I'd be more than happy to help you gather interested residents for an in-person meeting or consultation. You can also call me on [redacted] to chat further.

Regards,
Alan Shen
Owner Unit 1306

Item 5.

Public Exhibition - Planning Proposal - City Architect and City Landscape Architect Heritage Items - Sydney Local Environmental Plan 2012 Amendment

File No: X093489.007

Summary

Sydney has many layers of history and culturally significant places, landscapes and buildings. These places, landscapes and buildings, from our distant and recent past, tell the story of Sydney and contribute to its liveability, environment and economy. As the City of Sydney (the City) grows and develops, we face several challenges in protecting and maintaining our cultural heritage, while also accommodating change. Our planning controls assist us in balancing these challenges.

Continuous review is necessary to ensure the Sydney Local Environmental Plan 2012 (SLEP 2012) continues to deliver positive outcomes for the local economy, residents and visitors and remains consistent with the vision set out in the *City Plan 2036: Local Strategic Planning Statement* and *Sustainable Sydney 2030-2050 Continuing the Vision*. Since SLEP 2012 has been in force, the City has made heritage-related amendments and additions to improve its operation and accuracy, and ensure Sydney's diverse history is adequately acknowledged.

In August 2021, via a Notice of Motion, Council requested that the Chief Executive Officer investigate recognition of the work of City Architect Albert Smillie and City Landscape Architect Ilmar Berzins and their role in the design of post-war Sydney. These designers worked during a period of intense post-war reconstruction, which was accompanied by a boom in the construction of community facilities including baby health centres, libraries, welfare centres, public parks and gardens.

Council resolved that the City investigate the commissioning of a heritage study of public projects under Albert Smillie and Ilmar Berzins and report back to Council on which items could be considered for heritage listing.

In response, the City engaged TKD Architects in 2023 to complete a heritage study of sites designed under Smillie and Berzins and make recommendations for potential sites to be included as heritage items in the SLEP2012.

Around 250 sites identified by or under Smillie and Berzins, and of these, TKD architects recommended that 17 sites be investigated further for potential heritage listing. Several of the sites were located within existing heritage items, others were scheduled to be demolished and one was not designed by the City Architect. Following internal review, heritage assessments were completed for 6 sites.

This report proposes the public exhibition of a planning proposal to amend SLEP 2012 by including 3 buildings and 3 public spaces, all owned by the City and linked to Smillie and Berzins, as local heritage items under Schedule 5, Part 1:

- **Former Baby Health Centre, 12A Dadley Street, Alexandria**: a rare surviving example of a baby health centre designed by the City Architect, historically significant as it provides evidence of efforts by the City to improve social welfare conditions in the area; with a distinctive octagonal plan organised around a circular central court.

- **Former John Carroll Kindergarten, 2-14 Phelps Street, Surry Hills**: has been used as child care centre for over 70 years, designed in a New Empiricist style extensively used by the City Architect during the post-World War II period for buildings fulfilling a responsible social agenda; representative of the kindergartens designed by the City of Sydney during the post-World War II period.

- **Phillip Park Cleansing Depot, 13-17 Riley Street, Woolloomooloo**: a rare surviving example of a purpose designed cleansing depot that demonstrates a high level of aesthetic significance; also rare because it incorporates a World War II air raid shelter into its plan and fabric.

- **Arthur McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay**: a rare intact landscape design of the City Landscape Architect significant for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage.

- **Quarry Green Reserve, Ultimo**: representative of street closures and landscaping designed by the City Landscape Architect constructed across the City during the 1970s and 1980s, inspired by the "Sydney Bush School" aesthetic in landscape design.

- **Ulster Street, Paddington**: part of a series of street closures from the 1970s - 1980s to pedestrianise urban precincts as part of the City's "Greening Sydney" policy, formalised in the 1971 City of Sydney Strategic Plan, representative of the application of the "Sydney School" aesthetic in landscape design

This report recommends that the Central Sydney Planning Committee approve the public exhibition of the proposed amendments to the City's planning framework and seek a gateway determination for the planning proposal from the Department of Planning, Housing and Infrastructure which will enable the City to place the amendments on public exhibition.

Recommendation

It is resolved that:

(A) the Central; Sydney Planning Committee approve the Planning Proposal - City Architect and City Landscape Architect Heritage Items, shown at Attachment A to the subject report, for submission to the Department of Planning, Housing and Infrastructure with a request for a gateway determination;

(B) the Central Sydney Planning Committee approve the Planning Proposal - City Architect and City Landscape Architect Heritage Items as shown at Attachment A for public authority consultation and public exhibition in accordance with any conditions imposed under the gateway determination;

(C) the Central Sydney Planning Committee note the recommendation to Council's Transport, Heritage and Planning Committee on 16 February 2026, that Council seek authority from the Department of Planning, Housing and Infrastructure to exercise the delegation of all the functions under section 3.36 of the Environmental Planning and Assessment Act 1979 to make the local environmental plan and to put into effect Planning Proposal - City Architect and City Landscape Architect Heritage Items; and

(D) authority be delegated to the Chief Executive Officer to make any minor variations to the Planning Proposal - City Architect and City Landscape Architect Heritage Items to correct any drafting errors or to ensure consistency with the gateway determination.

Attachments

Attachment A.	Planning Proposal - City Architect and City Landscape Architect Heritage Items
Attachment B.	Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study
Attachment C.	TKD Heritage Assessment - 12A Dadley Street, Alexandria
Attachment D.	Draft Inventory Sheet - 12A Dadley Street, Alexandria
Attachment E.	TKD Heritage Assessment - 2-14 Phelps Street, Surry Hills
Attachment F.	Draft Inventory Sheet - 2-14 Phelps Street, Surry Hills
Attachment G.	TKD Heritage Assessment -13-17 Riley Street, Woolloomooloo
Attachment H.	Draft Inventory Sheet - 13-17 Riley Street, Woolloomooloo
Attachment I.	TKD Heritage Assessment - 1A Billyard Avenue, Elizabeth Bay

Attachment J.	Draft Inventory Sheet - 1A Billyard Avenue, Elizabeth Bay
Attachment K.	TKD Heritage Assessment - Quarry Street, Ultimo
Attachment L.	Draft Inventory Sheet, Quarry Street, Ultimo
Attachment M.	TKD Heritage Assessment - Ulster Street, Paddington
Attachment N.	Draft Inventory Sheet - Ulster Street, Paddington
Attachment O.	Council Resolution - City Architect and Landscape Architect Works Heritage Study

Background

1. In August 2021, via a Notice of Motion, Council requested that the Chief Executive Officer investigate recognition of the work of City Architect Albert Smillie and City Landscape Architect Ilmar Berzins and their role in the design of post-war Sydney. These designers worked during a period of intense post-war reconstruction, which was accompanied by a boom in the construction of community facilities including baby health centres, libraries, welfare centres, public parks and gardens.

2. Council resolved that the City investigate the commissioning of a heritage study of City projects under Albert Smillie and Ilmar Berzins and report back to Council on which items could be considered for heritage listing.

3. In response, the City engaged Tanner Kibble Denton Architects (TKD) to research the works of Smillie and Berzins while employed by the City, as well as any projects completed under their direction.

4. The study was completed in two stages with Stage 1 comprising preliminary research, with recommendations for potential heritage listings identified for future research and heritage assessment.

5. As part of this research, over 200 projects linked to Smillie were identified, including baby health centres, kindergartens and playgrounds, community and aged welfare centres, public housing, libraries, swimming pools, other sporting facilities and recreational facilities, bowling clubs, parking stations, public conveniences, air raid shelters, music shells, draughts shelters, public transport shelters, depots, and various ephemeral items (such as drinking fountains, fruit barrows etc.).

6. Similarly, over 40 projects linked to Berzins were identified, including parks, gardens (often with larger parks), streetscape upgrades and pedestrianised public spaces, ornamental and ephemeral structures (such as fountains and decorations etc.) and sporting facilities. Berzins is also likely to have substantial influence on broader Council policies regarding public domain improvements and street trees etc.

7. Of the total of 250 projects, TKD Architects recommended that 17 sites be investigated for potential heritage listing.

8. Internal discussions regarding these recommendations noted that several of the sites were located within existing heritage items (such as Victoria Park Swimming Pool and Sandringham Gardens), others were scheduled to be demolished (such as the former Baby Health Centre in Lower Fort Street) and one was not designed by the City Architect (Former Catherine Sloss Library, Woolloomooloo).

9. Following internal review, heritage assessments were completed for 6 sites.

10. The TKD heritage assessments confirmed that these 6 sites met the threshold for local significance under the NSW heritage assessment criteria (2025) and warranted inclusion as individual items on the SLEP 2012.

11. Summaries of these assessments are presented below and at Attachments C to N.

Former Baby Health Centre, 12A Dadley Street, Alexandria

12. The heritage assessment concluded that 12A Dadley Street meets the threshold for local significance in terms of:

    (a) Criterion (a) Historical significance:

        (i) one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War II and the redistribution of municipal boundaries in 1949.

        (ii) provides evidence of efforts by the City of Sydney to improve social welfare conditions within the local government area during this period.

    (b) Criterion (b) Historical association:

        (i) has associations with City Architect Albert Smillie who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s.

    (c) Criterion (c) Aesthetic / creative / technical achievement:

        (i) notable for its distinctive octagonal plan that was organised around a circular central court.

    (d) Criterion (d) Social, cultural, spiritual:

        (i) has been a community facility continuously since its opening in 1964. Uses have included a baby health centre, the Redfern Crisis Clinic and a home and community care facility.

    (e) Criterion (f) Rarity:

        (i) considered to be a rare surviving example of a baby health centre designed by the City Architect, notwithstanding changes that have taken place to the building's interior.

    (f) Criterion (g) Representativeness:

        (i) a good representative example of a community building designed by the City Architect.

13. The heritage study concluded that 12A Dadley Street meets the threshold for local heritage significance for its historic, historical association, aesthetic, social, rarity and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Former John Carroll Kindergarten, 2-14 Phelps Street, Surry Hills

14. The heritage assessment concluded that 2-14 Phelps Street meets the threshold for local significance in terms of:

    (a) Criterion (b) Historical association:

        (i) has associations with City Architect Albert Smillie who was involved in the design and construction of several kindergartens and other public facilities for the City of Sydney from the 1930s through to the 1960s.

    (b) Criterion (c) Aesthetic / creative / technical achievement:

        (i) as a modest vernacular example of New Empiricist style architecture, a regional form of Modernist architecture that exploited regional design and construction techniques. This style was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda.

        (ii) notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control sun ingress, as well as provide thermal comfort through shading and cross ventilation.

    (c) Criterion (d) Social, cultural, spiritual:

        (i) has been used as child care centre for over 70 years and continues to fulfil an important role within the local community.

    (d) Criterion (g) Representativeness:

        (i) representative of kindergartens designed by the City of Sydney during the post-World War II period, in particular its architectural design, planning and selection of materials.

15. The heritage study concluded that 2-14 Phelps Street meets the threshold for local heritage significance for its historical association, aesthetic, social and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Phillip Park Cleansing Depot, 13-17 Riley Street, Woolloomooloo

16. The heritage assessment concluded that 13-17 Riley Street meets the threshold for local significance in terms of:

    (a) Criterion (b) Historical association:

        (i) has associations with City Architect Albert Smillie who was involved in the design and construction of numerous Council facilities from the 1930s through to the 1960s.

(b) Criterion (c) Aesthetic / creative / technical achievement:

(i) as a restrained and assured example of the Inter War Functionalist style, with a distinctive architectural form and use of dichromatic brickwork relieved by expressed horizontal coursing

(ii) demonstrates a high quality of architectural resolution and form when compared to other cleansing depots designed by Council between the late 1930s and late 1950s.

(c) Criterion (d) Research potential:

(i) has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots, which performed an important role in the management of the sanitation and hygiene of city and suburban streets.

(ii) contains a remnant air raid shelter.

(d) Criterion (f) Rarity:

(i) rare, as a surviving example of a purpose designed cleansing depot in the City of Sydney that demonstrates a high level of aesthetic significance.

(ii) contains a remnant air raid shelter.

(e) Criterion (g) Representativeness:

(i) representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, although its architectural quality was much higher on others that were designed and actually constructed.

17. The heritage study concluded that 13-17 Riley Street meets the threshold for local heritage significance for its historical association, aesthetic, research, rarity and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Arthur McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay

18. The heritage assessment concluded that 1A Billyard Avenue meets the threshold for local significance in terms of:

(a) Criterion (a) Historic

(i) significant for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage, which reflect a respect and understanding of historic landscapes.

(ii) as a seminal park development initiated, designed and executed by the City of Sydney in the immediate Post World War II period.

(b) Criterion (b) Historical association:

(i) associated with Alexander Macleay, being part of the grounds of Elizabeth Bay House.

(ii) commemorates Arthur McElhone, a long serving alderman of the City of Sydney.

(iii) associated with Berzins, demonstrating at a high level of sensitivity to the broader setting of Elizabeth Bay House and the creation of a park that incorporates modernist concepts of landscape design.

(c) Criterion (c) Aesthetic / creative / technical achievement:

(i) as a rare intact landscape design of Ilmar Berzins that encompasses numerous significant features, including substantial topographic changes of level, a water feature and stone bridge and varied planting.

(ii) respects the original setting of Elizabeth Bay House by ensuring that the relationship of the house and broader setting to the harbour is respected and enhanced while providing a high level of detailed landscape design and amenity to the park itself. It forms an important interpretative tool in the understanding of the setting of the house and its relationship to its harbour setting

(iii) demonstrates a sensitivity to this significant colonial setting by reinforcing Elizabeth Bay House's views to and from the harbour while recognising the park's role as an important public amenity in the provision of much needed open green space.

(iv) employs international design ideas of the time by leading landscape architects such as Christopher Tunnard and others.

(v) The planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad and diverse interests in horticultural specimens, both Australian and exotic and Berzins intent of a horticulturally diverse planting scheme.

(d) Criterion (d) Social, cultural, spiritual:

(i) important to the local community and visitors to because of its high level of visual amenity and as a valuable landscaped open recreational area

(e) Criterion (d) Research potential:

(i) demonstrates the evolving landscape design in post-World War II Sydney that fused international design movements to a significant location within the visual curtilage of Elizabeth Bay House.

(ii) demonstrates the intellectual approach of Berzins as a post-World War II immigrant and his training as a landscape designer that reflected international design trends of the day.

(f) Criterion (f) Rarity:

(i) a rare intact design of Berzins and a rare intact example of advanced mid twentieth century landscape design in the City of Sydney.

(g) Criterion (g) Representativeness:

(i) representative of mid twentieth century landscape design expressed in the use of detailed sandstone walling and plant types, while responding to the immediate visual curtilage of a significant colonial house by maintaining the prospect and views to the harbour from the house.

19. The heritage study concluded that the Arthur McElhone Reserve meets the threshold for local heritage significance for its historic, historical association, aesthetic, social, research, rarity and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Quarry Green Reserve, Ultimo

20. The heritage assessment concluded that the Quarry Green Reserve meets the threshold for local significance in terms of:

(a) Criterion (a) Historic

(i) one of several landscaped street closures resulting from the implementation of the 1971 City of Sydney Strategic Plan in Central Sydney and inner-city suburbs within the local government area.

(ii) important as one of a group of landscaped street closures providing evidence of the “greening” of Sydney that came out of the Strategic Plan.

(b) Criterion (c) Aesthetic / creative / technical achievement:

(i) representative of several open space improvements through the Ultimo area that were inspired by the Sydney Bush School aesthetic using Australian native planting as its main structural form with Sydney School detailing of brick paving and sandstone.

(ii) the planting has matured to form an attractive landscape and provide an attractive recreational precinct in Ultimo.

(c) Criterion (g) Representativeness:

(i) representative of the street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s.

(ii) representative of the greening cities movement and social change taking place as evidenced by the gentrification of inner-city suburbs.

21. The heritage study concluded that the Quarry Green meets the threshold for local heritage significance for its historic, aesthetic and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Ulster Street, Paddington

22. The heritage assessment concluded that the landscaping of Ulster Street meets the threshold for local significance in terms of:

    (a) Criterion (a) Historic

        (i) part of a series of street closures from the 1970s - 1980s to pedestrianise urban precincts as part of the City Council's "Greening Sydney" policy, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans.

        (ii) forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington.

        (iii) embodies the increased demand for public open space through the displacement of vehicular access for communal use, linked to agitation from the Paddington Society during the1970s, resulting in the closure and landscaping of Ulster, Newcombe, Stewart, Regent and Elizabeth Street, of which Ulster Street is the finest.

    (b) Criterion (b) Historical association:

        (i) associated with Berzins architect who was responsible for extensive improvement works throughout the City of Sydney from the beginning of the 1950s to the second half of the 1980s.

        (ii) a distinctive example of his work related to street closures.

    (c) Criterion (c) Aesthetic / creative / technical achievement:

        (i) as a formal landscape treatment informed by the "Sydney School" aesthetic as applied to landscape design.

        (ii) representative of the application of the Sydney School aesthetic, most evidently the use of clinker brick for the planter boxes and brick paving.

    (d) Criterion (d) Research potential:

        (i) demonstrates the attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. Ulster Street provides evidence of the successful implementation of Action Plan 26 South Paddington Precinct C4.

(e) Criterion (g) Representativeness:

(i) representative of street closures from 1970s and 1980s resulting from implementation of Action Plans associated with the 1971 City of Sydney Strategic Plan and is distinctive for its formal character established by the gridded brick paving and planter boxes.

23. The heritage study concluded that the landscaping of Ulster Street meets the threshold for local heritage significance for its historic, historical association, aesthetic, research, and representative values and warrants potential listing as a heritage item on the SLEP 2012.

Key Implications

Strategic Alignment - Sustainable Sydney 2030-2050 Continuing the Vision

24. Sustainable Sydney 2030-2050 Continuing the Vision renews the communities' vision for the sustainable development of the city to 2050. It includes 10 strategic directions to guide the future of the city, as well as 10 targets against which to measure progress. This report is aligned with the following strategic direction and objective:

(a) Direction 8 - A thriving cultural and creative life - the acknowledgement of the heritage significance of the six sites proposed for inclusion in Schedule 5 of the SLEP2012 will contribute to the City's culture and creative life, with the protection of the heritage fabric and promoting the history of each site and their value to the community.

Risks

25. Proceeding with changes to Schedule 5 of the SLEP 2012 to include the places as heritage items is within the City's risk appetite. The proposed heritage listings have been discussed with internal City stakeholders who are aware of the proposal. There is a risk some external stakeholders may disagree with the proposed heritage listings. When heritage listing a property, we aim to strike a balance between achieving our strategic objectives, conserving and promoting culture and heritage, and protecting our reputation.

26. The project aligns with our appetite to tolerate complaints when implementing agreed actions within the Community Strategic Plan and minor complaints relating to action which has long-term community benefit.

27. Any changes to Schedule 5 of the SLEP 2012 will be capable of complying with relevant environmental and planning laws, regulations and standards.

Relevant Legislation

28. Environmental Planning and Assessment Act 1979.

29. Environmental Planning and Assessment Regulation 2021

Public Consultation

30. Should the planning proposal at Attachment A be approved, it will be forwarded to the Department of Planning, Housing and Infrastructure with a request for a gateway determination to allow public exhibition.

31. The public consultation process for the planning proposal will be subject to the conditions of the gateway determination issued by the Department of Planning, Housing and Infrastructure. Exhibition documents will be made available to the public for viewing and comment on the City's Have Your Say website.

GRAHAM JAHN AM

Chief Planner / Executive Director, City Planning Development and Transport

Matt Devine, Senior Specialist Planner Heritage

Attachment A

Planning Proposal – City Architect and City Landscape Architect Heritage Items

Planning Proposal – City Architect and City Landscape Architect Heritage Items

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Cover: Alexandria Baby Health Clinic, Dadley Street Alexandria, 1964. Photo: City of Sydney Archives.

1. Background

1.1. History

The Sydney Local Environmental Plan 2012 (SLEP 2012) came into effect on 14 December 2012, consolidating the Sydney, Leichhardt and South Sydney plans into one comprehensive plan in the new NSW Government's Standard Instrument format.

Continuous review is necessary to ensure the SLEP 2012 continues to deliver positive outcomes for the local economy, residents and visitors and remains consistent with the vision set out in the *City of Sydney's City Plan Local Strategic Planning Statement and Sustainable Sydney 2030-2050 Continuing the Vision.*

Since the SLEP 2012 has been in force, the City of Sydney has made heritage-related amendments of deletions and additions to improve its operation, accuracy and ensure that the diverse history and heritage of the City is adequately acknowledged.

In August 2021, a Notice of Motion was raised at an Extraordinary Meeting regarding recognition of the work of City Architect Albert Smillie and City Landscape Architect Ilmar Berzins and their role in the design of post-war Sydney.

Council resolved that:

(B) the Chief Executive Officer be requested to:

(i) investigate the commissioning of a heritage study of City projects under Albert Smillie and Ilmar Berzins in the Local Government Area; and

(ii) report back to Council via the CEO Update on which items could be considered for heritage listing.

In response, the City of Sydney engaged TKD Architects in 2023 to complete a heritage study of sites designed under Smillie and Berzins and make recommendations for potential sites to be included as heritage items in the SLEP2012.

The TKD report surveyed the careers of Albert Alexander Smillie and Ilmar Berzins, who both played an important role in shaping the post-war development of the City of Sydney.

Initially a draftsman and later Chief Architect, Smillie contributed a range of important civil buildings including baby health centres, community centres, libraries, public (council) housing, parking stations, playgrounds and pools. Ilmar Berzins designed a range of important public parks and gardens. He also designed the landscaping for numerous projects coming out of the City Architect's office.

Comparison with other local government areas in metropolitan Sydney and other parts of NSW and eastern Australia established that the City of Sydney was the first to employ a City Architect and the first to engage a qualified landscape architect. The range and scope of projects designed by the City Architect under Smillie and by Berzins are unique. They are significant historically and aesthetically and are important evidence of the City of Sydney's social and civic responsibility from the early twentieth century to the 1970s.

The study identified hundreds of projects by Smillie and Berzins, or under their jurisdiction. These were considered in detail, and from this a shortlist of 16 sites were identified as suitable for a detailed heritage assessment by TKD.

Following internal review and discussion with stakeholders, 6 of the identified sites have had detailed heritage assessments prepared by TKD and these constitute the subject of this planning proposal as they are being recommended for inclusion as heritage items in Schedule 5 of the SLEP2012. Some of the places identified are contained within already listed sites (such as the Smillie-designed swimming pool in Victoria Park or the Berzins-designed Sandringham Garden in Hyde Park); in these instances, the existing inventories will be revised.

The additions in this Planning Proposal will ensure the City's planning control framework is up to date and reflects current planning strategies.

1.2. Introduction

This Planning Proposal – Sydney Local Environment Plan – City Architect & City Landscape Architect Heritage Items (planning proposal) explains the intent of, and justification for, proposed amendments to the SLEP 2012. It has been prepared in accordance with Section 3.33 of the *Environmental Planning and Assessment Act 1979* (the Act) and relevant Department of Planning guidelines.

The planning proposal identifies the following six sites for inclusion as individual heritage items under Schedule 5 (Environmental heritage), Part 1 (Heritage items), of the LEP:

- Former Baby Health Centre, 12A Dadley Street, Alexandria
- Former John Carroll Kindergarten, 2-14 Phelps Street, Surry Hills
- Former Phillip Park Cleansing Depot, 13-17 Riley Street, Woolloomooloo
- McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay.
- Quarry Green and associated landscaping, Quarry Street, Ultimo.
- Landscaping, Ulster Street, Paddington

1.3. Background

Site identification

This planning proposal relates to the following land and structures:

- 12A Dadley Street, Alexandria (Lot 6 Sec A DP 2307, Lot 7 Sec A DP 2307)
- 2-14 Phelps Street, Surry Hills (Lot 1 DP 50102)
- 13-17 Riley Street, Woolloomooloo (Lot 1 DP 83649)
- 1A Billyard Avenue, Elizabeth Bay (Lot 4 DP 15713, Lot 5 DP 15713, Lot 1 DP 1080048)
- Landscaping, Quarry Street, Ultimo
- Landscaping, Ulster Street, Paddington

The relevant structures, Lot and DP boundaries subject to this planning proposal are outlined in blue in Figures 1, 2, 3, 4, 5 and 6.

Figure 1. 12A Dadley Street, Alexandria

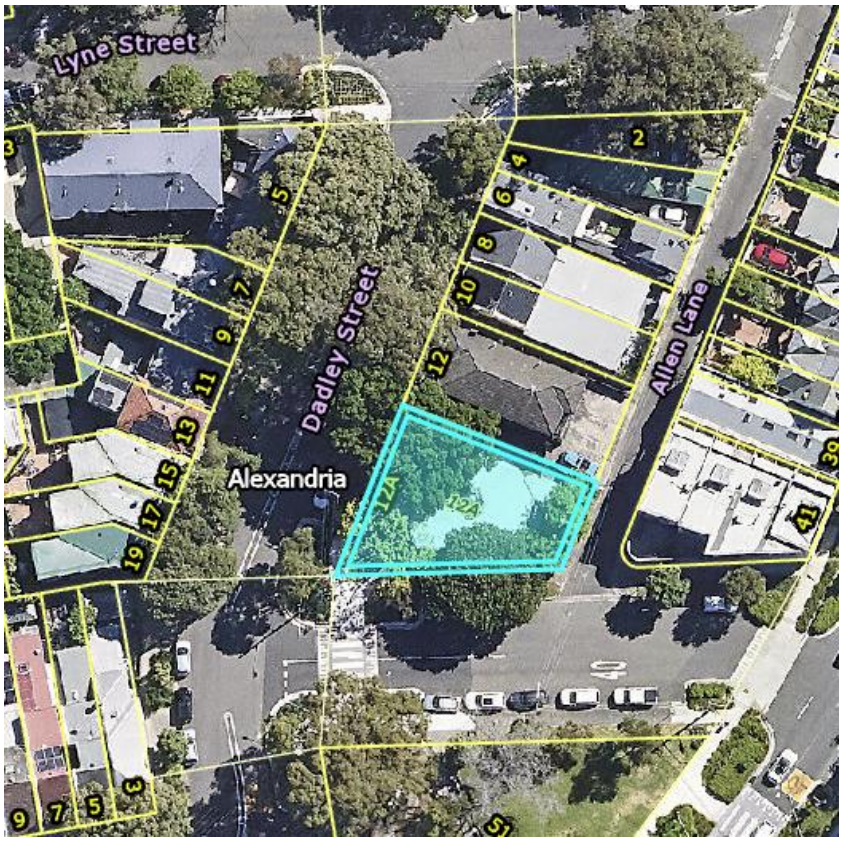


Figure 2. 2-14 Phelps Street, Surry Hills

Figure 3. 13-17 Riley Street, Woolloomooloo

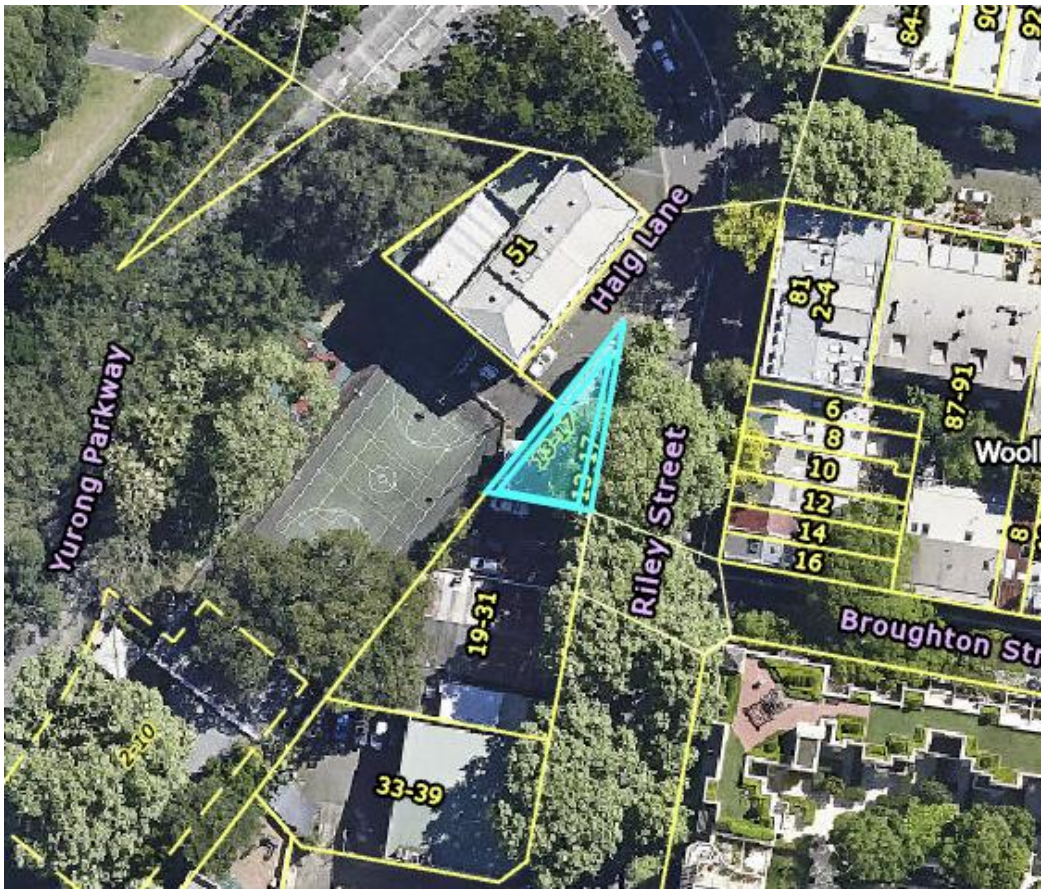


Figure 4. 1A Billyard Avenue, Elizabeth Bay

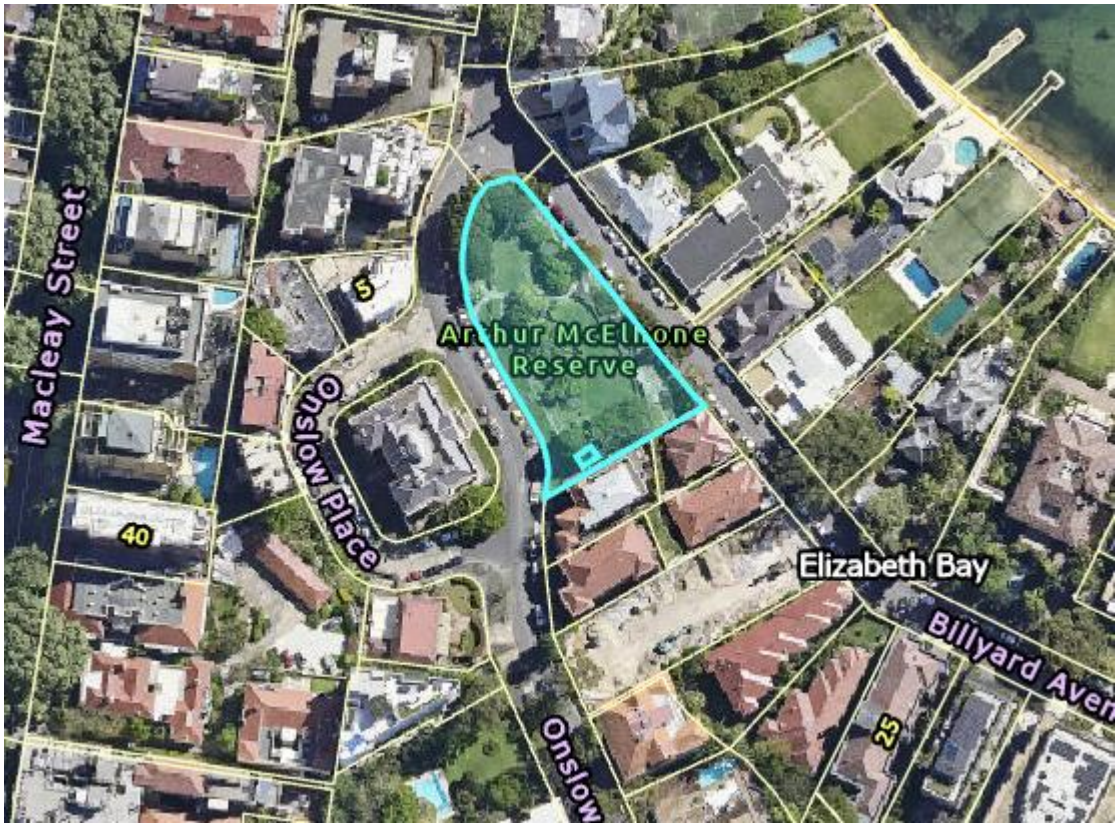


Figure 5. Quarry Street, Ultimo

Figure 6. Ulster Street, Paddington

12A Dadley Street, Alexandria – Former Baby Health Centre

The former baby health centre at 12A Dadley Street is a single storey brick building with a shallow pitched roof covered by metal decking. The building is octagonal in plan. An oculus over what was intended as a garden court in the centre of the building has been covered by a translucent dome.

The building has aluminium framed windows, the majority of which replaced earlier metal framed windows in the early 2000s. Metal canopies shade windows in the western half of the building.

There is chain-wire fencing along the Renwick and Dadley Street boundary and a portion of the Renwick Street boundary.

This building was constructed as baby health centre in 1964 and has continued providing a range of community uses since that time.

Figure 7. 17A Dadley Street, Alexandria. Photo: TKD Architects

2-14 Phelps Street, Surry Hills – Former John Carroll Kindergarten

The building at 2-14 Phelps Street is a single storey brick building with a rectangular plan footprint and a shallow-pitched gabled roof located on the eastern side of the site. Its design shows the influence of what has been termed New Empiricism, a form of humanist modernism that was appreciated and interpreted by prominent Australian architects.

The building is constructed with brick walls that are rendered internally. The roof is supported off steel trusses and comprises metal decking over timber rafters. The ceiling over the playrooms is raked to follow the pitch of the roof. There is a deep recessed porch on the southern side of the building forming the principal entry to the building, while eaves on the eastern side of the building are relatively deep. The playground area is heavily planted around its perimeter, effectively screening it from Alexander and Phelps Streets.

This building was completed in 1954 for use as a kindergarten and named after a prominent alderman and former staff member. It continues to be used for this purpose.

Figure 8. 2-14 Riley Street, Surry Hills. Photo: TKD Architects

13-17 Riley Street, Woolloomooloo – Former Cleansing Depot

The building at 13-17 Riley Street is a two-storey building with a distinctive plan footprint that reflects its unusual triangular site. The northern section of the building tapers, ending with a tightly curved corner, while the southern section is L-shaped in plan. This is reflected in the configuration of the building's roof, which is flat on the northern section and hipped and gabled over the southern part.

The exterior of the building is constructed out of textured brick with horizontal rendered coursing at the window head and sill levels extending across the facades. Brickwork above and below windows is darker in hue than brickwork at the level of the windows. Windows consist of pairs of double hung timber framed sashes.

Documentation describing the proposed single storey depot were prepared by the City of Sydney during 1938, though construction was delayed. In 1942 the design was revised so that it accommodated an air raid shelter, which was constructed as the initial phase of development. This was incorporated into a two-storey building in 1947 for use as a cleansing depot, associated with street cleaning. More recently, the building is used as a gallery and studio.

Figure 9. 13-17 Riley Street, Woolloomooloo. Photo: TKD Architects

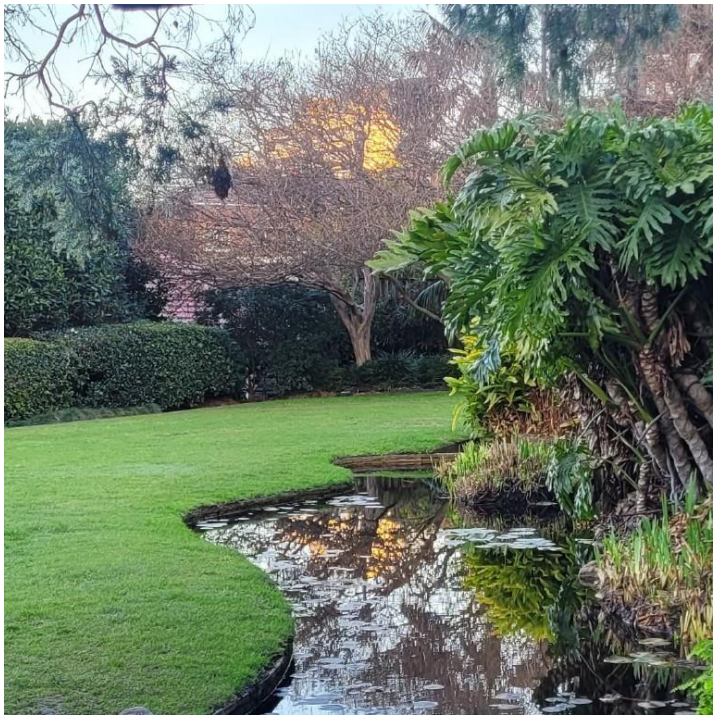
1A Billyard Avenue, Elizabeth Bay – Arthur McElhone Reserve

The Arthur McElhone Reserve is located at the intersection of Billyard and Onslow Avenues, between the western side of Billyard Avenue and the eastern side of Onslow Avenue. Elizabeth Bay House is located opposite the Reserve, on the western side of Onslow Avenue.

The majority of the park occupies a level area that has been formed through the erection of stone retaining walls at the top and bottom of the park, the walls at the bottom incorporating the naturally occurring sandstone outcrops. The design ensures that the views from Elizabeth Bay house to the harbour are retained and that its setting, while much modified since colonial times, can still be appreciated. The park has a number of built features including a stone bridge, pond, stairs and seating that encourage its use and enjoyment as a place of respite.

Originally part of the grounds of Elizabeth Bay House, several parcels of land from the subdivision of Elizabeth Bay House Estate were purchased by Council from 1929-1949 and the modernist garden designed by Ilmar Berzins was completed by 1954.

Figure 10. Arthur McElhone Reserve. Photo: TKD Architects



Quarry Street, Ultimo – Quarry Green

Quarry Green is located between Jones Street and Bulwara Road, Ultimo. The reserve forms a landscaped open space on what was Quarry Street and lies along an east west axis.

The landscape design of the Quarry Green Reserve features an extensive grassed open space at the centre with mature native trees forming a vegetated curtilage to the reserve. Paperbarks and Eucalypts predominate as the main tree species with Casuarina trees at the Jones Street entry. Garden beds are located adjacent to the apartments to the south, in shady areas under the canopy trees and to the footpath adjacent to the terraces to the north. These garden beds are characterised by low planting with a combination of both native and exotic plantings. These low plantings ensure clear sightlines through the reserve and to the properties that face it, assisting in the safety and security of the reserve.

Traversing the open space are a series of brick paved paths linking Bulwara Road and Jones Street. Supplementary paved areas with seating are located to the periphery of the open space and provide both tables and seats located under the tree canopy

The reserve was created on the street in response to community demand for increased open green spaces from the 1970s and opened in 1983.

Figure 11. Quarry Green, Ultimo. Photo: TKD Architects

Ulster Street, Paddington – Landscaping

Ulster Street is a small street closure between Oxford Street and Church Place in Paddington. It is rectangular in shape and is bounded on the south-eastern side by the St Matthias Church Hall. A two-storey residential building defines the street's north-western boundary. Both buildings are located on the site boundary, with their main orientation relating to Oxford Street.

The design of the street closure consists of a formally laid out brick paved plaza with four raised rectangular brick garden beds. Located in these planters, mature Chinese Weeping Elm and two Jacarandas form a treed canopy through the street closure. The layout of the brick paving is characterised by a strict rectangular grid that is highlighted with a contrasting lighter brick colour. There is minor planting in the raised garden beds of a ground cover nature.

The Ulster Street road closure is one of a series of road closures undertaken by the City in the 1970s and 1980s. Locally, the road closure is part of a series of road closures along the southern side of Oxford Street, Paddington that were part of Action Plan 26 South Paddington Precinct C4, approved by Council on 2 July 1973. The landscaping was completed in 1974/5.

Figure 12. Ulster Street, Paddington. Photo: TKD Architects

1.4. Planning context

Land Zoning

The proposed heritage item at 12A Dadley Street occupies SP2 – Infrastructure.

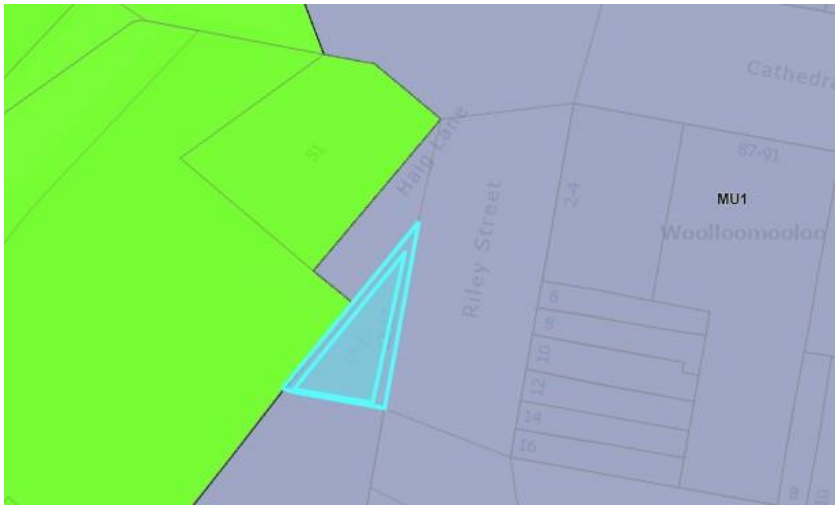
Figure 13. Extract from Zoning map in the SLEP 2012 showing zoning controls for 12A Dadley Street

The proposed heritage item at 2-14 Phelps occupies R1 – General Residential.

Figure 14. Extract from Zoning map in the SLEP 2012 showing zoning controls for 2-14 Phelps Street

The proposed heritage item at 13-17 Riley Street occupies MU1 – Mixed Use.

Figure 15. Extract from Zoning map in the SLEP 2012 showing zoning controls for 2-14 Phelps Street



The proposed heritage items at 1A Billyard Avenue, Quarry Green and Ulster Street all occupy RE1 – Public Recreation.

Figure 16. Extract from Zoning map in the SLEP 2012 showing zoning controls for 1A Billyard Avenue

Figure 17. Extract from Zoning map in the SLEP 2012 showing zoning controls for Quarry Green

Figure 18. Extract from Zoning map in the SLEP 2012 showing zoning controls for Ulster Street

Heritage context

12A Dadley Street, Alexandria

The proposed heritage item is located in the C3 Kingsclear Heritage Conservation Area.

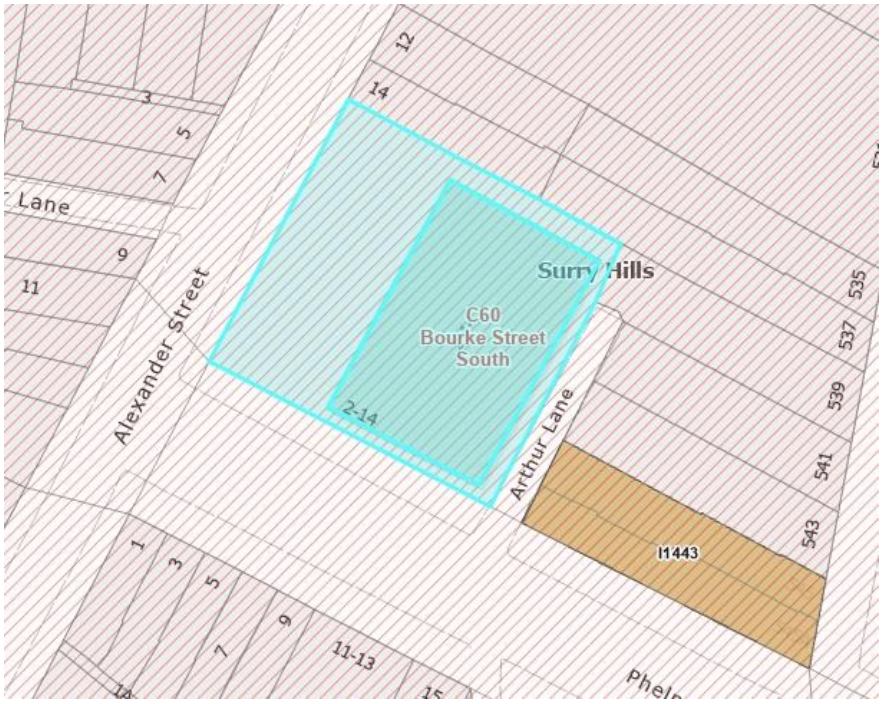
Figure 19. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to 12A Dadley Street.

2-14 Phelps Steet, Surry Hills

The proposed heritage item is located in C60 Bourke Street South Heritage Conservation Area. It is also in the vicinity of an individually listed item on the SLEP 2012:

- Corner shop and residence group including interiors, 545–545A Bourke Street (I1443)

Figure 20. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to 2-14 Phelps Street.

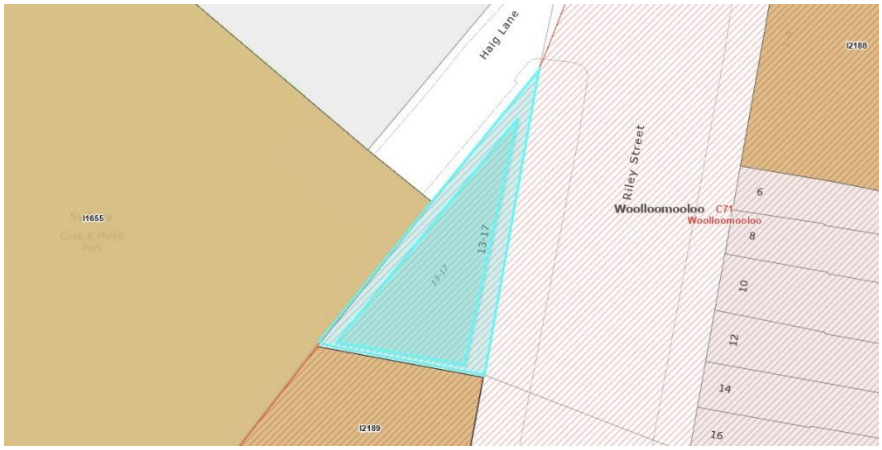


13-17 Riley Street, Woolloomooloo

The proposed heritage item is located in C71 Woolloomooloo Heritage Conservation Area. It is also in the vicinity of several individually listed items on the SLEP 2012:

- Sandstone wall remnant, 19–21 Riley Street (I2189)
- Cook & Phillip Park including “Earth Mother” play sculpture (I1665)
- Former Australian Hotel including interior, 2-4 Riley Street (I2188)

Figure 21. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to 13-17 Riley Street.



1A Billyard Avenue, Elizabeth Bay

The proposed heritage item is located in C20 Elizabeth & Rushcutters Bays Heritage Conservation Area. It is currently part of a heritage item known as “Elizabeth Bay House” including interior and grounds, at 7-9 Onslow Avenue. It is also in the vicinity of several individually listed items on the SLEP 2012:

- Cliff face behind Elizabeth Bay House, Onslow Place (I597)

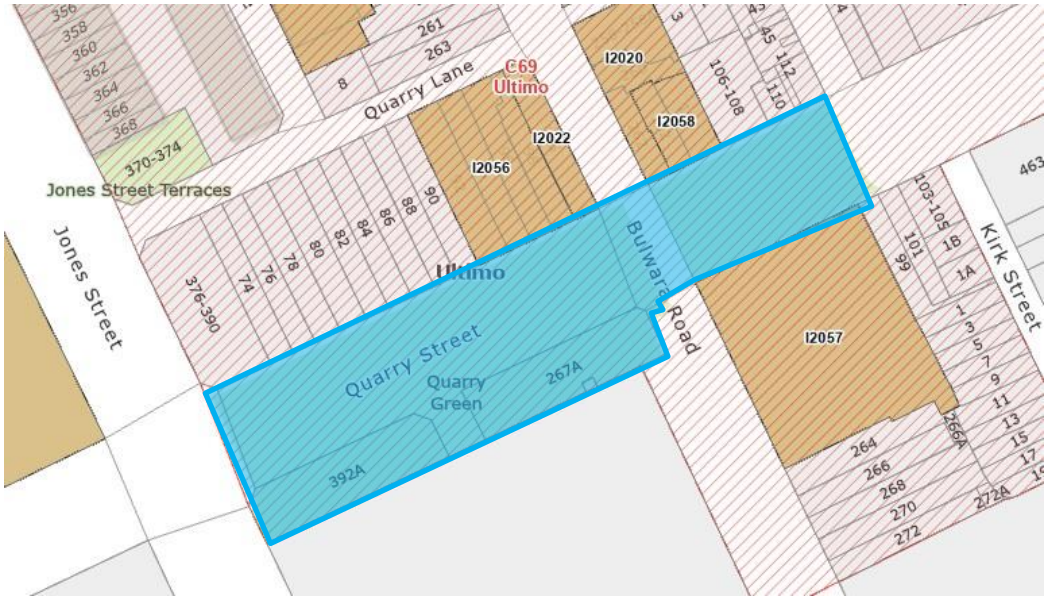
Figure 22. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to 1A Billyard Avenue.

Quarry Green, Ultimo

The proposed heritage item is located in C69 Ultimo Heritage Conservation Area. It is also in the vicinity of several individually listed items on the SLEP 2012:

- Cottage and terrace group including interiors, 92-98 Quarry Street (I2056)
- Lord Wolseley Hotel including interior, 265 Bulwara Road (I2022)
- Ultimo Uniting Church group buildings and grounds, including interiors, 97 Quarry Street (I2057)
- Terrace houses including interiors, 102-104 Quarry Street (I2058)
- Terrace group including interiors, 242–262 Bulwara Road (I2020)

Figure 23. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to Quarry Green.

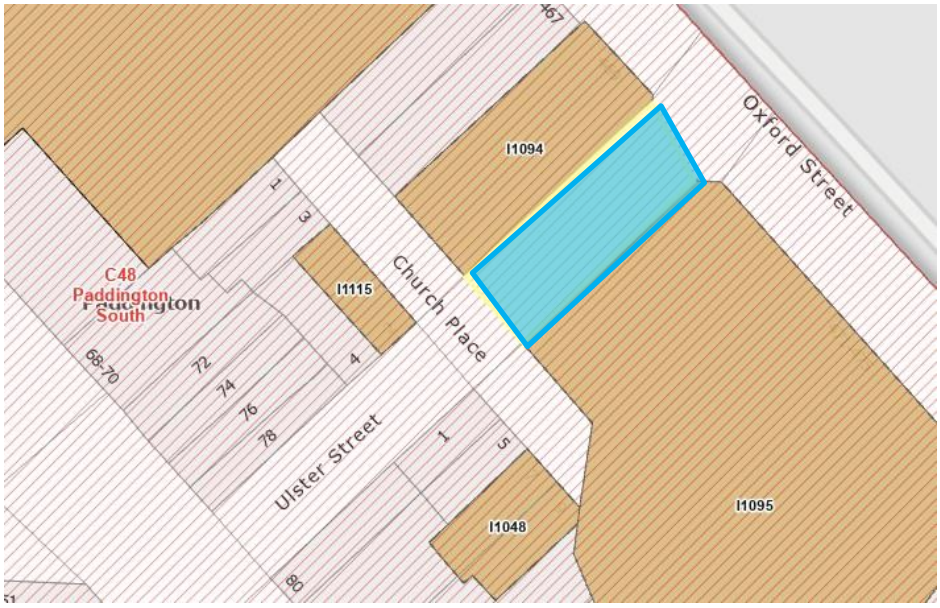


Ulster Street, Paddington

The proposed heritage item is located in C48 Paddington South Heritage Conservation Area. It is also in the vicinity of several individually listed items on the SLEP 2012:

- Former house “Pendower” including interior, 469 Oxford Street (I1094)
- St Matthias Church group including buildings and their interiors, front fence and grounds, 471–475 Oxford Street (I1095)
- Cottage group including interiors, 7-9 Church Place (I1048)
- “Church Place Cottage” including interior, 2 Ulster Street (I1115)

Figure 24. Extract from Heritage map in the SLEP 2012 showing heritage items and conservation areas adjacent to Ulster Street.



1.5. Heritage assessment

In August 2021, a Notice of Motion was passed regarding the heritage significance of projects by Smille, City Architect and Berzins, City Landscape Architect. Subsequently, the City of Sydney engaged TKD Architects to research projects by or under the jurisdiction of these Council staff members, and to investigate their potential heritage significance.

The study also recommended the inclusion of several additional sites within Schedule 5, Part 1 of the SLEP 2012.

This planning proposal is for 6 sites which are being recommended for listing. The findings of each heritage assessment are presented below.

The original heritage study prepared by TKD Architects is included in **Appendix B**. Separate heritage assessments for the subject, and draft inventory sheets are included at **Appendices C-N**.

Heritage assessment findings

12A Dadley Street, Alexandria - Former Baby Health Centre

The heritage assessment concluded that Former Baby Health centre meets the threshold for local significance in terms of:

> Criterion (a) Historic significance: The former Alexandria baby health centre at 12A Dadley Street is one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War II and the redistribution of municipal boundaries in 1949. It provides evidence of efforts by the City of Sydney to improve social welfare conditions within the local government area during this period. The building is the second to house a baby health centre in Alexandria, the suburb in which the first baby health centre in NSW was opened in 1914. After this use was discontinued the building continued to serve the community, including members of Sydney's First Nations community.
>
> Criterion (b) Historical associations: The former Alexandria baby health centre has associations with City Architect Albert Smillie, who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s.
>
> Criterion (c) Aesthetic significance: The former Alexandria baby health centre is notable for its distinctive octagonal plan that was organised around a circular central court. internal court. Modifications to the building to suit changing uses have removed much of the original layout, but the exterior of the building is relatively intact.
>
> Criterion (d) Social significance: The building has been a community facility continuously since its opening in 1964. Uses have included a baby health centre, the Redfern Crisis Clinic and a home and community care facility. It is likely to have significance for people who worked there and members of the public who used its facilities, but further research is needed to confirm this.
>
> Criterion (f) Rarity: The former Alexandria Baby Health Centre is considered to be a rare surviving example of a baby health centre designed by the City Architect, notwithstanding changes that have taken place to the building's interior. Its original external form is generally intact. Other baby health centres constructed in the City of Sydney after World War II have been demolished.
>
> Criterion (g) Representativeness: Because of modifications to the building, the former Alexandria baby health centre is not representative of this typology. However, many communal buildings designed by the City Architect continue to be used, although not for the purposes for which they were originally designed. In this sense the former baby health centre is representative.

The heritage assessment concludes that the building at 12A Dadley Street, Alexandria meets the threshold for local heritage significance for its historic, historical associations, aesthetic and representative significance and rarity at a local level and warrants potential listing as a heritage item on the SLEP 2012. The assessment also concludes that 12A Dadley Street may meet the threshold for social significance at a local level.

2-14 Phelps Street, Surry Hills - Former John Carroll Kindergarten

The heritage assessment concluded that the Former John Carroll Kindergarten meets the threshold for local significance in terms of:

> Criterion (b) Historical associations: 2-14 Phelps Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural

draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of kindergartens.

Criterion (c) Aesthetic significance: 2-14 Phelps Street has aesthetic significance as a modest vernacular example of New Empiricist style architecture, which was a regional form of Modernist architecture that exploited regional design and construction techniques. The style was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda.

The building is notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control sun ingress, as well as provide thermal comfort through shading and cross ventilation.

Criterion (d) Social: There is some evidence that the John Carroll Kindergarten has social significance. A community celebration was held at the 60th anniversary of the kindergarten's opening in August 2014.29 It continues to fulfil an important role within the local community. Further research may confirm this level of heritage significance.

Criterion (g) Representativeness: 2-14 Phelps Street is representative of the kindergartens designed by the City of Sydney during the post-World War II period. This is because of its architectural design, planning and selection of materials. It is also representative more generally of kindergartens designed by architects in private practice for community groups in other parts of metropolitan Sydney.

The heritage assessment concludes that the building at 2-14 Phelps Street, Surry Hills meets the threshold for local heritage significance for its historical associations, aesthetic and representative significance at a local level and warrants potential listing as a heritage item on the SLEP 2012. The assessment also concludes that 2-14 Phelps Street may meet the threshold for social significance at a local level.

17 Riley Street, Woolloomooloo – Former Phillip Park Cleansing Depot

The heritage assessment concludes that Former Phillip Park Cleansing Depot meets the threshold for local significance in terms of:

Criterion (b) Historical associations: 13-17 Riley Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of cleansing depots. His signature appears on several architectural drawings related to the site, indicating his involvement in the building's design.

Criterion (c): Aesthetic: 13-17 Riley Street is a restrained and assured example of the Inter War Functionalist style. Its architectural form and use of dichromatic brickwork relieved by expressed horizontal coursing are significant aesthetic contributors to the locality. The building appears to have retained a high level of external and internal integrity.

The building demonstrates a high quality of architectural resolution and form when compared to other cleansing depots designed by Council between the late 1930s and late 1950s.

Criterion (d) Social: As the Firstdraft Gallery, 13-17 Riley may have significance to Sydney's artistic community. Firstdraft, initially established as an artist-run-initiative, has been supporting emerging and early-career artists and bringing experimental practices to

audiences since 1986. It converted 13-17 Riley Street to a complex of exhibition and studio spaces and collaborative workspaces to accommodate the development and presentation of contemporary arts practice.

Criterion (e) Research potential: Because of its integrity, 13-17 Riley Street has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots, which performed an important role in the management of the sanitation and hygiene of city and suburban streets. The building has research potential because it incorporated an air raid shelter during World War II, evidence of which still survives.

Criterion (f) Rarity: 13-17 Riley Street may be considered rare, as a surviving example of a purpose designed cleansing depot in the City of Sydney that demonstrates a high level of aesthetic significance. Although its use has changed, its high level of integrity allows early functions to be interpreted. Many other cleaning depots have been demolished and their sites redeveloped or turned over to other uses. The building also has rarity because it contains evidence of a World War II air raid shelter.

Criterion (g) Representative: 13-17 Riley Street may be considered representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, although its architectural quality was much higher than others that were designed and actually constructed.

The heritage study concluded that the building at 13-17 Riley Street, Woolloomooloo meets the threshold for local heritage significance for its historical association, aesthetic significance, rarity and representativeness. The site may also have potential social and research significance. It warrants potential listing as a heritage item on the SLEP 2012.

1A Billyard Avenue, Elizabeth Bay - Arthur McElhone Reserve

The heritage assessment concludes that Arthur McElhone Reserve meets the threshold for local significance in terms of:

Criterion (a) Historic significance: The Arthur McElhone Reserve is significant for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage, which reflect a respect and understanding of historic landscapes. The site was extensively developed to meet contemporary recreation needs. It is significant as a seminal park development initiated, designed and executed by the City of Sydney in the immediate Post World War II period in the City of Sydney.

Criterion (b) Historical associations: The site of the Arthur McElhone Reserve is associated with Alexander Macleay, being part of the grounds of Elizabeth Bay House. It was subsequently formed as a public park that in its name commemorates Arthur McElhone, a long serving alderman of the City of Sydney.

The Reserve is associated with the landscape architect Berzins, reputedly the first professional landscape architect to be engaged by a municipal council in Australia. It is amongst the earliest works by Berzins while employed by the City of Sydney, demonstrating at a high level of sensitivity to the broader setting of Elizabeth Bay House and the creation of a park that incorporates modernist concepts of landscape design.

Criterion (c): Aesthetic: The Arthur McElhone Reserve is a rare intact landscape design of Ilmar Berzins that encompasses a number of significant features. It incorporates topographic changes of level, and its detailed design features a water feature and stone bridge and varied planting. The landscape design has a reliance on the underlying architectural layout of the Reserve that provides an integrity and structure to the modulation of the park as a whole. The park design respects the original setting of Elizabeth Bay House by ensuring that the relationship of the house and broader setting to the harbour is respected and enhanced while

providing a high level of detailed landscape design and amenity to the park itself. International design ideas of the time by leading landscape architects such as Christopher Tunnard and others were applied by Berzins.

The Reserve's location to the formal axis of Elizabeth Bay House forms an important interpretative tool in the understanding of the setting of the house and its relationship to its harbour setting. The Reserve demonstrates a sensitivity to this significant colonial setting by reinforcing Elizabeth Bay House's views to and from the harbour while recognising the park's role as an important public amenity in the provision of much needed open green space.

The park demonstrates important landscape concepts of park design taking in modernist ideas of providing an internal setting of green spaces for the use and enjoyment for the public, the formation of access pathways, water feature and a pedestrian bridge over this water feature. The hard landscape elements are carefully detailed and constructed in sandstone, resulting in a long-lasting legacy for the form and shapes designed by Berzins. It is considered his most significant work for the City of Sydney.

The planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad and diverse interests in horticultural specimens, both Australian and exotic and Berzins intent of a horticulturally diverse planting scheme.

Criterion (d) Social: The Arthur McElhone Reserve is understood to have great significance to residents and visitors to the locality because of its high level of visual amenity and as a valuable landscaped open recreational area.

Criterion (e) Research potential: The Arthur McElhone Reserve demonstrates the evolving landscape design in post-World War II Sydney that fused international design movements to a significant location within the visual curtilage of Elizabeth Bay House. The design demonstrates the intellectual approach of Berzins as a post-World War II immigrant and his training as a landscape designer that reflected international design trends of the day.

Criterion (f) Rarity: The Arthur McElhone Reserve is a rare intact design of the significant landscape architect Ilmar Berzins and a rare intact example of advanced mid twentieth century landscape design in the City of Sydney.

Criterion (g) Representative: The Arthur McElhone Reserve is representative of mid twentieth century landscape design expressed in the use of detailed sandstone walling and plant types. The design responds to the immediate visual curtilage of a significant colonial house by maintaining the prospect and views to the harbour from the house.

The heritage study concluded that 1A Billyard Avenue, Elizabeth Bay (Arthur McElhone Reserve) meets the threshold for local heritage significance for its historical, historical association, aesthetics, social significance, research significance, rarity and representativeness and warrants potential listing as a heritage item on the SLEP 2012.

Quarry Green Reserve, Ultimo - Landscaping

The heritage assessment concludes that Landscaping in the Quarry Green Reserve meets the threshold for local significance in terms of:

Criterion (a) Historical significance: Quarry Green Reserve is one of a relatively large number of landscaped street closures resulting from the implementation of the 1971 City of Sydney 'Strategic Plan in Central Sydney and inner-city suburbs within the local government area. It is historically important as one of a group of landscaped street closures providing evidence of the "greening" of Sydney that came out of the Strategic Plan.

Criterion (b) Historical associations: Quarry Green Reserve is associated with Ilmar Berzins, the City of Sydney's landscape architect who oversaw extensive development of green open

spaces throughout the city. Quarry Green Reserve is representative of the parks and open spaces that Berzins was associated with. It is a fine and attractive example of landscaping, but may not have been wholly the work of by Berzins.

Criterion (c): Aesthetic: Quarry Green Reserve is representative of a number of open space improvements through the Ultimo area that were inspired by the Sydney Bush School aesthetic through the use of Australian native planting as its main structural form with Sydney School detailing of brick paving and sandstone. The planting has matured to form an attractive landscape and provide an attractive recreational precinct in Ultimo.

Criterion (d) Social: It has not been determined whether Quarry Green Reserve has strong or special associations with the local community, although evidence indicates it is a focus of regular community activities and celebrations.

Criterion (g) Representative: Quarry Green Reserve is representative of the street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s. It is also representative of the greening cities movement and social change taking place as evidenced by the gentrification of inner city suburbs.

The heritage study concluded that the building at Quarry Green Reserve, Ultimo meets the threshold for local heritage significance for its historical significance, historical associations, aesthetics and representativeness at a local level. It is also likely to fulfil the criterion for social significance. It warrants potential listing as a heritage item on the SLEP 2012.

Ulster Street, Paddington - Landscaping

The heritage assessment concludes that Landscaping in Ulster Street, Paddington meets the threshold for local significance in terms of:

Criterion (a) Historical significance: Ulster Street, Paddington, is part of a series of street closures from the 1970s that continued into the 1980s to pedestrianise urban precincts as part of the City Council's "Greening Sydney" policy, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans. It forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington.

Ulster Street Paddington has social/historical significance in relation to urban and conservation measures in Paddington. The gentrification and resultant demand for community open space is embodied through the displacement of vehicular access for communal use, and resulted from agitation from the Paddington Society during the1970s. This resulted in the closure and landscaping of Ulster, Newcombe, Stewart, Regent and Elizabeth Street, of which Ulster Street is the finest.

Criterion (b) Historical associations: Ulster Street, Paddington, is associated with Ilmar Berzins, the City of Sydney landscape architect who was responsible for extensive improvement works throughout the City of Sydney from the beginning of the 1950s to the second half of the 1980s. It is a distinctive example of his work related to street closures.

Criterion (c): Aesthetic: Ulster Street, Paddington is a formal landscape treatment informed by the so-called "Sydney School". It is representative of the application of the Sydney School aesthetic, most evidently the use of a type of clinker brick for the planter boxes and brick paving. The selection of materials brought design elements of the Sydney School into an established 19th century urban context.

Ulster Street continues the design themes exemplified in Ilmar Berzins' significant redesign of Fitzroy Gardens in Kings Cross (circa 1971), notably the use of raised planters as a solution in urban areas to raise trees above the urban floor.

Criterion (d) Social: Ulster Street, along with the other contemporary street closures in Paddington, is evidence of the gentrification of the suburb during the 1960s and 1970s. Although it may be of significance to the community, more research is required to establish this.

Criterion (e) Research potential: Ulster Street has limited research potential as a demonstration of the attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. Ulster Street provides evidence of the successful implementation of Action Plan 26 South Paddington Precinct C4.

Criterion (g) Representative: Ulster Street is representative of street closures from 1970s and 1980s resulting from implementation of Action Plans associated with the 1971 City of Sydney Strategic Plan and is distinctive for its formal character established by the gridded brick paving and planter boxes.

The heritage study concluded that the building at 13-17 Riley Street, Woolloomooloo meets the threshold for local heritage significance for its historical association, aesthetics, research potential and representativeness at a local level. It is also likely to fulfil the criterion for social significance. It warrants potential listing as a heritage item on the SLEP 2012.

Conclusion

Based on these conclusions, progressing local heritage listing for each proposed heritage item will ensure the significance of each site is appropriately recognised, considered and managed in the context of any future plans or redevelopment.

2. Objectives and intended outcomes

The objectives of this planning proposal are to recognise the heritage significance of the 6 sites in by listing them as individual heritage items under Schedule 5, Part 1 of SLEP 2012.

3. Explanation of provisions

To achieve the proposed outcomes, this planning proposal includes amendments to the SLEP 2012.

3.1. SLEP 2012 Heritage Schedule Amendments

The planning proposal seeks to amend the SLEP 2012, Schedule 5, Part 1 by inserting the following items as shown below in **Table 2.** Text to insert is shown as **bold underline**.

Table 2: Proposed amendments to Schedule 5, Environmental heritage, Part 1, heritage items.

Locality	Item Name	Address	Property Description	Significance	Item no.
Alexandria	**Former Baby Health Centre**	**12 A Dadley Street**	**Lot 6 Sec A DP 2307, Lot 7 Sec A DP 2307**	**Local**	TBC post-exhibition
Elizabeth Bay	**Arthur McElhone Reserve**	**1A Billyard Avenue**	**Lot 4 DP 15713, Lot 5 DP 15713, Lot 1 DP 1080048**	**Local**	TBC post-exhibition
Paddington	**Ulster Street Landscaping**	**Ulster Street, between Oxford Street & Church Place**		**Local**	TBC post-exhibition

Locality	Item Name	Address	Property Description	Significance	Item no.
Surry Hills	**Former John Carroll Kindergarten**	**2-14 Phelps Street**	**Lot 1 DP 50102**	**Local**	TBC post-exhibition
Ultimo	**Quarry Green**	**Quarry Street, between Jones Street & Bulwara Road**		**Local**	TBC post-exhibition
Woolloomooloo	**Former Cleansing Depot**	**13-17 Riley Street**	**Lot 1 DP 83649**	**Local**	TBC post-exhibition

The name of each heritage item has been developed in accordance with the directions contained in the *Standard Instrument (Local Environmental Plans) Order 2006*, which require that an item name briefly describe those things that are part of its heritage significance.

The items are described further in the supporting information contained in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study included at **Appendix B** and the heritage assessments and draft inventory sheets for each at **Appendices C-N.**

4. Justification

Section A – Need for the planning proposal

Q.1 Is the planning proposal a result of any strategic study or report?

Yes. The planning proposal is a result of a heritage assessment of each site completed as part of a broader heritage study investigating projects liked to Smillie, City Architect and Berzins, City Landscape Architect. The heritage study was prepared by TKD Architects in 2023 and is available at **Appendix B**.

Preparation of the report was linked to a resolution of Council available at **Appendix O**.

The proposed items identified in this planning proposal were recommended for listing in the TKD report as they met one or more of the NSW Heritage Council's (2025) criteria for local significance.

A summary of each building's significance as assessed by TKD Architects is presented Section 1.5 of this planning proposal.

Detailed heritage assessments demonstrating the significance of each building and landscape are available in Appendix **C, E, G, I, K** and **M** and draft inventory sheets at Appendix **D, F, H, J, L** and **N**.

Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. Appropriate heritage protection is best achieved through the identification of each building proposed for listing as local heritage items in an environmental planning instrument. The buildings proposed for heritage listing in each amendment currently have no statutory protection as individually listed heritage items on the SLEP 2012 or under the *NSW Heritage Act 1977*.

Progressing local heritage listings for each proposed heritage item will ensure that their local heritage significance is appropriately recognised and managed into the future. It will also ensure formal consultation with landowners and broader community prior to any future change or development to the items. These outcomes are only achieved in the longer term through protection under Schedule 5, Part 1 of the SLEP 2012.

Section B – Relationship to strategic planning framework

Q3. Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy?

Yes. See comments below.

Greater Sydney Region Plan: A Metropolis of Three Cities

The Greater Sydney Region Plan, completed in March 2018, is the Greater Sydney Commission's vision for a Greater Sydney of three cities where most residents live within 30 minutes of their jobs and services. City of Sydney is situated within the Eastern Harbour City.

This plan sets a 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters. This sets out how the State Government's 10 directions for a Greater Sydney are to be implemented through

integrated planning. These 10 directions, with 40 supporting objectives, address infrastructure, liveability, productivity and sustainability. This planning proposal is consistent with these high level directions and objectives. In particular it addresses the liveability great places direction objective:

Objective 13: Environmental heritage is identified conserved and enhanced

By listing each building on the SLEP 2012, this planning proposal will fulfill this objective.

Eastern City District Plan

The Eastern City District Plan completed by the Greater Sydney Commission in March 2018 is a 20-year plan to manage growth in the context of economic, social and environmental matters. The district plan identifies 22 planning priorities and associated actions that support a liveable, productive and sustainable future for the district. This planning proposal gives effect to the following key planning priority and actions:

Liveability Planning Priority E6 – Creating and renewing great places and local centres, and respecting the District's heritage Action 26 - Identify, conserve and enhance environmental heritage by:

> *(a) engaging with the community early in the planning process to understand heritage values and how they contribute to the significance of the place*
>
> *(b) applying adaptive re-use and interpreting heritage to foster distinctive local places*
>
> *(c) managing and monitoring the cumulative impact of development on the heritage values and character of places.*

This priority seeks to enhance the district's liveability by identifying, conserving and enhancing the heritage of local centres and neighbourhoods. It notes that built heritage contributes to an area's sense of place, its distinctive character and diversity of built form and uses and brings people together.

By consulting with the community to consider amending and listing these items as having local heritage significance, this planning proposal will address the district plan by respecting the City of Sydney's diverse heritage and fostering great places to bring people together.

The retention, conservation and revised acknowledgement of each site will contribute the character and sense of our local government area.

Q4. Is the planning proposal consistent with council's local strategy or other local strategic plan?

Yes.

Sustainable Sydney 2030 – 2050 Community Strategic Plan

The City of Sydney's Sustainable Sydney 2030 Strategic Plan is the vision for the sustainable development of the City to 2050 and beyond. It includes 10 strategic directions to guide the future of the City, as well as 10 targets against which to measure progress. This planning proposal is consistent with the key directions of Sustainable Sydney 2030 – 2050, particularly Direction 4 'Design excellence and sustainable development.'

Local strategic planning statement

The City Plan 2036 Local Strategic Planning Statement was completed in March 2020. This statement is the 20-year vision for land use planning in the city. It aims to link the NSW State Government's strategic plans and the community strategic plans with the city's planning controls. This plan highlights that the unique heritage character of Sydney is a strong focus for local communities.

The planning proposal identifies the following sites as heritage items, thereby facilitating their conservation and allowing future generations to understand the historical development of the City. The heritage listing will ensure future development considers and maintains the heritage significance of each site.

Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies (SEPPs)?

This planning proposal is consistent with applicable State Environmental Planning Policies (SEPPs) as summarised in Table 4 and detailed in the following section. In this table, consistent means that the planning proposal does not contradict of hinder the application of the relevant state environmental planning policy.

Table 4: Consistency with State Environmental Planning Policies.

State Environmental Planning Policy	Comment
SEPP (Biodiversity and Conservation) 2021	Consistent - amendments in this planning proposal will continue to support the biodiversity and conservation in the local government area
SEPP (Building Sustainability Index: BASIX) 2004	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Exempt and Complying Development Codes) 2008	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Housing) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Industry and Employment) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Planning Systems) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Precincts–Central River City) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Precincts–Eastern Harbour City) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Precincts–Regional) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Precincts–Western Parkland City) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Primary Production) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Resilience and Hazards) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Resources and Energy) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP No 65 - Design Quality of Residential Flat Development	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Transport and Infrastructure) 2021	Consistent - no amendments in this proposal will hinder the application of this SEPP.
SEPP (Housing) Amendment (Transport Oriented Development) 2024	Consistent - no amendments in this proposal will hinder the application of this SEPP.

Q6. Is the planning proposal consistent with applicable ministerial directions?

This planning proposal is consistent with all Ministerial Directions issued under section 9.1 of the *Environmental Planning and Assessment Act 1979*, as summarised in Table 5.

Table 5: Consistency of the planning proposal with ministerial directions**.**

Ministerial Direction	Comment
Focus area 1: Planning Systems	
1.1 Implementation of Regional Plans	Consistent. No amendments in this proposal will hinder the implementation of Regional Plans
1.2 Development of Aboriginal Land Council land	Not applicable
1.3 Approval and Referral Requirements	Consistent. No amendment includes concurrence, consultation or referral provisions or identify any designated development.
1.4 Site Specific Provisions	Consistent – see discussion below.
1.4A Exclusion of Development Standards from Variation	Consistent. This planning proposal does not propose to exclude a development standard from variation under clause 4.6
Focus area 1: Planning Systems – Place-based	
1.6 Parramatta Road Corridor Urban Transformation Strategy	Not applicable
1.7 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	Not applicable
1.8 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
1.9 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
1.10 Implementation of Glenfield to Macarthur Urban Renewal Corridor	Not applicable
1.11 Implementation of the Western Sydney Aerotropolis Plan	Not applicable
1.12 Implementation of Bayside West Precincts 2036 Plan	Not applicable
1.13 Implementation of Planning Principles for the Cooks Cove Precinct	Not applicable
1.14 Implementation of St Leonards and Crows Nest 2036 Plan	Not applicable
1.15 Implementation of Greater Macarthur 2040	Not applicable
1.16 Implementation of the Pyrmont Peninsula Place Strategy	Not applicable
1.17 North West Rail Link Corridor Strategy	Not applicable
Focus area 2: Design and Place	No directions in place
Focus area 3: Biodiversity and Conservation	

Ministerial Direction	Comment
3.1 Conservation Zones	Consistent. Amendments in this planning proposal will continue to support the protection and conservation of environmentally sensitive areas in the local government area
3.2 Heritage Conservation	Consistent. Amendments in this planning proposal will support the conservation of items, areas, objects and places of environmental heritage significance in the local government area
3.3 Sydney Drinking Water Catchments	Not applicable
3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs	Not applicable
3.5 Recreation Vehicle Areas	Not applicable
Focus area 4: Resilience and Hazards	
4.1 Flooding	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
4.2 Coastal Management	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
4.3 Planning for Bushfire Protection	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
4.4 Remediation of Contaminated Land	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
4.5 Acid Sulfate Soils	Consistent. Amendments in this planning proposal are proposed for land classified as Class 5 and will not hinder the implementation of this local planning direction
4.6 Mine Subsidence and Unstable Land	Not applicable
Focus area 5: Transport and Infrastructure	
5.1 Integrating Land Use and Transport	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
5.2 Reserving Land for Public Purposes	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
5.3 Development Near Regulated Airports and Defence Airfields	Not applicable

Ministerial Direction	Comment
5.4 Shooting Ranges	Not applicable
Focus area 6: Housing	
6.1 Residential Zones	Consistent. This planning proposal supports and aligns with this local planning direction, particularly objectives (a) and (b).
6.2 Caravan Parks and Manufactured Home Estates	Not applicable
Focus area 7: Industry and Employment	
7.1 Business and Industrial Zones	Consistent. No amendments in this proposal will hinder the implementation of this local planning direction
7.2 Reduction in non-hosted short-term rental accommodation period	Not applicable
7.3 Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable
Focus area 8: Resources and Energy	
8.1 Mining, Petroleum Production and Extractive Industries	Not applicable
Focus area 9: Primary Production	
9.1 Rural Zones	Not applicable
9.2 Rural Lands	Not applicable
9.3 Oyster Aquaculture	Not applicable
9.4 Farmland of State and Regional Significance on the NSW Far North Coast	Not applicable

Section C – Environmental, social and economic impact

Q7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

No. The planning proposal will not adversely affect any critical habitat or threatened species, populations or ecological communities or their habitats.

Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

No. It is unlikely that the proposed amendments to Schedule 5, Part 1 of SLEP 2012 will result in development creating any environmental effects that cannot be readily controlled.

Q9. How has the planning proposal adequately addressed any social and economic effects?

Identification and recognition of each heritage item and its significance will facilitate retention of physical, social, cultural and historic values that may have significance to the community. No changes to current zoning controls are proposed. The merit-based heritage provisions provide capacity for Council and any proponent to consider these matters when development is proposed.

Section D – State and Commonwealth interests

Q10. Is there adequate public infrastructure for the planning proposal?

Yes. The SLEP 2012 amendment will not generate demand for infrastructure.

Q11. What are the views of State and Commonwealth public authorities consulted in the gateway determination?

If required by the Gateway Determination, the Heritage Council of NSW will be consulted during the public exhibition period. The identification of this heritage item, based on a comprehensive heritage assessment, is consistent with Heritage Council of NSW standards.

5. Mapping

The Heritage Map tile HER_008, HER_010, HER_015, HER_016, HER_021 and HER_023 will be updated to shade in brown the location of the 6 new heritage items.

6. Community consultation

5.1 Public Exhibition

This planning proposal shall be exhibited in accordance with the requirements of gateway determination once issued by the Department of Planning, Housing and Infrastructure.

It is anticipated that public exhibition will be for a period of at least 20 working days, which is consistent with the *Environmental Planning and Assessment Act 1979* and the *Local Environmental Plan Making Guideline* prepared by the Department dated August 2023.

The public exhibition of the documents will be on the City of Sydney website and carried out in accordance with the City's Community Participation Plan.

Consultation with the necessary NSW agencies, authorities and other relevant organisations will be undertaken as required by the conditions contained within the Gateway Determination.

7. Project timeline+

The anticipated timeline for the completion of the planning proposal is as follows:

Stage	Timeframe
Gateway request	February 2026
Public exhibition & government agency consultation	July 2026
Consideration of submissions	September 2025
Post exhibition consideration of proposal	November 2026
Draft and finalise LEP	January 2027

Appendices

Appendix B **Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study**

Appendix C TKD Heritage Assessment - 12A Dadley Street, Alexandria

Appendix D Draft Inventory Sheet - 12A Dadley Street, Alexandria

Appendix E TKD Heritage Assessment - 2-14 Phelps Street, Surry Hills

Appendix F Draft Inventory Sheet - 2-14 Phelps Street, Surry Hills

Appendix G TKD Heritage Assessment -13-17 Riley Street, Woolloomooloo

Appendix H Draft Inventory Sheet - 13-17 Riley Street, Woolloomooloo

Appendix I TKD Heritage Assessment - 1A Billyard Avenue, Elizabeth Bay

Appendix J Draft Inventory Sheet - 1A Billyard Avenue, Elizabeth Bay

Appendix K TKD Heritage Assessment - Quarry Street, Ultimo

Appendix L Draft Inventory Street, Quarry Street, Ultimo

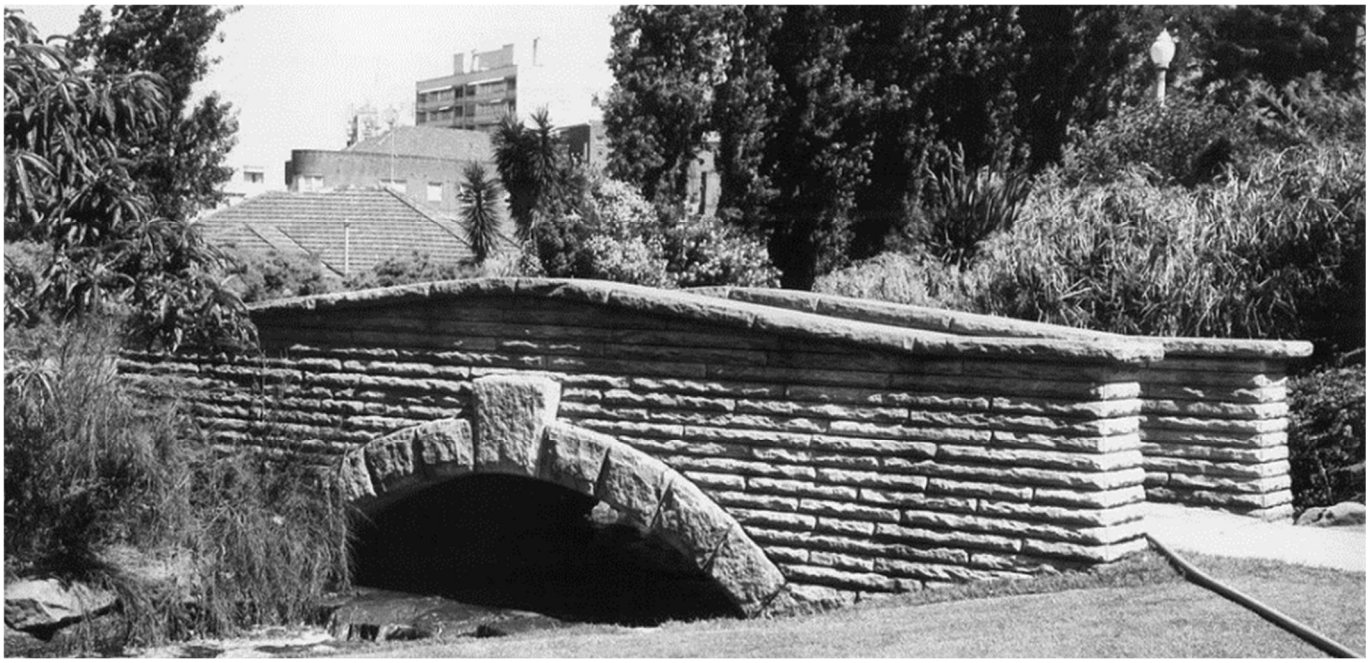
Appendix M TKD Heritage Assessment - Ulster Street, Paddington

Appendix N Draft Inventory Sheet - Ulster Street, Paddington

Appendix O Council Resolution - City Architect and Landscape Architect Works Heritage Study - 9 August 2021

Attachment B

Albert Smilie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study



Albert Smillie and Ilmar Berzins

City Architect and City Landscape Architect

Heritage Study

TKDArchitects
Tanner Kibble Denton

Prepared for the City of Sydney

October 2023

Cover
Alexandria Baby Health Centre, 1964.
Source: City of Sydney Archives, Unique ID A-00010293
McElhone Reserve, 1964.
Source: City of Sydney Archives, Unique ID A-00010383

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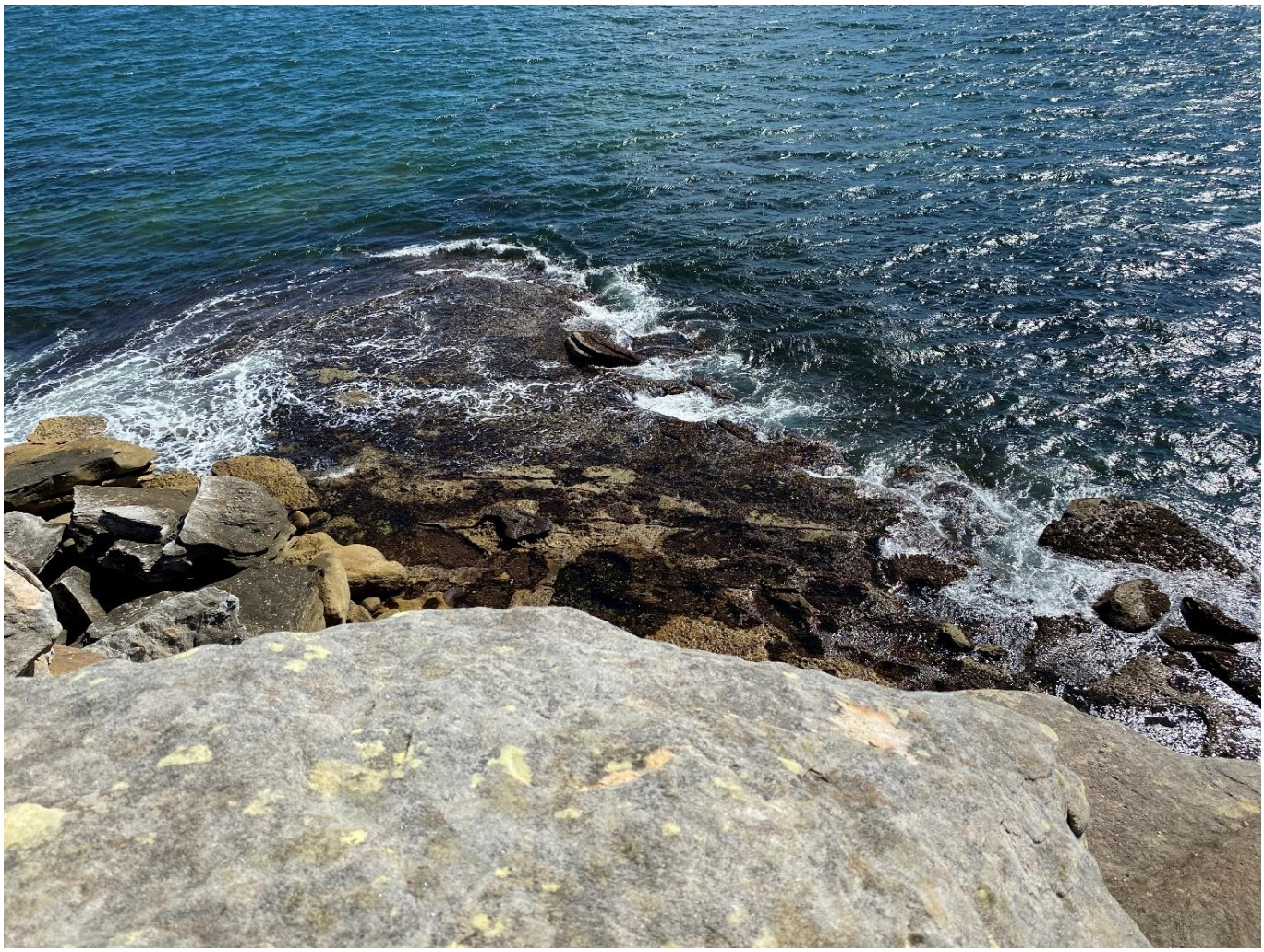

We respectfully acknowledge the Traditional Custodians of the City of Sydney local government area, the Gadigal.

For thousands of years, the Gadigal cared for and cultivated their land which stretched from Burrawara (South Head), through Warrane (Sydney Cove), down to Blackwattle Creek. We acknowledge the continuing spiritual, cultural, political and physical connections which continue between the Gadigal, their descendants and other neighbouring clans, and this Country.

We pay respect to their Elders past, present and future.

Executive summary

This report surveys the careers of two significant civil servants, Albert Alexander Smillie and Ilmar Berzins, who played an important role in shaping the post-war development of the City of Sydney. Initially a draftsman and later Chief Architect, Smillie contributed a range of important civil buildings including baby health centres, community centres, libraries, public (council) housing, parking stations, playgrounds and pools. Ilmar Berzins designed a range of important public parks and gardens. He also designed the landscaping for numerous projects coming out of the City Architect's office.

Comparison with other local government areas in metropolitan Sydney and other parts of NSW and eastern Australia establishes that the City of Sydney was the first to employ a City Architect and the first to engage a qualified landscape. The range and scope of projects designed by the City Architect under Smillie and by Berzins are unique. They are significant historically and aesthetically and are important evidence of the City of Sydney's social and civic responsibility from the early twentieth century to the 1970s.

Sixteen sites identified within this study are considered to have the potential for inclusion in Schedule 5 of Sydney Local Environmental Plan 2012.

Sites associated with Ilmar Berzins include:

- McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay.
- Sandringham Gardens, Hyde Park North, Sydney.
- Landscaping, Quarry Street, Ultimo.
- Landscaping, Ulster Street, Paddington.

Sites associated with Albert Smillie (City Architect) are:

- Former Baby Health Centre, 12 Dadley Street, Alexandria.
- Former Joseph Sargent Children's Centre, 60 Prospect Street, Erskineville.
- Former Baby Health Centre, 87 Lower Fort Street, Millers Point.
- Former John Carroll Kindergarten, 2 Phelps Street, Surry Hills.
- Former Catherine Sloss Library, 130 Dowling Street, Woolloomooloo.
- Victoria Park Swimming Pool, City Road, Camperdown.
- Pyrmont Housing Scheme, 1-7 Henry Avenue, Pyrmont.
- Alexandria-Erskineville Bowling Club House, 1 Fox Avenue, Erskineville.
- Hilda Booler Kindergarten, Jubilee Park, Eglinton Road, Glebe.
- Former Ron Williams Welfare centre for the Aged, 11 Kepos Street, Redfern.
- Draughts Shelter, adjacent to Waterloo Oval, McEvoy Street, Waterloo.

Darlington Aged Welfare Centre, 132-134 Shepherd Street, Darlington is significant for its associations with Berzins and with Smillie.

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1 Introduction

1.1 Background and purpose of the report

This Heritage Assessment has been prepared for the City of Sydney to investigate council projects completed under the jurisdiction of City Architect Albert Smillie and City Landscape Architect Ilmar Berzins and determine whether there are any extant examples of projects associated with them that meet the threshold for heritage listing.

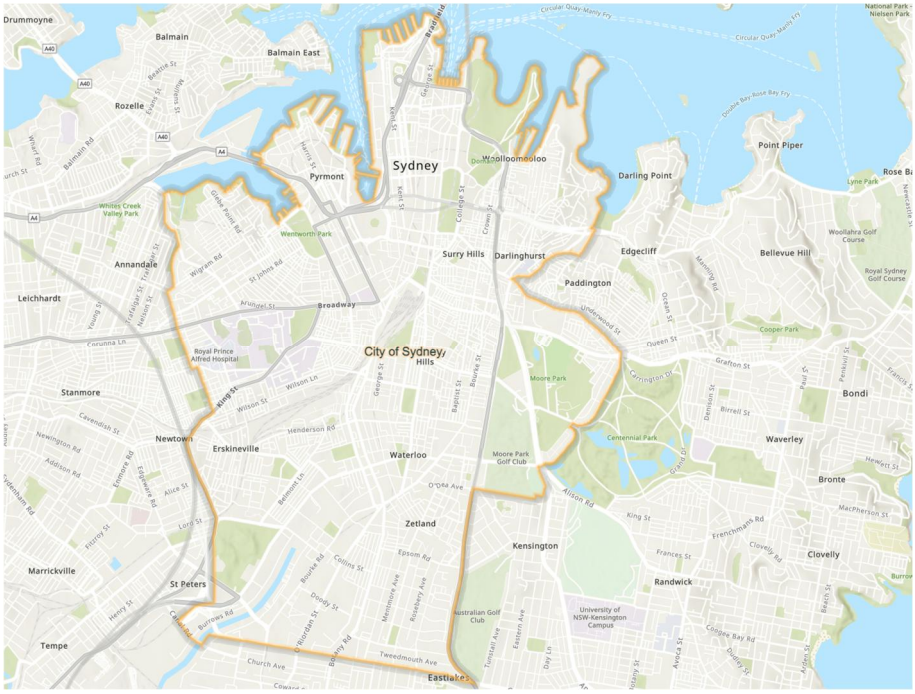
The study follows council discussion and resolution in August 2021 which acknowledged the contributions of Smillie and Berzins to the City, and the state of preservation of their legacy with many important works already demolished. Council resolved to investigate the commissioning of a heritage study of City projects under Albert Smillie and Ilmar Berzins in the Local Government Area and to consider which items could be considered for heritage listing.

This report surveys the careers of two significant civil servants, Albert Alexander Smillie and Ilmar Berzins, who played an important role in shaping the post-war development of the City of Sydney. Initially as a draftsman and later as Chief Architect, Smillie contributed a range of important civil buildings including baby health centres, community centres, libraries, public (council) housing, parking stations, playgrounds and pools. Ilmar Berzins designed a range of important public parks and gardens and was the first qualified landscape architect ever employed in local government in Australia.

This report provides a brief background on the careers of Smillie and Berzins in order to contextualise the research list of projects completed by each. The list of projects compiled includes remarks on the integrity and potential significance of the items and leads into recommendation for the potential heritage listing of items.

1.2 Study area

The study area for the purposes of this study is the entire City of Sydney Local Government area.



1 Study area, outlined yellow, not to scale.
Source: City of Sydney ARC GIS.

1.3 Abbreviations

CSA	City of Sydney Archives
LEP	Local Environmental Plan
NLA	National Library of Australia
SHR	State Heritage Register
SLNSW	State Library of NSW.

1.4 Heritage listings

Items that were designed by or involved Albert Smillie and Ilmar Berzins are included in the heritage listings for four items in Sydney Local Environmental Plan 2012. In most cases there is no direct reference to their input:

- McElhone Reserve is included in the listing in Sydney LEP 2012 for House and Grounds, Elizabeth Bay House (Item I594) but is not specifically listed.

- Sandringham Gardens is included in the Sydney LEP listing for Hyde Park (Item I1654) The listing includes sundry items such as former public toilets, Sandringham Gardens including memorial gates/pergola, Nagoya Gardens and Chess Board.

- Macquarie Place, Sydney (Item I1856 in the LEP). The Macquarie Place Precinct is included in the State Heritage Register, which refers generally to 1960 and 1976 alterations.
- Victoria Park Swimming Pool forms part of listings in the State Heritage Register and Sydney LEP 2012. Its social significance is recognised in the

SHR listing for The University of Sydney, University Colleges and Victoria Park. Victoria Park, Gardener's Lodge and its interior, entry gates and piers, park layout, paths and plantings is Item I39 in the LEP. Here Victoria Park is of social significance for its role as a passive recreation area and for the active use of the Victoria Park Swimming Pool.

- The Substation and women's toilets at Taylor Square are part of a SHR listing for the Substation and Underground Conveniences at Taylor Square. The Substation and women's toilet is Item I400 in Sydney LEP 2012.

- The cast iron railings embellished by sea horses at Sydney Cove, a version of which appears in a sketch drawing initialled by Albert Smillie dated 4 August 1939 are included in Item 1709in Sydney LEP 2012 and are attributed to the Maritime Services Board. More research is required to confirm that the balustrades installed at Circular Quay were designed and installed by the City of Sydney.

  The railings are Also included in the State Heritage Register listing for Railings, Sydney Cove (SHR 01572) The contribution of the City of Sydney Architect, if the designer, is not acknowledged.

- The listing for Fitzroy Gardens, 64-68 Macleay Street, Elizabeth Bay (Item I593) acknowledges Ilmar Berzins' importance. The following is extracted from the Statement of Significance included in the State Heritage Inventory database entry for Fitzroy Gardens:

  > *Fitzroy Gardens are an interesting example of 1970s modernist planning and detail and are largely the work of Ilmars Berzins (1921-1993) at that time employed by the City's Parks and Gardens Division, and the first qualified landscape architect to practice in Sydney. The existing 1970s design of the Gardens, demonstrates creative innovation as an example of an early progression from modernism to postmodernism in Sydney Landscape architecture. Examples of gardens of this style are becoming increasingly rare. However later modifications and management of the park have however detracted much from the original design and character*.

2 Historical context

2.1 Introduction

This section of the report provides a historical background for the work of Albert Smillie and Ilmar Berzins. It provides a summary of the politics associated with the City of Sydney in the years that they worked for it and the ground-breaking report prepared by City Engineer Arnold Garnsey after his investigative tour of Europe and North America during the second half of the 1940s. This report strongly influenced the direction that municipal works and parks and gardens within the City of Sydney's boundaries would take from the late 1940s onwards. Council's involvement with community-oriented projects is also summarised, setting the scene for the projects undertaken by Smillie and Berzins in the second half of the twentieth century.

2.2 Political background

The City of Sydney has never been free of the yoke of the New South Wales Government. From the time of its incorporation as a municipality in 1842 onwards the City's powers have been curbed and curtailed by Macquarie Street. The period during which Albert Smillie and Ilmar Berzins were employed by the City of Sydney was no exception.

Albert Smillie joined the staff of the Municipal Council of Sydney in 1924 (refer to Section 3.2). A short-lived Civic Reform council, the result of a non-aligned ratepayers' organisation called the Civic Reform Association that was formed in 1920 to remove the administration of the City of Sydney from the control of the Australian Labor Party, was replaced by a Labor council at the end of 1924. This too was to be short-lived and was replaced by Commissioners at the beginning of 1928. From 1930 until 1948 Civic Reform largely held sway.

From May 1941 until May 1965 a Labor government ruled NSW, but lost power after a coalition of the Liberal and Country Parties led by Robin Askin was elected. The Liberals were replaced by Labor under Neville Wran in May 1976. Concurrently, the City of Sydney was led by a Labor Council between 1949 and 1967. The Labor Council was sacked by the Askin Government in November 1967[1] and replaced by three commissioners, who remained in power until September 1969. Civic Reform was returned to power and stayed there from 1969 until 1987, when the State government dismissed it.

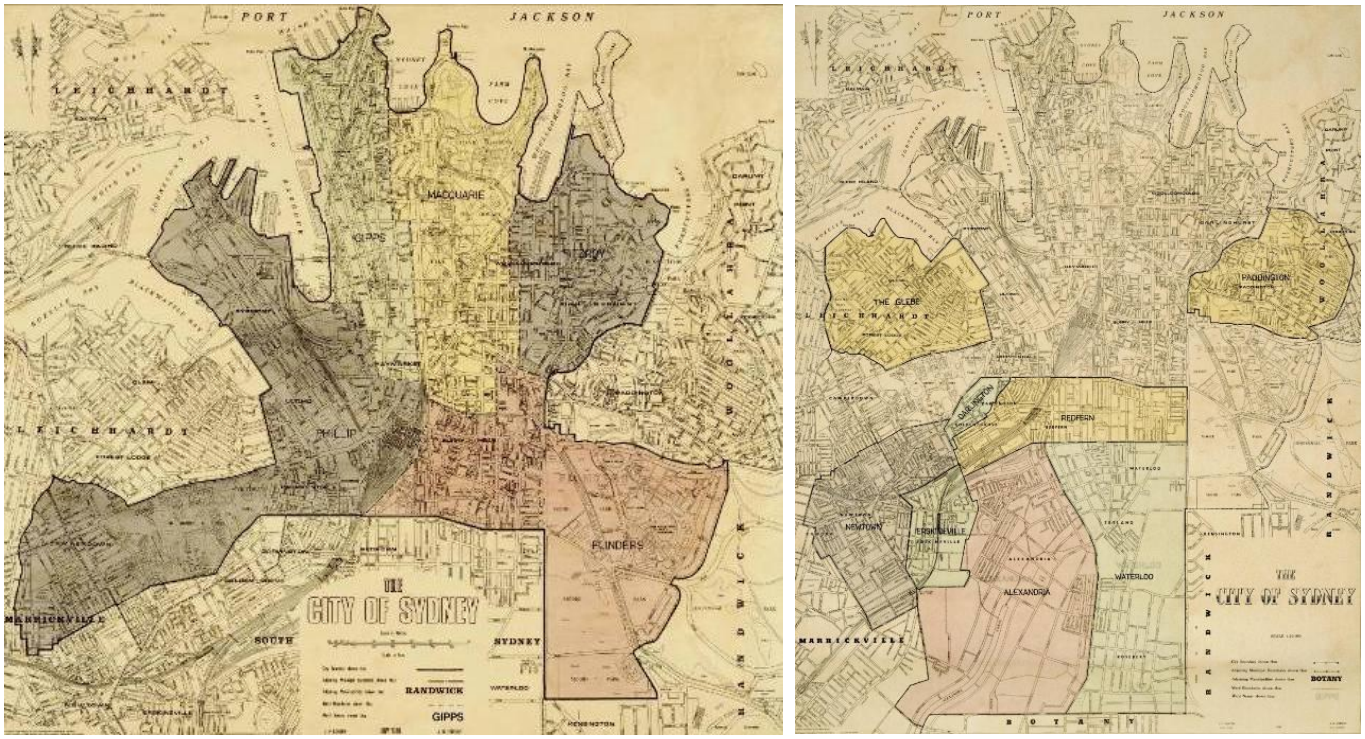
When Labor returned to office in the NSW Parliament in 1941, Premier McKell "intimated his intention to revive the Greater Sydney Bill."[2] This was based on an initiative dating to the early twentieth century, meeting with defeat when introduced to parliament in the early 1930s. The resuscitated bill was delayed because of the war but in June 1945 a royal commission was appointed to reorganise local government boundaries. The commission followed the passage of a Town and Country Planning Bill amending the *Local Government Act* in April 1945, which allowed shire and municipal councils to prepare town and country planning schemes. Assistance was provided by committees and qualified planners and schemes ultimately approved by the Minister for Local Government. The Act also provided for the preparation of a planning scheme for

1 It was the third time this had happened. The first dismissal took place in 1853 and the second in 1927. The fourth occurred in 1987.
2 Peter Spearritt, *Sydney Since the Twenties* (Hale & Iremonger, 1978), p.177.

the County of Cumberland.[3] The newly formed Cumberland County Council presented its scheme to the Minister for Local Government, J J Cahill, on 27 July 1948.[4] After a lengthy period of amendment the Cumberland Planning Scheme officially came into operation on 27 July 1951.[5]

Perhaps more significantly for the City of Sydney, the passage of the *Local Government* (*Areas*) *Act* in 1948 enabled the extension of the city's municipal boundaries in 1949 to incorporate the surrounding municipalities of Alexandria, Darlinghurst, Erskineville, Glebe, Newtown, Paddington, Redfern and Waterloo, all characterised by Labor-voting, low income-earning residents. A Labor Party majority in Council was the inevitable outcome of the next local government election. It held sway for the next 19 years. This provided opportunities to renovate structures and build new community facilities; the construction of buildings, structures and parks to improve the condition of residents reflected the social agendas of aldermen relating to their electorates and the loss of residential population there as the demography of Sydney changed.[6]

On the planning front, the City Engineer's Department submitted a Land Use Zoning Scheme in October 1947 for Council's approval, which was submitted the following year for incorporation into the Cumberland Planning Scheme but not accepted.



2 The boundaries of the City of Sydney before (left) and after (right) the amalgamation of inner local government areas in 1948.
Source: CSA Historic Map Collections – City Boundaries and Wards, 1842-2004.

The City Council prepared its first, interim plan in 1948, which it intended to finalise through the City Planning and Improvement Committee, appointed by Council in

3 *Local Government (Town and Country Planning) Amendment Act* (Act No 21, 1945), Division 8 – Scheme for the County of Cumberland
4 "Sydney's Master Plan Ready", *Sydney Morning Herald*, 28 July 1948, p.3.The Council consisted of 10 members – one representing the City of Sydney and nine elected by constituencies of from five to 12 local councils (Spearritt, p.185).
5 "County Plan to be Set in Motion", *Sydney Morning Herald*, 26 July 1951, p.2.
6 Hilary Golder, *Sacked,* p.109.

December 1947. The plan was conceived as a method of preventing industrial development moving into residential areas and circumventing economically "unsound" development in "obsolete areas."[7] In October 1948 Council approved the formation of a Town Planning Branch in the City Engineer's Department. Administration of planning in Council prior to 1972 was divided between the City Engineer (strategic planning) and the City Building Surveyor (development control).

The City of Sydney Planning Scheme formulated by the City Planning and Improvements Committee was adopted by Council on the 15 December 1958 and submitted to the Minister for Local Government. It was altered by the Minister on the advice of the State Planning Authority and exhibited in December 1964. Council lodged objections to these alterations based on the loose zoning that was proposed. The Scheme was re-exhibited in November 1967 and Council again raised objections to it. It was finally gazetted on 16 July 1971.[8]

In 1968 the boundaries of the City of Sydney were changed and many of these suburbs became part of the new municipality of South Sydney. In turn, South Sydney was amalgamated with the City of Sydney in 1982 but became separate again under the City of Sydney Act of 1988.

2.3 Arnold Garnsey's overseas tour and recommendations

Arnold Hugh Garnsey (1888-1953) was appointed City Engineer in 1929. He had joined the Municipal Council of Sydney in 1904 as an articled clerk in the Engineering Department, becoming a junior draftsman in the Department of Public Works about five years later. In March 1915 he returned to the employ of the City Council before enlisted for service in World War I. At war's end Garnsey returned to the City Council but resigned during 1920 to join the War Service Homes Commission. In March 1925 Garnsey became a licensed surveyor. He was re-engaged by the City Council and in September 1925 was appointed deputy City Engineer and City Surveyor, then in April 1928 Acting City Engineer and in May 1929 City Engineer and City Surveyor, active from 1 January 1930. In 1947 he took the position of Town Planner at the City of Sydney.[9] Garnsey, who had seen active service in World War I and World War II, died in December 1953.

After the conclusion of World War II Garnsey expressed his concerns about the inadequacies of Sydney's parks and playgrounds. He submitted a master plan for the improvement of Sydney's parks and playing fields and the acquisition of new parkland to the Council's Health and Recreation Committee on 11 June 1946, which was accepted shortly afterwards.[10]

7 Paul Ashton, *The Accidental City: planning Sydney since 1788* (Hale & Iremonger, 1993), pp.68 and 75. According to Ashton, the floor space ratio met with more opposition than any other part of the planning scheme.
8 https://archives.cityofsydney.nsw.gov.au/nodes/view/63128, accessed 24 July 2023.
9 "City Engineer. Mr Garnsey Appointed", *Sydney Morning Herald*, 9 May 1929, p.12; "Death of City Engineer", *Sydney Morning Herald*, 15 December 1953, p.12
10 "Plan for City Park Improvements", *Daily Telegraph*, 12 June 1946, p.6.

The following month Arnold Garnsey and another Council engineer, Ken Andrews, departed on an extensive eight-month tour of cities in North America, Europe and Great Britain. Garnsey's illustrated report was comprehensive in scope, covering matters such as systems of local government and finance, road planning, design and traffic engineering, public transport, city planning, housing, street lighting, parks and park organisation and the administration and operation of municipal recreation activities. Amongst his numerous recommendations were those for bringing the standard of parks in Sydney up to the standard of those he had seen in in cities overseas:

- Extent and disposition of parks and open spaces.
- Landscaping and park furnishings.
- Expenditure on parks.
- Organisation of the parks branch.[11]

3 Arnold Garnsey. Source: CSA UID A-00006294

Garnsey strongly suggested that qualified professionals were critical to the successful implementation of park design and management. His argument was reinforced by overseas precedent:

> *One of the most attractive park systems seen was that in Stockholm, the head of the Parks Branch in that city being an architect. The parks of Paris are deservedly world famous, and it is perhaps significant that an engineer is in charge of this department. In Sheffield the parks had, for many years, been most unattractive, but have recently been brought to a fitting standard under the direction of a Parks Superintendent whose training is in engineering and architecture. To quote only two further examples, the parks in Vancouver and Oakland, California, were amongst the best seen on the west coast of North America, and these are under the control respectively of an engineer and a Master of Arts in landscape architecture.*
>
> *Realising the importance of a city's parks, most councils make provision for a number of specialist officers to deal with the respective branches of park work. It is found, in many cities, that the parks superintendent has the assistance, in senior positions, of engineers, architects, landscape architects, horticulturalists, foresters and the like, irrespective of his own basic qualifications. A horticultural training is not always considered a prerequisite for appointment as Parks Superintendent.*[12]

2.4 The City of Sydney and social welfare

Many of the buildings and structures designed or overseen by Albert Smillie were associated with social welfare and community amenity. The City Council became involved with social welfare during the early decades of the twentieth century, establishing a precedent for projects carried out in the post-World War II decades.

The projects on which Albert Smillie (and Ilmar Berzins for that matter) were involved reflected broad governmental priorities that were delivered at a national, state and local level during the twentieth century. In particular, many socially responsible endeavours were initiated by the City of Sydney in the 1950s.[13] They were one part of wider efforts to provide needed community amenities and services, which included welfare centres

11 Sydney Council, *Report of the City Engineer and City Surveyor On His Visit to Europe and America 1946-47*, (WE Smith, 1949), p.486.
12 *Report of the City Engineer and City Surveyor On His Visit to Europe and America 1946-47*, p.479
13 Shirley Fitzgerald, *Sydney 1842-1992* (Hale & Iremonger, 1992), p.16.

for the elderly, libraries, baby health centres, community halls and swimming pools. These facilities were constructed across the entire local government area.[14]

> *These initiatives sought to support the health and welfare needs of the whole community, from infants to the aged. They often required new types of public services, many of which had emerged initially as the result of social activism, religious patronage or philanthropy, and then quickly became mainstays of municipal provision. These included baby health centres and kindergartens; libraries; community centres and halls; and recreational facilities such as swimming pools and bowling clubs. Such services and their associated buildings, although often ad hoc and unassuming in their formulation, were quietly instrumental in shaping everyday community life. By the mid-20th century, as such services expanded rapidly, an architectural language of economically lean, functionalist and often unpretentious modernism was assumed appropriate to express widely accepted social ideals of community participation and accessible recreation.*[15]

14 *City of Sydney Strategic Plan 1971*, p.43

15 Hannah Lewi and David Nichols (editors), *Community: building modern Australia* (UNSW Press, 2010), p.3.

4 Map showing the location of community facilities under the jurisdiction of the City of Sydney in 1971.
Source: City of Sydney Strategic Plan 1971, p.43.

3 Albert Smillie

3.1 Introduction

The construction of community facilities during the decades following World War II was a major feature of the urban Australian townscape. The City of Sydney was responsible for the construction of a substantial number of facilities, such as baby health centres, swimming pools, community halls, libraries, parks and playgrounds across the entire local government area. Few were built in Central Sydney, reflecting the spread of population within the municipal boundaries. Architect Albert Smillie and landscape architect Ilmar Berzins were a crucial part of these endeavours.

3.2 Biographical information

Albert Smillie was born Albert Alexander Smellie, the son of Alexander and Lillie M Smellie of Balmain South, on 13 March 1904.[16] The family appears to have been of Scottish extraction.[17] Smellie joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924. On 29 April 1926 he registered as an architect with the Board of Architects of New South Wales.[18] He subsequently became an Associate of the Royal Australian Institute of Architects, established in 1930. In July 1927 Albert Smellie changed his name via deed poll to Albert Alexander Smillie.[19] At this time he was living at "Boronia" in Claremont Street, Campsie. About three years later he married Ivy Hazel Martin.[20] A son was born to the couple in March 1932.[21]

5 Albert Alexander Smillie. Source: CSA Unique ID A-00016548.

In 1928 the commissioners who replaced the sacked Labor Council amalgamated the City Architect and Building Surveyor's Department with three others. They became the City Engineering and Building Surveyor's Department headed by engineer A H Garnsey. The City Architect lost the status of head of department. In 1936 the Department was split in two, and the City Architect and Building Surveyor's Department was re-created. In 1948 the title 'City Architect' was dropped from the department's name and it became the City Building Surveyor's Department. John Rankin was appointed City Building Surveyor in 1936, remaining in the role until 1963.

In July 1936 Smillie applied unsuccessfully for the position of City Building Surveyor but by the following September 1936 he had been promoted to the position of architectural assistant and from around this time his name appears on numerous drawings prepared in the Council's architectural department as Architect. On 29 November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch.

In May 1950, the City Council Works Committee recommended Albert Smillie and City Building Surveyor John Rankin, be sent to Great Britain, Europe and the United States to study trends in building control and modern building methods relating to civic infrastructure such as parking stations, libraries and swimming pools. They travelled to

16 Birth registration number 10127/1904, accessed at https://familyhistory.bdm.nsw.gov.au/lifelink/familyhistory/search/result?4.
17 "Obituary", *Williamstown Chronicle*, 28 June 1924, p.2.
18 AIA
19 Government Gazette of the State of New South Wales, 'Private Advertisements,' Fri 29 Jul 1927 [Issue No.101], Page 3815.
20 5904/1930
21 "Family Notices", *Sydney Morning Herald*, 24 March 1932, p.10.

England, Scotland, Sweden, Denmark, Holland, Belgium, Frances, Switzerland, Italy, America and Canada, and were away from June to November 1950.[22]

In June 1953 Smillie became the Council's Principal Architect. C G Mitchell became the Assistant Principal Architect, effectively Smillie's deputy.

As the Chief Architect, and later Principal Architect, Smillie signed off on all the building plans but was not necessarily the designer of the buildings work. According to Edward John Merewether, a member of Smillie's architectural team in the post-war period, "The bosses were mainly one hundred per cent keeping the Department going, dealing with the Council and that sort of thing. They signed the drawings but I don't ever remember any design criteria. I think most blokes were left to do what they wanted to do." Merewether's colleagues in the council's architectural branch were Jack Mitchell (second in command to Smillie), Arthur Collins, Ivor Lloyd and Loyal Alexander.[23]

Albert Smillie retired at the beginning of 1969. He died in March 1986, aged 82.

3.3 Projects

The functions of the Architectural Branch comprised the following:

- To prepare plans, specifications and estimates for all building proposals to the Council, including the layout of playgrounds.
- To supervise Council's contracts for all building works.
- The make valuations of properties in connection with schemes for the widening of public ways and for insurance purposes, etc.
- To supervise alterations, repairs and painting of Council's leasehold properties.

The projects initiated by the City of Sydney were informed by an awareness of Modernist architecture, which was broadly associated with social improvement through hygiene and housing. There was a correlation between strategies to foster a healthy educated community and modern design initiatives.

However, by the early 1970s circumstances had changed. Residential population declined steadily between 1947 and the late 1960s, from over 10,000 to just over 7,000 in 1966. The most significant losses took place in Central Sydney, East Sydney, Darlinghurst and Surry Hills:[24]

> *Many community services are now obsolete. Many are no longer close to the people who need them. A multiplicity of agencies offer similar services with little coordination. There has been little systematic assessment of future needs. The result is that the City's facilities no longer satisfactorily cater for the needs of residents, or for the special needs of those disadvantaged groups who are traditionally and universally attracted to central urban areas.*[25]

In his role as City Architect, Smillie designed or oversaw a vast array of projects. A large number related to Council owned buildings and included alterations to buildings such

22 City of Sydney Archives File 2339/50 Building Projects Visit of City Building Surveyor and Chief Architect Overseas 1950; "Tour plan for Council men," *Daily Telegraph*, 9 May 1950, Page 11.
23 Biography supplied by City of Sydney - Interview transcript with Edward John Merewether, Trim 2019/007226
24 City of Sydney Strategic Plan 1971 p.32
25 City of Sydney Strategic Plan 1971, p.42.

as Sydney and Glebe Town Halls and the Queen Victoria Building and upgrades and alterations to commercial assets, such as hotels, that were owned by Council.

Not every project was constructed and it appears that many that were built have since been demolished. It is considered unlikely that Smillie designed many, if any, buildings or other items after he was promoted to the role of Council's Principal Architect in June 1953. For instance, the project architect for the Sulman award-winning Florence Bartley Library at Potts Point (1958) was Arthur Collins.

The following section provides historical background and a summary of the numerous projects on which Albert Smillie is understood to have been involved.

Baby health centres

The Council became involved in infant health care in the wake of the outbreak of bubonic plague in 1900. The State government appointed Dr W G Armstrong the City Health Officer in 1901 and it was under his guidance that infant health became a concern of the Council. A “Lady Sanitary Inspector was appointed in 1902 and in 1904 started visiting households where infant deaths had occurred.[26]

The earliest baby health clinics in Sydney, which were established by the state government, opened in Alexandria and Newtown during 1914. They were followed by clinics in Bourke Street, Darlinghurst and other localities. A baby health centre was constructed at Lower Fort Street, Millers Point by the Department of Health in conjunction with the City Council and opened in 1916.

The City of Sydney inherited baby health centres when its boundaries were enlarged in 1949, such as the building constructed in Redfern Park by Redfern Council and completed in 1949. A new building at 87 Lower Fort Street was opened by Labor MLA Daniel Clyne on 22 November 1952. The City of Sydney consolidated its child welfare efforts in the post-World War II era. Seven new baby health centres had been constructed by 1965.

Not all of the baby health centres within the City of Sydney’s enlarged boundaries were designed in-house. For instance, Glebe Baby Health Centre was designed by architect R Lindsay Little in 1946 for Glebe Municipal Council and completed around 1950.[27]

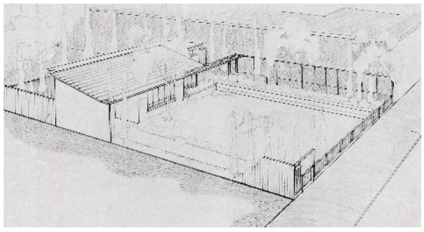
List of Baby Health Centres designed by or under Smillie

- Baby Health Centre at 62-64 Pine Street, Camperdown, n.d.
- Baby Health Centre at 12 Dadley St Alexandria, 1964
- Alterations and Additions to Baby Health Centre at 85 Lower Fort Street, n.d
- Baby Health Centre at 85 Lower Fort Street, 1952
- Baby Health Centre at Castlereagh Street, Redfern, n.d.
- Baby Health Centre at 103-105 Quarry Street, Ultimo, 1948 (demolished).
- Alterations to Playground Building to Temporary Baby Health Centre, Redfern Park, n.d.

Kindergartens and playgrounds

The first free kindergarten in Australia was an initiative of the Kindergarten Union of NSW, which was founded in 1895. It opened in Charles Street, Woolloomooloo in May

6 Baby health centre at 87 Lower Fort Street, November 1952.
Source: CSA Unique ID A-00042650.



7 Perspective study of a proposed baby health centre in Castlereagh Street (Chalmers Street), Redfern (n.d.). Sheet 15 of the Building Surveyor's Detail Sheets, 1949-1972 shows the site of an infant welfare centre opposite Redfern Park. The site no longer exists.
Source: CSA Unique ID A-00545664

26 Fitzgerald, p.219,
27 CSA Unique ID A-00035904. It has since been demolished.

1896 and was followed not long after by kindergartens in Newtown and Surry Hills, which were regarded at the time as slum areas.[28] What is understood to have been the first Council initiative occurred in the middle of 1912, when the Education Department approached it in regard to setting aside land in Victoria Park for a children's playground.[29] The playground was officially opened on 31 October 1913.[30]

Victoria Park was followed some years later by a kindergarten playground at Moore Park equipped with play equipment and a shelter, which was officially opened by the Lord Mayor on 25 July 1917. Its use was granted to the Kindergarten Union, which was able to benefit financially as Council granted it the right to supply teas to golfers using the nearby golf course "as the profit made from this undertaking will be expended on children's welfare in the city."[31] Additions to the small building at Moore Park were designed in 1924 by the City Architect's Department and officially opened the following year.[32]

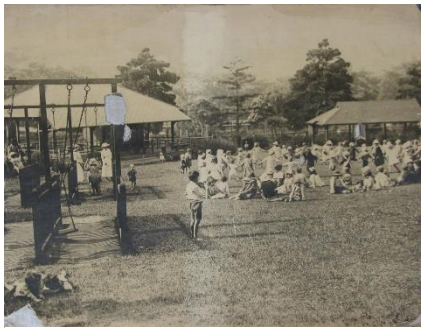
During 1922 the Council sought powers from the State government to resume land for conversion to children's playgrounds. Towards the end of July that year a small sub-committee was set up to investigate several matters:

- Which of the 19 parks and reserves controlled by the Council would be suitable for the erection of playgrounds.
- What other Council-controlled land would be suitable.
- What playgrounds were owned by the Council and their associated construction costs.
- Congested areas where it would be advisable to construct them.
- Provide a general report on the "question" of playgrounds.
- Collate the recommendations of each Ward representative concerning suitable locations for playgrounds.[33]

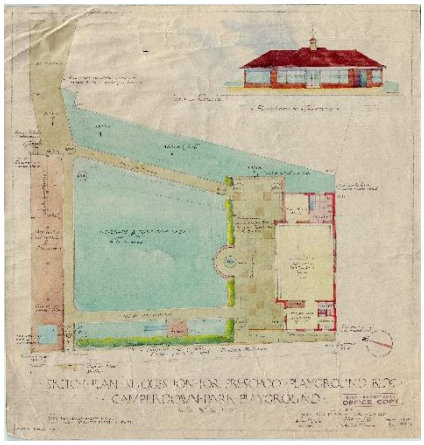
A purpose-designed building at 222 Palmer Street, Darlinghurst, was designed and documented In the City Architect's Branch in 1927. The completed building, known as the Frances Newton Memorial Free Kindergarten' in the John Birt Memorial Hall, was formally handed over to the Kindergarten Union at the beginning of July 1928.

The Council continued to establish playgrounds during the 1930s. Examples include the playground at Camperdown Park and in the King George V Memorial Park in Cumberland Street, The Rocks (both 1935). A 1938 sketch proposal of a preschool playground building at Camperdown Park, likely to have been designed by Smillie, includes a layout of the playground with landscape elements such as planter boxes.[34]

Council had constructed 15 kindergartens and day nurseries by 1965. They were restrained buildings designed in the prevailing Modernist aesthetic, tailored to meet



8 Victoria Park playground and kindergarten.
Source: CSA Unique ID A-00022828.



9 Sketch proposal describing a preschool playground building at Camperdown Park, 1938.
Source: CSA Job 1550.

10 John Carroll Kindergarten in Phelps Street, Surry Hills.
Source: CSA Unique ID A-00042717.

28 Lewi and Nichols, p.55.
29 "Playgrounds. Victoria Park Site", *Sydney Morning Herald*, 28 June 1912, p.9; "Victoria Park. Site for Children's Playground", *Sydney Morning Herald*, 23 July 1912, p.7.
30 "The Real Issue", *Sydney Morning Herald*, 5 November 1913, p.12.
31 "Playgrounds. City Council Scheme", *Sydney Morning Herald*, 4 October 1924, p.17.
32 The Kindergarten Union enjoyed a very positive relationship with the City Council during the 1930s. Several mayors and their wives took what was termed a "keen interest" in its Free Kindergarten work, while the Town Clerk, City Engineer and Council Officers gave the Union "courteous treatment at all times." (Kindergarten Union 40th Annual Report, 1935, p.4). Council provided playground maintenance and salaries associated with the work, exempted Kindergarten Union buildings from rates and taxes, and by the end of the 1930s (if not before) was providing an annual grant. (Kindergarten Union 44th Annual Report, 1939, p.7).
33 Municipal Council of Sydney, *Proceedings*, 25 July 1922, Item 2990/22.
34 CSA Job 1550.

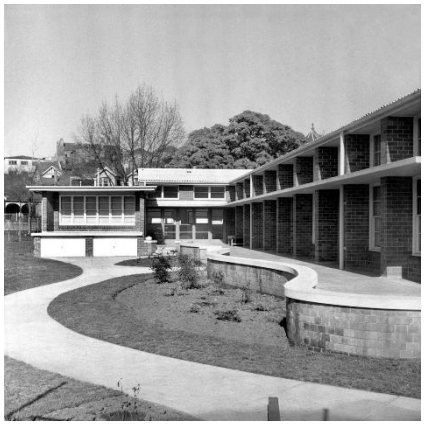
strict budgets. Extensive areas of glass and deep eaves provided cheerful bright interiors protected from the sun's worst effects.

By 1971 Council was subsidising nine kindergartens and two-day nurseries, which were operated by the Kindergarten Union and Day Nursery Association. It was responsible for seven supervised and 16 unsupervised playgrounds within the City of Sydney's boundaries.[35]

List of kindergartens and playgrounds designed by or under Smillie

- Enclosure of shelter shed and lavatories at No. 226 Dowling Street Playground, 1939.
- Playground, playground building, and equipment layout for Maybanke Kindergarten, Harris Street Ultimo, 1940.
- Preschool Playground Building at Camperdown Park Playground, 1941.
- Additions and remodelling of Pine Street Playground, 1942.
- Kindergarten building at Rushcutters Bay Park, Waratah Street, Rushcutters Bay,1952.
- Alterations to form Kindergarten at Presbyterian Church, Quarry Street Ultimo, n.d.
- Alterations to form Children's Theatre, 47 Buckingham Street Surry Hills, n.d.
- Alterations and additions to Sunbeam Kindergarten, Lyne Street, Alexandria, 1957.
- Alterations to John Birt Kindergarten Hall, Palmer Street, Darlinghurst, 1957.
- Alterations and additions to Splatt Playground, Cardigan Street Glebe, n.d.
- Paving and Playground remodelling, Rest Park, Bridge Road Glebe, n.d.
- Playground shelter shed and playground layout at Little Riley Street Playground, n.d.
- Establishment of junior playground at Shannon Reserve, n.d.
- Playground at Glen and Stephen Streets, Paddington, n.d.
- Children's Centre and Library, Prospect Street, Erskineville, n.d.
- Childrens Play Group Centre, Phelps Street, Surry Hills, 1953.
- Children's Centre, Moore Park, n.d.
- Alterations to Camperdown Park Children's Playground and Junior Playground (layout), 1940.
- Alterations to King George V Memorial Playground Field House building, 1936
- Alterations and additions to Moore Park Playground field house, 1940.
- Additional playground building at Phillip Park Children's Playground, n.d.
- Craft shed at Phillip Park Playground, 1964.
- Coronation Playground Building at Prince Alfred Park, 1938.
- Playground building, Trumper Park Paddington, n.d.
- Victoria Park Playground and building, n.d.
- Hilda Booler Kindergarten, Jubilee Park, Glebe, 1965.
- Kindergarten at Lander Street, Darlington, 1954 (demolished).

11 Hilda Booler Kindergarten in Jubliee Park, Glebe.
Source: CSA Unique ID A-00015417.



12 Rushcutters Bay Kindergarten.
Source: CSA Unique ID A-00042726.

Community and aged welfare centres

The concept of the community centre as series of buildings providing facilities such as a kindergarten, library and baby health centre emerged at the end of the 1930s. At a much smaller scale, the notion of a discrete building containing a hall, meeting rooms, a kitchen and other ancillary spaces appears to have emerged during the first half of the 1940s.[36]

A community centre formed part of a housing scheme in Surry Hills for which planning was undertaken by Council's architects in the 1940s.[37] In 1943 documentation was

13 Aged Welfare Centre at Newtown in use, February 1959.
Source: CSA Unique ID A-00043620.

35 City of Sydney Strategic Plan 1971, p.82
36 Lewi and Nichols, pp.181-186.
37 Fitzgerald, p.231.

prepared for a community centre building in Camperdown Park in 1943, although it is not certain if it was constructed. The single storey building contained a large hall with a stage at one end. The hall could be divided into three sections, for, dining, sleeping and playing, suggesting it would cater to the needs of young children. There was extensive lavatory accommodation, a room each for a doctor and for staff, and storage space for prams. A wide terrace provided sunny outdoor space.[38]

Several community centres were constructed during the 1950s. One was the Cyril Carrol Recreation Centre, bounded by Bulwarra, William Henry and Harris Streets in Ultimo. Planned during 1952, it was proposed to construct a centre with a children's playground, tennis courts, baby health centre, library and public hall. A two storey Victorian house, Little Bridge, occupied part of the site for some time; it was proposed to use it as a temporary baby health centre pending a permanent building. A building known as the Esme Hackett Memorial Hall was constructed in two stages between 1955 and 1958. The site of the Cyril Carrol Recreation Centre and its facilities is now the site of the Ultimo Community Centre and Library.

Other examples include the Anthony Doherty Community Centre in Crown Street, Surry Hills, which opened in May 1956 and housed a. branch library and recreation hall, and the Camperdown Community Recreation Centre, the first stage of which was completed in March 1959.

Discussion around the Council provision of amenities for aged persons is understood to have emerged during the second half of the 1950s, although the provision of these facilities by community groups began to emerge during the first half of the decade. Depending on the zoning of the proposed site consent was needed from the Cumberland County Council. The Health and Recreations Committee discussed amenities for aged and invalid persons in the Paddington District several times between June 1955 and July 1956.[39] The E J Ward Welfare Centre in Underwood Street, Paddington, opened around 1958 in the former Metropolitan Hotel, a fine Federation era building. It was subsequently transferred over to Woollahra Council at the end of the 1960s.

Similarly, the Reg Cope Welfare Centre at 55 Pitt Street, Redfern occupied a two storey Italianate style house, as did the Victoria Alice Lamkin Welfare Centre in Hereford Street, Glebe (circa 1963). The Reg Cope site was redeveloped in the 1970s while the Victoria Alice Lamkin site was purchased by a private developer in 2004 after the welfare centre transferred to another site.

Sites were acquired for the construction of new welfare centres and existing Council facilities were modified to accommodate them. For instance, the Roper Welfare centre is understood to have been constructed on the acquired property at 545 – 549 Dowling Street, as was the Ron Williams Welfare Centre for the Aged in Kepos Street, Redfern (opened in November 1966). On the other hand, the long-established Abraham Mott Hall (formerly known as the Coal Lumpers Hall and renamed in 1960) in Argyle Place, Millers Point was augmented by the Harry Jensen Welfare Centre in 1959, which offered older residents a place "for company and a midday meal."[40] The Sid Fegan Welfare and Teenage Centre was constructed in the mid-1960s on land adjacent to the

14 Anthony Doherty Community Centre, Crown Street, Surry Hills (demolished).
Source: CSA Unique ID A-00043192

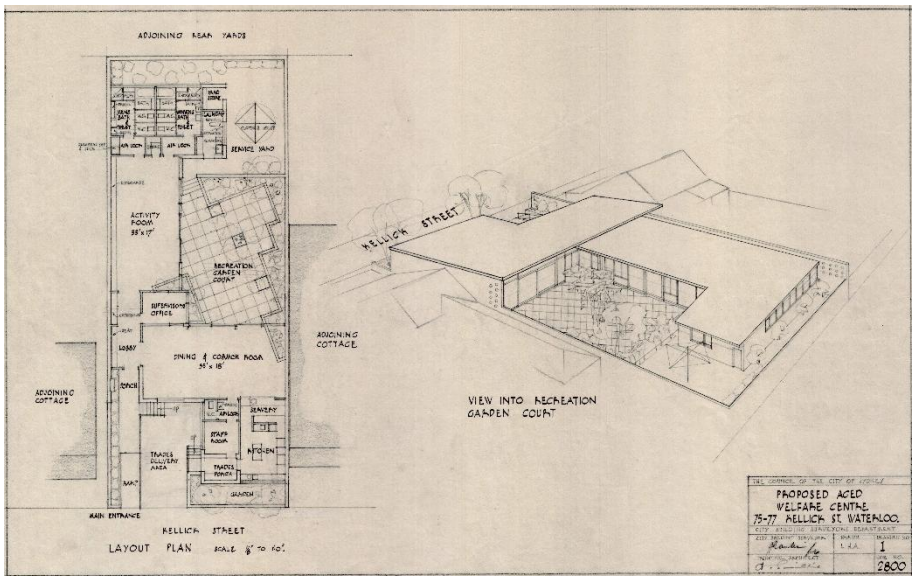
15 The Ron Williams Welfare Centre for the Aged in Kepos Street, Redfern. The open court within the building has since been roofed over.
Source: CSA UID A- A-00017944.

16 Harry Jensen Welfare Centre nearing completion, September 1958. The Abraham Mott Hall is in the background.
Source: CSA Unique ID A-00043538.

38 CSA Unique ID A-00545510.
39 CSA Unique ID A-00432748 Minutes of the Health and Recreations Committee, 1954-1956. Volume 13/22
40 Shirley Fitzgerald and Christopher Keating, *Millers Point: the urban village*, p.117.

Esme Hackett Memorial Hall in Ultimo. It catered both for the needs of the elderly and local youth but has since been demolished.

The Gordon Ibbett Welfare Centre at 75-77 Kellick Street, Waterloo, sketches for which were drawn in 1958, typifies this building type. Organised around an internal "recreation" courtyard, the main internal spaces consisted of an activity room and a dining/common room served by an adjacent kitchen. These were augmented by a service yard, lavatories, a laundry, staff and supervisor's rooms and delivery dock.



17 Sketch drawing of the proposed Welfare Centre at 75-77 Kellick Street, Waterloo.
Source: CSA Unique ID A-00545900.

Not all welfare centres were designed by Council architects. Prominent architect Harry Seidler's office was responsible for the Cliff Noble Activity Centre at 24 Suttor Street Alexandria (1960-1964).

By 1971 the City of Sydney owned and operated eight community and recreation halls in Pyrmont, Surry Hills, West Rocks (Millers Point?), Paddington, Darlinghurst and Elizabeth Bay. It also owned and operated six welfare centres for the aged in Pyrmont, Surry Hills, West Rocks, Woolloomooloo, Newtown and Elizabeth Bay. It established a Senior Citizens Activity Centre in Pyrmont and a Youth Centre in association with the Boys, Brigade in Surry Hills during 1971.[41]

List of community and aged care centres designed by or under Smillie

- Camperdown Park Community Centre Building, n.d.
- Harry Jensen Welfare Centre and Abraham Mott Hall (Coal Lumpers' Union), Argyle St, Millers Point, 1956
- Esme Hackett Memorial Hall, William Henry Street, Ultimo, 1955-1958 (demolished).
- May Street Public Hall / Community Centre, Newtown, n.d.
- Community Centre at Springfield Avenue, Kings Cross, n.d.
- Gordon Ibbett Welfare Centre, 75-77 Kellick Street, Waterloo, 1958-1963 (no longer in use as a Council facility).
- Ron Williams Welfare Centre for the Aged, 5-11 Kepos Street, Redfern, 1964. It is now the Ron Williams Community Centre.
- Amenities Centre for Aged Persons, Ivy and Shepherd Streets, Darlington, n.d.
- Tom Foster Welfare Centre, 11-13 Darley Street, Newtown,1963 (now under the control of Inner West Council).

18 Esme Hackett Memorial Hall, Ultimo.
Source: CSA Unique ID A-00042993.

41 City of Sydney Strategic Plan 1971, p.82.

– Welfare Centre within the Florence Bartley Library, 60 Macleay Street, Potts Point, 1958 (since demolished).
– Anthony Doherty Community Centre, Crown Street, Surry Hills, 1956 (since demolished).
– Mary McDonald Welfare Centre, 49 McElhone Street, Woolloomooloo, 1960. In 2017 the building became the Sydney Youth Services (a First Nations youth support group) Weave Community Hub.
– Chrissie Cotter Hall at Camperdown Park, 1964.

Public housing

Following the passage of the Housing Act of 1912, the City Council was empowered to construct public housing. Several projects were completed in the following two decades. The Strickland Building in Chippendale was Sydney's first public housing project built under the Act. Originally conceived as two blocks, only half the scheme eventuated. Designed in the Council's architectural department as workers' housing, it comprised 71 flats and eight shops. The buildings were officially opened in April 1914.

19 The Strickland Building, Chippendale.
Source: Vade Mecum, 1915.

During the 1920s three notable public housing projects, two of which were designed by architects in private practice, were completed. Ways Terrace in Pyrmont (architect Leslie Wilkinson), of which only half was constructed, and the Dowling Street Dwellings in Woolloomooloo (architect Peddle Thorp & Walker) were completed in in 1925. The semi-detached housing known as Alexandra Dwellings on Pyrmont Bridge Road, Camperdown was completed in 1927. The Alexandra Dwellings were designed by the Council's architectural department. It is perhaps notable that these projects were undertaken under a Labor Council.[42]

20 Walk-up flats in Henry Avenue, Pyrmont, completed in 1960.
Source: CSA UID A- 00043939.

Other schemes were shelved because of expense and to impose commercial rather than residential use of the land, and construction ceased with the onset of depression during the 1930s. In 1938-1939, following recommendations from City Engineer Garnsey, Council briefly considered demolition of what were considered sub-standard housing in Surry Hills and constructing multi-storey flats to replace it.[43] A survey was subsequently undertaken of four areas in the city boundaries that were suitable for public housing, three of which were in Surry Hills. A Devonshire Street Remodelling Scheme was developed in 1945 incorporating four storey blocks of flats, a playground and community centre. At the same time schemes were prepared for sites in Bourke Street and Dowling Street in Surry Hills and Harris Street in Ultimo.[44]

21 John Byrne Court in Glebe, completed in 1961.
Source: CSA UID A- 00012502.

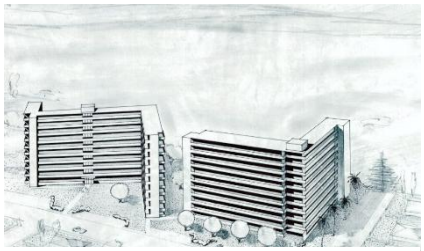
The Devonshire Street Remodelling Scheme was taken over by the State Housing Commission in 1947 and work began in 1950. The State was now the main provider of public housing in Sydney.[45]

The Council continued to design and construct public housing projects during the 1950s and 1960s. Finance was raised by selling properties, notably Council-owned hotels. They included the Waratah Hotel in Bayswater Road, the Kings Cross Hotel and the Crecy and Oxford Hotels on Oxford Street, which were sold at auction.

The scale of the housing projects varied, ranging from large multi-storey blocks to small walk-up blocks. Some were built in the inner city, but most were located in the suburbs

42 Fitzgerald, p.229.
43 https://archives.cityofsydney.nsw.gov.au/nodes/view/62727
44 City Architectural Branch Annual Report for 1945.
45 "City Slums To Go Under New Housing Proposal", *Sydney Morning Herald*, 17 October 1947, p.11.

amalgamated into the City of Sydney's boundaries in 1949. Following the reduction of boundaries at the end of the 1960s and the return of Civic Reform interest in public housing flagged. The Council owned 12 blocks of residential flats and 98 terrace houses in Pyrmont, Surry Hills, Woolloomooloo and other locations by 1971. Later in the decade endeavours were made to sell off Council-owned properties outside its boundaries. At the end of 1988 all Council housing was transferred to the State.[46]



22 Unbuilt proposal for Council housing, Bannerman Crescent and Asquith Avenue, Rosebery, 1960. Source: CSA Job No 2869.

Not all post-war public housing was designed by the Council architectural section. For instance, prominent Modernist architectural practice Harry Seidler & Associates designed two public housing apartment blocks at the intersection of Glen and Stephen Streets in Paddington (circa 1963) and a single slab block at 31-35 Station Street, Newtown (circa 1963). These projects are no longer within the City of Sydney's boundaries. Two larger schemes for low-cost housing, on sites in Camperdown and Glebe, were not built. The buildings were part of a competitive tender, in which several firms presented schemes for development. These were known as "package deals", where a developer provided design and construct services.

List of public housing projects designed by or under Smillie

- Joanna O'Dea Court, Pyrmont Bridge Road, Ultimo, 1959
- John Byrne Court, St John's Road, Glebe, 1959
- Council Flat building at Bannerman Crescent, Rosebery, 1960.
- Council Residential Flats Project, Charles Street, Woolloomooloo, n.d.
- Council Residential Flats Project, Harris Street, Pyrmont, 1944.
- Council Housing Development, 1-5 Henry Avenue, Pyrmont, 1960.
- Council Flats, Ithaca Road, Elizabeth Bay, n.d.
- Council Flats, Newton Street Alexandria, n.d.
- Council Housing Project at Wilson Lane, Redfern, 1963.

23 Scheme for the redevelopment of a "substandard area" in Pyrmont prepared during 1944. Source: CSA Unique ID A-00545525.

46 Fitzgerald, p.231.

Libraries

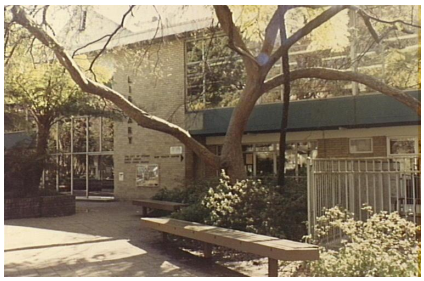
The NSW government opened the Free Public Library in September 1869. A lending branch was opened in July 1877. The Free Public Library was renamed the Public Library of NSW in 1895. In 1899 the lending branch moved into the Queen Victoria Building. Under the Sydney Corporation Act, Sydney Municipal Council was given statutory powers to establish a free reading and lending library for ratepayers, residents and employees within its boundaries to take effect from 6 March 1909. Following the establishment of the Mitchell Library in 1909, the City of Sydney received the Public Library's lending branch and newspaper room. It was renamed the Sydney Municipal Library. A separate children's library was established in 1918.[47] Alterations to the Nursery building at Phillip Park to accommodate a children's library were documented during 1936.

24 Interior of the Frank Green Library at Paddington, November 1952. Source: CSA Unique ID A-00042637.

The popularity of the Sydney Municipal Library warranted detailed documentation for a new Free Classical style building with Art Deco flourishes that also incorporated a municipal art gallery and lecture hall in Druitt Street during 1940-41. Smillie appears to have been the architect. Construction did not proceed.[48]

The Library Act of 1939, which only came into effect in 1944, provided the impetus for the establishment of municipal libraries across the state. The first suburban libraries in metropolitan Sydney were established in 1946 and their numbers proliferated during the 1950s. A library was opened in Newtown Town Hall by Newtown Council in 1947 (two years before amalgamation with Sydney Municipal Council). The City Council established the following branch libraries:

- Alexandria, within the existing town hall, 1951.
- The Frank Green Library, Paddington, within the existing town hall, 1952.
- Surry Hills, within the Anthony Doherty Community Centre in Crown Street, completed in October 1956. The building also contained other community facilities. The building has since been demolished.
- Glebe, within the existing school of Arts building, 1956
- Florence Bartley Library, Macleay Street, Potts Point, 1958. The project architect was Arthur Collins. An early scheme proposed a larger building with an RSL Club on the top floor. Despite winning the NSW Chapter of the Royal Australia Institute of Architects' Sulman Award in 1958, approval for demolition was given in October 1995.[49]
- Catherine Sloss Library, 130 Dowling Street, Woolloomooloo, 1963.



25 The Florence Bartley Library in Macleay Street, Potts Point. Source: CSA Unique ID A-00012068.

During the 1970s, after Albert Smillie had retired, branch libraries were established at Waterloo in 1972 and Haymarket in 1974. Both occupied existing buildings.

List of libraries designed by or under Smillie:

- Branch Library, Crown and Collins Streets Surry Hills, c1956 (demolished).
- Municipal Library Building, Kent Street, Sydney, 1941 (not built).

26 The Catherine Sloss Library in Woolloomooloo. Source: CSA Unique ID A-00046191.

47 David J Jones, *A Source of Inspiration & Delight: the buildings of the State Library of New South Wales since 1826* (Library Council of New South Wales, 1988), p.31; Richard Neville, "The Free Public Library of Sydney" at https://www.sl.nsw.gov.au/stories/free-public-library-sydney, accessed 5 July 2023; "City of Sydney Library Centenary Blog" at https://cityofsydneylibrarycentenary.wordpress.com/timeline/, accessed 5 July 2023.

48 CSA Job No. 1698.

49 Andrew Metcalf, *Architecture in Transition: the Sulman Award 1932-1996*, p.90.

– Building incorporating Baby Health Centre, Public Library, Public Hall and Conveniences for Men and Women at 60 Macleay Street, Kings Cross, 1956 (Florence Bartley Library; demolished).
– Catherine Sloss Library, 130 Dowling Street, Woolloomooloo.
– Alterations to Phillip Park Nursery Building for use as Children's Library, 1936, plus further alterations and extensions.

Swimming pools

In 1858 the City Council built the first free public baths in Sydney on the site of the Andrew (Boy) Charlton Pool on the western shore of Woolloomooloo Bay. The establishment was officially named the Corporation Baths. In 1903 the Corporation Baths were pulled down, along with several of the other old structures in the Bay, and a new complex was built. It consisted of a Ladies Bath and Free Baths and opened in 1908. This Edwardian structure was named the Domain Baths, which quickly became associated with the emerging sport of swimming. In 1955 the Ladies and Free Baths were demolished and in 1968 were replaced by a modern Olympic pool called the Andrew (Boy) Charlton Pool (since replaced).[50]

27 Andrew (Boy) Charlton Pool. The photographed during the 1970s. Source: CSA Unique ID A-00018608.

In 1872 the residents of Pyrmont petitioned the Council to erect a public swimming baths in the locality. Pyrmont baths were constructed around 1877 then were replaced by a new public swimming baths constructed by the Municipal Council of Sydney, which opened in 1902. Pyrmont Baths were demolished in 1946.[51]

Generally public swimming pools became a municipal concern between 1920 and 1970, the first large-scale wave of pool construction taking place in the 1930s.[52] The swimming pools that were constructed in Victoria Park, Camperdown and Prince Alfred Park, Surry Hills were part of a boom in pool construction across metropolitan Sydney during the 1950s and 1960s.

28 Swimming pool complex in Prince Alfred Park. Source: CSA Unique ID A-00008445.

Sketches for Victoria Park were prepared during 1946 but it took several years before construction commenced. The Victoria Park Pool offered some challenging design and technical issues, inspiration for which Smillie evidently sought on his 1950 overseas tour.

List of swimming pools designed by or under Smillie
– Extension of Club Rooms and Gymnasium at Domain Baths, n.d.
– Swimming pool at George and Harrington Streets, Circular Quay, n.d.
– Prince Alfred Park Swimming Pool, associated dressing pavilion and other facilities, 1954.
– Victoria Park Swimming Pool and buildings, 1954.

29 Swimming pool complex in Victoria Park. Source: CSA Unique ID A-00014927

Sporting facilities

The City Council was responsible for a range of sporting facilities and associated structures during the twentieth century. For instance, municipal golf links in Moore Park were laid out during 1911. A nine-hole golf course known as the Moore Park Municipal Golf Links opened in May 1913. This was later expanded to include 18-holes in 1922

50 Shirley Fitzgerald, "Andrew (Boy) Charlton Pool" at https://dictionaryofsydney.org/entry/andrew_boy_charlton_pool#:~:text=The%20Domain%20Baths,labelled%20it%2C%20opened%20in%201908, accessed 8 June 2023.
51 "Pyrmont Baths" at https://archives.cityofsydney.nsw.gov.au/nodes/view/1913294, accessed 5 July 2023.
52 Lewi and Nichols, pp.116-117.

and become the Moore Park Golf Course. A “handsome golf house” was erected by Council in 1926. The Council engaged specialist architect Eric Apperly to prepare plans for a new layout at Moore Park in May 1937.[53]

The Council was responsible for numerous parks, the larger of which incorporated ovals and buildings associated with their use such as grandstands, toilet blocks and changing rooms. Tennis courts and bowling greens were constructed in several parks. By the 1940s the process of installing sporting facilities into public parks and gardens and become quite entrenched. Camperdown Park demonstrates this process.

Camperdown Park was first resumed by the NSW government in 1892. The Municipal Council of Sydney was appointed trustee in 1909 following amalgamation with Camperdown Council. One of the first major improvements to the Park at this time was the construction of the bandstand. By 1917 what was termed a “gymnasium”, which comprised a fenced-off section of the park containing rudimentary exercise equipment, was in place.

In about 1921 the War Memorial was erected, and a program of maintenance and general improvements instigated, which may have included a children’s playground. Tennis courts were installed around 1923. A series of playgrounds were constructed during the 1930s. Undertaken jointly by the City Council and Board of Social Study and Training, the girls’ section opened in December 1935. This was followed by a boys’ playground and a young children’s playground. At some stage a field house associated with the playgrounds was constructed.

In 1938 a decision was made to establish a demonstration nursery school in the Park at the instigation of the Commonwealth Government, for which Smillie prepared a sketch drawing.[54] During the 1940s Smillie was responsible for schemes to upgrade playground and kindergarten facilities, along with the provision of tennis courts and courts for other ball games.

During the 1950s an oval was constructed at Camperdown Park. Ilmar Berzins prepared an elaborate sketch describing proposed landscaping around the oval in 1953, along with a bowling club and various courts for ball games.[55] Sadly, despite the construction of the oval the landscaping did not eventuate. The oval was, however, accompanied by a grandstand and dressing rooms. Along with the oval, a bowling club, including a clubhouse designed by Council architects, enlarged playground and tennis courts were all constructed and officially opened on 14 March 1959; The bowling club house and green were leased to Camperdown Bowling and Recreation Club.

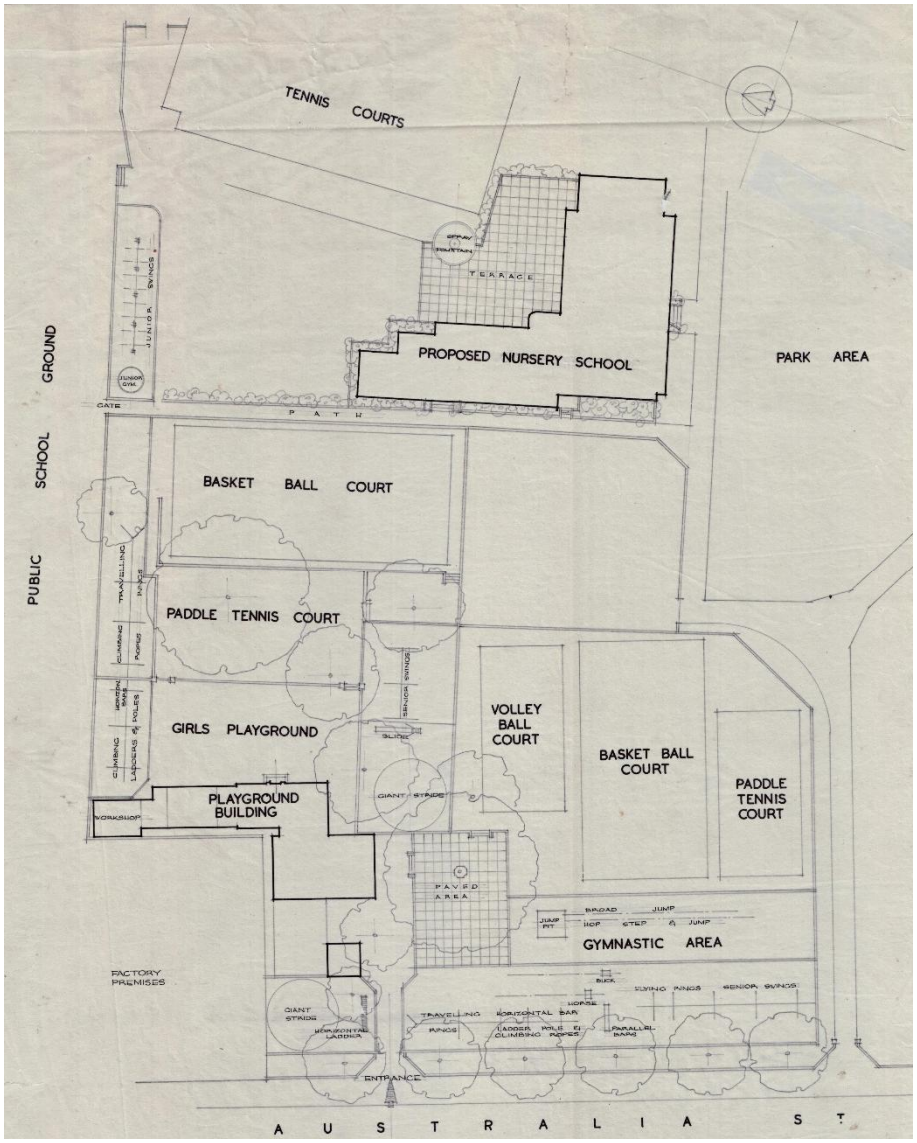
A draughts players shelter was constructed in the south-western section of the Park in 1955, while a decade later the Chrissie Cotter Hall was constructed immediately adjacent to the bowling clubhouse. It was completed in 1964. Following redistribution of municipal boundaries later that decade, Marrickville Municipal Council assumed responsibility for Camperdown Park on 1 August 1968 and it is now administered by Inner West Council.

32 Camperdown Park in April 1909. Source: CSA Unique ID A-00037676.

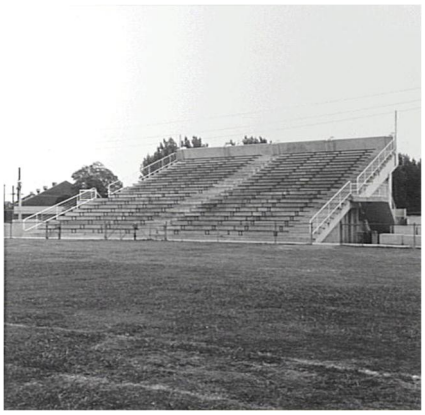
31 The girls’ playground at the time of its opening in December 1935. Source: CSA Unique ID A-00055480.

30 Camperdown Park Bowling Club. The clubhouse had been recently completed when the photogrpah was taken. Source: CSA Unique ID A-00043648.

53 Hector Morrison, “Remodelling Moore Park Golf Course”, *Daily Telegraph*, 11 May 1937, p.20.
54 CSA Unique ID A-00545350. The drawing is dated 5 April 1938.
55 CSA Unique ID A-00493812. The drawing is dated 15 July 1953.



34 1941 plan signed by Smillie describing a proposed upgrading of children's playground facilities and the proposed nursery school at Camperdown Park.
Source: CSA Unique ID A-00545441



33 The grandstand overlooking the oval at Camperdown Park.
Source: CSA Unique ID A-00016459.

List of sporting facilities designed by or under Smillie

- Additions to King George V Memorial Park Bowling Green Club House, 1939
- Male and Female Dressing Shed at Alexandra Park, n.d.
- Staff Amenities Building, Belmore Park, n.d.
- Dressing Pavilion and Grandstand at Camperdown Park, n.d.
- Extensions to Field House at Camperdown Park Playground, 1961
- Footballer's dressing rooms at Jubilee Park Glebe, n.d.
- Dressing Shed at Anzac Parade, Moore Park, n.d.
- Dressing rooms for girls at Grand Drive, Moore Park, n.d.
- Cycle Track, Boronia Street, Moore Park, 1954
- Grandstand pavilion and dressing rooms for athletes at Moore Park, 1937
- Dressing Shed at Cleveland Street, Moore Park, 1936
- Starters Office at Moore Park Golf Links, n.d.
- Squash Court building, Prince Alfred Park, n.d. and extensions n.d.
- Grandstand at Redfern Oval, 1957
- Grandstand at Trumper Park, Paddington, 1959
- Dressing Pavilion and Shelters for Tennis Courts, Trumper Park Paddington, n.d.

Bowling clubs

What is likely to have been the first bowling green in NSW was established at the Boundary Stone Inn, situated at the intersection of Bourke and Cleveland Streets in the second half of 1845.[56] In 1881 one of Sydney's first bowling clubs was established on the College Street frontage of Cook Park. A bowling club was established in Victoria Park in 1892. The sport became increasingly popular prior to World War II and rapidly expanded across the state from the 1950s to the 1970s.

Bowling greens and clubhouses were constructed in several parks within the City of Sydney's boundaries. They were leased to the various clubs. The City Architect's office designed some clubhouses although others, such as the building at the Cook Park bowling club, were designed by architects in private practice.

List of bowling clubs designed by or under Smillie

- King George V Bowling Club House, York Street North (Cumberland Street), Sydney, 1936 (demolished).
- Bowling Club house at Camperdown Park, 1955
- Bowling Club House at Erskineville Park, 1957
- Bowling Club House at Moore Park, n.d.
- Bowling club house, Trumper Park, Paddington, 1959 (modified and enlarged).
- Victoria Park Bowling Club, circa 1962.

36 Club house at King George V Bowling Club, 1936. Smillie is noted as architect on the drawings for the building.
Source: CSA Unique ID A-00016047

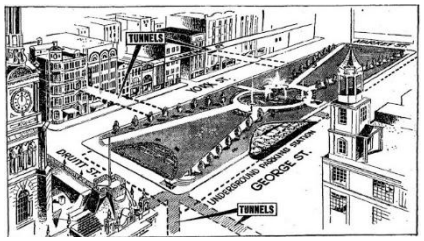
35 Trumper Park Bowling Club.
Source: CSA Unique ID A-00043624.

Parking stations

Several privately constructed parking stations appeared in Central Sydney during the 1920s. Perhaps the first was the parking station at 213-217 Elizabeth Street, which was operated by Hunter Motor Service.[57] What was considered to be the first major parking station in Sydney "on a scale resembling the buildings which have been erected in American and Continental cities" was the Central Parking and Service Station at 105 York Street, occupying a remodelled building, and opening in December 1927.[58]

The City Council was also investigating parking stations at this time. In March 1924 it was reported that the "The City Council has moved in the matter of providing car accommodation" – the City Surveyor was apparently preparing plans for an underground parking station at Wynyard, capitalising on excavations for the underground railway in this part of Central Sydney.[59] In 1927 it was suggested that the basement of the Queen Victoria Building be adapted as a parking station, accompanying the demolition of the building to provide open space.[60] This became a recurring theme until the beginning of the 1970s. Construction of a car park in Sydney's Domain was mooted as early as 1933, when the Lord Mayor of Sydney suggested it be converted to "a monster parking station for motor cars."[61]

During the 1940s a parking station under Hyde Park was considered by the City Council but did not eventuate. The Council resolved to undertake full control of parking and approved in principle a large central car park under the Domain as well as fringe parking around Central Sydney in 1945. A proposal for a Domain parking station was presented to State Cabinet in 1950, which handed over responsibility for car parking to



37 The Queen Victoria Building replaced by a public park above an underground carpark. Published in the *Sydney Morning Herald*, 10 May 1959.
Source: https://fabsydneyflashbacks.blogspot.com/2017/06/1959-council-proposal-for-turn-queen.html

56 John P Monro, "Origin of Bowls in NSW", The Biz, 30 January 1957, p.15.
57 "The Motoring World", *The Sun*, 18 August 1923, p.8.
58 "Homes for Cars", *Daily Telegraph*, 17 December 1927, p.29; "Parking Cars", *Sydney Morning Herald*, 17 December 1927, p.17.
59 "Motoring World. Parking of Cars. City Council's Scheme. Underground Garages", *The Sun*, 29 March 1924, p.7.
60 "Ambitious Scheme for Civic Reserve and Motor Parking Station", *Daily Telegraph*, 27 August 1927, p.13.
61 "Parking of Cars", *Sydney Morning Herald*, 31 October 1933, p.12.

the Council at the end of 1950. Permission to construct the parking station was finally granted in May 1955. In the interim Alderman Hills visited the west coast of America to study parking stations in May 1954. A Council delegation subsequently undertook a study tour of civic buildings and carparks. The Domain Parking Station was built in three stages – the first section was officially opened by the Lord Mayor Harry Jensen on 8 April 1958. The whole complex came into use in December 1959 after the completion of the third stage. Its distinctive moving footway was officially opened in June 1961.

38 Kent Street parking station.
Source: City of Melbourne City Collection registration number 1721347.

Meanwhile, in September 1953 the Council acquired a site at 279-293 Kent Street off the Electricity Commission, which had commenced construction on a garage and workshop on the site during 1952. Alterations converting it into a large parking station were documented about two years later by architects D T Morrow & Gordon and constructed during 1955. Photographs of the carpark showing rows of angled parking bays and the fronts of parked cars were to become somewhat iconic.

The third of Central Sydney's major parking stations, the Goulburn Street Parking Station, was initially designed by Council's architectural staff but the final building is credited to architects Kevin Curtin & Partners. It was designed in 1961[62] and officially opened on 16 April 1963. The bulky monolithic structure was constructed in airspace leased from the NSW Railways Department and incorporated a large amount of precast concrete, including pre-cast and pre-stressed concrete T beams and precast columns, and concrete block grilles across wide openings. It was claimed to have been financed entirely from revenue derived from parking meters.

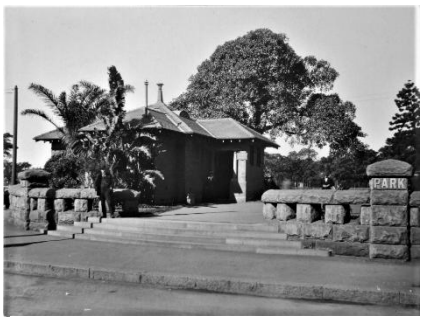
39 The Goulburn Street carpark shortly before completion. The concrete block grilles have since been removed.
Source: CSA Unique ID A-00045901.

List of parking stations designed by or under Smillie

- Central Station Parking Station, n.d.
- Goulburn Street Parking Station, 1963
- Haig Avenue Parking Station, n.d.
- Sussex Street Parking Station, n.d.
- The Domain Parking Station, 1956

Public conveniences

The design and construction of public conveniences occupied a fair amount of the City Architect's Department while Albert Smillie was employed by Council. There are numerous plans signed by Smillie for the construction of male and female toilet blocks in various locations. The numbers of extant drawings indicate the documentation of public conveniences occupied a sizable amount of the City Architects' time. However, this building typology was documented by Council's architects from the beginning of the twentieth century, if not earlier.



40 1The women's convenieince in Hyde Park South that was completed in 1911.
Source: CSA Unique ID A-00040824.

Sydney suffered from a shortage of public conveniences for a long period of time. There was a public urinal at the Haymarket by 1859, although it appeared to be constantly locked.[63] Patent cast iron urinals first appeared in the United Kingdom during the 1850s. An enterprising English manufacturer of these utilitarian objects sent information on its product to the Corporation in 1879.[64] During the mid-1880s some 15 urinals were

62 "New Sydney Parking Station", *Building, Lighting and Engineering*, December 1961.
63 "Public Urinals", *Sydney Morning Herald*, 22 April 1859, p.2.
64 CSA UID A-00303908, Letters Received. English manufacturer, George Henry Jennings, sent a catalogue of public conveniences manufactured by his firm and offering to tender for supply to the Corporation.

ordered by the Corporation but by the beginning of 1886 only one had been erected. There was public resistance to the installation of more of them in Sydney's streets.[65]

For many years sanitary conveniences under the control of the Corporation were only available at the Redfern railway terminus and the Haymarket. Conveniences managed by others were situated at Circular Quay. In 1900 the Council decided to proceed with the construction of three underground male conveniences – in what is now Martin Place, in Darlinghurst Road near William Street and at the intersection of Liverpool and Oxford Streets. They were completed in May 1901. More were completed over the following decade.

By way of contrast, during the first decade of the twentieth century the City Council provided only two for women – in the basement of the Queen Victoria Building and in Parker Street at Haymarket. The latter were "extensively altered in 1906 so that it contained "very commodious and first-class accommodation, including cloak-room, etc."[66] The situation improved slightly with the construction of the first above-ground ladies' convenience to be erected by Council, in Hyde Park near the south-eastern corner of Elizabeth and Park Street. Completed in 1911, it provided additional accommodation for children, a dressing room and a parcels office.[67] It proved over time to be unpopular, perhaps in part because of planting around it. Complaints continued over lack of facilities for women. In 1917 the lack of women's conveniences in Sydney was highlighted by the Royal Easter Show and the prevalence of "strong and sturdy sun-browned women from the north and south and west". The Circular Quay wharves and Central Station remained the main public locations.[68] The Council's policy certainly played its part - women's conveniences "should, when possible, form part of a block of buildings. If it is only possible to have them in independent structures then they should be combined with a small shop such as a florist, tearooms, Parcels Office etc."[69]

Circumstances slowly improved. Plans prepared in 1924 show ladies' conveniences at Moore Park in a pavilion containing the entry to the cricket and tennis areas (not documented by Smillie). [70] Cast iron stall urinals were installed in various parts of Glebe during the mid-1920s.[71] By 1938 the southern end of the substation at Taylor Square was modified to accommodate a women's convenience, some 55 years after a urinal had been installed there.[72] By 1941 there were 41 public conveniences under the control of Council. Of these 23 were policed by an attendant. 10 were for the use of women.[73]

At the end of 1949 consent was given for the construction of a women's amenities centre and creche in Hyde Park. An investigative scheme adapting the existing kiosk to south-east of Archibald fountain for use as a mother's centre, including infants' and children's spaces was prepared at some point of time.[74] Two women's rest rooms and parcel depots had been constructed in Hyde Park, one behind St James Station and

41 Public conveniences at Taylor Square – the underground men's convenience (1907) in the foreground and beyond it the women's convenience above the substation (1938).

42 Playground and creche associated with the Hyde Park women's amenities centre.
Source: CSA Unique ID A-00014526.

65 "Sydney Municipal Council", *Sydney Morning Herald*, 24 February 1886 p.7.
66 Vade Mecum 1931, pp.168-170.
67 Vade Mecum 1931, p.174.
68 "Sydney's Apathy to Women's Health", *Sydney Morning Herald*, 28 March 1917, p.5. Clipping in Town Clerk's Department Correspondence File at CSA UID A-00103965.
69 CSA CRS 34/4356/20.
70 CSA UID A-00544828
71 CSA UID A-00543737.
72 State Heritage Inventory database entry for Former Electrical Substation (No. 6) Including Interior, 136 Oxford Street, Darlinghurst; architectural drawing at CSA Unique ID A-00545328. The drawing is dated 4 June 1937 and Smillie's signature appears as architect.
73 Vade Mecum 1941, pp.187-192.
74 CSA Unique ID A- 00545583. The undated drawing is signed by Smillie.

one on Elizabeth Street south of Park Street. The rest centre and creche was constructed in the southern section of Hyde Park on Park Street, strategically located near major department stores and underground railway stations, trams, buses and a taxi rank. It was officially opened in April 1954. The building was attributed to Albert Smillie.[75] The amenities centre, staffed with attendants and others, provided much needed facilities for women - a comfortable rest room with refreshment facilities, space for a chemist, a baby-feeding room, telephone and writing facilities, showers with dressing cubicles, lavatories, dressing room and ironing facilities. On the level above was a babies' section with vestibule and attendant, feed room, lavatories, doctor's room, baby wash and change, food preparation room, cot room, sunroom, nurse's room. A toddlers' playground adjoined a separate creche building with a playroom, sanitary facilities, kitchen, office and staff room.

43 Reception and rest roon in the Hyde Park women's amenities centre.
Source: CSA Unique ID A-00014527

The opinionated Melbourne architectural journal *Cross-section* was a bit unkind:

> … Its heavy magazine modernism of horizontal stress & textural contrasts is not lightened by logic, e.g. plate glass to the ground fl[oor] lobby is unshaded, but the long first fl[oor] window has: 1, a hood 2, vertical louvres 3. Venetian blinds. The vertical louvre "sun-breakers" of Le Corbusier have swept the world from Brazil to Bendigo, Vic, as an answer to the problem of shading off-north windows. Why are they used on this north elevation? To break the winter sun? These summer days they are in the shadow of the hood.[76]

However, the rest of the centre received a fair amount of positive press coverage both in NSW and in other states.

44 The women's amenities centre at the north-western corner of Hyde Park South.
Source: SLNSW Australian Photographic Agency -46311.

The City of Sydney built several rest centres for women after completing the Hyde Park amenities centre. They included a rest centre incorporated into the former Newtown Town Hall (circa 1962) and one on Oxford Street in Paddington (circa 1964).

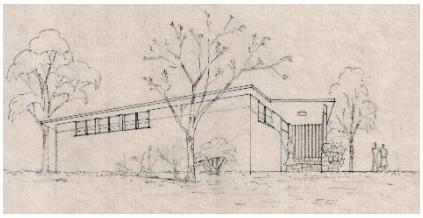
List of public toilets designed by or under Smillie

- Norman Street bathing facilities, Sydney, 1958
- Observatory Park Women's Conveniences, 1938

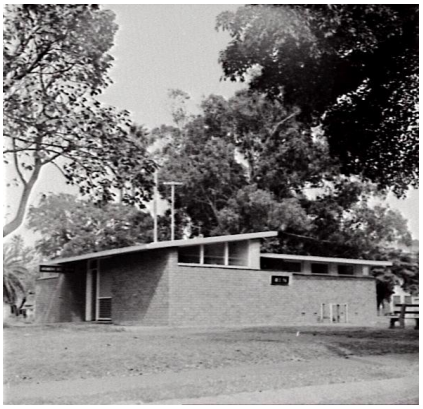
75 "Womens' Amenities Centre Hyde Park, Sydney", *Building, Lighting & Engineering*, 24 May 1954, p.44.
76 *Cross-section* no. 16, 1 February 1954, no pagination.

- Taylor Square Men's Conveniences, 1940
- Darlinghurst Road, Kings Cross Public Conveniences, 1938
- Paternoster Row Pyrmont Public Convenience, 1939.
- Lang Park Convenience, 1942
- Fitzroy and Foveaux Streets Public Convenience, n.d.
- Pyrmont Bridge Men's Convenience alterations and renovations, n.d.
- Hyde Park North Women's Convenience, 1947
- Park and Elizabeth Streets Men's Convenience, n.d.
- Anzac Parade Public Men's Convenience, n.d.
- Redfern Oval Women's Convenience, n.d.
- Wattle Street Men's Convenience, n.d.
- Cook Park Convenience for Men and Women, 1954
- Prince Alfred Park Men's Convenience, n.d., and Women's Convenience, 1939
- Gladstone Street Amenities Block, 1953
- St Peters Station Men's and Women's Convenience, 1955
- Macquarie Street Public Convenience, n.d.
- Dowling Street Public Convenience, n.d
- Rushcutters's Bay Park, 1936 (men's conveniences), 1939 (women's conveniences).
- Quay Street Amenities Block and Male Toilet, 1960
- Beare Park Public Convenience, 1959
- Moore Park (Drive Ave Conveniences, Bleacher Toilets at ES Marks Field, Women's Convenience at Golf Links), n.d.
- Wynyard Park Men's and Women's Convenience, n.d.
- King Street Public Conveniences, Newtown, n.d.
- St Johns Road Conveniences for Women, Glebe, n.d.
- Enmore Road Conveniences, n.d.
- Anzac Parade and Cleveland Street Men's Convenience and shelter, n.d.
- Camdenville Oval dressing room and toilet block, n.d.
- Camperdown Park Dressing Room and Toilet Block, n.d. and Women's Convenience, circa 1955.
- Macleay St and Elizabeth Bay Rd, n.d.
- Fitzroy Gardens Men's and Women's Convenience, n.d.
- Trumper Park Paddington toilet block, 1954
- Women's Rest Centre including nursery and creche, Hyde Park, 1955
- St James Station Men's Convenience (1936) extension (1946)
- Women's rest centre, Oxford Street, Paddington, circa 1964.

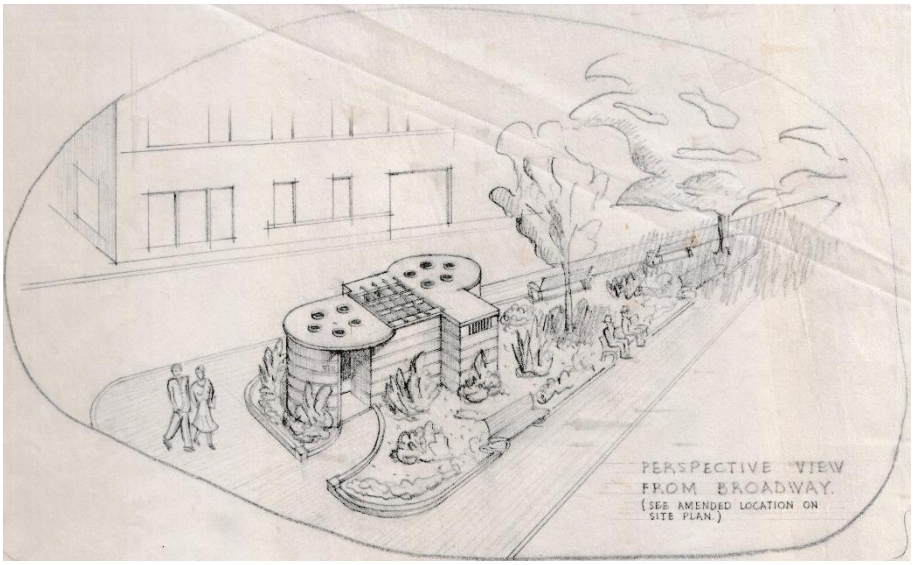
45 Women's rest centre, Oxford Street, Paddington.
Source: CSA Unique ID A-00046434.



46 Perspective study of a women's convenience in Camperdown Park circa 1955.
Source: CSA Unique ID A-A-00545712 (Job 2430)



47 Toilet block in Redfern Park, 1954.
Source: CSA Unique ID A-00042861



48 Male convenience on Broadway at Wattle Street, Ultimo, circa 1950. A similar structure was proposed for Lang Park in Central Sydney during 1942.
Source: CSA Unique ID A-00545644.

Air raid shelters

A National Emergency Services Committee (NESC) was set up by the City Council towards the end of 1940. It immediately began co-ordinating air raid precautions and an advisory body to the NESC was established in February 1941. The decision to build shelters was made that month[77] and work commenced on the 17th of the month. It included a trench in Rushcutters Bay Park, construction of a brick pillbox in Wattle Street near Broadway and a pillbox in Taylor Square.[78] Construction of shelters continued into 1942. Perhaps one of the more unusual projects undertaken by the City Architect was a proposal for a subterranean bomb-proof control centre to be constructed in Hyde Park North. It has not been ascertained if this was constructed.

Once the war had ended time was spent documenting the adaptive reuse of air raid shelters to new uses such as park depots and toilets.

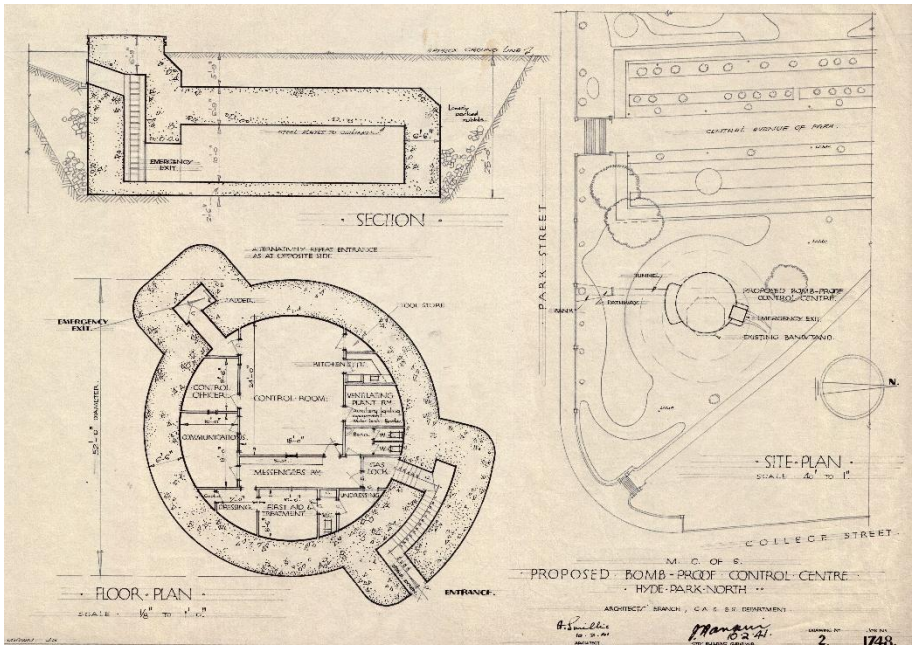
List of air raid shelters designed by or under Smillie

- Standard details, 1941.
- Air raid shelters (4 of) at Pyrmont Dwellings, Ways Terrace, 1942.
- Conversion of Air raid shelter at Waterloo Town Hall to Park Staff Amenities and Tool Store, n.d.
- Conversion of Air raid shelter at No. 6 Market, Corner Hay and Lackey Streets into Maintenance Office, 1942.
- Air raid shelter at Campbell Street for Haymarket Buildings, n.d.
- Alterations to Moore Park Depot Mess room to form Blast and Splinter Proof Shelter, 1941.
- Air raid shelter at Phillip Park Cleansing Depot site (part of future depot building), 1942.
- Conversion of Air Raid Shelter to Parks Depot/Store, Rushcutters' Bay Park, 1954.
- Alterations to Victoria Park Depot to form Blast and Splinter Proof Shelter, 1941.
- Proposed underground bomb proof control room Hyde Park North, 1941.
- Air raid shelter in the Shannon Reserve, Crown Street, Surry Hills (1940).

49 Concrete air raid shelter nearing completion.
Source: CSA Unique ID A-00010152

50 Cylindrical air raid shelter.
Source: CSA Unique ID A-00010147

77 "Shelters in Raids. Work to Begin at Once", *Sydney Morning Herald*, 15 February 1941, p.13.
78 "Work Begun on City Council Air Raid Shelters", *Sydney Morning Herald*, 18 February 1941, p.10.



51 Proposed bomb-proof control centre in Hyde Park North, 1941. Source: CSA Unique ID A-A-00545431

Recreational items

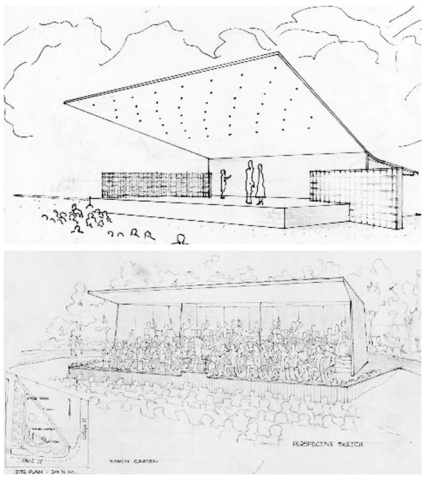
During the middle third of the twentieth century plans were prepared for several recreational building typologies to be constructed in parks and reserves across the City of Sydney: music shells, shelters for draughts players, swimming pools. Plans were prepared for sporting grounds and playing fields. They were also prepared for one-off items such as a stylish tourist information pavilion in Martin Place.

Music shells

Albert Smillie's signature appears on several drawings for music shells, post-war successors to the bandstands found in numerous parks across the state. The City Architect designed several bandstands well before World War II. Examples include the structures constructed in Moore Park (1908), Observatory Park (1909), the Coronation Bandstand in Hyde Park on the site of what is now Sandringham Gardens (circa 1911) and Green Park (1925).

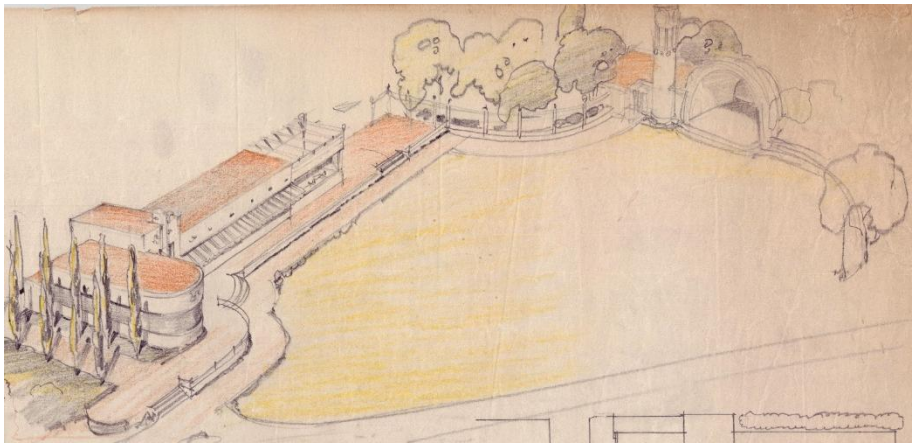
During the 1930s and 1940s several proposals for band and music shells in Hyde Park were prepared, none of which seem to have eventuated. The most ambitious was for a café and band shell, sketches for which were prepared in 1937 (with a clock tower) and 1939 (with a nearby café) and construction drawings in 1940. Another scheme for the northern end of the Park combined a kiosk and music shell, while detailed drawings for a shell were prepared in 1945. A temporary music platform was designed during the 1950s, to be located in part of the Sandringham Gardens.

Music shells were proposed for other parts of Sydney as well. Plans and reports were prepared for two in Wynyard Park during 1941 and during the post-war period, and another was proposed for Fitzroy Gardens around 1960. Perhaps the most extraordinary scheme was "the largest all plywood music shell ever built … claimed to have better acoustics than the famous Hollywood Bowl", which was apparently erected at the E S Marks oval in 1956 or early 1957. It was, however, designed by plywood designer and fabricator Ralph Symonds.[79]

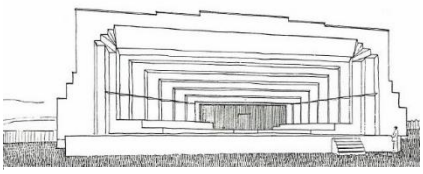


52 Bandshell proposed for Fitzroy Gardens (above) and temporary bandshell proposed for Hyde Park (below). Source: CSA Unique ID A-A-00545934 and A-00545662

79 *Building, Lighting and Engineering*, 24 April 1958, p.57; "Advances in Plywood Utilisation", *The Australian Timber Journal*, May 1957, p.50.



54 Sketch of proposed café and music shell with attached clock tower in the south-western corner of Hyde Park North, 1939.
Source: CSA Unique ID A-00545376



53 Plywood music shell construted at the E S Marks oval, 1956. It was designed by plywood designer and manufacturer Ralph Symonds.
Source: *Building, Lighting and Engineering*, May 1957.

List of music shells designed by or under Smillie

- Band Stand/Music Shell and Café at Hyde Park, Sydney, 1937-1945 (various schemes)
- Wynyard Park Bandstand 1941.
- Music Shell at Fitzroy Gardens, 1960.

Draughts players shelters

Public parks provided much needed recreational space during the interwar years. Amongst the activities that took place in them were games of draughts, which enjoyed great popularity during the late nineteenth and early twentieth centuries, and chess. In the mid-1920s draughts was described as "Hyde Park's favourite sport".[80] However, these informal games were not without their problems, as was reported in the middle of 1935:

> In the city parks, especially Hyde Park and Belmore Park, groups of men, mostly in the evening of their lives, play draughts. They while away the hours of sunshine, with the boards balanced on their knees or placed between players on their seats. Their friends gather round, waiting their turns at the boards, occasionally giving advice or uttering friendly criticism of the moves.
>
> They are, in the main, happy littler reunions, which are invaluable in filling hours that would be empty and idle. The authorities regard these unofficial draughts tournaments with a benevolent eye. They fulfil a useful purpose; yet at the same time, there is an aspect which causes the authorities concern.
>
> The city engineer (Mr Garnsey) reported yesterday to the health committee of the City Council …that the draughts players monopolised the park seats, and the men watching the players caused damage to the grass, principally by shuffling their feet. He therefore proposed that a special area in Belmore Park should be set aside for the playing of draughts. This area would be provided with seven tables and seats and would be paved in order that players and spectators would not damage the grass. …
>
> The committee adopted the proposal and recommended it to the council.[81]

55 Playing draughts in Hyde Park before the advent of shelters.
Source: *Sunday Times*, 21 March 1926, p.20.

56 Playing draughts in Hyde Park South, circa 1950.
Source: CSA Unique ID A-00014601

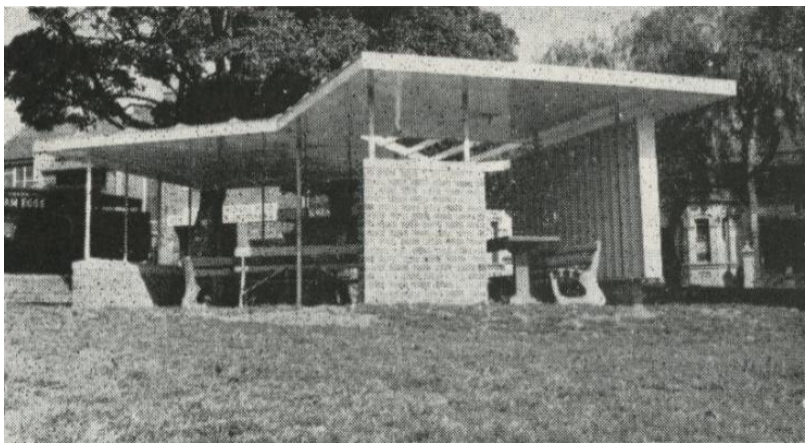
80 "Hyde Park's Favourite Sport", *Sunday Times*, 21 March 1926, p.20.
81 "Draughts in the Parks. Special Area for Players", *Sydney Morning Herald*, 11 June 1935, p.9.

Concrete tables, with three boards per table, were designed by city staff and installed in 1936. One table in Hyde Park South was protected from rain and heat by an elegant shelter. Lighting was subsequently installed to enable people to play draughts and chess at night.

Construction of the shelters continued after World War II and numerous parks and rest areas were selected to become sites for them. Shelters were documented for Moore Park and Hyde Park between 1947 and 1949. Most were constructed during the 1950s. These were generally simple brick structures, open on two sides; the two enclosing walls often featured extensive areas of glazing. Flat roofs were supported off slender steel pipe columns. Perhaps the most audacious shelter was amongst the last to be constructed. The shelter in Waterloo Park near the intersection of McEvoy and Elizabeth Streets, which was documented in 1958, consists of a thin continuous reinforced concrete structure forming the floor, rear wall and roof.

Almost all the draughts shelters constructed by the City Council are understood to have been demolished. The shelter in Waterloo Park remains but has deteriorated and is not in good condition. An echo of these little structures is to be found in Hyde Park, where a chess garden with a giant chess board was constructed to a design by Ilmar Berzins in 1972 (refer to Section 4.6 below).

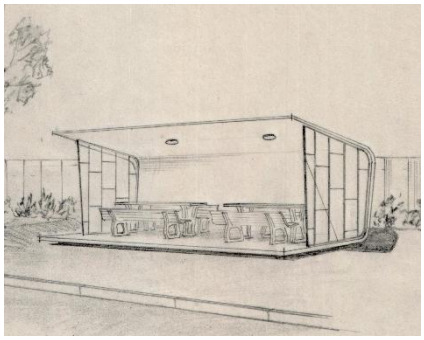
57 Draughts players shelter at Millers Point (since demolished).



58 A simple draughts shelter constructed in Fitzroy Gardens (left) and a rather more elaborate structure in Camperdown Park (right). Both have been demolished. Source: CSA Unique ID A-00012101; *Cross-section* No. 36, October 1955.

List of draughts shelters designed by or under Smillie

- Hyde Park South, circa 1936
- Fitzroy Gardens, Potts Point, 1957.
- Moore Park, 1947.
- Victoria Park, Broadway, n1957.
- Camperdown Park, 1955.
- Oxford Street, Paddington 1955
- Prince Alfred Park.
- Rushcutters Bay Park.
- Argyle Street, Millers Point.
  - Shannon Reserve, Crown Street, Surry Hills.
  - Waterloo Park, 1958. Extant.
  - Kensington Street Rest Area, Waterloo, 1958.



59 Perspective study of the draughts shelter in Waterloo Park, 1958. Source: CSA Unique ID A-00545897.

Other recreational items

List of other recreational items designed by or under Smillie

– Circular Quay handrailing to promenade, 1939. These remain in place.
– Proposed park at Circular Quay, 1939.
– Drinking fountain at Fitzroy Gardens, 1940.
– Lord Mayors patriotic fund recreation building in Hyde Park 1940.
– Temporary recreation building for servicemen in Hyde Park, 1940.
– Open air café, Hyde Park South, 1961.
– Refreshment stall at Moore Park Golf Links, 1939.
– Caretaker's Cottage at Rushcutters Bay Park, 1938-1940.
– Caretaker's Cottage at Trumper Park, n.d.
– Information Bureau, Martin Place, 1956 (since demolished).

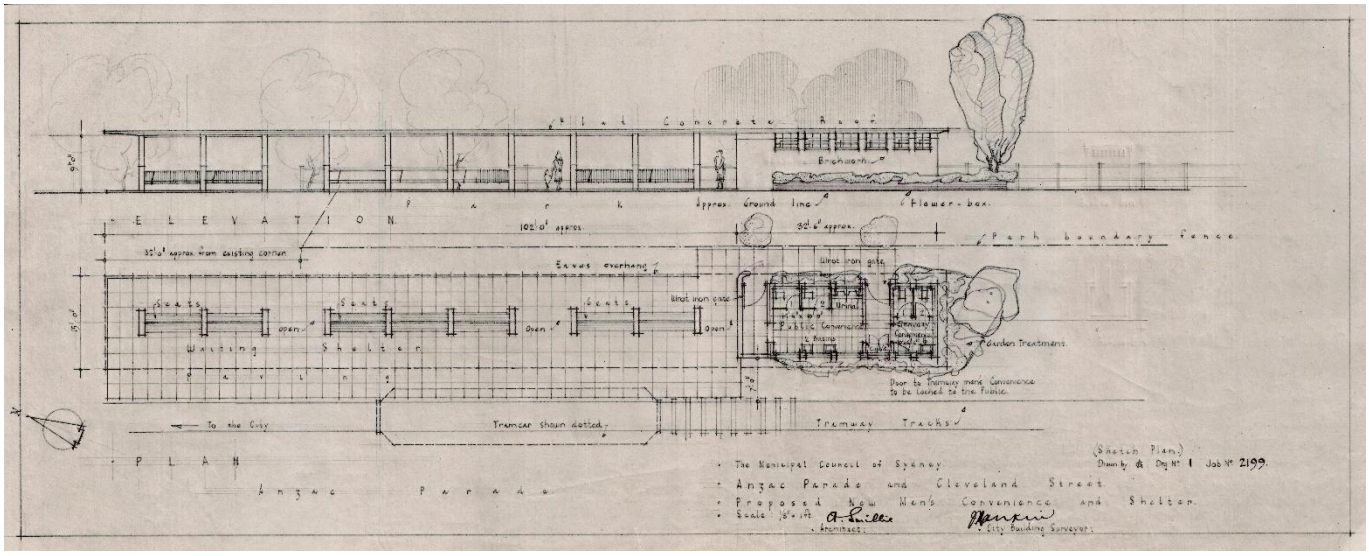
60 The stylish Modernist Information Bureau at the eastern end of Martin Place, constructed just prior to the Melbourne Olympic Games in 1956.
Source: CSA Unique ID A-A-00008839.

Shelters

On occasion the City Architect was required to document shelters for those waiting to take public transport or for a taxi, or as protected seating adjacent to busy thoroughfares. Amongst the earliest were substantial brick structures with reinforced concrete hoods to be installed on the western side of Wynyard Park, which were designed during 1943. It is not known if these were constructed. Shelters designed and constructed during the 1950s and later were lightweight structures with steel pipe framing supporting metal or bituminous roofs.

– Bus shelters at Wynyard Park, 1943.
– Public Shelter, King Street, Newtown n.d.
– Bus shelter, Sir John Young Crescent, Woolloomooloo.
– Bus shelters, Elizabeth Street, Sydney.
– Tram shelter combined with men's convenience at the intersection of Anzac Parade and Cleveland Street.
– Taxi rank shelters, St James Road, Sydney.

61 Taxi shelters at St James Road, Sydney, September 1962.
Source: CSA Unique ID A-00045647



62 Proposed tram shelter and men's convenience at the intersection of Anzac Parade and Cleveland Street, n.d.
Source: CSA City Architect's project no 2199

Council depots

Council depots were an essential part of the effective management, maintenance, cleaning and operation of facilities and parks under its jurisdiction. The City Architect's office documented numerous depots and associated buildings, which tended to be functional and pragmatic buildings with little architectural pretention.

List of depots designed by or under Smillie

- Parks depot and tennis shelter shed, William St Alexandria, 1955.
- Park staff building, Hyde Park South, 1952
- Amenities building for City Council Inspectors, Moore Park, n.d.
- Parks depot, Jubilee Oval, Glebe, n.d.
- Phillip Park Cleansing Depot, n.d. (c1942)
- Tool shed and mess room, Prince Alfred Park, n.d.
- Storage Building at Parks Depot, Ashmore St Alexandria, n.d.
- Alterations to Forsyth St Depot Glebe, c1952.
- District Engineering Depot, Gerard Street, Alexandria, n.d.
- Additions to Parks Depot Building, Alexandria Park, n.d.
- Cleansing Depot and Amenities Block, Bourke St Waterloo, 1959.
- Construction and maintenance depot, Bourke Street Surry Hills, n.d.
- Glass house at Bay Street Nursery, 1936.
- Buildings for Vehicle Housing and Properties Department, n.d.
- Cleansing Depot at Council St, Newtown, n.d.
- Extensions to Cleansing Depot, Pier and Harbour Streets, n.d.
- Hollis Park Park Depot Newtown, 1955.
- Parks Depot and Workshop, Gibbons St Redfern, 1955.
- Parks Depot at Oatley Road, Paddington, 1960.
- Alterations to Old Still Building, Wattle St Depot, 1937.
- Office and Amenities Building, Wattle St Depot, n.d.
- Weighbridge, wattle St Depot, 1938.
- Woolloomooloo Depot amenities block, 1957.
- Alterations and additions to Parks Depot, York Street, 1958.
- Moore Park depot alterations and additions (to old building), n.d.
- Moore Park depot (new), n.d.

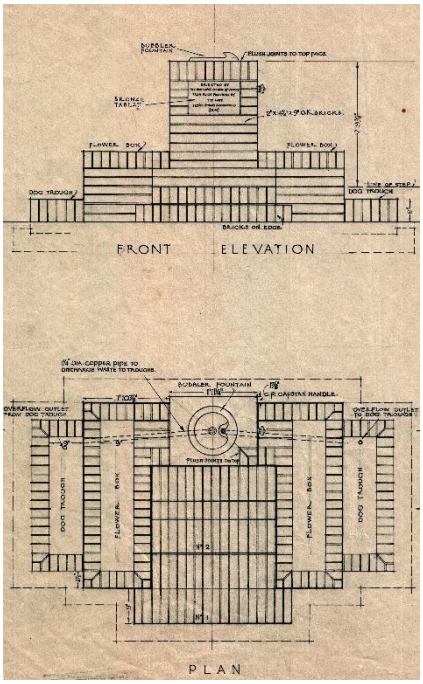
64 Wattle Street Depot, 1953.
Source: CSA Unique ID A-00029692.

63 Depot in Hyde Park, 1960s.
Source: CSA Unique ID A-00014603

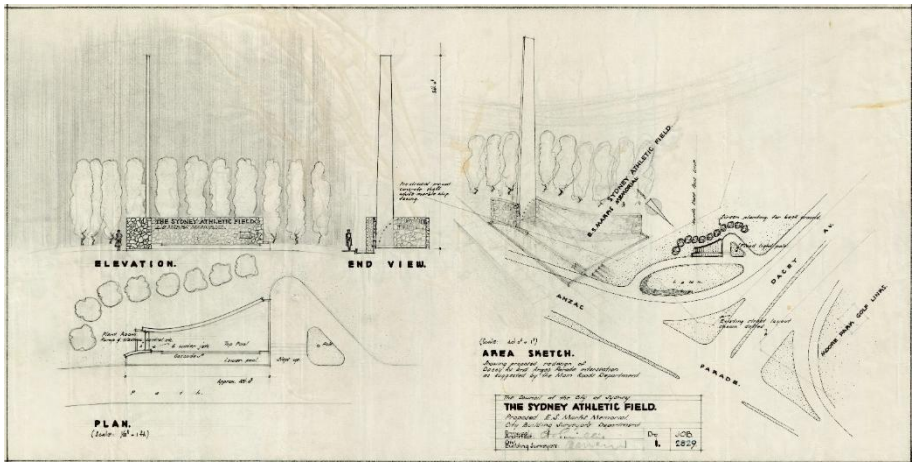
Ephemeral items

Ephemeral items attributable to Smillie or documented under his jurisdiction included a wide and diverse range of items. These ranged from commemorative plaques and structures to drinking fountains, playground equipment and lettering on buildings:

– Decorations for civic buildings during commemorative or celebratory occasions.
– New granite facing to the base of the Archibald Fountain in Hyde Park.
– Commemorative plaques and honour rolls.
– Layout and design of lettering to be placed on building facades.
– Playground see-saws.
– Park by-law standards.
– Fruit barrows.
– Flower sales stands.
– Drinking fountains.
– Memorial gates and memorial to ES Marks Athletic Field, Moore Park, n.d.
– Drinking fountain and dog trough at Moore Park, 1941



65 Proposed drinking fountain and dog trough at Moore Park, 1941.
Source: CSA Unique ID A-00545426.



66 Proposed Ernest Samuel Marks Memorial Gates at the Sydney Athletic Field, Moore Park, 1959
Source: CSA Unique ID A- 00545911.

4 Ilmar Berzins

4.1 Introduction

In 1936 the City Council embarked on a program of tree planting, which continued up to World War II. Trees were planted in Bridge and York Streets, Sydney, Potts Point, Camperdown, Woolloomooloo and various parks. Shortly after the end of World War II Arnold Garnsey announced planned improvements to Sydney's parks and streets. Approved schemes for "remodelled parks" included beautification of Prince Alfred Park near Central Station, redesigning and replanting Camperdown Park, improvements to Victoria Park and beautification of Moore Park. In addition to this, in coming years "thousands of trees" were to be planted in city streets and residential sections of the city. The works would be directed by City Parks Superintendent A E Bruce, who apparently had directed Canberra's tree planting scheme.[82]

Following Bruce's resignation in 1948, Clarence (Clarrie) Garth (1904-1981), a registered architect who had worked in the Architects Branch assumed the role of Superintendent of Sydney Parks and Gardens. Several draftsmen, horticulturalists and technicians were engaged b etween1949 and 1951.None of the original senior officers were landscape architects but some had architectural training.[83]

Garth and Principal Assistant Architect, C G Mitchell are understood to have visited the United States of America and Canada to investigate and report upon matters relating to parks and recreation during the second half of the 1950s.

4.2 Biographical information

Ilmar Berzins was born in Latvia in 1921.[84] He studied horticulture at the State Horticultural College in Riga, Latvia and landscape architecture at Hanover's the State Horticultural College and University of Technology in Hanover, Germany. He, along with his wife Lucija (aka Sylvia?) and son Alnis arrived in Melbourne on the Greek ocean liner *Nea Hellas* on 23 February 1949. The family had been living at the displacement persons' resettlement camp at Bremen in Germany, before travelling to Australia via Genoa in Italy.

Migration records record their destination as Mr L Sampson of "Hazelhome" in Orange, NSW.[85] Lionel Sampson Berzins moved with his family to Orange, He worked in the Email Ltd whitegoods factory so that he could pay off the two-year bond for the fares to Australia. During this time Berzins prepared a master plan and nominated plantings for the Orange Golf Course:

Something between two and three thousand trees and shrubs have been planted since 1949 – pines, elms, magnolias, chestnuts, crab-apples, flowering cherries and prunuses, rhododendrons, berry-bushes, viburnums, azaleas and a multitude of others.

67 Circa 1949 photograph of Ilmar Berzins included in immigration records..
Source: National Archives of Australia Series A2571 ID 203663834.

82 "Sydney street, park beautification plan", *Daily Telegraph*, 18 November 1945, p.10. Bruce was Parks and Gardens Superintendent in Canberra during the 1920s and 1930s. Bruce joined the City Council in 1937 and retired from it in 1949.
83 Warwick Mayne-Wilson, Draft Heritage Study and Review of Proposed Landscape Master Plan of the McElhone Reserve, no pagination.
84 His name appears as Ilmars Berzins on immigration records held at the National Archives of Australia.
85 National Archives of Australia Series A2571, ID 203663834

The plantings have been carried out under the supervision of Elmar [sic] Berzins, who has had wide European experience in landscape-planning.[86]

Ilmar Berzins and his family moved to Sydney in 1951. Berzins started working at Sydney Municipal Council on 13 June 1951 as a first-grade draftsman. His recruitment by the Council is widely said to be the first employment of a formally trained landscape architect in Australia. According to pioneering landscape architect Allan Corry,

> *… he brought Modernist European design styles to a city desperately seeking innovative civic design ideas. Berzins was given many opportunities to create new community spaces and redesign existing parks. He developed a distinctive style that incorporated free-form shapes. Sandstone book-leaf walling, naturally sculpted boulders, water-worn pebbles, and strongly contrasting plant forms and textures, all artistically arranged to form pleasing compositions, a marked contrast to the traditional council designs of that time. His most important designs were completed during the 1950s and 1960s …*[87]

In 1953 Ilmar Berzins was promoted to senior draftsman. He and his wife Lucija became naturalised citizens in April 1958.[88] As time passed his abilities were recognised by the City Council and he was promoted to supervising draftsman in 1964, followed by assistant landscape architect in 1966. During 1966 Berzins was one of the founding members of the Australian Institute of Landscape Architects. He was promoted to chief technical officer in 1971, followed in 1984 by promotion to Director of Parks and Gardens. In this role he would advise external consultants on major urban projects. Berzins retired in 1986 and died in October 1993 at the age of 72.

Ilmar Berzins was described by his colleague John Sweaney as "very flamboyant, probably one of the best draughtsmen and most knowledgeable person associated with horticulture that I'd encountered".[89] According to landscape architect and urban designer Tempe McGowan, "[Berzins] held the passionate belief that all people need to enjoy nature and that nature in turn can ameliorate the human temperament. ... His designs were socially responsive and typical of trends in international, modernist design culture in the way he created little arcadian retreats in the city wilderness."[90]

Berzins' abilities were suited to the task, for he had the unwavering aim of introducing nature into the city and he instigated very liberal planting programs. His aesthetic was not related to Australian indigenous landscapes, instead introducing a European sensibility to the thoughtful design of public open spaces in Sydney, detailing his landscape designs in a way that was unprecedented in public works. Over the many years which his career spanned, Berzins gradually utilised more Australian natives and applied the principles of the Sydney Bush School of landscape architecture.

4.3 Critical appreciation of Berzins' work

Ilmar Berzins' work has been the focus of commentary from several authors, sharing their insights into his work.

86 "Golf and Blossom", *The Bulletin*, 21 October 1953, p.4.
87 Allan Correy, "Berzins, Ilmars" in Richard Aitken and Michael Looker (editors), *Oxford Companion to Australia Gardens* (Oxford University Press in association with the Australian Garden History Society, 2002), p.87.
88 Commonwealth of Australia Gazette, 'Certificates of Naturalization,' Thursday 24 Apr 1958 [Issue No.23], Page 1261.
89 John Sweaney, Interviewed by Jo Kijas on 8 May 2012 (City of Sydney oral history collection), quoted in biography of Ilmars Berzins provided by the City of Sydney.
90 Tempe McGowan, 'Humanising the City', *Monument*, Issue No. 25, 1998, p.58.

In a short appreciation of his work, landscape architect and writer Tempe McGowan considered that "Berzins' socially responsive designs provide an alternative model for [and in favour of] small-scale interventions in the public domain":

> He held the passionate belief that all people need to enjoy nature and that nature, in turn, can ameliorate the human temperament. His strategy was to create gardens and introduce tree-planting programmes defining council boundaries with poplar trees and trying out diverse species of trees – all of this long before the ecological/environmental movement got into full swing in the 1960s/70s.
>
> His garden designs may appear "un-Australian" for that period. In post-World War II Australia, while public swimming pools and ovals were being built into Victorian era parks, Berzins was crafting nature into clear, articulated places. His designs were socially responsive and typical of trends in international, modernist design culture in the way he created little arcadian retreats in the city wilderness.'[91]

McGowan wrote that Berzins' drawings of "outdoor rooms" appear as "virtual gardens" …. His public gardens are experienced as lyric retreats with layers of subtlety that contrast with the austerity of the architecture of the time". Referring specifically to the McElhone Reserve, McGowan commented that "against the high density massing of tall apartment buildings . . . the design provides a quiet, green refuge and an opportunity to feel and touch grass, watch carp in the pools, and look out across the most beautiful harbour in the world . . . These creations are enclosures with overlays of contemplative or reflective elements – water, diverse plant species, flowers, intricate walling or paving – woven together".[92]

Heritage landscape consultants Warwick Mayne Wilson's Draft Heritage Study and Review of Proposed Landscape Master Plan of the McElhone Reserve (February 2001) cites landscape architect Leonard Lynch:

> *Landscape architect Leonard Lynch has provided another perspective. According to Lynch, Berzins was influenced by the landscape style of Christopher Tunnard, a Canadian-born landscape architect who lectured at Harvard's Graduate School of Design in the late 1930s and 1940s and was author of the seminal work Gardens in the Modern Landscape, published in 1938. According to Peter Walker*
>
> > *'Tunnard was sympathetic to many of the ideals of Le Corbusier, Walter Gropius and other European modernists . . . but what distinguished him from his modernist colleagues was a pragmatic, unsentimental interest in historic gardens and landscapes and his appreciation of the qualities of order, unified composition, and artistic expression in great gardens of any era and culture. He also believed in the sort of progress – artistic, scientific, technological, and social – that was based on an understanding of both past achievements and present opportunities. Even centuries-old historic landscapes could be preserved nearly intact and intensively developed.'*
>
> *Coming from Riga, Berzins would have been particularly attuned to Tunnard's approach. It was certainly one which he applied to the Reserve in front of Elizabeth Bay House.* [93]

91 McGowan, p.58
92 McGowan, p.58.
93 Mayne-Wilson, no pagination. The Peter Walker citation comes from P Walker and M Simo, *Invisible Gardens - the Search lor Modernism in the American Landscape* (MIT Press, 1994).

While agreeing that Berzins had introduced a new style, Lynch described its trademark characteristics as “whimsical gardenesque”, with “amoebic shapes” and “bookleaf sandstone walls” to protect vegetative edges. Professor James Weirick has remarked on the influence of Lutyens and Jekyll in Berzins’ reliance on an underlying architectural layout (also a strong modernist approach), with the use of raised beds, built of bookleaf sandstone, but with soft planting overspilling them. Both Lynch and Weirick noted that during the 1950s, Sydney City Council had a lot of highly qualified stone masons, who had a high involvement in the actual execution of landscape works and were given a fairly free hand to decide on finishes.

4.4 Immigrant landscape designers

The expansive postwar immigration program resulted in the direct transfer of European and American garden design knowledge as new immigrants joined Australian designers and influenced practice. They were often employed initially as draftspersons usually because of language or regulatory barriers, even though state-of-the-art training offered in early 20th-century Europe often afforded a broad range of competencies such as structural detailing, pushing the boundaries of design beyond what someone who only specialised in plants might have achieved.

Ilmar Berzins was one of a small number of trained migrants who are noted to have made a significant impact on landscape design in Australia. He was one of the first qualified landscape architects to be employed in local government in Australia when he took up a position with the Sydney City Council’s Parks and Gardens Division in 1951. Amongst the earliest was horticulturalist Paul Sorensen (1891-1983), who was trained in France, Germany and Switzerland. He migrated from Denmark in 1914 and became established in the Blue Mountains around 1917. He is best known for the garden at Everglades at Leura, commissioned by Henri Van de Velde (1936), managing director of Felt and Textiles of Australia Ltd (Feltex). Sorensen built over 100 gardens, amongst the best-known of which are those at Invergowrie at Exeter in the Southern Highlands (1936) and Gleniffer Brae at Keiraville (1939) for Cecil Hoskins and the innovative rooftop garden at Feltex House in George Street, Sydney (1939).

68 The roof garden at Feltex House featured in this Feltex advertisement that was published in *Art in Australia*, 15 November 1939.

Some decades later Viennese trained botanist Erwin Gauba arrived in Australia in 1941 and Czechoslovakian landscape draftsman Otakar Ruzika arrived in Australia in 1949. Both worked in Canberra during the 1950s and 1960s in the City Parks and Gardens Department headed by the noted Australian botanist Lindsay Pryor between 1944 and 1958. Ruzika is known for his landscape design at the Australian National University’s University House, the Australian National Botanic Gardens, the Lodge and public gardens across Canberra.[94]

4.5 Evolution of landscape design

The time from 1951 to 1986 encompassed a period of substantial change in the evolving design and implementation of open space in Sydney. In the immediate post war period, park design followed the established characteristics of open lawn areas with feature exotic trees, ornamental garden beds, seating and public amenities. Berzins would have been aware of overall park and garden design and his internship at Orange prior to commencing with City Council demonstrated his knowledge of plant material.

Many of the public parks had the provision of a children’s play area that generally consisted of swings, sandbox and later climbing structures (for example, in the 1960s

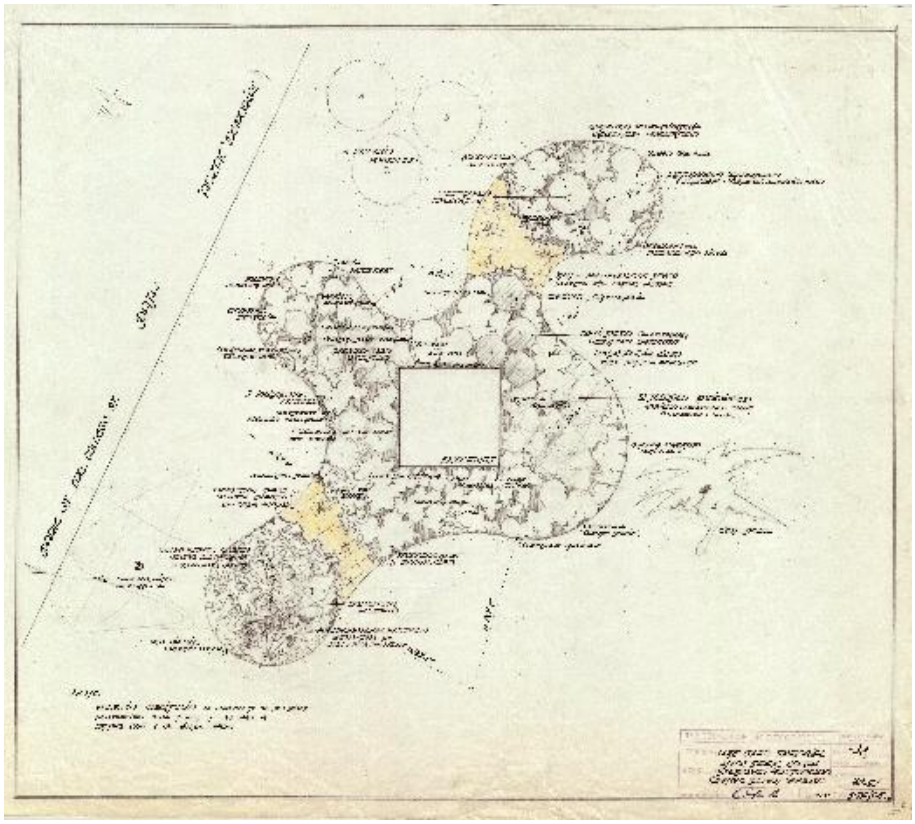
94 Janie Gillespie, “Transplanting ideas: how migrants shaped the Australian garden” in Roger Butler (editor), *The Europeans: Émigré artists in Australia 1930-1960* (National Gallery of Australia, 1997), pp.180-189

sometimes in the shape of rockets that responded to the vogue of space travel). Design and implementation of many parks would have been under the administration of qualified horticulturists and park supervisors where their background in horticulture, turf and tree management gave them a practical base for the administration of open space areas. Horticultural outcomes varied with specimen trees in the main being exotic and the use of flower beds gradually declining as costs to maintain these features became more expensive.

69 Landscaping by Otakar Ruzika in the central courtyard of University House at the Australian National University, photographed in 1959.
Source: National Library of Australia PIC Box PIC/8974 #PIC/8974/3

The rise of the environmental movement from the late 1950s and developing in the 1960s brought a new level of awareness of ecological concerns and the effect on the environment generally. Publications such as *Silent Spring* by Rachel Carson and an awareness of the effect of contemporary development on natural systems became more prevalent. This concern was expressed in the evolution in the architecture of what became known as the Sydney School where natural materials were used and an awareness of the retention of existing natural bush was pursued. One of the outcomes of this greater consciousness was the establishment of the School of Landscape Architecture at the University of New South Wales (UNSW) in 1974. The school was established under Professor Peter Spooner, an architect and landscape architect, who was influenced by Myles Dunphy amongst others in the benefits of bush walking in the Sydney region. Other staff included Finn Thorvaldsen, Donald Sigsby who had gained experience in the United States brought a level of broader application of landscape design through the writings of Ian McHarg, *Design with Nature* (1969) profoundly influenced the profession.

It should be noted, however, that during the 1950s Berzins provided alternative schemes utilising exotic and Australian planting. An example of this was the planting at Anzac House in College Street (1957). Australian plants were suggested around the base of the Captain Cook statue in Hyde Park (1959) and native trees were proposed for a park in Young Lane, Redfern (1954).



70 Drawing signed by Ilmar Berzins describing a scheme of Australian plants around the base of the Captain Cook statue in Hyde Park. The drawing is dated 31 August 1959.
Source: CSA Unique ID A-00493867

Berzins designs evolved with the changes in architectural and urban design. The use of Australian native plants and trees increased, and the greening cities movement resulted in extensive street plantings of native trees, particularly in the inner suburbs of Sydney and marked a change in the way cities were viewed and appreciated. The Green Ban movement of the 1970s helped to increase environmental awareness with Kelly's Bush in Hunters Hill being the first "Green Ban" in 1971. Graduates of the Landscape Architecture course at UNSW were starting to be employed by local suburban councils and the City of Sydney. Their training reflected the changes to attitudes to open space design, with a more contemporary public domain awareness and robust outcomes for a growing city. Raised planter boxes, brick paving, integrated seating and use of Australian natives (not all of local NSW origin) established a design approach that Berzins adopted while having a keen appreciation of the evolving needs and requirements for open space in the City of Sydney.

4.6 Projects

Parks

The City of Sydney was responsible for parks several decades before Ilmar Berzins entered its employ. The Sydney Corporation (City of Sydney) was made trustees of Moore Park in 1866. Several decades on, Beare Park at Elizabeth Bay, consisting of land reclaimed by the Council plus adjacent land reserved in a private subdivision, was conveyed to Council in trust during 1901, subsequently declared a public park and Council made a trustee in 1912. During the first decade of the twentieth century, the City Council assumed responsibility for several more parks following amendments to Acts of the NSW Parliament: Hyde, Cook and Phillip Parks (1904); Belmore and Observatory Parks and Dawes Point Reserve (1908) and Victoria and Rushcutters Bay Parks (1910).[95]

Planning and parks were included in the Engineer's Department remit following the Commissioners' reorganisation during the 1920s.[96] Following the release of Arnold Garnsey's report to Council in 1947, its adoption led to the creation of a dedicated Parks and Recreations Department in 1948. architect Clary Garth was appointed to head up the new Department and he oversaw the appointment of 'several draftsmen, horticulturalists and technicians between 1949 and 1951. None of the original senior officers were landscape architects, but some had had architectural training. The arrival of Berzins in 1951 brought with it a new level of professional expertise.

71 Ilmar Berzins on site during the construction of the Arthur McElhone Reserve, circa 1953.
Source: reproduced in State Heritage Register nomination for Elizabeth Bay House and Landscape Setting (Arthur McElhone Reserve).

One of Berzins' most highly regarded works was amongst his earliest at the City of Sydney. This was the Arthur McElhone Reserve at Elizabeth Bay. The land was purchased by Council in 1949 in response to public pressure to retain it as a park. Initial plans were prepared in 1950 but refined and developed by Ilmar Berzins. The design of the Reserve provided open space that was sensitive to the immediate presence of Elizabeth Bay House while providing amenity that provided a clear sense of design detail (sandstone bridge, water feature, garden beds, plantings). These details reflected contemporary design trends while providing a distinctive and memorable outcome. Assisting Berzins were established and expert stonemasons that realised his design. The Reserve has been described by Tempe McGowan as

> *Cleverly squeezed into a rocky traffic island between the meandering streets of Elizabeth Bay with its high density massing of tall apartment buildings. … the*

95 Fitzgerald, p.131; Warwick Mayne-Wilson, Town Parks of New South Wales: past, present and future (self-published, 2013), p.21
96 Fitzgerald, p.182.

design provides a quiet, green refuge and an opportunity to feel and touch grass, watch carp in the pools and look out across the most beautiful harbour in the world. The planting has lost some of its diversity but retains its original structure variety and mix of native and exotic species that form layers hinting at the underlying rock formation.[97]

The Arthur McElhone Reserve has also been cited as a significant example of the "European modern garden" approach taken by European émigré designers to landscape design in Australia, at the same time "being intrigued with the relatively exotic landscapes of a new land." It is as "a refined landscape of walls, paths, water and lawn."[98]

72 Planting bed bordering the path along one side of the Arthur McElhone Reserve. The detailing of paths and walls is also clearly visible. The photograph was taken during the 1960s.
Source: CSA Unique ID A-00013999.

List of park schemes designed by or under Berzins:

- Rest Park and children's playground, Hereford Street and Wigram Lane, Glebe, 1960.
- Rest Park and children's playground, Young Lane, Redfern, 1954.
- Children's playground, Vine and Hugo Streets, Redfern, 1952.
- Children's playground, Kepos and Zamia Streets, Redfern, 1952.
- Children's playground, James Cahill Kindergarten Waterloo, 1955.
- Remodeling of Lake, Victoria Park, 1953.
- McElhone Reserve including rock gardens and rock pools, Billyard Avenue and Onslow Avenue, Elizabeth Bay, 1951-1952.
- Sports area and rest park, Perry Park, Alexandria, 1956.
- Remodeling of Macleay Reserve, 1974.
- Improvements to Fitzroy Gardens, Kings Cross, 1968.
- Centre rest park, Devonshire Street Housing Project, Surry Hills, 1954.
- Planting scheme (Autumn 1966), Wynyard Park, 1966.

Gardens

In addition to the design and remodelling of whole parks and reserves, Berzins and his team also designed smaller and more restrained garden schemes within larger open spaces or developments. These included small specialty gardens within Phillip and Hyde Parks, as well as gardens for council infrastructure including baby health centres, pools and council housing.

Berzins was responsible for several projects in Hyde Park. Sandringham Gardens, in the south-eastern corner of the northern section of Hyde Park, was initiated by the City Council in 1951 to commemorate the impending visit of King George VI and princesses Elizabeth and Margaret to Australia during April 1952. It opened to public November 1952. Following the death of King George VI it was decided to incorporate memorials to him and to King George V into the garden. These included gates designed by architect Henry Epstein and a circular pool with a mosaic floor by sculptor Lyndon Dadswell, necessitating modification to the existing reflecting pool. Sandringham Gardens was officially opened in February 1954 by the Queen during her visit to Australia.

In the 1960s an outdoor cafe was constructed behind (north-east) of Museum Station entry building, by Sydney City Council. The design of cafe and landscaping were both

73 Sandringham Gardens as initially conceived, 1952.
Source: CSA Unique ID A-00014658

75 Chess garden at the north-western end of Hyde Park.
Source: CSA Unique ID A-00026222

97 McGowan, p.58.
98 Andrew Saniga, "Landscape & infrastructure" in Hannah Lewi and Philip Goad, *Australia Modern: Architecture, landscape & design* (Thames & Hudson, 2019), p.199.

Ilmars Berzins' work.[99] Ilmar Berzins also designed the chess garden at the north-western end of Hyde Park, installed during 1972.

Another notable project by Berzins was Fitzroy Gardens at Potts Point. The original section of Fitzroy Gardens was a site on Macleay Street earmarked for the construction of the Paradise Theatre, an ambitious entertainment complex. The site was resumed by Council in April 1939 and named Fitzroy Gardens about four months later. A plan signed by Albert Smillie at the time it was resumed showing a playground and freely curved planting around the boundaries of the site. A stone flagged path was constructed in 1941. The Gardens were enlarged by the acquisition of a large mansion called Maramanah in October 1945 and resumption of additional land in March 1954. The Florence Bartley Library, which was completed in 1958 and included a playground in front of the building, formed the northern boundary of the Gardens.

76 Fitzroy Gardens in the mid 1980s. The Florence Bartley Library has not yet been demolished.
Source: CSA Unique ID A-00014452

In 1961 the El Alamein Fountain was added to the park, and its distinctive dandelion shape soon became a symbol of Kings Cross. Approval was given for the remodelling of Fitzroy Gardens in September 1970 and work in 1971 included the paving of the park to eliminate the dustbowl created by its large trees, installation of seating and low brick planters defining pedestrian movement across and through the space. The remodelling provided an appropriate setting for the Florence Bartley Library.

77 Ilmar Berzins at the official opening of the upgraded Fitzroy Gardens on 11 June 1971. Berzins is second from the left. Ronald Stringer, Director of Parks, is to Berzins' right.
Source: CSA Unique ID A-00012091.

List of gardens designed by or under Berzins:

- Improvements to fencing, walls and garden area at rear of Town Hall, Kent Street, 1964.
- Garden layout for Housing Development, Pyrmont Bridge Road and Lyons Road, 1961.
- Raised gardens at Prince Alfred Park Swimming Pool, 1958.
- Fragrance garden, Phillip Park, 1958-1960.
- Garden layout for Amenities Center for Ages Persons, Ivy and Shepherd Streets Darlington, 1960.
- Landscape treatment to café in Hyde Park South, 1961.
- Australian Native Plant Garden, Hyde Park South, 1959.

78 Fragrance Garden, Phillip Park (since demolished).
Source: CSA Unique ID A-00011386.

99 State Heritage Register inventory for Hyde Park.

– Sandringham Garden, Hyde Park North, 1954.
– Garden Area, Circular Quay West, 1971.
– Garden layout for Baby Health Centre, Dadley Street Alexandria, 1964.
– Garden layout for Anzac House, College Street, Sydney, 1957.
– Macquarie Place 1976

Streetscape upgrades and pedestrianized public spaces

Berzins' time with the City coincided with a later twentieth century movement toward pedestrianizing previously public spaces or closing sections of road to expand public space. Berzins designed the layout and landscape treatment of a number of such schemes:

79 Fountain and bird bath at Beare Park (since removed). Source: CSA Unique ID A-00034369.

List of streetscape upgrades designed by or under Berzins:
– Landscaping to public space in Ulster Street, Paddington, 1974.
– Street closure and landscaping for Springfield Avenue, Kings Cross, 1983.
– Street closure and landscaping for Quarry Street, Ultimo, c1980.
– Streetscape treatment, Macquarie Place and Macquarie Place Park, 1975.

Ornamental and ephemeral structures

Berzins roles in the Parks and Recreation department also afforded him the opportunity to work on ornamental structures such as fountains and cascades in parks, and ephemeral decorations and beautification of spaces for seasonal events. Examples of this type of project include:

List of ornamental and ephemeral structures designed by or under Berzins:
– Fountain, Chelmsford Avenue Entrance, Sydney Showground (for Sydney Trades Fair), 1961.
– Smoke screen vehicle for Pageant at Royal Agricultural Show Showground, 1963.
– Base and water reticulation for 'Porcellino' Fountain, Sydney Hospital, 1968.
– Fountains and water cascades, Phillip Park Fragrance Garden, 1960.
– Water cascades and terraced gardens, Hyde Park South, Liverpool Street Entrance, 1963.
– Waratah Spring Festival layout, Hyde Park North, 1961.
– Design for El Alamein Memorial Fountain (unsuccessful), Kings Cross, n.d.
– Sandstone fountain and bird bath at Beare Park, Elizabeth Bay, 1955.

Sporting facilities

In line with the recreational aspect of the Parks and Recreation department's duties, Berzins oversaw or designed a number of sporting facilities within existing Council assets. These included communal recreation facilities for Council housing projects, and community facilities within public parks.

List of sporting facilities designed by or under Berzins:
– "Par Three" illuminated 9-hole golf course at Moore Park, 1966.
– Bowling Greens and Tennis Courts, Erskineville Housing Settlement, Ashmore Street and Fox Avenue, Erskineville, 1955.
– New oval and general layout, Camperdown Park, 1953.

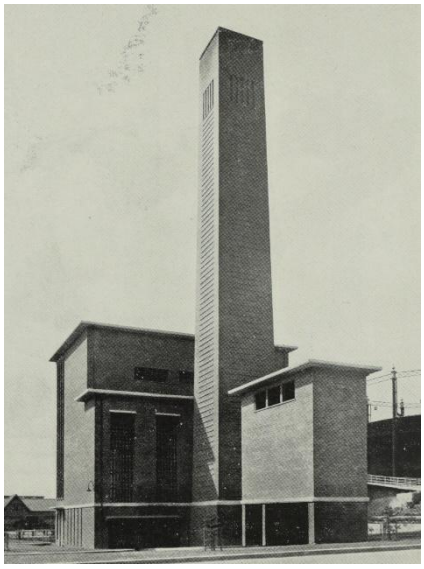
5 Comparative context: other LGAs

This section of the report is intended to provide a comparative context for what was undertaken in the City of Sydney. It is not intended as a comprehensive survey of works undertaken in other local government areas. It includes Melbourne and Brisbane City Councils and local government areas across metropolitan Sydney and other parts of the state.

5.1 City architects

The City of Sydney was not the only NSW council to employ a city architect, although it was apparently the first to do so. The first City Surveyor was appointed in 1847, while the first Architect to be appointed was Alfred Bond, in 1873. In 1881 the two positions were combined and Thomas Sapsford was appointed City Architect and City Building Surveyor.

In Newcastle Frederick Abraham Scorer (1907-1966), who studied architecture at Newcastle and Sydney Technical Colleges, became that city's architect in 1935. He became Chief Architect of the Greater Newcastle Council on its formation in 1938. Scorer's Newcastle Municipal Incinerator won the NSW Chapter of the Royal Australian Institute of Architects' Sulman Medal – the first designed by an architect outside of Sydney, the first industrial building and the first to embrace Modernism. Scorer worked for the Commonwealth Department of the Interior from 1943 then after the war worked for Brisbane City Council before setting up his own practice in 1948.[100]



80 Frederick Scorer's Newcastle Municipal Incinerator. It was demolished in 1989.
Source: *Building*, 24 January 1940.

At least one smaller local government area is known to have employed an architect. Frank George Dudley Stone (1905-1984) became shire engineer and health inspector for Stroud Shire Council in 1929. He later became its architect and town planner, registering as an architect in 1932. During World War II he was a commissioned officer at Allied Headquarters in Melbourne, then returned to Stroud after the war as Council's Architect, Engineer and Town Planner. In 1948 he was appointed to the Northumberland County Council. In 1958 he established his own practice.[101]

Henry Edgar Morton (1872-1952) was an assistant building surveyor working for the Melbourne City Council before his appointment to the newly created position of City Architect in June 1907. In this role he supervised all significant building projects of the Melbourne City Council. In October 1915 the Melbourne City Council abolished the positions of City Architect and City Surveyor and amalgamated them into the single position of City Engineer and Building Surveyor. Morton assumed this role. He resigned from the Melbourne City Council at the end of 1927 to take up the position of Commissioner of the City of Sydney (1928–1930) following the dismissal of the incumbent Labor council by the NSW government.

81 James Birrell's Centenary Swimming Pools at Spring Hill.
Source: https://rmitgallery.com/exhibitions/birrell-works-from-the-office-of-james-birrell/

In Brisbane Alfred Herbert Foster (1873-1932), who had worked in England for several years before working for the Queensland Public Works Department, was appointed by Brisbane City Council assistant architect and building surveyor, a newly created post, in 1913. By the last quarter of 1916 he was referred to as City Architect and City Engineer. When the Greater Brisbane Council was formed in 1925, Foster retained his position as City Architect. Foster was granted leave of absence due to ill health in 1931

100 Les Reedman, *Early Architects of the Hunter Region: a hundred years to 1940* (Boraga Academic, second edition 2010), pp.219-220; Metcalf, p.69.
101 Reedman, pp.232-234.

and died six months later.[102] H A Erwood, chief assistant architect, was appointed City Architect in 1933. One of his successors, James Birrell (1928-2019), designed some exemplary buildings that received considerable national and overseas press. He was Chief Architect from 1955 to 1961 and oversaw an extensive range of public building projects, including libraries, swimming pools, car parks, and public toilet blocks. Many have since been altered or demolished. Amongst the most celebrated are the Wickham Terrace carpark (1958-1961), the Centenary Swimming Pools at Spring Hill (1957-59) and the Toowong Library (1961).

5.2 Baby health centres

Purpose-designed baby health centres in Australia were built from the 1920s onwards. In regional NSW the assistance of the Country Women's Association (CWA) allowed baby health centres to open in country towns. They were financed by the State government up to 1930, at which time there were 79 across the state. Funding then passed from state to local level, although the state provided staff. The CWA were building baby health centres as well, sometimes in collaboration with a local council.

By 1941 baby health centres were administered by the Division of Maternal and Baby Welfare for the Department of Public Health. According to NSW Health,

> In 1942, a new interest developed from local government authorities in the establishment and improvement of baby health centres in their districts. This led to the preparation of lists and schedules setting forth the standard requirements for the premises of baby health centres including the appropriate equipment, maintenance and condition of the centres, the local responsibility, if any, and any other relevant data.[103]

The baby health centre at Concord, opened in October 1943, was said to be "the first in the metropolitan area built to a special design for the Health Department by a municipal council."[104] It was the first to demonstrate these new requirements. The building was designed by architect R Lindsay Little (who also designed the baby health centre at Glebe, since demolished), it became the model for subsequent baby health centres. The Concord Council built and appointed the Centre, without any financial aid from the government.[105]

The Commonwealth government published detailed guidelines in 1944, noting that the welfare of mothers as well as infants needed to be considered. There were a number of standard requirements - a waiting room for mothers, babies and toddlers; a room for every nurse at the establishment for consulting with the mother and weighing of the baby; a test-feeding room for instruction in breast-feeding; a kitchenette for sterilising equipment; a nurses change room; and if possible, a doctor's room. The bungalow-like Centre at Concord was presented as a paradigm. Towards the end of World War II, the NSW government began to contribute half of the costs associated with building the centres.

Communities and community groups staged a variety of fund-raising events such as reviews, balls, card nights and mannequin parades while local councils could hold

82 Weighing a baby at a baby health centre, circa 1936.
Source: SLNSW Home and Away – 3915, Sam Hood photograph.

83 The baby health centre at Concord.
Source: Roy Lumby photograph.

84 The baby health centre at Earlwood.
Source: Roy Lumby photographs.

102 "Mr A H Foster", The Brisbane Courier, 24 March 1932, p.15: "Personal", Daily Standard, 25 September 1916, p.6.
103 Various authors, *Our Babies: the States Best Asset. A history of 100 years of child and family health services in NSW*, p.66.
104 "New Baby Clinic", *Sun*, 17 October 1943, p.8.
105 "Concord Baby Health Centre" at https://canadabayheritage.asn.au/concord-baby-health-centre/, accessed 9 August 2023.

money in trust and invest it. Some were built as war memorials. In at least one case several groups were involved. In 1951 the centre at Blackheath was opened, a collaborative effort between Rotary, the Country Women's Association, Department of Health and the local community.

A series of delightful Modernist pavilions was built during the 1950s. A respectable number were designed by the architectural firm of Davey & Brindley, which amongst others designed six baby health centres for Canterbury Council:

- Lakemba, officially opened on 22 November 1947.
- Punchbowl, opened 28 February 1948.
- Earlwood, completed circa 1951.
- Belmore, circa 1951, and Hurlstone Park, circa 1952, both of which have been demolished.
- Campsie, officially opened on 10 December 1954.

The buildings at Lakemba, Earlwood and Belmore are significant because they did double-duty to the community, incorporating both baby health centre and local library. Construction of baby health centres across the state continued during the second half of the 1950s and the 1960s.

85 Mona Vale Baby Health Centre, designed by Clarke Gazzard & partners, 1966.
Source: State Library Victoria Accession No: H91.244/1513Peter Wille photograph.

5.3 Kindergartens and playgrounds

In 1936 the National Health and Medical Research Council was formed to advise on research proposals for health-related topics. In 1937 a motion calling for a review of children's health was passed. It led to the establishment of a model demonstration centre in each of the state capitals and gave an institutional form to preschool education. Lady Gowrie Centres, named after the wife of the Governor-Genera, were established in State capitals. In Sydney one was built close to the Erskineville public housing scheme. The Centres became an influential model and marked shifts in attitude from developmental aid for disadvantaged children to one aiding the psychological and social growth of all children: "What had begun in the early years of the 20th century as a tool for urban social reform aimed at the working class, through national government initiative became a model admired, envied and desired by the middle class."[106]

86 Inside the Lady Gowrie Centre at Erskineville, 1940.
Source: SLNSW ON 388/Box 029/Item 067, Frederick Stanley Grimes photograph.

By the 1960s pre-school kindergartens were becoming a ubiquitous feature of early childhood, an accompaniment to rapid population growth in the post-war era. However, it is not clear how many were financed by the community or, apart from the City of Sydney, how many were funded by local councils. Ryde Council began planning to construct pre-school kindergartens in the mid-1940s. The first was at Eastwood, completed in 1948. Some funding came from the NSW. The Kindergarten Union was one recipient.

87 The kindergarten at Palm Beach designed by Peter Muller,
Source: State Library Victoria ID 1700462, Peter Wille photograph.

Regardless of where funding were designed by prominent designed two kindergartens f and at Wahroonga.[107] The lat entered for the prestigious In

88 Collard Clarke & Jackson's community kindergarten at St Ives.
Source: https://csec.esrc.unimelb.edu.au/image_viewer.htm?CSEC00602,4,2,S,80. David Moore photograph, published in *Cross-section*, September 1962.

garten buildings Eleanor Cullis-Hill i, at Turramurra nd hall and was 56.

An informal Modernist kinder Johnson was constructed cir

nnel Smith & idely published

106 Lewi and Nichols, p.71.
107 Bronwyn Hanna, Absence and Presence: a historiography of early women architects in New South Wales (Doctor of Philosophy theses, Faculty of the Built Environment, University of NSW, 1999), p.281.

kindergarten at Palm Beach. Originally established by community efforts in 1948 and housed in the local surf life saving club, it was relocated on Crown Land. Construction was funded by the community and the building was completed in 1961.[108]

89 The kindergarten at St Ives designed by Collard Clarke & Jackson.
Source: https://www.csec.esrc.unimelb.edu.au/image_viewer.htm?CSEC00602,4, David Moore photograph published in *Cross-section*, September 1962.

In 1960 a public meeting was called to discuss the establishment of a Community Kindergarten in St Ives. The formation of the St Ives Preschool Kindergarten followed and the Ku-ring-gai Municipal Council leased some land in Garrick Road to the newly established association. Intensive fundraising activities were initiated and architects Collard, Clarke and Jackson were commissioned to design a building, completed in 1961. What emerged was described as "A charming innocence that is wholly suitable to the function pervades this rather perfect little pavilion with its exactly square plan, wide veranda [sic], and pyramid roof."[109]

Community and aged welfare centres

Many local communities and local councils built multi-purpose buildings designated Community Centres, essentially flexible halls for the use of residents. Prominent architects could be involved in their design. Construction of community buildings commenced soon after World War II ended and continued into the 1950s and 1960s. For instance, in June 1945, the Willoughby Youth Welfare Committee was formed, and a scheme for a recreational hall was prepared by the Committee's honorary architect Eric Nicholls, formerly a partner in Walter Burley Griffin and Marion Mahony Griffin's practice. The proposed building contained a gymnasium, kindergarten and ancillary spaces and was funded in part by donations Because of a shortage of building materials and funds, the hall as planned was never built, but a modified version was finally approved by Willoughby Council in 1951. Construction of the stage and hall commenced in 1953. The Albert Chowne VC Memorial Hall was officially opened in 1954.[110]

Nicholls was honorary architect for Castlecrag's community centre, which opened in November 1947. It was used by day as a kindergarten, by night for meetings, dances or other purposes and was intended as the nucleus of a group of buildings, the first stage of Castlecrag-East Willoughby Community Centre project.[111] A library opened in an extension the building during 1951, the addition partly financed by Council and partly by the community.

Sometimes local councils could work with the community to provide a much-needed facility. The extraordinary Lilac Time Hall in Goulburn is a special case. It was designed by architects Brown Brewer & Gregory and was officially opened on 11 March 1960. It is associated with Australia's longest running community festival, the annual Lilac Time Festival, which was first staged in October 1952. The Festival's chief fundraising objective was the construction of a community hall, which was primarily designed for dancing and theatrical productions. It's somewhat audacious structure ensured clear open space within the hall and supported the main roof.

90 The Lilac Time Hall in Goulburn.
Source: Goulburn Mulwaree Library reference number 20859.

108 "Palm Beach War Memorial Kindergarten" at https://pbwba.org.au/newsletter-october-2022/, accessed 28 August 2023.
109 "St Ives Preschool Kindergarten" at http://www.stivespreschool.org.au/uploads/8/3/3/9/83397228/information_booklet_2016.pdf, accessed 28 August 2023; Robin Boyd, *The New Architecture* (Croydon, Vic., 1963), p.25.
110 "Chowne Memorial Hall" at https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2660259, accessed 14 August 2023; "The Albert Chowne Memorial Hall", *Construction*, 26 November 1947, p.4.
111 "V.A.D. Annual Parade", *Sydney Morning Herald*, 27 November 1947, p.14.

Although many services for aged welfare were managed and funded by community groups, several councils were active in providing assistance and providing financial support for services such as Meals on Wheels and the construction of welfare centres. Many more aged welfare centres were community endeavours that received subsidies from local government. In recent years, usage of seniors' centres by senior citizens' clubs has generally declined, so that the centres have been used more as multi-purpose facilities for a variety of community and seniors' groups.

91 Woollahra Old People's Welfare Centre as originally constructed.
Source: https://www.csec.esrc.unimelb.edu.au/image_viewer.htm?CSEC01187,David Potts photograph, published *in Cross-section*, November 1960.

Some councils constructed welfare centres for older people in their local communities, although perhaps not to the extent undertaken by the City of Sydney. Occasionally they buildings were visually adventurous. The striking, if architecturally confused, Woollahra Old People's Welfare Centre in Gaden Reserve, Woollahra was designed by Steven Kalmar and officially opened in August 1960. It now houses a seniors and community centre, although its landmark arch has gone. The E J Ward Welfare Centre in Underwood Street, Paddington, was originally a City of Sydney facility that was taken over by Woollahra Council at the end of the 1960s following adjustment of municipal boundaries.

92 The Ku-ring-gai Centre for Seniors at East Lindfield.
Source: Roy Lumby photograph.

Aged Welfare Centres also utilised existing buildings. The Centre at Turramurra was housed in an adapted Federation era house. On the other hand, the Aged Welfare Centre at East Lindfield was purpose-built as part of a deal between Ku-ring -gai Council and a community organisation as part of the development of a large site given over to community purposes. Council resumed the site in 1948. The first building to be constructed was Lindfield Library (1954). A seniors' welfare centre opened nearby in July 1963. This was a collaboration between the Lions Club of Ku-ring-gai and a group called Ku-ring-gai Old People's Welfare Association (KOPWA). KOPWA was founded in 1957 by residents concerned about the needs of the elderly in the Ku-ring-gai community. The founding principle of the KOPWA was the need to house needy elderly in a home type environment and residential units were constructed behind the welfare centre at the same time as it was being built. The housing component was eligible for Commonwealth funding. From the beginning KOPWA was assisted by Ku-ring-gai Council.[112]

5.4 Public housing

Most public housing after World War II in NSW was undertaken by the NSW Housing Commission. The NSW Housing Commission was formed in 1942 to house war workers. As well, The Commonwealth inaugurated the Commonwealth-State Housing Agreement (CSHA) to fund state governments to build and operate public housing. Under the first CSHA (1945-55) the NSW Housing Commission built almost 38,000 dwellings under the first CSHA.[113]

However, some local councils confronted housing after World War II:

> One of the most innovative post-World War II housing schemes operated in the municipality of Ryde. This was the Ryde Council Housing Scheme and consisted of a number of project areas in various suburbs including Denistone West, Meadowbank and Gladesville. ...
>
> The housing shortage that existed before World War II had worsened during the war, due to building restrictions. At the end of the war, as ex-servicemen and

112 Ku-ring-gai Council, *Lindfield Library Site Plan of Management*, December 2014, pp.30-31.
113 Chris Martin, *Public Housing in New South Wales: a brief history* at https://innersydneyvoice.org.au/magazine/public-housing-new-south-wales-brief-history/, accessed 10 August 2023.

women were demobilised, marriage rates increased and so did the need for houses. With federal government funding, the New South Wales Housing Commission embarked on a large-scale program of welfare housing. However, Ryde Council wanted more than welfare housing. Their scheme offered would-be home owners the option of buying houses with small deposits at a low rate of interest, and repayments over a long period. The scheme was distinguished also by its employment of a panel of ten architects and town planners, who were then leaders in their fields.

The scheme provided for the erection by council of 2,500 homes over a five-year period. Each subdivision boasted bitumen-surfaced roads, kerbing and channelling, footpath paving, street beautification and general drainage. Not only was each subdivision planned with attention to the natural contours of the land but roads were designed to reduce traffic speeds and provide safety to residents. The planning of the subdivision was linked with the planning of each house in its own garden setting.

Between 1945 and 1952, 599 houses were built by council and a further 360 were built under a Ryde Loan Scheme.[114]

Stroud Shire Council introduced a short-lived scheme Housing Project in 1947. It was formulated by Council Architect Frank Stone and comprised a range of six low-cost houses that he designed. Applicants preferably owned their own land and paid a 10% deposit. Finance at a low rate of interest was offered by the council.[115]

5.5 Libraries

Many though not all municipal libraries were designed by architects in private practice, who generally provided a high standard of design.

The Library Act of 1939, which only came into effect in 1944, provided the impetus for the establishment of municipal libraries across the state. Grafton Council is thought to be the first to take advantage of the Act and by the end of 1946 some 60 local councils across NSW had followed its lead. In 1948 funding was increased, precipitating a boom in library construction. Thus, the local municipal library is almost exclusively a post war phenomenon.

93 Mayfield Library.
Source: SLNSW Home and Away - 28324

Newcastle provides a striking example of other local government endeavours. The suburban Mayfield Library, approved by Newcastle Council in June 1951 and officially opened by the Minister for Education, Robert Heffron, on 2 October 1953, was the latest in the city's endeavours to provide libraries for its citizens. From 1946 the Council managed to establish a central library a children's library and four branches. The uncompromisingly contemporary building was designed by City Architect D Sutherland in association with City Librarian Mr Miller – Heffron suggested at its opening that it had been described as the most modern in the Commonwealth, while the Newcastle Morning Herald proudly reported that "a world authority on library construction and planning, the Dean of Humanities and Social Science at Massachusetts Institute of Technology (Dr J E Burchard), said the library was equal to anything in the world in design." The new library certainly aroused a great deal of community interest, as about

114 Angela Phippen, "Denistone East" at https://dictionaryofsydney.org/entry/denistone_east#ref-uuid=58be687c-d9a1-3d77-76b1-918f57243b35, accessed 30 August 2023.
115 Reedman, p.233.

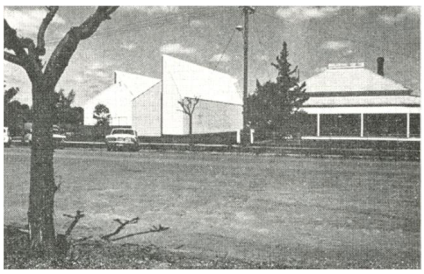
a thousand people crowded nearby footpaths at its opening, and several hundred took the opportunity to inspect the premises after it was opened.

One of the most significant suburban libraries constructed during the 1950s was Davey & Brindley's 1954 building for Ku-ring-gai Council at East Lindfield. Ku-ring-gai Council set up its first library in the Council Chambers at Gordon in 1945, which is claimed to be the first municipal library in NSW set up after the passage of the 1939 NSW Library Act. The council then opened a succession of branch libraries in various suburbs between 1948 and 1968, including purpose designed buildings by architects Ancher, Mortlock, Murray and Woolley at Gordon (1965) and Turramurra (1968).

94 East Lindfield Library.
Source: SLNSW ON 558/Box 19/nos. 176-177, Max Dupain photograph.

The building at East Lindfield was an almost elemental Modernist building - refined, minimalist and visually satisfying. It also proved to be influential - regularly spaced steel columns supporting exposed roof trusses allowed an unobstructed, well-lit space supplemented by separate work and processing rooms, with an inviting, low-key entrance. A wall of west facing glass provided ample natural light and was protected by canted full-height timber louvres across the facade. The example of the East Lindfield Library may have influenced the design of other municipal libraries. Natural light and functional planning were certainly important in many libraries, including those built by the City of Sydney.

Edwards Madigan Torzillo & Briggs' library at Dee Why for Warringah Council broke out of this mould. The library was an innovative, internalised complex with a double height reading room surrounded by galleries naturally lit from above and embellished with a mural by Melbourne artist Tom Sanders. It also experimented with the Sydney School in its massing and use of materials. It was completed in 1966 and was promptly awarded the Sulman Medallion by the Institute of Architects. The same firm continued to explore the potential of Dee Why with its design for the library at Warren, which was completed at the end of the 1960s.



95 Above: Dee Why Library.
Below: Warren Library.
Sources: State Library Victoria Accession No: H91.244/1851; *Cross-section* no 205, December 1969.

As with Lakemba and Earlwood, a number of other libraries were included in buildings that contained other facilities. For instance, Davey & Brindley's Bankstown library included a baby health centre, as did Morrow & Gordon's Burwood Library. Individual buildings could also form the nucleus of bigger civic complexes. For instance, Campsie Baby Health Centre, although an autonomous building, was the first stage of a larger civic centre development, the second stage of which was a library, also designed by Davey & Brindley & Vickery and completed in 1959 and Council Administration Offices designed by Whitehead & Payne and completed in 1963. The 1966 Dee Why Library, designed by Col Madigan and Chris Kringas of Edwards Madigan & Torzillo, preceded council offices designed by the same architects. It fused Sydney School and Brutalist idioms to create monumental concrete forms successfully interfacing with a bushland setting. The prismatic library at Warren (1969) was also the first stage of a civic centre. It too was designed by Col Madigan and Chris Kringas.

5.6 Swimming pools

Local councils, particularly in regional NSW, were beginning to construct swimming pools during the 1920s. By the end of the decade "splendid baths" had been constructed at Lismore, Albury, Singleton, Wellington, Orange and Muswellbrook. These were considered superior to any public baths in Sydney[116]

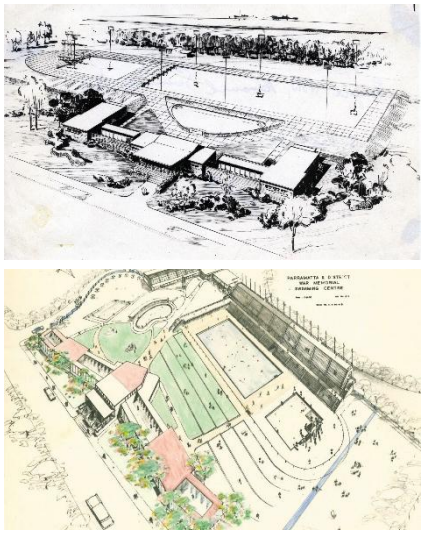
[116] "Swimming Boom in Country", *Glen Innes Examiner*, 2 October 1928, p.2.

The first major push to construct public swimming pools in suburban Sydney (and regional NSW) took place during the 1930s. Funding varied. It could be on a 50/50 basis, half supplied by the local council and half by a state government grant. Some pools were funded by depression unemployment relief schemes, such as the pool at Parkes (1935). In metropolitan Sydney important Olympic-standard pools were constructed to the design of architects Rudder & Grout at Enfield, Granville and North Sydney, which hosted aquatic events during the 3rd British Empire Games of 1938. Councils also funded the construction of bathing pavilions at beaches during the 1930s. And council staff sometimes designed them – one example is the pavilion at North Beach in Wollongong (1938) designed by Harvey Gale, Chief Council Inspector. This tradition continued into the post-war era. Balmoral Baths, an enclosed harbourside pool, was designed by H H Mee, Council's Building Surveyor around 1950.[117]

96 Enfield swimming pool at Henley Park, 1933.
Source: National Library of Australia PIC P838/2175 LOC PIC Album 172, Edward Searle photograph.

The Federal National Fitness Council was established at the end of 1939 to promote physical fitness. It advised the Education Department on implementing physical fitness in school children. In 1944, learning to swim became compulsory for primary school students in NSW. In 1947 the State government released a document entitled Standards for Modern Swimming Pools. These guidelines resulted in uniformity in layout and facilities - change rooms on either side of an entry pavilion with an ideal complement of pools including an Olympic pool, diving pool, children's wading pool, and learner's pool, the last two emphasising the needs of children. Simple modern forms were used, although diving towers could be quite dramatic.

Construction of pools took off immediately after the war. The swimming pool in Crookwell is one early instance. The Crookwell Swimming Club was agitating to have a proper pool constructed as early as 1925 and one was constructed on Kiama Creek during 1930. It clearly became inadequate, as the Shire Council decided to construct a new pool in February 1946, and the Crookwell Baths opened in December 1949. The works were entirely funded by the Shire Council and may well have been designed by Council's engineer. The facility has recently been upgraded and original fabric demolished.



97 Two swimming centres desogned by Figgis & Jefferson: Gosford (above) and Parramatta (below).
Sources: *Cross-section* no 29, March 1955; https://historyandheritage.cityofparramatta.nsw.gov.au/blog/2016/02/19/the-parramatta-and-district-war-memorial-swimming-pool

By 1951 pools were regarded as a necessary community facility and what followed was a boom in pool construction across the state. At least 25 were constructed in the Sydney region between 1953 and 1967, in an arc from the southern to the northern suburbs - as Sydney's population expanded to the west, coastal regions become less accessible to more and more people. Funding came from Councils, although the community raised funds and additional assistance could be provided if the pool became a war memorial. During 1954-1955 alone Bathurst Pool, Canowindra Pool and Griffith Pool all opened. Between 1955 and 1959 swimming centres opened at Gosford, Liverpool, Marrickville, Canterbury and Auburn. Cabramatta pool, which opened in December 1960 and was built by Fairfield Council, featured Olympic, learners, and waders pools and a diving tower, plus dressing facilities, a kiosk, club room and managers residence. There were many others. The architectural firm of Figgis & Jefferson designed a fair number, such as Gosford swimming centre (circa 1955), the Parramatta and District War Memorial Swimming Centre (1959-1960) and the Goulburn War Memorial Pool which was designed around 1964.

There are a couple of swimming pools that stand out for their architectural character. One is the Ruth Everuss Aquatic Centre, formerly Auburn Swimming Centre, completed in 1959. Designed by Frank R Hines in association with Auburn Council's engineer, it

[117] "The New Balmoral Swimming Baths", *Building and Engineering*, September 1950, pp.30—32. It is not certain if the project actually proceeded.

offered comprehensive facilities - male and female pavilions, club rooms, kiosk, manager's flat and spectators' gallery. The entrance lobby was covered by a cantilevered butterfly roof supported off inverted A-frames. The diving tower was even more spectacular.

Another is the Queanbeyan War Memorial Pool, designed by architect Robert Warren and opened on Armistice Day, 1961. A war memorial pool had been suggested as early as 1921, but the local river remained the only option, augmented by dressing sheds and a couple of swimming clubs. A series of drownings prompted action - swimming classes and the formation of the Queanbeyan Floral Festival Committee by townspeople as a fund-raising venture. The committee raised £16,000, local MLA J W Seiffert secured a government grant of £10,000 and service clubs, including Rotary, Lions and Apex, also made important funding contributions.

98 Entry pavilion at Queanbeyan War Memorial Pool.
Source: https://commons.wikimedia.org/w/index.php?title=File:Queanbeyan_War_Mewmorial_Swimming_Pool_located_in_Moore_Park_in_Queanbeyan.jpg&redirect=no

5.7 Parking stations

As with the City of Sydney, other councils erected multi-storey carparks once the volume of motor traffic and the need for parking warranted it. One of the earliest was the six level Whistler Street carpark in Manly, a utilitarian six level reinforced concrete structure built for Manly Council in 1969-1970 and extended in 1973-1974. North Sydney Council constructed its Ridge Street carpark in 1982, followed by other carparks in North Sydney and Crows Nest at the end of the decade.

Woollahra Council constructed the five level Cross Street parking station at Double Bay around 1977. Designed by architect Furio Valich for McConnel Smith & Johnson, its external cladding was apparently based on the Fibonacci sequence, transforming the building into a minor Brutalist style masterpiece.[118]

99 Ridge Street carpark in North Sydney (left); Cross Street Ccarpark, Double Bay (right).
Source: Stanton Library LH REF CT 27/33; https://www.theurbandeveloper.com/articles/fortis-assembly-add-double-bay-development-pipeline.

5.8 Public conveniences

Women's rest centres were a specialised public amenity, although notionally similar to what the Country Women's Association had been providing for some years in regional NSW.

The circa 1948 Children's Library at Chatswood was a little different to most. It shared a building with a women's rest centre. Both facilities closed during the 1970s.

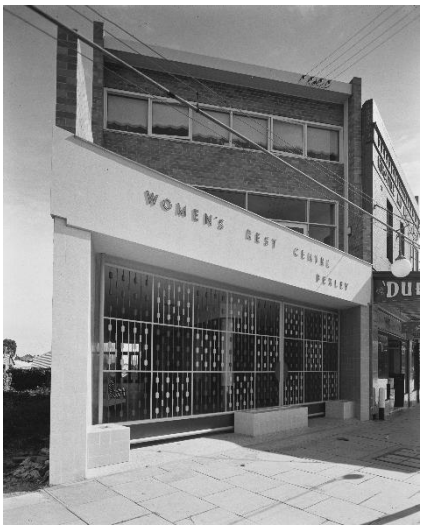
100 The combined children's library and women's rest centre at Chatswood.
Source: Willoughby City Library record number 22170.

In August 1950 the State government pledged half the capital cost of acquiring buildings or constructing and equipping new ones in selected Sydney and country shopping centres but they had to be approved by the Minister for Local Government "as being in accordance with sound town planning principles." The first to be constructed in suburban Sydney was designed by architect Harold Smith in 1953 and located in Bexley shopping centre. It contained a waiting area, meeting room on the first

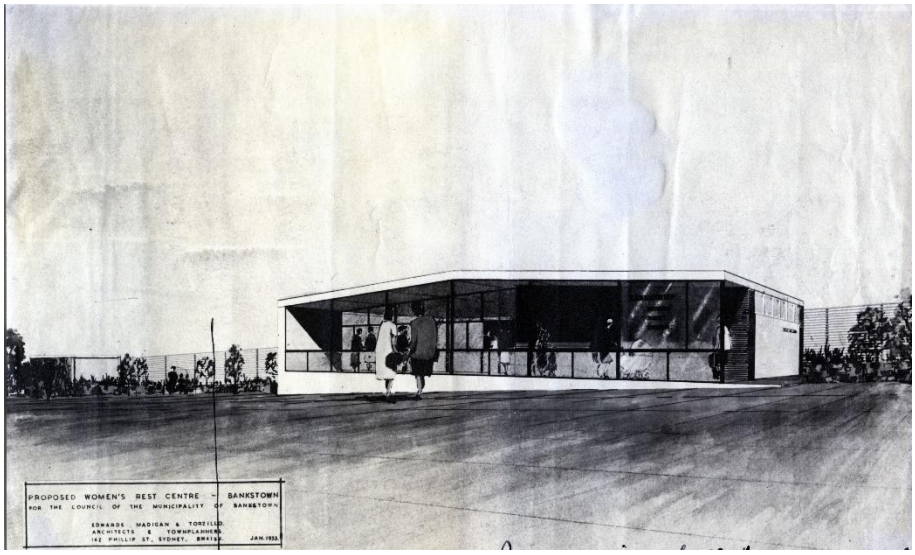
[118] "The Cross Street parking station" at https://mhnsw.au/stories/general/cross-street-parking-station/, accessed 21 August 2023; kmarchitect at https://www.instagram.com/p/CUtgWqllJT9/?img_index=1, accessed 21 August 2023.

floor for women's organisations and a tearoom. The building is understood to be unoccupied. A stylish rest centre for Bankstown was designed by architects Edwards Madigan & Torzillo in 1955. The completed building differed substantially in appearance and has since been demolished.

The women's rest centre at Hornsby (known locally as the CWA Building) was designed by architects Ross Aynsley & Partners. The Modernist building was erected in 1958 to mark the fiftieth anniversary of local government in the shire. It has since been demolished.[119] Other rest centres that are known to have been built during the 1960s were at Lane Cove, Caringbah, Lakemba and Cronulla. The Cronulla facility was demolished in 2017 amidst a great deal of public outcry. So too was the building at Hornsby Similarly, the rest centre at Campbelltown, designed by Davey Brindley & Vickery as the and opening in March 1969 as the third building in the civic centre complex, was demolished in 2013.[120]



102 Bexley Women's Rest Centre. Source: SLNSW ON 558/Box 2/nos. 620-625 Max Dupain photograph.



103 Above: the proposed womens rest centre at Bankstown designed by Edwards Madigan & Torzillo, 1955. Below: Davey Brindley & Vickery's women's rest centre at Campbelltown, 1969. Sources: Cross-section, June 1955; http://campbelltown-library.blogspot.com/2019/07/the-womens-rest-centre.html

5.9 Air raid shelters

As with the City of Sydney, other local councils are on record as having constructed air raid shelters. Woollahra Council's engineer designed a generic air raid shelter, which was constructed by Council staff.[121] Holroyd Council constructed a shelter in its council chamber yard. Newcastle Council built a variety of shelters in public parks, which included pillboxes, Anderson type shelters and trenches.

119 Heritage CWA Building to be demolished" at https://architectureau.com/articles/heritage-cwa-building-to-be-demolished/, accessed 14 August 2023.
120 Samantha Stevenson, "The Women's Rest Centre" at http://campbelltown-library.blogspot.com/2019/07/the-womens-rest-centre.html, accessed 14 August 2023.
121 "Air Raid Shelter", *The Sun*, 15 December 1941, p.3.

Shelters were constructed in school grounds, even in regional NSW where volunteer labour constructed them. Slit trenches in some localities such as Blackheath were constructed by local council.

5.10 Recreational

Music shells

Several music shells were constructed in other local government areas. The music shells that have been located during research were designed by architects in private practice and constructed after World War II. Perhaps the exemplar of post war music shells was built in Melbourne. The Sidney Myer Music Bowl was an innovative tensile structure completed in 1959. It is listed on the Victorian Heritage Register.

104 The music shell in St Leonards Park, 1948.
Source: Roy Lumby photograph.

There was favourable discussion concerning the construction of music shells in numerous local government areas in metropolitan Sydney and other parts of the state, but proposals did not always eventuate. Of those that were constructed, perhaps the finest was the music shell at St Leonards Park in North Sydney. Designed by architects Peddle Thorp & Walker, it was completed in 1948. Its dramatic roof sheltering the stage is embellished by relief sculpture. The structure remains in use with occasional musical performances. The band practice room and storage areas at the rear of the shell house now house community activities.

Music shells were constructed in Newcastle. One was completed in Civic Park, in 1951. It was preceded by a temporary shell in King Edward Park, which had been erected a couple of years earlier. What appears to have been a temporary shell was built in Cooper Park at Bellevue Hill. Woollahra Council agreed to construct an auditorium in 1931; by the mid-1940s photographic evidence indicates that a temporary structure had been built. Discussions continued after World War II ended. A proposal for a music shell not unlike the Hollywood Bowl was publicised during 1951, its construction dependent on a loan from the NSW Government. Evidently it remained unrealised. but not built. A concrete music shell was constructed in Hurstville Park in 1957 to the design of architect Denis Moulen. It replaced a temporary structure that was extant by the 1940s. The music shell was in turn demolished during 1984.

105 Cooma music shell, 1959.
Source: Roy Lumby photograph.

The music Shell in Centennial Park, Cooma, was designed by the prominent architectural firm Fowell Mansfield & Maclurcan and completed in 1959. It remains an important feature of the Park. The same cannot be said for the distinctive music shell in Mawson Park, Campbelltown. In 1956 the Fisher's Ghost Festival and Miss Spirit contest raised funds to build a music shell in Mawson Park dedicated to the memory of those who served in World War II. It was finally built in 1964. However, the structure was demolished in 1991 and replaced by the present War Memorial.

106 Hurstville music shell, circa 1956.
Source: Georges River Libraries Local Studies Collection reference number LMG16-032.

Draughts players shelters

Research undertaken during the preparation of this report uncovered relatively little evidence of draughts players' shelters being constructed in other parts of NSW or other parts of the country.

Petersham Council did accommodate draughts players when during 1936 it constructed a giant draughts board in Petersham Park, claimed to be the first in Australia and predating the draughts garden in Hyde Park by several decades. Between 1960 and 1963, Marrickville Council undertook a program of works that included construction of a shelter shed with draughts tables. A similar outdoor draughts board was constructed in Hamilton, an inner suburb of Newcastle, in 1937.

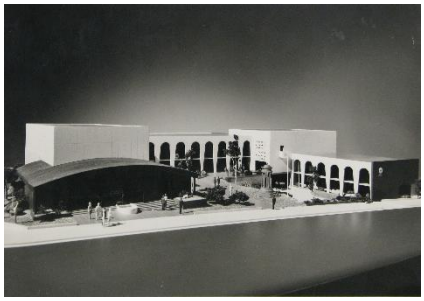
Further afield, by the end of 1938 Melbourne City Council had built four shelters in several Melbourne Parks [122] During the 1930s Hobart City Council provided tables for players and Launceston Council erected a shelter.

In 1948 it was suggested that provision be made for a draughts shelter in a proposed building to house the Albury Museum, then under consideration by the Albury City Council. It was evidently the latest instalment in ongoing discussions concerning amenities for draughts players. [123]

107 The giant draughts board in Petersham Park, photographed in May 1938.
Source: SLNSW ON 388/Box 033/Item 111.

5.11 Civic centres

One typology not constructed by the City of Sydney was the civic centre. The concept of civic or community centres emerged during the 1940s. During the 1920s and 1930s town halls, the focal point of local government, evolved to accommodate public functions. In the 1940s the notion of the civic centre embraced an orientation towards family life. Plans for civic centres were conceived as "a collection of facilities for the community, with the majority of spaces reserved for cultural and educational activities."[124] Those civic centres that were built in NSW were somewhat different. For instance, the civic centre at Campsie was initiated by a baby health centre (1954), followed by a library and then council offices. East Maitland Neighbourhood Centre included a municipal building, library, baby health centre and electricity and gas showrooms. Bankstown Civic Centre comprised a library, town hall and a detached circular council chamber. Ryde Civic Centre consisted of municipal offices, a library and a public hall. And further afield, Cowra Civic Centre consisted of a single administrative building including council offices and chambers, a library, exhibition space and a multi-purpose hall.



109 Model of Drummoyne Civic Centre, 1967.
Source: City of Canada Bay Local Studies Collection record number 422308.

Not all were the result of council endeavours. For instance, in 1950 the Riverstone Civic Centre Co-operative was formed by local citizens to raise funds so that community facilities in the area could be improved. One of the principal objectives was an Olympic standard swimming pool. In the early 1950s the Co-operative bought several parcels of land to build a swimming pool, bowling club and civic centre. After examining the costs and returns, they decided to build a bowling club first. Fundraising events were staged, and the bowling club was formed in November 1952. Initially occupying a building transported to the site, a new clubhouse designed by architect Kevin Curtin was completed in 1965. Riverstone Swimming Pool opened in December 1962.[125]

108 Coffs Harbour Civic Centre, 1964.
Source: Coffs Harbour Regional Museum accession number M2021.61.130, Arnold Forsyth photograph.

Newcastle established a civic group in the post-war period, known as the War Memorial Cultural Centre. The first building was a library and art gallery designed by a consortium of local architects and completed in 1957. A purpose-built regional gallery, the first in the country, was officially opened by Her Majesty Queen Elizabeth II in March 1977. It was designed by Newcastle City Council's architect Brian Pile.[126]

5.12 Parks and gardens

Unlike the City of Sydney, local councils did not engage qualified landscape architects during the 1950s and 1960s. They all had parks and gardens departments with horticulturalists and looked after parks in-house. Engineers prepared plans for the parks

122 Rambler, "Draughts in the Park", *The Age*, 3 December 1938, p.30.
123 "Shelter for Draughts Players", *Border Morning Mail*, 3 April 1948, p.2.
124 Lewi and Nicholls, pp.180-182.
125 "The Riverstone Swimming Pool" at https://www.riverstonehistoricalsociety.org.au/blog/?page_id=548, accessed 9 August 2023. The pool soon became inadequate and the local council was lobbied for a new pool.
126 Newcastle Art Gallery. History at https://nag.org.au/about/history, accessed 26 September 2023.

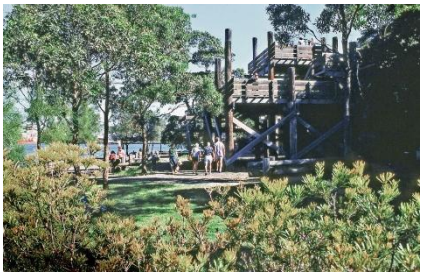
and horticulturists filled in the plantings. Qualified landscape architects did not enter many councils' employ until graduates began emerging from the University of NSW's degree course in landscape architecture, established in 1974.

In 1969 Lane Cove Council was the first to engage a qualified professional, architect Harry Howard. Although Howard had no qualifications in landscape architecture, he had experience in the integration of architecture and landscape that included the site design and landscape development of many schools. He grew up playing with his brothers in bush gullies around Gordon and Turramurra. He was one of a highly talented group which included architects and landscape designers who were committed to creating an inspired response to the Sydney landscape and was a foundation member of the Australian Institute of Landscape Architects, a seminal moment in the establishment of the profession of landscape architecture in Australia in 1966. Howard consulted to Lane Cove Council until 1993.[127]

Leichhardt Council engaged prominent landscape architect Bruce McKenzie to consult on two major and seminal projects during the 1970s – Iloura Reserve (Peacock Point) at Balmain and Yurulbin Reserve (Long Nose Point) at Birchgrove. Other councils took longer to employ qualified landscape architects, waiting until the 1980s. They were originally employed as part of the engineer's department.[128]

The first chief landscape architect appointed in Canberra took place in 1963 with the engagement of Harry Oakman. He headed the National Capital Development Commission's newly formed Landscape Division, which covered the entire range of landscape works in the nation's capital. Oakman (1906-2002) was born Henry Octave Cyril Vereecke in Belgium. He emigrated to Australia in 1914 and first worked on farms in rural New South Wales, then worked in flower nurseries at Pennant Hills. In his 20s he worked in parks for Ku-ring-gai Council. Oakman was Head Gardener, Department of Parks, for Newcastle City Council from 1940 to 1946, and was Manager of Parks and Gardens for the Brisbane City Council from 1946 to 1963. He retired in 1972.[129]

110 Harry Howard's significant contribution to landscape design and its implementation in Lane Cove is interpreted by this signage and a bushwalk.
Source: https://inthecove.com.au/2021/07/03/lane-cove-north-bushwalk-stringybark-creek-reserve/



127 Barbara Buchanan, Modernism Meets the Australian Bush: Harry Howard and the 'Sydney Bush School' of landscape architecture, PhD thesis, Faculty of Built Environment, University of NSW, 2009.
128 Information from Matthew Taylor.
129 "Oakman, Harry (1906-2002), Council of Heads of Australasian Herbaria Australian National Herbarium Biographical Notes at https://www.anbg.gov.au/biography/oakman-harry.html, accessed 31 August 2023; Ken Taylor, *Canberra: city in the landscape* (Halstead Press and the National Capital Authority, 2007), p.122.

5.13 Conclusions

Based on comparative evidence, the City of Sydney is unique in several ways.

The City of Sydney was the first local council to engage an in-house architect, in 1873. It was not until 1907 that one was engaged by Melbourne City Council, followed by Brisbane circa 1916 and Newcastle in 1935. The City of Sydney was also the first to employ an in-house qualified landscape architect, in 1951. In NSW Lane Cove Council was next, engaging Harry Howard as its long-term landscape consultant. It was not until the first graduates emerged from the University of NSW school of landscape architecture that landscape architects established a greater presence in local government instrumentalities.

111 A section of Illoura Reserve. This timber deck was an original component of the landscaping at the Reserve.
Source: https://architectureau.com/articles/bruce-mackenzie-design-with-landscape/#img-4

Although the buildings associated with community welfare and well being such as libraries, kindergartens, baby health centres and aged welfare and community centres were constructed in local government areas across the state., they were generally designed by independent architects and many were the result of community endeavours and fund-raising. Buildings of outstanding quality were produced, such as the libraries and baby health centres designed by Davey & Brindley in the 1950s and kindergartens designed by Peter Muller, Eleanor Cullis-Hill and Collard Clarke & Jackson. The baby health centre at Concord, designed by R Lindsay Little became the model for subsequent baby health centres in NSW. Apart from buildings designed by architects permanently employed by councils or employed as project consultants, relatively few buildings were designed by council employees (generally engineers or building inspectors). Examples include Mayfield Library in Newcastle and Canowindra swimming pool.

The City of Sydney is unique because of the large number of buildings of different typologies it constructed to serve the needs of its residents, demonstrating a relatively high level of social awareness (and perhaps political calculation on the part of councillors). These included building types not associated with local councils such as bowling clubhouses and draughts shelters.

6 Summary of recommendations

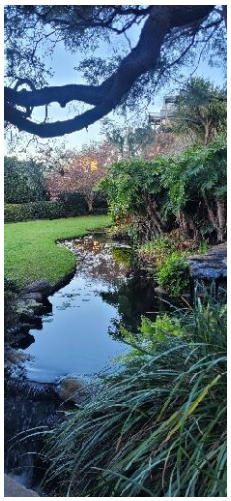
There is some difficulty in attributing projects directly to Albert Smillie and Ilmar Berzins because their role changed as they received promotions upwards through Council's hierarchies.

The following 13 items have been recommended for listing, as defined by the scope of this project brief to identify 10 items. The selected items are considered to be the most intact and aesthetically interesting examples of their type. Other items may also to meet the threshold for inclusion in the LEP, but require further research and assessment, and as such are outside the scope of this study.

It is recommended that the contributions of Ilmar Berzins and Albert Smillie is included in listed items where their contribution is known but not acknowledged or significance assessed. Listings should be updated to reflect the importance of their contributions.

The following items are recommended for consideration for inclusion in Sydney LEP 2012, based on research undertaken to date and levels of integrity. Some items were superintended by Ilmar Berzins or Albert Smillie and therefore under their jurisdiction, if not designed by them.

Items associated with Ilmar Berzins

Item	Comments	Image
McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay (1952)	Intent of planting has been retained, significant stone retaining walls, sandstone in good order. Recommended for listing because of its historic significance as a major early project designed by Ilmar Berzins, demonstrating his approach to landscape design shortly after joining the City of Sydney. It is an important early post World War II landscaping project undertaken by the City of Sydney. The McElhone Reserve has a high level of aesthetic significance and is relatively intact. The Reserve has social significance, demonstrated by its popularity as a passive recreational area by residents and visitors to the locality.	
Sandringham Gardens, Hyde Park North, south-eastern corner near Park Street (1952, 1954)	High level of integrity. Recommended for listing because of its historic associations with the commemoration of King George V and VI and the visit to Sydney of Queen Elizabeth II in 1954. The Sandringham Gardens have high aesthetic significance and are representative of formal landscape design in the post World War II era. Apart from their associations with Ilmar Berzins, the Sandringham Gardens feature significant work by sculptor Lyndon Dadswell and Dr Henry Epstein, a notable émigré architect.	
Darlington Aged Welfare Centre (now Darlington Activity Club), 132-134 Shepherd Street at Ivy Street, Darlington (1959)	Four trees retained from original Ilmar Berzins planting scheme: Queensland Black Pine (*Primnopitys amara*), London Plane tree (*Platanus orientalis*), Chinese Tallowwood (*Sapium seberiferum*) and Jacaranda (*Jacaranda mimosifolia*). Shrub plantings have been replaced. Recommended for listing as a representative and relatively intact aged welfare centre building designed in the City Architect's office that still serves its original function. It is also significant for the original surviving trees specified by Berzins, which are evidence of his evolving approach to landscape design. The site demonstrates the relationship of landscape and architectural design at the end of the 1950s and early 1960s.	

Item	Comments	Image
Quarry Street Ultimo (circa 1980)	Brick paving and some planting intact: River Oak (*Casuarina cunninghamiana*), Paper Bark (*Melaleuca quinqenervia*) some changes to species, urban furniture (bins, seats). Berzins' signature on drawings appears under Director of Parks. Recommended for listing on the basis of its aesthetic significance as a late twentieth century open park space designed by Council. which retains a high level of integrity. The landscaping demonstrates the evolution of approach to landscape design and is representative of 1970s landscape design. It has retained a relatively high level of integrity.	
Ulster Street, Paddington (1974)	Raised brick garden beds with timber seating attached. Brick paving in grid pattern. Detailing of seating and raised garden beds similar to Fitzroy Gardens. High integrity. Berzins' signature on drawings appears under Chief Technical Officer. Recommended for listing on the basis of its aesthetic significance as a late twentieth century urban domain designed by Council. which retains a high level of integrity. The landscaping demonstrates the evolution of approach to landscape design and is representative of 1970s landscape design. It has retained a high level of integrity.	

Items associated with Albert Smille

Item	Comments	Image
Former Baby Health Centre,12A Dadley Street, Alexandria (1964)	The building, which has an unusual form, is relatively intact. Landscaping has been extensively modified in the late 1980s with Black Locust (*Robinia Pseuduoacacia*) and other plantings of the time (*Lomandra longfolia* etc); later metal fence. One tree remains from the original planting scheme - Common Hackberry (*Celtis occidentalis*). Now a community care centre. Became a home and Community Care centre circa 2002. The Australian Unity Home Care Centre – Alleena Aboriginal Services. Recommended for listing on the basis of its aesthetic and historic significance. The first baby health centre in NSW opened on Henderson Road Alexandria in 1914. This building opened some 50 years later and continued to provide services to the local community until the early 21st century. It is an unusual example of a baby health centre designed by the City Architect, which has a distinctive external expression and was unusually planned around a central court (since removed). The building is likely to have social significance.	
Former Joseph Sargent Children's Centre, 60 Prospect Street, Erskineville (1956)	High level of integrity externally and internally (https://news.cityofsydney.nsw.gov.au/articles/joseph-sargeant-community-centre-upgrade). Now used as a community centre. Recommended for listing on the basis of its aesthetic and historic value as a children's activity centre designed by the City Architect, which retains a high level of integrity and continues to be used for community purposes. The building is a good representative example of post war Modernist architecture and is sited as an integral component of the adjacent playground space. It is likely to have social significance.	

Item	Comments	Image
Former Baby Health Centre, 87 Lower Fort Street, The Rocks (1952)	Early post World War II baby health centre designed by the City Architect. Original roofing and some windows replaced. Overall building form and other external fabric is intact. Adjacent to original building that served as the baby health centre at Millers Point (85 Lower Fort Street) and thought to have replaced a circa 1930s addition to that building. Still used for community purposes – Older Women's Network. Recommended for listing on the basis of its aesthetic, historic and social significance, as a rare early post-war baby health centre designed by the City Architect. It is evidence of the City of Sydney's contribution to an important community health service. There is the potential to incorporate the building into a group listing with the Abraham Mott Hall and the Harry Jensen Welfare Centre (1959) at 17 Argyle Street, Miller's Point.	
Children's Playgroup Centre, 2 Phelps Street, Surry Hills (1954)	Site resumed by Council for a playground in 1926. Named the John J Carroll Playground since 1953. Now KU John J Carroll Preschool. Combination of playground and shelter. The exterior of the building appears to be intact. The integrity of its interior requires investigation. Recommended for listing on the basis of its aesthetic, social and historic significance. The building is a good representative example of a Modernist style kindergarten building designed by the City Architect. It is still serving its original purpose.	
Former Catherine Sloss Library, 130 Dowling Street, Woolloomooloo (1963).	Further investigation required as to the building's interior and its context of other surviving post-war libraries designed by the City of Sydney. The library closed in 1988. Now houses a Baptist Care Hope Street counselling service. Recommended for listing on the basis of its potential rarity as a post-war library designed and constructed by the City of Sydney. Of some aesthetic significance for its external design. May have social significance.	
Victoria Park Pool, City Road, Camperdown (1954)	Rare example of a public swimming pool constructed by the City of Sydney, which has retained a relatively large amount of original fabric and site planning. Recommended for listing on the basis of its historic and aesthetic significance as a fine and rare swimming pool complex designed by the City Architect, which retains a substantial amount of its original fabric and planning. Likely to be of social significance.	

Item	Comments	Image
Pyrmont Housing Scheme, 1-7 Henry Avenue, Pyrmont (1960)	Rare example of walk-up public housing designed and constructed by the City of Sydney. The building exterior has a high level of integrity. Built component of what appears to have been a larger scheme. Recommended for listing on the basis of its historic and aesthetic significance as a fine and rare example of public housing designed by the City Architect. It is representative of smaller flat blocks erected for public housing in the post World War II era. Planting around the building suggests high level of resident esteem and potential social significance.	
Alexandria-Erskineville Bowling Club House, 1 Fox Avenue, Erskineville (1957).	Potentially rare surviving example of a bowling club house designed by the City Architect. Representative of this building typology. The integrity of the building requires further investigation. Recommended for listing on the basis of its aesthetic and historic significance, as a representative and rare example of bowling club houses designed by the City Architect. Should the listing be approved, it should include the bowling greens as part of the setting and curtilage of the club house.	
Hilda Booler Kindergarten, Jubilee Park, Eglinton Road, Glebe (1965)	Kindergarten located in a park setting that is still fulfilling its original function. Recommended for listing as a fine and representative example of a kindergarten designed by the City Architect which has aesthetic significance as an example of vernacular scaled Modernist architecture. The building appears to have retained a high level of integrity, but this needs to be confirmed. It may have social significance.	
Ron Williams Community Centre, 5-11 Kepos Street, Redfern (1966)	Designed as an aged welfare centre, one of several initiated by the City of Sydney. Appears to have retained a relatively high level of integrity. Now used by the Ron Williams Community Centre. Recommended for listing as a rare and representative example of an aged welfare centre designed by the City Architect which has some aesthetic significance as an example of vernacular scaled Modernist architecture.	

Item	Comments	Image
Waterloo Park Draughts Shelter (1958)	A rare surviving draughts shelter designed by the City Architect. It is notable for its distinctives structure, setting it apart from the more conventional structures of other shelters, most if not all of which have been demolished. Recommended for listing as a surviving example of a building typology pioneered by the City of Sydney and for its aesthetic, technical and historic importance. It has rarity value.	
Phillip Park Cleansing Depot, 17 Riley Street, Woolloomooloo (circa 1947)	Air raid shelter (1942) subsequently modified and building enlarged. Investigation of interior required. Prominent streetscape element with dichromatic brickwork and dominant horizontal emphasis.. Recommended for listing on the basis of its aesthetic and historic significance, as a fine and representative example of utilitarian council building designed by the City Architect in the Inter War Functionalist style. It is likely to have been designed by Albert Smillie.	

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Appendix A List of projects

7.1 Works of Albert Smillie

The following tabulated analysis lists all the known works of Albert Smillie during his time as an architect at the City of Sydney Council, including projects completed during his time as City Architect. It provides the year of design/construction, extant status, integrity, current heritage protections and recommendations for each item. It is limited to projects which are known to have been built and includes those which have since been demolished.

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Aged Welfare Centres						
Darlington Aged Welfare Centre (now Darlington Activity Club), 132-134 Shepherd St, Darlington	1959	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C10 Darling Nursery Estate	Recommended for listing.	Council Plan 2832 Note Garden scheme originally designed by Berzins.
Welfare Centre for Aged Persons (now Ron Williams Activity Club), 5-11 Kepos Street, Redfern	1965	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C53 Baptist Street	Recommended for listing.	Council Plan 2988, BA2475/65
Gordon Ibbett Aged Welfare Centre, 75-77 Kellick St Waterloo	1958	Extant	Appears somewhat intact externally, with enclosure to western side and painting to brickwork.	In HCA C70 Waterloo	Recommended for further investigation.	Council Plan 2800
Anthony Doherty Community Centre, Crown Street, Surry Hills	1956	Demolished	—	—	—	
Tom Foster Welfare Centre, 11-13 Darley Street, Newtown (now Inner West LGA)	1963	Extant	Out of scope	Out of scope	Now in Inner West LGA.	Council Plan 2880
Mary McDonald Welfare Centre, 49 McElhone Street, Woolloomooloo	1960	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C71 Woolloomooloo	Recommended for further investigation.	Council Plan 2875
Baby Health Centres						
Baby Health Centre (now Pine Street Creative Art Centre), 62-64 Pine Street, Camperdown	1946	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C10 Darling Nursery Estate	Recommended for further investigation.	Council Plan 2001, 2672
Baby Health Centre (now Alleena Home Care), 12 Dadley St Alexandria	1964	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C3 Kingsclear	Recommended for listing.	Council Plan 2794
Baby Health Centre (now Older Women Network Inc), 85 Lower Fort Street	1952	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C35 Millers Point Technically covered by curtilage of local heritage item *'Terrace house 'Argyle House' (85 Lower Fort Street) Item Number I948'* but values of this building and later history not included.	Recommended for listing (or update to existing listing).	Council Plan 2424
Hyde Park Women's Amenities and Baby Health Care Centre	1954	Demolished	—	—	—	Council Plan 2364
Baby Health Centre at 103-105 Quarry Street, Ultimo	1948	Demolished	—	—	—	Council Plan 2012
Children / Play Group Centres						
Children's Play Group Centre (now KU John J Carroll Preschool), 2 Phelps St, Surry Hills	Circa 1951	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C60 Moore Park	Recommended for listing.	Council Plan 2109 Town Clerk correspondence re borrowing funds 4627B/46 Playground gone?
Joseph Sargeant Children's Centre (now Joseph Sargeant Community Centre), 60 Prospect St, Erskineville.	1956	Extant	Appears largely intact externally. Interiors not inspected but original balustrade to music room within is visible from street.. Colour scheme – original?	In HCA C26 Toogood & White's Estate	Recommended for listing.	Council Plan 2392
Rushcutters's Bay Park Kindergarten Building	1952	Extant	Appears largely intact externally. Interiors not inspected. Less architecturally interesting than other examples.	In HCA C20 Elizabeth and Rushcutters Bay Covered by Rushcutters Bay Park SHR listing #02041 but values of this building and later history not included.	Recommended for further investigation.	Council Plan 2175

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Hilda Booler Kindergarten, Jubilee Park, Eglinton Road, Glebe	1965	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C34 Toxeth Covered by Jubilee Park local heritage item I648, but values of this building and later history not included.	Recommended for listing (or update to existing listing).	
Kindergarten at Lander Street, Darlington	1954	Demolished	—	—	—	
Libraries						
Catherine Sloss Library (now Hope St Baptist Care Centre), 130 Dowling Street, Woolloomooloo	1962	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C71 Woolloomooloo	Recommended for listing.	Not Smillie? 1 x Plan signed FA Cavalier Council Plan 2948 Enquire about 1962/018, 2741/62
Library, Baby Health Centre and Public Conveniences (later known as Florence Bartley Library), 50 Macleay St, Kings Cross	1958	Demolished	—	—	—	Council Plan 2651
Branch Library, Crown and Collins Street, Surry Hills	C1956	Demolished	—	—	—	Council Plan 2575
Council Housing						
Council Housing Development, 1-7 Henry Avenue Pyrmont	1958	Extant	Appears largely intact externally. Still public housing. Interiors not inspected.	In HCA C69 Ultimo	Recommended for listing.	Council Plan 2797
Council Housing Development (John Byrne Court), St Johns Road, Glebe	1959	Extant	Appears largely intact externally. Some of the building is no longer public housing. Interiors not inspected.	In HCA C32 St Phillips	Recommended for further investigation.	Council Plan 2771 Note Garden scheme by Berzins.
Council Housing Development (Joanna Odea), Pyrmont Bridge Road, Camperdown.	1959	Extant	Appears largely intact externally. Still public housing. Interiors not inspected.	No coverage.	Recommended for further investigation.	Council Plan 2778 Note Garden scheme by Berzins.
Council Housing Development, 262 Wilson Lane, Redfern	1963	Demolished	—	—	—	Council Plan 2960
Miscellaneous structures						
Circular Quay Balustrades with Seahorse Motif	C1939	Extant	Intact may be to final design by Smillie	Listed as part of SHR Item No. 01572 and as a s170 item, 'Cast iron railings, palisade fence and gate posts.'	—	Council Plan 1657
Wattle St & Broadway Toilet Block	1950	Extant	Appears largely externally intact in form but openings have been bricked closed.	No coverage.	Not recommended for listing.	Council Plan 2296 Bricked up openings 1950/0985
Beare Park Toilet Block	1959	Extant	Recently upgraded by Sam Crawford Architects (modified)	In HCA C20 Elizabeth and Rushcutters Bay	Not recommended for listing.	Recently upgraded by Sam Crawford Architects (modified) Council Plan 2799
St James Train Station Toilet Block and extension (now Café), Hyde Park	1946	Extant	Modified for use as café.	'Amenities block' is listed as part of local Item No. #I1740.	—	Council Plan 2016
Argyle Place Park Draught Shelter	N.D.	Demolished	—	—	—	Council Plan 2673
Waterloo Park Draughts Shelter	1958	Extant	Appears largely intact.	Covered by curtilage of local item Waterloo Park I2079. No reference to Draughts Shelter and not included as a structure of noted significance.	Recommended for listing (or update to existing listing).	Council Plan 2797
Parks						
Circular Quay Park (First Fleet Park)	1939	Extant	General layout of the park including circular garden bed are extant, though intersecting paths have been removed and park layout changed substantially.	Within Sydney Cove West Archaeological Precinct, SHR 01860.	Not recommended for listing.	Council Plan 1653
Fitzroy Gardens	1961	Extant	Substantially modified in recent years including with recent playground upgrade. Retains elements of its general planning and landscape design – related more to Berzins that Smillie. All Smillie related structures and inputs were either never built or have been demolished.	Listed as a local heritage item (Gardens). El Alamein Fountain within as a local and state item. In HCA C51 Potts Point.	—	Council Plans 1624, 1679, 2407, 2604, 2725, 2873.

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Park buildings, playgrounds						
Playground and Field House Building, Bowling Club, Public Hall (attached to Club), Camperdown Park.	Playground building (1941) and field house extension (1961), Bowling Club (1955) and Public Hall (1963)	Extant	Bowling Club and Public Hall are largely externally intact, cohesive and legible as two similar elements. Playground and Field House appear somewhat intact but read as two disparate buildings stuck onto one another.	In HCA C32 Camperdown Park. Camperdown Park local listing (Landscape item). Its described values relate to its landscape and not to the built form on its fringes which was designed under the City Architect.	Recommended for further investigation.	Council Plan 1753, 2274, 2774 (Playground), 2589 (Bowling Club), 2935 (Public Hall)
Bowling Club (Alexandria Erskineville), Erskineville Oval	1957	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C22 Erskineville Estate	Recommended for listing.	Council Plan 2710
Alexandria Park Dressing Shed	N.D.	Demolished	—	—	—	Council Plan 3037
Belmore Park Staff Amenities Building	N.D.	Demolished	—	—	—	Council Plan 2255
Hyde Park Wartime Recreation Building	1940	Demolished	—	—	—	Council Plan 1709
John Birt Memorial Park Playground Building	1943	Demolished	—	—	—	Council Plan 1947
King George V Memorial Park Playground Building	1936	Demolished	—	—	—	Council Plan 1409
Moore Park Pavilion/Dressing Rooms	1937	Demolished	—	—	—	Council Plan 1509
Moore Park detached dressing shed	1963	Demolished	—	—	—	Council Plan 2925
Moore Park Drinking Fountain and Dog Trough (Jessie Broomfield)	1941	Demolished	—	—	—	Council Plan 1735
Moore Park Toilets x3	Various	Demolished	—	—	—	Council Plans 2168, 2469, 2545
Prince Alfred Park Coronation Playground Building	1938	Extant	Appears largely intact externally. Interiors not inspected.	‘Coronation Recreation centre’ listed as part of local item no. #I1406	—	Council Plan 1577
Redfern Oval Grandstand	1957	Demolished	—	—	—	Council Plan 2660
Redfern Park Toilets	ND	Demolished	—	—	—	Council Plan 2465
Rest Park Glebe Toilets	ND	Demolished	—	—	—	Council Plan 2494
Rushcutters’s Bay Caretaker’s Cottage	c1938	Demolished	—	—	—	Council Plan 2169
Trumper Park Toilets	1954	Demolished	—	—	—	Council Plan 2476
Trumper Park Bowling Club House	1959	Demolished	—	—	—	Council Plan 2679
Information Centres						
Martin Place Civic Information Centre	1959	Demolished	—	—	—	Council Plan 2709
Swimming Pools						
Prince Alfred Park	1958	Extant	Has been progressively modified over time.	Included as part of local item no. #I1406, graded as intrusive.	Recommended for further investigation.	Council Plan 2623
Victoria Park	1953	Extant	Has been progressively modified over time.	Included as part of SHR item no. #01974 which considers social value of the pool only.	Recommended for listing (or update to existing listing)	Council Plan 2089

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Parks Depots						
Philip Park Cleansing Depot and Air Raid Shelter	1942	Extant	Appears largely intact externally. Interiors not inspected.	In HCA C71 Woolloomooloo	Recommended for listing.	Council Plans 1904 and 2081
Beaconsfield Park Parks Depot, William St Alexandria	1955	Extant	Appears relatively intact externally. Interiors not inspected.	No coverage.	Recommended for further investigation.	Council Plan 2614
Engineering Depot, Gerard Street Alexandria	TBC	Extant	Appears relatively intact externally. Interiors not inspected.	In HCA C1 Alexandria Park.	Recommended for further investigation.	Council Plan 2329
Wattle and Fig Streets Depot	Various	Extant	Abandoned site, buildings falling apart.	No coverage.	Not recommended for listing.	Council Plan 1583, 1504, 2144
Bourke Street Maintenance Depot Surry Hills	TBC	Demolished	—	—	—	Council Plan 2714
Cleansing and Maintenance Depot, Bourke Street Waterloo	1952 + 1958	Demolished	—	—	—	Council Plan 2449, 2815 and 2656
Brougham Lane sub-depot	1941	Demolished	—	—	—	Council Plan 1766
Forsyth St Depot Glebe	1952	Demolished	—	—	—	Council Plan 2482
Hollis Park Parks Depot Newtown	1955	Demolished	—	—	—	Council Plan 2565
Marian St Redfern Parks Depot	1953	Demolished	—	—	—	Council Plan 2425
Oatley Rd Paddington Parks Depot	1960	Demolished	—	—	—	Council Plan 2834
Parking Stations						
The Domain Parking Station	1956-58	Extant	Appears largely intact externally. Interior space not inspected. Moving walkway was upgraded in 1990s.	Excluded from curtilage of The Domain local heritage item. Covered by The Royal Botanic Gardens and Domain SHR item 01070.	Recommended for further consideration. Recommended for listing as part of Modern Movement study.	Original Station plan not found, BA 1956/2068 Moving Walkway Council Plan 2786
Goulburn Street Parking Station	1960	Extant	Appears largely intact externally when viewed from Goulburn Street, though the bee-hive style external screens have been removed from all remaining elevations compromising the original intent. Interior space not inspected.	No coverage.	Not recommended for listing.	Council Plan 2870

7.2 Works of Ilmar Berzins

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Anzac House Gardens		Non extant	—	—	—	Archives record ID No. A-00493969
Baby Health Centre (now Alleena Home Care), 12 Dadley St Alexandria	1964	Non extant	Extensively modified in the late 1980s with Black Locust *Robinia Pseuduoacacia* and other plantings of the time (Lomandra longfolia etc) metal fence. One tree remains from original planting scheme, Common Hackberry *Celtis occidentalis*	In HCA C3 Kingsclear	—	Archives record ID No. A-00494067
Beare Park	1955	Non extant	Extensively modified Jane Irwin Landscape Architect 2000s toilet facilities with green roof. Pond on file does not exist	—	—	Archives record ID No. A-00494926
Camperdown Park	1953	Extant	Proposed new oval, replaced existing oval	Locally listed item under inner west LEP (I942) & own heritage conservation area (C32).	Not recommended for listing.	Archives record ID No. A-00493812
Circular Quay	1971	Non extant	Replaced with quay paving and public domain works for 1988 bicentenary.	—	—	Archives record ID No. A-00494042
Devonshire Street Housing Development	1954	Non extant	New building footprints and changes to park	—	—	Archives record ID No. A-00493891
Erskineville Housing Development	1955	Extant	Bowling greens, tennis courts now removed. Plan has no tree species noted, evidence of new plantings of the 1970s	In HCA C22 Erskineville Estate/	Not recommended for listing.	Archives record ID No. A-00493892
Fitzroy Gardens	undated		Sketch of El Alamein Fountain (not built)	—	—	Archives record ID No. A-00493974
Hyde Park Sandringham Garden	1954	Extant	Sandringham Gardens, High integrity.	TBC	Recommended for listing.	Archives record ID No. A-00493860-67.
Ivy and Shepherd Streets, Darlington Aged Welfare Centre (now Darlington Activity Club), 132-134 Shepherd St, Darlington	1959	Extant	Four trees retained from original scheme, Queensland Black Pine, *Primnopitys amara,* London Plane tree, Platanus orientalis, Chinese Tallowwood *Sapium seberiferum* and Jacaranda. *Jacaranda mimosifolia* Shrub plantings replaced.	In HCA C10 Darling Nursery Estate	Recommended for listing.	Archives record ID No. A-00494021
James Cahill Kindergarten, Waterloo	1955	Non extant	Extensive remodelling of playground area	—	—	Archives record ID No. A-00493846
Kepos Street Redfern Playground	1952	Non extant	Park has been extensively remodelled with new play area, walls, trees	—	—	Archives record ID No. A-00493868
Macleay Reserve	1974	Non extant	Pre-existing Moreton Bay Figs *Ficus macrophylla* noted as retained, all lawn under trees.	—	—	Archives record ID No. A-00493837
McElhone Reserve	1952	Extant	Intent of planting retaining, retaining walls, sandstone in good order	Listed as part of Elizabeth Bay House and grounds (LEP #I594). Values don't address the reserve.	Recommended for listing.	Archives record ID No. A-00493802, 08, 10.
Moore Park	1961	Non extant	Water and planting feature for the Sydney Trades Fair, Chelmsford Avenue	—	—	Archives record ID No. A-00493942
Perry Park	1961	Non extant	Substantial remodelling of the park, no features noted extant, possibly not built?	—	—	Archives record ID No. A-00493799-800.
Phillip Park	1960	Non extant	Roads realigned and renamed circa 1988 with Cook and Phillip Park Pool.	—	—	Archives record ID No. A-00493964-68.
Prince Alfred Park		Non extant	Detailed planting plan with Kentia *Howea Forsteriana* Palms	—	—	Archives record ID No. A-00493933
Pyrmont Bridge Road Housing development (Joanna O'Dea Court)	1961	Non extant	Detail planting and landscape feature removed.	—	—	Archives record ID No. A-00494047
Quarry Street Ultimo	Circa 1980	Extant	Brick paving and some planting intact, River Oak *Casuarina cunninghamiana*, Paper Bark *Melaleuca quinqenervia* some changes to species, urban furniture (bins seats)	In HCA Ultimo C69.	Recommended for listing.	Archives record ID No. A-00494139
Springfield Avenue, Kings Cross	1983	Non extant	Replaced by civic works post 2000	—	—	Archives record ID No. A-00494134
Sydney Hospital Macquarie Street	1968	Extant	Not clear that the fountain is working, stone base retained	Included as part of Sydney Hospital group (LEP No. I1865)	—	Archives record ID No. A-00494073
Sydney Showground	1961	Non extant	Re landscaped with palms and plantings	—	—	Archives record ID No. A-00494059
Town Hall rear yard	1964	Non extant	Possibly temporary path and plantings, timber garden walls. Replaced by Town Hall extension	—	—	Archives record ID No. A-00493834
Ulster Street, Paddington	1974	Extant	Raised brick garden beds with timber seating attached. Brick paving in grid pattern. Detailing of seating and raised garden beds similar to Fitzroy Gardens. High integrity	In HCA C48 Paddington South.	Recommended for listing.	Archives record ID No. A-00494106-07.
Victoria Park	1953	Non extant	Proposed horticultural planting to around lake. Lake and surrounds have been extensively remodelled since 2010?	—	—	Archives record ID No. A-00493826.

Project	Year	Status	Integrity	Listed	Recommendation	Notes/Source
Vine Street, Redfern	1952	Non extant	Extensively remodelled, no planting on 1952 plan remains.	—	—	Archives record ID No. A-00493889
Wynyard Park	1966	Non extant	Extensively remodelled, no planting on 1952 plan remains with the exception of the existing trees noted.	—	—	Archives record ID No. A-00493940
Young Lane, Redfern	1954	Non extant	Extensively remodelled, no planting on 1954 plan remains.	—	—	Archives record ID No. A-00493905-06.

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Attachment C

TKD Heritage Assessment – 12A Dadley Street, Alexandria

Former Baby Health Centre
12A Dadley Street, Alexandria

Heritage assessment

TKDArchitects
Tanner Kibble Denton

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
Alexandria Baby Health Centre, July 1964 (City of Sydney Archives)

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Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL	
P2	7 October 2025	Draft issue	RL	
A	16 December 2025	Final issue	RL	GP
B	20 January 2026	Revised final issue	RL	GP

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6	Conclusions	23

1 Aerial location image (top) and aerial detail image of 12A Dadley Street, Alexandria
Source: Nearmap with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of the former baby health centre at 12A Dadley Street, Alexandria. The property was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects and Taylor Brammer Landscape Architects, October 2023). It is located in the Kingsclear Heritage Conservation Area (C3).

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, *Assessing Heritage Significance* (2023),

1.2 Site description

The subject site is bounded by Dadley Street to the west, Renwick Street to the south and Allen Lane to the east. A three-storey block of flats is located to the north of the site, which is a residential neighbourhood of terrace houses and apartment blocks. The Jack Shuttleworth Reserve is located opposite the site on the southern side of Renwick Street. Beyond it is the Cliff Noble Community Centre.

12A Dadley Street is presently used for community purposes. The site is identified as Lots 6 and 7 Section A Deposited Plan 2307.

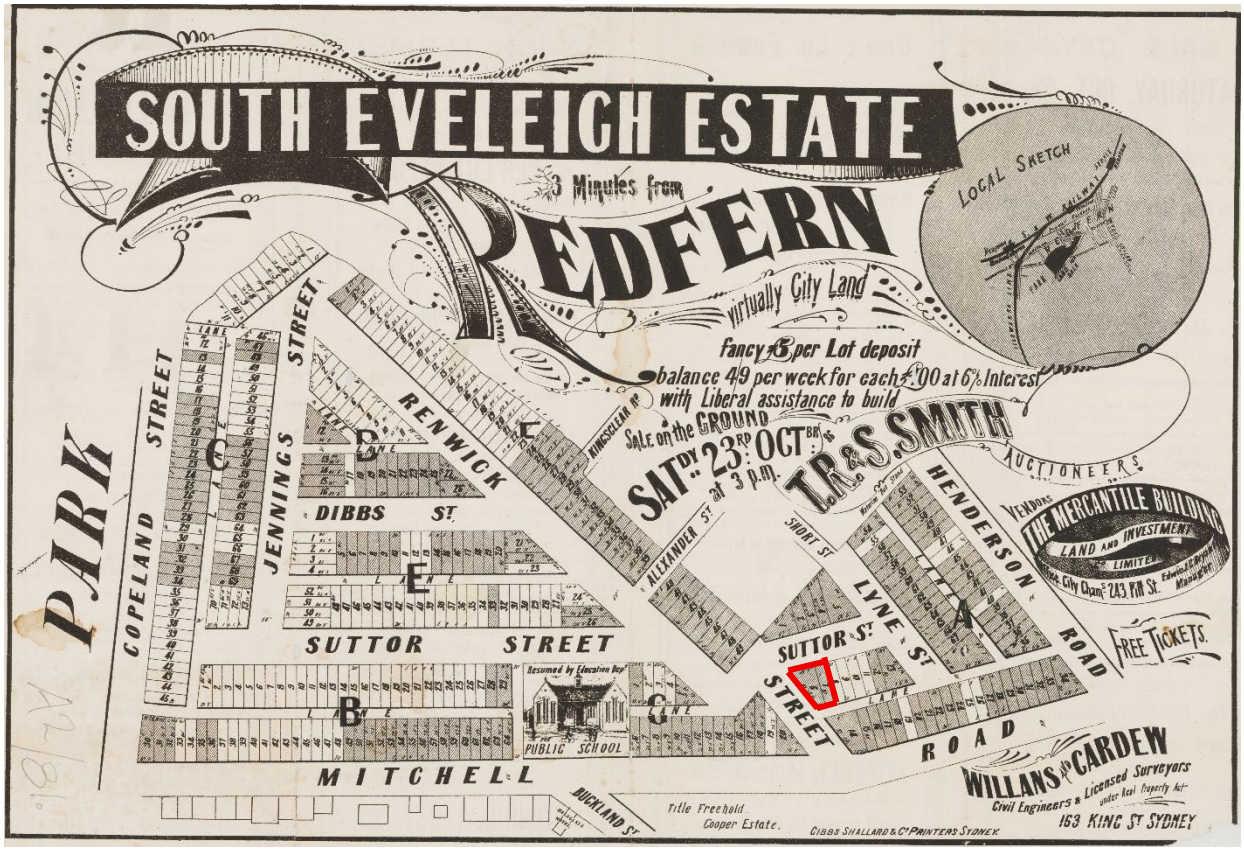
2 12A Dadley Street, Alexandria in 2023.

2 Historical overview

2.1 Site history

The site of 12A Dadley Street occupies part of 566.5 hectares (1400 acres) of land granted to emancipated convict, public servant and landowner William Hutchinson (1772-1846) in May 1823.

In July 1886 some 8.9 hectares (22 acres) were acquired by the Mercantile Building Land and Investment Company Limited. [1] The land was brought onto Torrens Title[2], subdivided and offered for sale in 1886. The subject site is a part of the Company's South Eveleigh Estate.



3 Auction notice for the sale of allotments in the South Eveleigh Estate dated 23 October 1886. The subject site is outlined in red. Source: State Library of NSW Z/SP/A2?81.

On 7 February 1906 the title to Lots 6 and 7 in Section A of the subdivision (along with Lots 14 to 18 in Section A) was transferred to accountant George Thompson .[3] Lots 6 and 7 were bounded by what was then called Suttor Street, Renwick Street and a lane. Suttor Street was renamed Dadley Street in 1917. Henry George Dadley (1868-1929) worked for the NSW Public Service in the Resumed Properties Department as a foreman and plasterer. He served as an alderman on Alexandria Council between 1908 and 1919, representing the Council's West Ward.

1 HLRV NSW Old Systems Title Book 343 Number 814.
2 HLRV NSW Primary Application 7576.
3 HLRV NSW Volume1529 Folio160.

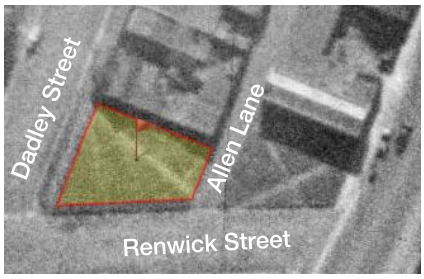
Evidence provided by *Sands Sydney and suburban directory* indicates that Lots 6 and 7 remained undeveloped when Thompson sold them to clerical worker Richard Henry Harris in 1922. The transfer of title took place on 29 November.[4] Harris immediately transferred the property title to the Board of Water Supply and Sewerage, which retained possession of it until 1938. In March that year the title was transferred to contractor Herbert John Nichols, who sold it the following month to John Patrick Matthews and Kathleen O'Riordan, described on title documents as toilet manufacturers.[5] Lots 6 and 7 were subsequently purchased by a company called Service Springs Pty Limited early in 1944.[6]

Alexandria Council was amalgamated with the Municipal Council of Sydney in 1948. A decision was made to acquire Lots 6 and 7 for the purposes of a children's playground in the second half of 1951 and the purchase of the land from Service Springs Pty Limited was finalised on 24 January 1952, when the transfer of title took place. [7] In 1963 the Council's Parks and Recreations Department suggested replacing the existing early baby health centre, established in 1914, with a new building on the playground site.

2.2 Baby health centres in Alexandria

In 1914 Labor politician Frederick Flowers became the state's new health minister. That same year he held a conference, bringing together the Alice Rawson School for Mothers, the Sydney District Nursing Association, and numerous government departments. The Alice Rawson School for Mothers was named after the daughter of Sir Harry Rawson, governor of NSW between 1902 and 1909. It was founded in 1908 by the National Council of Women as a subsidised voluntary agency servicing the working-class suburbs of Newtown, Darlinghurst and Alexandria. In 1914 it and the Sydney District Nursing Association were combined under the Baby Clinic Board. The conference ended with a commitment to establish baby clinics throughout the city – the first would be in Alexandria, an industrial working-class suburb.[8] Alexandria Baby Clinic was opened by Frederick Flowers and inaugurated on 24 August 1914 in rented premises at 22 Henderson Road. The movement expanded rapidly and by September 1919 there were twenty-eight baby clinics in various parts of New South Wales.

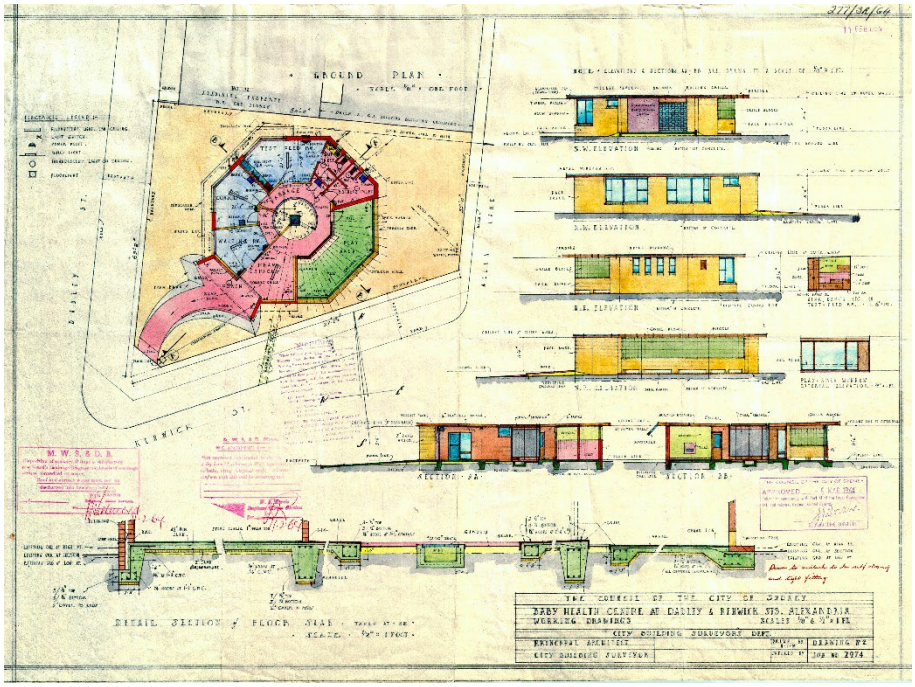
Following the recommendations of the Parks and Recreations Department in 1963, plans of a new building were prepared by the City Architect. Drawings are signed by Albert Smillie. The plans were approved by Council on 5 March 1964, and the tender of building contractors Drake & Vine was approved on 23 March 1964. Construction commenced on 7 April 1964. The works were completed and approved on 30 July 1964.



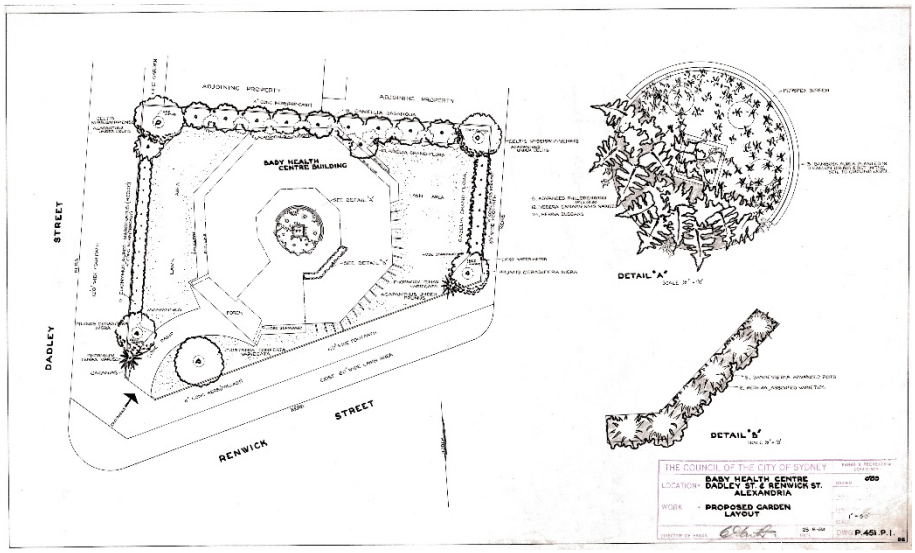
4 Site of the former Baby Health Centre, 1943. The site is outlined and shaded. Source: SIX Maps with TKD Architects overlay.

5 The newly opened baby health clinic at 22 Henderson Road, Alexandria, in 1914. The building is understood to still exist. Source: Museums of History NSW State Archives CollectionNRS-4873-1-[2/8567.5]-2/8567.5

4 HLRV NSW Volume 1678 Folio182.
5 HLRV NSW Volume 3403 Folio 18.
6 HLRV NSW Volume 4938 Folios 118 and 119.
7 HLRV NSW Volume 5424 Folio 112.
8 Brad Gillespie, "The history of the Alexandria Baby Health Centre" at https://bradgillespie.com.au/the-history-of-the-alexandria-baby-health-clinic/ accessed 5 June 2025.



6 Council-approved drawings of the new Alexandria baby health centre. The drawing is dated 11 February 1964.
Source: City of Sydney Archives Unique ID A-00545975.



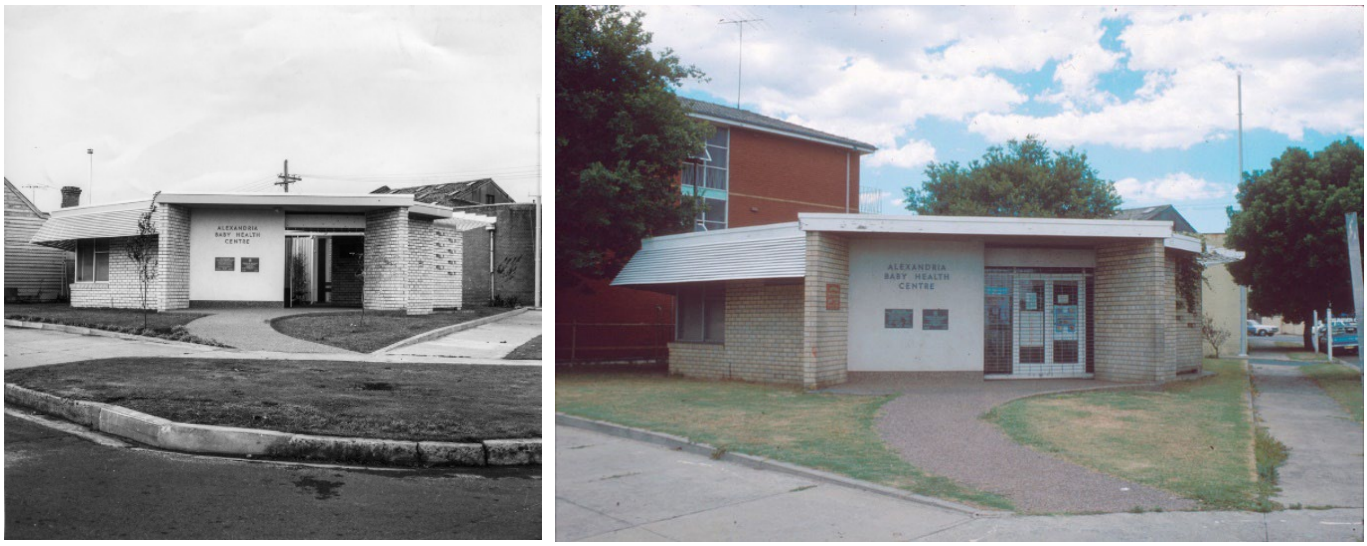
7 1964 drawing describing proposed landscaping at 12A Dadley Street, which included the open court in the centre of the building.
Source: City of Sydney Archives Unique ID A-01200709.

8 At the official opening of the Alexandria Baby Health Centre on 31 July 1964.
Source: State Library of NSW Government Printing Office 2 – 30341 and Government Printing Office 2 – 30342.

The octagonal building incorporated features to be found in many baby health centres across the state - an area to park prams, a waiting room, consulting room, test fed room and lavatories, along with a screened play space on the eastern side of the building. A small central circular garden court was surrounded by an internal access corridor connecting all of the spaces.

As with baby health centres generally, the Alexandria baby health centre was staffed and controlled by the NSW Department of Health, while the building was maintained by the City

Council. However, by 1970 the baby health centre only operated on Friday. The Redfern Crisis Clinic applied to use the building from Monday to Thursday each week.[9] However, by 1976 it was back to two days a week for infant health. A contract to undertake renovations to the building was signed on 17 July 1981 but the scope of works has not been ascertained. However, at some point of time the play area became a meeting room.

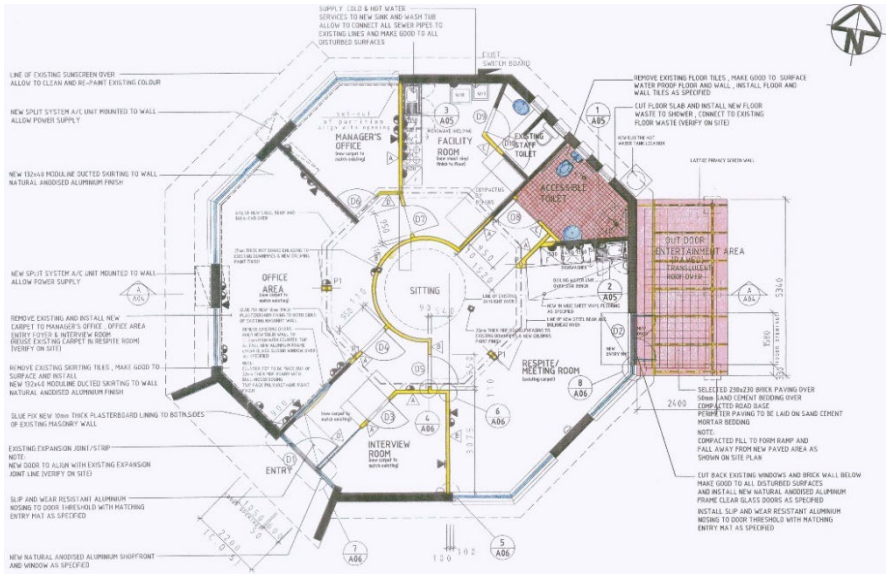


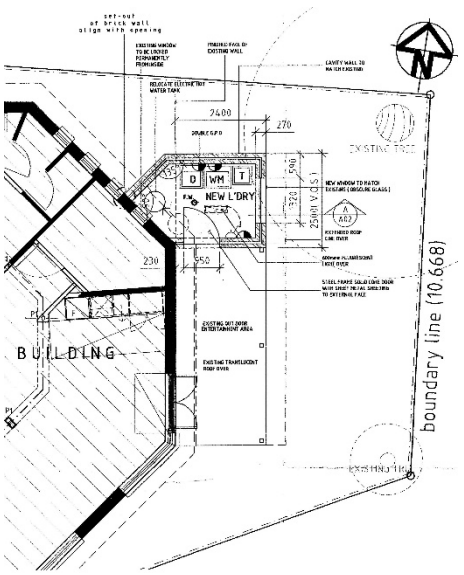
9 The Alexandria Baby Health centre photographed in July 1964 (left) and 1981 (right). Little had been done to the exterior of the building in this period. Landscaping is conspicuously absent, as is fencing around the site.
Source: City of Sydney Archives Unique ID A-00010293 and Unique ID A-00021506.

The property title was transferred to South Sydney Council Around the beginning of 1991.[10] This followed the establishment of South Sydney Council at the instigation of the State government in 1989. The City Council ad South Sydney Council merged in 2004 following redistribution of municipal boundaries so that the building came once again under the jurisdiction of the City of Sydney.

During 2002 and 2003 plans were lodged with South Sydney Council to modify the building for home and community care (HACC) facilities. Documented by architects Woodhouse & Danks, the works involved extensive internal demolition and modifications to some windows, along with a laundry addition at the rear of the building, pergola on the eastern side of the building and landscaping works. The adaptation was intended to assist frail elderly people and people with disabilities to live independently in their own home. The following year the same architects documented a laundry addition at the rear of the building. The facility was known as Alleena, a First Nations aged care establishment understood to have been conducted under the auspices of Australian Unity Aboriginal Home Care from 2015.

9 City of Sydney Archives Unique ID A-00460772.
10 HLRV NSW Certificate of Title Volume 5424 Folio 112.





10 Portions of drawings prepared in the office of Woodhouse & Danks describing modifications to 12A Dadley Street in 2002 (left) and 2003 (right). Source: City of Sydney Archives Unique ID A-

It has not been ascertained when the building ceased use as an aged care establishment. However, a development application was lodged by the City of Sydney in May 2025 seeking consent for ongoing community use at 12A Dadley Street.[11]

11 Development Application D/2025/468.

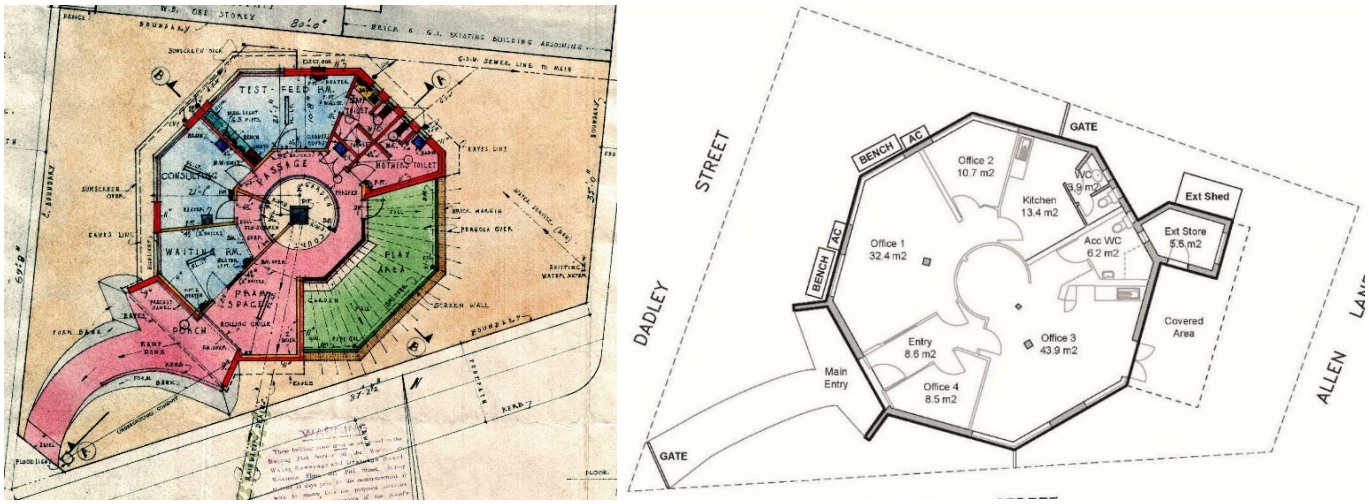
3 Physical evidence

The former baby health centre at 12A Daldey Street is a single storey brick building with a shallow pitched roof covered by metal decking. The building is octagonal in plan. An oculus over what was intended as a garden court in the centre of the building has been covered by a translucent dome. Original plans indiicate it may have been covered by a flat sheet of perspex, although this is not clear. In any case, the dome was in place prior to 2002. The building has aluminium framed windws, the majority of which replaced earlier metal framed windows in the early 2000s. Metal canopies shade windows in the western half of the building.

There is chainwire fencing along the Renwick and Dadley Street boundary and a portion of the Renwick Street boundary. The drawings prepared in 2002 indicate that this fencing had been installed prior to this. Brush fencing has been installed along part of the Renwick Street boundary and along the Allen Lane boundary, providing privacy to open space in this section of the site.

Although the interior of the building has not been inspected, comparison with the approved drawings prepared by the City Building Surveyor's Department in 1964 and an existing plan of the building reveals that the interior has been extensively modified to accommodate ongoing and changing uses.

11 Detail of a photograph taken in 1964 . The oculus in the centre of the building can be seen through the main entrance and appears to have been open to the sky. Source: City of Sydney Archives Unique ID A- 00010291.



12 The approved plan of the Alexandria Baby Health Centre, 1964 (left) and a recent drawing of the plan of the exisitng plan (right). Although some original walls appear to have been retained, spaces have been reconfigured, the circular central court has been incorporated intooffice space, space occupied by lavatories has been reduced and the laundry added to the building in 2003 has been converted to storage space. Most of these changes were made in the first half of the 2000s.
Sources: City of Sydney Archives Unique ID A-00545975; 12A Dadley Street Plan of Management, 21 May 2025, p.10.

13 Looking south along Dadley Street towards the former baby health centre.

14 Main entrance to the former baby health centre viewed from Dadley Street.

15 Looking north-east along Renwick Street to the former baby health centre.

16 Western side of the building, showing the lightweight metal awnings installed to shade windows and details of fenestration. on this side of the building.

17 General view of the western side of the building.

18 Looking along the side of the building facing Allen Street. Brush fencing encloses the yard at the rear of the site.

19 Pergola and laundry (at right) facing Allen Lane.

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20 Rear of the building viewed from Allen Lane, adjacent to the northern site boundary.

21 Commemorative plaques at the main entrance to the building associated with the official opening of the building in 1964 and the golden jubilee of the first baby health centre in Alexandria, which opened in 1914.

4 Comparative analysis

4.1 Albert Smillie

Albert Smillie was born Albert Alexander Smellie, the son of Alexander and Lillie M Smellie of Balmain South, on 13 March 1904.[12] The family appears to have been of Scottish extraction.[13] Smellie joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924. On 29 April 1926 he registered as an architect with the Board of Architects of New South Wales.[14] He subsequently became an Associate of the Royal Australian Institute of Architects, established in 1930. In July 1927 Albert Smellie changed his name via deed poll to Albert Alexander Smillie.[15] About three years later he married Ivy Hazel Martin.[16] A son was born to the couple in March 1932.[17]

22 Albert Alexander Smillie. The photograph was taken during the 1950s.
Source: City of Sydney Archives Unique ID A-00016548.

In 1928 the commissioners who replaced the sacked Labor Council amalgamated the City Architect and Building Surveyor's Department with three others. They became the City Engineering and Building Surveyor's Department headed by engineer A H Garnsey. The City Architect lost the status of head of department. In 1936 the Department was split in two, and the City Architect and Building Surveyor's Department was re-created. In 1948 the title 'City Architect' was dropped from the department's name and it became the City Building Surveyor's Department. John Rankin was appointed City Building Surveyor in 1936, remaining in the role until 1963. In July 1936 Smillie applied unsuccessfully for the position of City Building Surveyor but by the following September 1936 he had been promoted to the position of architectural assistant and from around this time his name appears on numerous drawings prepared in the Council's architectural department as Architect. On 29 November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch.

In 1950 Albert Smillie and City Building Surveyor John Rankin were sent to Great Britain, Europe and the United States to study trends in building control and modern building methods relating to civic infrastructure. They travelled to England, Scotland, Sweden, Denmark, Holland, Belgium, France, Switzerland, Italy, America and Canada, and were away from June to November 1950.[18] In June 1953 Smillie became the Council's Principal Architect. As the Chief Architect, and later Principal Architect, Smillie signed off on all the building plans but was not necessarily the designer of the buildings work. According to Edward John Merewether, a member of Smillie's architectural team in the post-war period, "The bosses were mainly one hundred per cent keeping the Department going, dealing with the Council and that sort of thing. They signed the drawings, but I don't ever remember any design criteria. I think most blokes were left to do what they wanted to do."[19] Albert Smillie retired at the beginning of 1969. He died in March 1986, aged 82.

12 Birth registration number 10127/1904, accessed at https://familyhistory.bdm.nsw.gov.au/lifelink/familyhistory/search/result?4.
13 "Obituary", *Williamstown Chronicle*, 28 June 1924, p.2.
14 AIA
15 Government Gazette of the State of New South Wales, 'Private Advertisements,' Fri 29 Jul 1927 [Issue No.101], Page 3815.
16 5904/1930
17 "Family Notices", *Sydney Morning Herald*, 24 March 1932, p.10.
18 City of Sydney Archives File 2339/50 Building Projects Visit of City Building Surveyor and Chief Architect Overseas 1950; "Tour plan for Council men," *Daily Telegraph*, 9 May 1950, Page 11.
19 Biography supplied by City of Sydney - Interview transcript with Edward John Merewether, Trim 2019/007226

4.2 Overview of baby health centres in NSW

Following the pioneering establishment of baby health centres during the second decade of the twentieth century, purpose-designed baby health centres in Australia were built from the 1920s onwards. In regional NSW the assistance of the Country Women's Association (CWA) allowed baby health centres to open in country towns. They were financed by the State government up to 1930, at which time there were 79 across the state. Funding then passed from state to local level, although the state provided staff. The CWA was building baby health centres as well, sometimes in collaboration with a local council. By 1946, 138 of the 175 baby health centres operating in NSW had been established by the CWA.

By 1941 baby health centres were administered by the Division of Maternal and Baby Welfare for the Department of Public Health. According to NSW Health,

> In 1942, a new interest developed from local government authorities in the establishment and improvement of baby health centres in their districts. This led to the preparation of lists and schedules setting forth the standard requirements for the premises of baby health centres including the appropriate equipment, maintenance and condition of the centres, the local responsibility, if any, and any other relevant data.[20]

The baby health centre at Concord, opened in October 1943, was said to be "the first in the metropolitan area built to a special design for the Health Department by a municipal council."[21] It was the first to demonstrate these new requirements. The building was designed by architect R Lindsay Little, who was responsible for seven baby health centres during the 1940s. Concord Council built and appointed the Centre, without any financial aid from the government[22] and it became the model for subsequent baby health centres. The following year Strathfield Council acquired a site at 52 Redmyre Road and financed construction of a baby health centre designed by prominent architects D T Morrow & Gordon. Both buildings are extant but serving different purposes.

23 The baby health centre at Concord. Source: Roy Lumby photograph.

The Commonwealth government published detailed guidelines in 1944, noting that the welfare of mothers as well as infants needed to be considered. There were a number of standard requirements - a waiting room for mothers, babies and toddlers; a room for every nurse at the establishment for consulting with the mother and weighing the baby; a test-feeding room for instruction in breast-feeding; a kitchenette for sterilising equipment; a nurses' change room; and if possible, a doctor's room. The bungalow-like Centre at Concord was presented as a paradigm. Towards the end of World War II, the NSW government began to contribute half of the costs associated with building the centres.

Communities and community groups staged a variety of fund-raising events such as reviews, balls, card nights and mannequin parades while local councils could hold money in trust and invest it. Some baby health centres were built as war memorials. In at least one case several groups were involved. In 1951 the centre at Blackheath was opened, a collaborative effort between Rotary, the Country Women's Association, Department of Health and the local community.

20 Various authors, *Our Babies: the States Best Asset. A history of 100 years of child and family health services in NSW*, p.66.
21 "New Baby Clinic", *Sun*, 17 October 1943, p.8.
22 "Concord Baby Health Centre" at https://canadabayheritage.asn.au/concord-baby-health-centre/, accessed 9 August 2023.

A series of Modernist pavilions was built during the 1950s through to the 1970s across the state. During the 1950s a respectable number were designed by the architectural firm of Davey & Brindley, which amongst others designed six baby health centres for Canterbury Council:

- Lakemba, officially opened on 22 November 1947.
- Punchbowl, opened 28 February 1948. The building is disused and derelict.
- Earlwood, completed circa 1952.
- Belmore, circa 1951, and Hurlstone Park, circa 1952, both of which have been demolished.
- Campsie, officially opened on 10 December 1954.

24 Left: Davey & Brindley's plan of the baby health centre at Earlwood.
Right: the Earlwood baby health centre abuts the local library.
Source of plan: *Architecture,* October-December 1952,

The buildings at Lakemba, Earlwood and Belmore are significant because they formed part of small groups of civic amenities, incorporating both baby health centre and local library. In some cases, baby health centres were incorporated into comprehensive civic centres containing Council offices, a library and the baby health centre, such as the group of buildings in Campsie. Another locality where the baby health centre was part of a larger group of community buildings is at St Marys, where council chambers were constructed in 1933. The council chambers were augmented by the construction of a community hall (the Memorial Hall) in 1961 and stylish Modernist baby health centre in 1962, which contained a test feed room, consulting room, staff room, waiting room, pram park at its entrance, a play area and lavatories. The group of buildings has since been repurposed as St Marys Corner Community and Cultural Precinct, which was opened in May 2010. The baby health centre has been repurposed as the St Marys Arts and Crafts Studios.

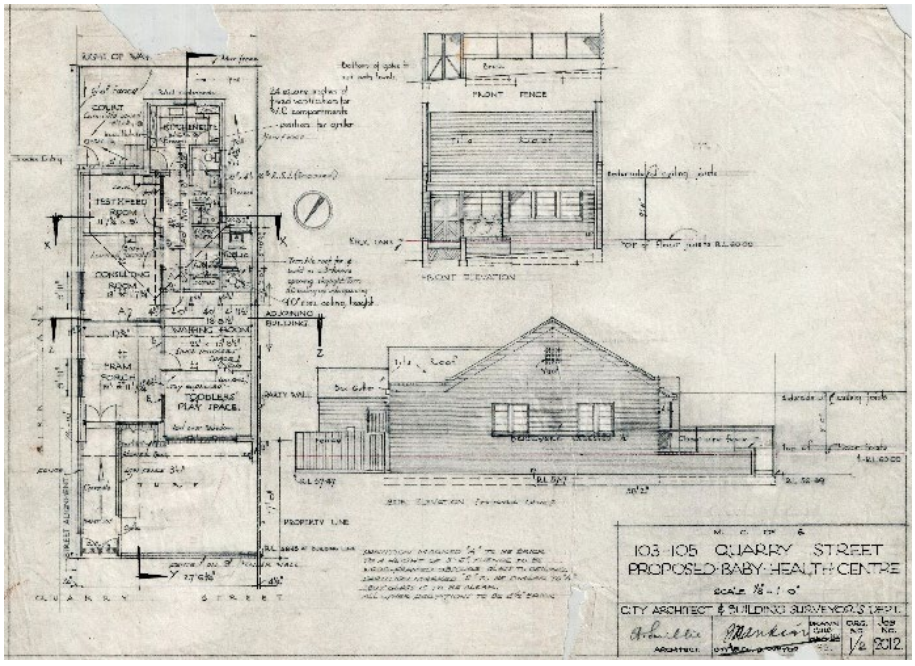
25 The repurposed St Marys baby health centre at the intersection of the Great Western Highway and Mamre Road..

4.3 Baby Health Centres in the City of Sydney

The Municipal Council of Sydney became involved in infant health care in the wake of the outbreak of bubonic plague in 1900. The State government appointed Dr W G Armstrong the City Health Officer in 1901, and it was under his guidance that infant health became a concern of the Council. A "Lady Sanitary Inspector" was appointed in 1902 and in 1904 started visiting households where infant deaths had occurred.[23] The earliest baby health clinics in Sydney, which were established by the state government, opened in Alexandria and Newtown during 1914. They were followed by clinics in Bourke Street, Darlinghurst and other localities.

The City of Sydney inherited a number of baby health centres when its boundaries were enlarged in 1949, such as the building constructed in Redfern Park by Redfern Council and completed that same year. Not all of the baby health centres within the City of Sydney's enlarged boundaries were designed in-house. For instance, Glebe Baby Health Centre was designed by architect R Lindsay Little in 1946 for Glebe Municipal Council and completed around 1950.[24]

Following the enlargement of the municipal boundaries, Central Sydney was surrounded by a ring of Labor-supporting suburbs. 15 kindergarten/day nurseries and seven baby health centres had been constructed by 1965, reflecting the social agenda of aldermen related to their electorate and the residential population there.[25] Amongst the earliest post war baby health centres designed by the City Architect predated the boundary changes, however. was the narrow domestically scaled building at 103-105 Quarry Street, Ultimo (1948, demolished). It contained the complement of spaces required by baby health centres at this time, including a pram porch, toddlers' play area, waiting, consulting and test feed rooms plus a small kitchen and staff rooms. Albert Smillie's signature appears on the drawings describing the scheme.

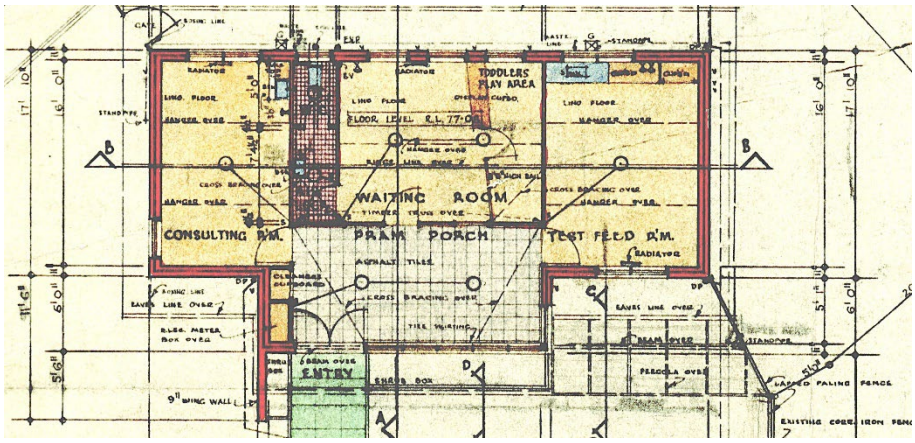


26 Architectural drawing describing the baby health centre at 103-105 Quarry Street, Ultimo.
Source: City of Sydney Archives Unique ID A-00545532.

Another early baby health centres designed and constructed by the City of Sydney was at Millers Point. Here a baby health centre had been constructed at Lower Fort Street by the

23 Fitzgerald, p.219,
24 CSA Unique ID A-00035904. It has since been demolished.
25 Hilary Golder, *Sacked: removing and remaking the Sydney City Council 1842-1992* (City of Sydney, 2004), p.109.

Department of Health in conjunction with the City Council. and opened in 1916.[26] The facility was relocated to Argyle Street in the 1920s and its replacement at 87 Lower Fort Street was opened by Labor MLA Daniel Clyne on 22 November 1952. The compact domestically scaled building was a self-effacing and modest version of Modernist architecture containing all the essential spaces – "[b]y the mid-20th century ... an architectural language of economically lean, functionalist and often aesthetically unpretentious modernism was assumed appropriate to express widely accepted social ideals of community participation and accessible recreation."[27] It was recently demolished.

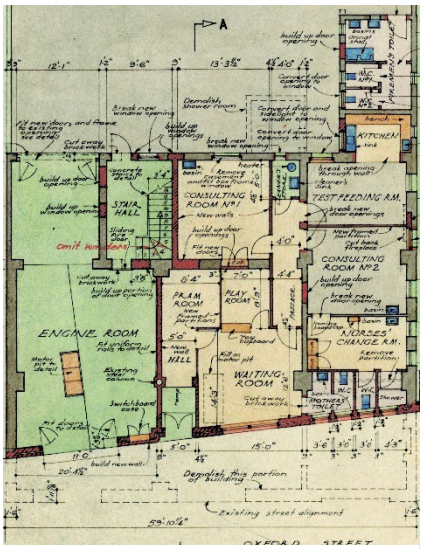


27 Left: plan of the proposed baby health centre at 87 Lower Fort Street, which was approved by Council in July 1952. The drawing bears Smillie's signature.
Right: photograph of the completed baby health centre taken on 20 November 1952..
Source: City of Sydney Archives, Unique ID A- 00042651 and Unique ID A-00562093.

The City of Sydney consolidated its child welfare efforts in the post-World War II era and by 1965 it had constructed seven new baby health centres and modified buildings to accommodate the facilities.

The Baby Health Centre at 62-64 Pine Street, Chippendale, was located in a two-storey 1920s industrial building that was acquired by the Municipal Council of Sydney in 1946, next to the Golden Fleece Kindergarten. The building was modified to accommodate a baby health centre a couple of years later. It included the standard complement of spaces – pram park, test feed room, waiting room, consulting room and playroom, along with separate spaces for nurses and a doctor. Council acquired the Golden Fleece Kindergarten in 1955. 62-64 Pine Street was subsequently incorporated into this facility.

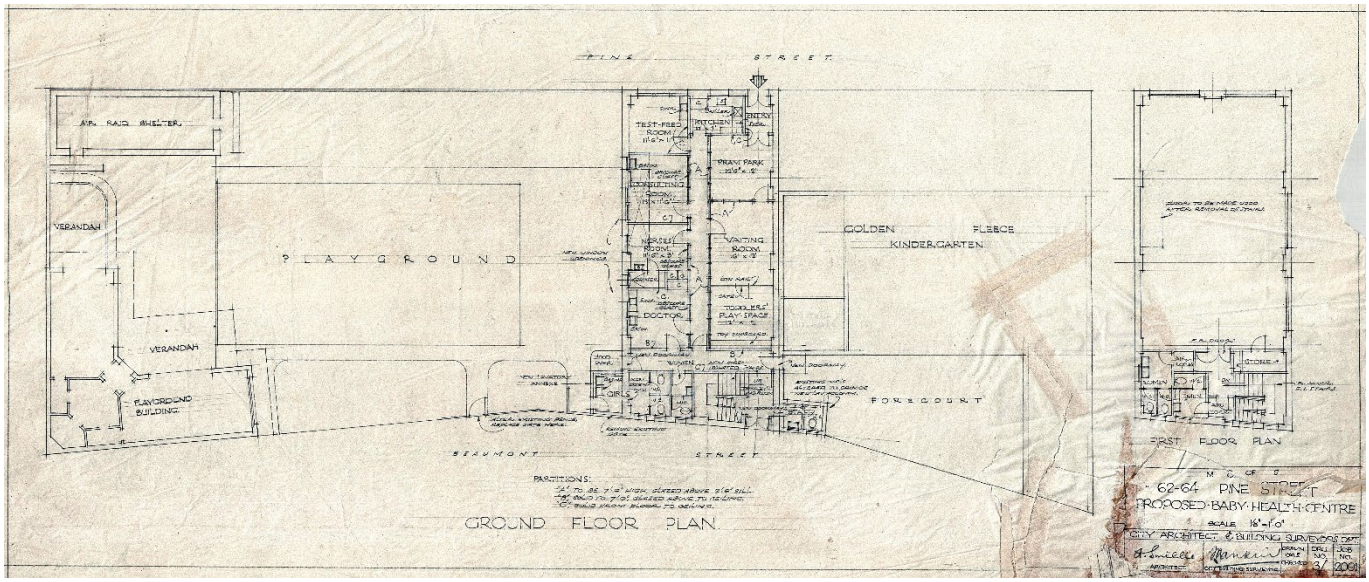
The Littlebridge Community Hall at 38 William Henry Street, Ultimo, was another building intended to house a baby health centre. The property, which included Little Bridge House, was resumed by Council in 1952 for a children's playground. Instead, plans were prepared for minor alterations to the house for the purposes of a baby health centre.[28] The site was developed by the construction of the Esme Hackett Welfare Centre in the mid-1950s, and Little Bridge House was eventually demolished. The site is now occupied by the Ultimo Community Centre and Library. A baby health centre was incorporated into plans for extensive alterations to the Paddington Fire Station at 257 Oxford Street, which was documented during 1953 but not



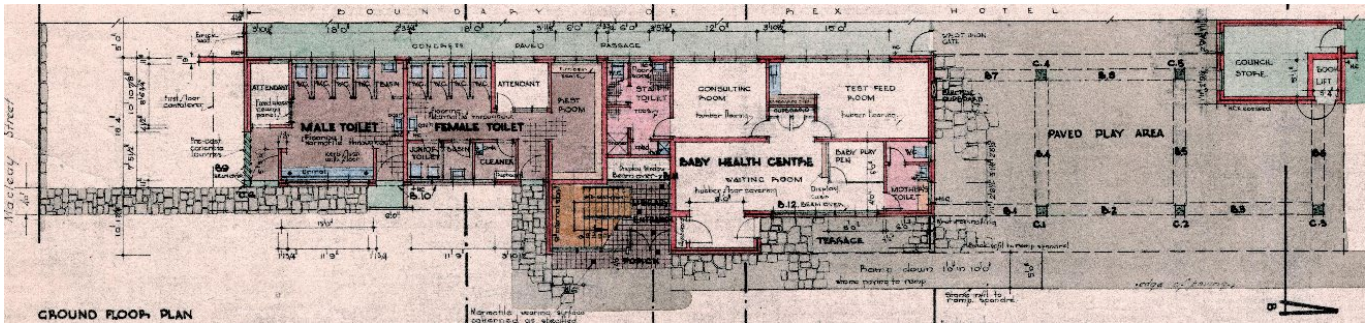
28 Section of a drawing documenting the alterations to Paddington Fire Station, which shows the layout of the baby health centre.
Source: City of Sydney Archives Unique ID A-00568554.

26 The first baby health clinic was opened on 28 July 1916. See *The Newsletter: an Australian Paper for Australian People*, 29 July 1916, p.8.
27 Hannah Lewi and David Nicholls (editors), *Community: building modern Australia* (UNSW Press, 2010), p.3.
28 City of Sydney Archives Unique ID A-00545853.

approved for about two years. This building has since been demolished.[29] Similarly, provision was made for a baby health centre on the ground floor of the award-winning Florence Bartley Library at 60 Macleay Street, Kings Cross, which opened in 1959. The building was demolished in 1997.

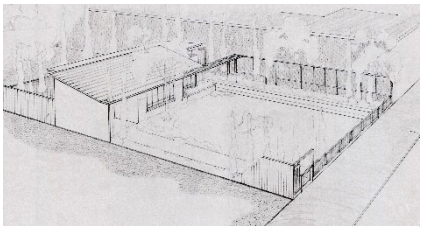


29 Plan describing the alterations to the industrial building at 62-64 Pine Street, adapting it for use as a baby health centre.
Source: City of Sydney Archives Unique ID A-00545527.



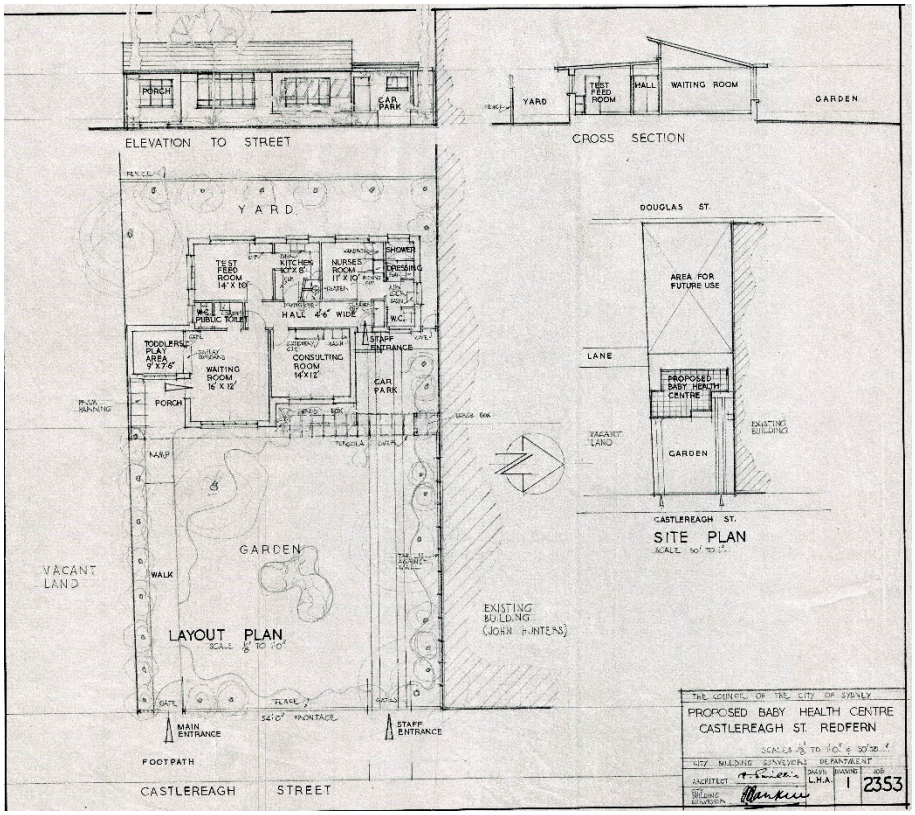
30 Section of a drawing documenting the Florence Bartley Library at Kings Cross, showing the layout of the baby health centre on the ground floor.
Source: Unique ID A-00546051.

Before becoming part of the City of Sydney, Redfern Council established a baby health centre in a building under construction to provide a field house in Redfern Park. In 1949the building was altered to include what was intended as a temporary baby health centre, but apparently became a permanent facility. However. a baby health centre was also designed for a site opposite Redfern Park on Castlereagh Street (now Chalmers Street), which had been acquired by Redfern Council. It is clearly shown on the City of Sydney's Building Surveyor's Detail Sheet for Redfern, produced between 1949 and 1972.[30] The building no longer exists.



31 Undated perspective study of the baby health centre on Chalmers Street opposite Redfern Park.
Source: City of Sydney Archives Unique ID A-00545664

29 City of Sydney Archives Unique ID A-00568554
30 City of Sydney Archives: City of Sydney - Building Surveyor's Detail Sheets, 1949-1972: Sheet 15 - Surry Hills – Unique ID A-00880190



32 Undated plan of the baby health centre on Chalmers Street opposite Redfern Park. Source: City of Sydney Archives Unique ID A-00545664

In June 1922 a refurbished terrace of houses at 443-453 Riley Street was handed over to the Royal Society for the Welfare of Mothers and Babies. The terrace was remodelled to the design of the Government Architect to accommodate a child care centre consisting of a baby health clinic, kindergarten and day nursery.[31] These buildings remained in use until the second half of the 1970s, when they were replaced by a new complex designed by architects Stafford Moor & Farrington. For a time, the site continued in use as a childcare and baby health centre and is now used as a children's education and care centre.

Part of the context of the former Alexandria baby health centre is a Council financed welfare centre at 24 Suttor Street, just to the south of the former Alexandria baby health centre. The building was designed in the office of prominent architect Harry Seidler and completed in April 1964. Initially known as the Alexandria Welfare Centre, it was subsequently renamed the Cliff Noble Welfare Centre and now serves as a community centre.

33 The Cliff Noble Welfare Centre in Suttor Street, Alexandria.

4.4 Conclusions

Notwithstanding alterations and additions to the former Alexandria baby health centre that reflect changing uses after its closure circa 1980, the concept of the original design conformed to the standard requirements that had been established for baby health centres in NSW. Its planning and overall form were unusual, unlike any other baby health centre known to have been constructed during the 1940s, 1950s and 1960s in NSW.

31 "Welfare Centre. Opened at Surry Hills", *Sydney Morning Herald*, 15 June 1922, p.10.

5 Assessment of heritage significance

5.1 Assessment

Historical significance

Criterion A — An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

The former Alexandria baby health centre at 12A Dadley Street is one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War II and the redistribution of municipal boundaries in 1949. It provides evidence of efforts by the City of Sydney to improve social welfare conditions within the local government area during this period.

The building is the second to house a baby health centre in Alexandria, the suburb in which the first baby health centre in NSW was opened in 1914. After this use was discontinued the building continued to serve the community, including members of Sydney's First Nations community.

The building meets the threshold for listing at a Local level.

Historical associations

Criterion B — An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).

The former Alexandria baby health centre has associations with City Architect Albert Smillie, who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s.

The building meets the threshold for listing at a Local level.

Aesthetic significance

Criterion C — An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

The former Alexandria baby health centre is notable for its distinctive octagonal plan that was organised around a circular central court. internal court. Modifications to the building to suit changing uses have removed much of the original layout, but the exterior of the building is relatively intact.

The building meets the threshold for listing at a Local level.

Social significance

Criterion D — An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

The building has been a community facility continuously since its opening in 1964. Uses have included a baby health centre, the Redfern Crisis Clinic and a home and community care facility. It is likely to have significance for people who worked there and members of the public who used its facilities, but further research is needed to confirm this.

The building may meet the threshold for listing at a Local level.

Research potential

Criterion E — An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

Because of alterations to the building, the former Alexandria baby health centre is not considered to have the potential to yield information that might contribute to an understanding of the City of Sydney's cultural history.

The building does not meet the threshold for listing at a Local level.

Rarity

Criterion F — An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

The former Alexandria Baby Health Centre is considered to be a rare surviving example of a baby health centre designed by the City Architect, notwithstanding changes that have taken place to the building's interior. Its original external form is generally intact. Other baby health centres constructed in the City of Sydney after World War II have been demolished.

The building meets the threshold for listing at a Local level.

Representativeness

Criterion G — An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.

Because of modifications to the building, the former Alexandria baby health centre is not representative of this typology. However, many communal buildings designed by the City Architect continue to be used, although not for the purposes for which they were originally designed. In this sense the former baby health centre is representative.

The building meets the threshold for listing at a Local level.

5.2 Statement of significance

The former Alexandria Baby Health Centre at 12A Dadley Street, Alexandria, is one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War I, providing evidence of City of Sydney endeavours to improve social welfare conditions for residents is the second baby health centre in Alexandria, where the first baby health centre in NSW was opened in 1914. The building has continued to serve the community, including members of Sydney's First Nations community, and it is likely to have significance for people who worked there and members of the public who used its facilities, However, this needs further confirmation.

The former Alexandria Baby Health centre has associations with City Architect Albert Smillie, who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s. It is notable for its distinctive octagonal plan organised around a circular central court and, notwithstanding internal alterations, is considered to be a rare surviving example of a baby health centre designed by the City Architect and representative of communal buildings designed by the City Architect.

6 Conclusions

The former Alexandria baby health centre at 12A Dadley Street fulfils the NSW Heritage Council's criteria for historical significance, historical associations, aesthetic significance, rarity and representativeness at a Local level. The site may also have potential social significance. Because of this it warrants listing as a heritage item in Schedule 5 of Sydney Local Environmental Plan 2012.

Attachment D

Draft Inventory Sheet – 12A Dadley Street, Alexandria

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**Former Alexandria Baby Health Centre**		
Former name	**Alexandria Baby Health Centre, Alleena**		
Item type	**Built**		
Address	Number **12A**	Street **Dadley Street**	Suburb **Alexandria**
Property description	**Lots 6 and 7**		**DP 2307**
Use	Current **Not in use**		Former **Baby health centre, crisis centre, First Nations aged care centre**
Statement of significance	The former Alexandria Baby Health Centre at 12A Dadley Street, Alexandria, is one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War I. It provides evidence of City of Sydney endeavours to improve social welfare conditions for residents as the second baby health centre in Alexandria, where the first baby health centre in NSW was opened in 1914. The building has continued to serve the community, including members of Sydney's First Nations community, and it is likely to have significance for people who worked there and members of the public who used its facilities. However, this needs further confirmation. The former Alexandria Baby Health centre has associations with City Architect Albert Smillie, who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s. It is notable for its distinctive octagonal plan organised around a circular central court and, notwithstanding internal alterations, is considered to be a rare surviving example of a baby health centre designed by the City Architect and representative of communal buildings designed by the City Architect.		
Level of significance	State:	Local:	
Heritage listings			
DESCRIPTION			
Designer	City Building Surveyor's Department, Albert Smillie (Principal Architect).		
Builder	Drake & Vine		
Construction years	1964		

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Physical description	The former Baby Health Centre at 12A Dadley Street is a single storey brick building with a shallow pitched roof covered by metal decking. The building is octagonal in plan. An oculus over what was intended as a garden court in the centre of the building has been covered by a translucent dome. Original plans indicate it may have been covered by a flat sheet of Perspex, although this is not clear. In any case, the dome was in place prior to 2002. The building has aluminium framed windows, the majority of which replaced earlier metal framed windows in the early 2000s. Metal canopies shade windows in the western half of the building. There is chainwire fencing along the Renwick and Dadley Street boundary and a portion of the Renwick Street boundary. The drawings prepared in 2002 indicate that this fencing had been installed prior to this. Brush fencing has been installed along part of the Renwick Street boundary and along the Allen Lane boundary, providing privacy to open space in this section of the site. Although the interior of the building has not been inspected, comparison with the approved drawings prepared by the City Building Surveyor's Department in 1964 and a plan of the existing building reveals that the interior has been extensively modified to accommodate ongoing and changing uses.
Physical condition	
Modification and Dates	1981 renovations understood to have been undertaken
Archaeological potential	The archaeological potential of the site has not been ascertained.

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

The site of 12A Dadley Street occupies part of 566.5 hectares (1400 acres) of land granted to emancipated convict, public servant and landowner William Hutchinson (1772-1846) in May 1823.
In July 1886 some 8.9 hectares (22 acres) were acquired by the Mercantile Building Land and Investment Company Limited. The land was brought onto Torrens Title, subdivided and offered for sale in 1886. The subject site is a part of the Company's South Eveleigh Estate.

On 7 February 1906 the title to Lots 6 and 7 in Section A of the subdivision (along with Lots 14 to 18 in Section A) was transferred to accountant George Thompson . Lots 6 and 7 were bounded by what was then called Suttor Street, Renwick Street and a lane. Suttor Street was renamed Dadley Street in 1917. Henry George Dadley (1868-1929) worked for the NSW Public Service in the Resumed Properties Department as a foreman and plasterer. He served as an alderman on Alexandria Council between 1908 and 1919, representing the Council's West Ward.

In 1914 Labor politician Frederick Flowers became the state's new health minister. That same year he held a conference, bringing together the Alice Rawson School for Mothers, the Sydney District Nursing Association, and numerous government departments. The Alice Rawson School for Mothers was named after the daughter of Sir Harry Rawson, governor of NSW

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between 1902 and 1909. It was founded in 1908 by the National Council of Women as a subsidised voluntary agency servicing the working-class suburbs of Newtown, Darlinghurst and Alexandria. In 1914 it and the Sydney District Nursing Association were combined under the Baby Clinic Board. The conference ended with a commitment to establish baby clinics throughout the city – the first would be in Alexandria, an industrial working-class suburb. Alexandria Baby Clinic was opened by Frederick Flowers and inaugurated on 24 August 1914 in rented premises at 22 Henderson Road. The movement expanded rapidly and by September 1919 there were twenty-eight baby clinics in various parts of New South Wales.

Evidence provided by Sands Sydney and suburban directory indicates that Lots 6 and 7 remained undeveloped when George Thompson sold them to clerical worker Richard Henry Harris in 1922. The transfer of title took place on 29 November. Harris immediately transferred the property title to the Board of Water Supply and Sewerage, which retained possession of it until 1938. In March that year the title was transferred to contractor Herbert John Nichols, who sold it the following month to John Patrick Matthews and Kathleen O'Riordan, described on title documents as toilet manufacturers. Lots 6 and 7 were subsequently purchased by a company called Service Springs Pty Limited early in 1944.

Alexandria Council was amalgamated with the Municipal Council of Sydney in 1948. A decision was made to acquire Lots 6 and 7 for the purposes of a children's playground in the second half of 1951 and the purchase of the land from Service Springs Pty Limited was finalised on 24 January 1952, when the transfer of title took place. In 1963 the Council's Parks and Recreation Department suggested replacing the existing early baby health centre, established in 1914, with a new building on the playground site. Plans of a new building were prepared by the City Architect. Drawings are signed by Albert Smillie. The plans were approved by Council on 5 March 1964, and the tender of building contractors Drake & Vine was approved on 23 March 1964. Construction commenced on 7 April 1964. The works were completed and approved on 30 July 1964.

The octagonal building incorporated features to be found in many baby health centres across the state - an area to park prams, a waiting room, consulting room, test fed room and lavatories, along with a screened play space on the eastern side of the building. A small central circular garden court was surrounded by an internal access corridor connecting all of the spaces.

As with baby health centres generally, the Alexandria Baby Health Centre was staffed and controlled by the NSW Department of Health, while the building was maintained by the City Council. However, by 1970 the baby health centre only operated on Friday. The Redfern Crisis Clinic applied to use the building from Monday to Thursday each week. However, by 1976 it was back to two days a week for infant health. A contract to undertake renovations to the building was signed on 17 July 1981 but the scope of works has not been ascertained. However, at some point in time the play area became a meeting room.

The property title was transferred to South Sydney Council Around the beginning of 1991. This followed the establishment of South Sydney Council at the instigation of the State government in 1989. The City Council and South Sydney Council merged in 2004 following redistribution of municipal boundaries so that the building came once again under the jurisdiction of the City of Sydney.

During 2002 and 2003 plans were lodged with South Sydney Council to modify the building for home and community care (HACC) facilities. Documented by architects Woodhouse & Danks, the works involved extensive internal demolition and modifications to some windows, along with a laundry addition at the rear of the building, pergola on the eastern side of the building and landscaping works. The adaptation was intended to assist frail elderly people and people with disabilities to live independently in their own home. The following year the same architects documented a laundry addition at the rear of the building. The facility was known as Alleena, a First Nations aged care establishment understood to have been conducted under the auspices of Australian Unity Aboriginal Home Care from 2015.

It has not been ascertained when the building ceased use as an aged care establishment. However, a development application was lodged by the City of Sydney in May 2025 seeking consent for ongoing community use at 12A Dadley Street.

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**
2 Peopling Australia	Aboriginal cultures and interaction with other cultures	Uses for First Nations community – crisis centre and Alleena
3 Developing local, regional and national economies	Health	Baby health centre
7 Governing	Welfare	Local government provision of community services
8 Developing Australia's cultural life	Creative endeavour	Purpose-designed post-World War II baby health centre
9 Marking the phases of life	Persons	Associations with City Architect Albert Smillie

HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	The former Alexandria Baby Health Centre at 12A Dadley Street is one of several baby health centres designed and constructed by the City of Sydney in various locations across the local government area after World War II, following the redistribution of municipal boundaries in 1949. It provides evidence of efforts by the City of Sydney to improve social welfare conditions within the local government area during this period. The building is the second to house a baby health centre in Alexandria, the suburb in which the first baby health centre in NSW was opened in 1914. After this use was discontinued the building continued to serve the community, including members of Sydney's First Nations community. The building meets the threshold for listing at a Local level.
Historical association SHR criteria (b)	The former Alexandria Baby Health Centre has associations with City Architect Albert Smillie, who was involved in the design and construction of several baby health centres, welfare centres, libraries and other public facilities for the City of Sydney from the 1930s through to the 1960s. The building meets the threshold for listing at a Local level.
Aesthetic significance SHR criteria (c)	The former Alexandria Baby Health Centre is notable for its distinctive octagonal plan that was organised around a circular central court. Modifications to the building to suit changing uses have removed much of the original layout, but the exterior of the building is relatively intact. The building meets the threshold for listing at a Local level.
Social significance SHR criteria (d)	The building has been a community facility continuously since its opening in 1964. Uses have included a baby health centre, the Redfern Crisis Clinic and a home and community care facility. It is likely to have significance for people who worked there and members of the public who used its facilities, but further research is needed to confirm this. The building may meet the threshold for listing at a Local level.

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Technical/Research significance SHR criteria (e)	Because of alterations to the building, the former Alexandria Baby Health Centre is not considered to have the potential to yield information that might contribute to an understanding of the City of Sydney's cultural history. The building does not meet the threshold for listing at a Local level.
Rarity SHR criteria (f)	The former Alexandria Baby Health Centre is considered to be a rare surviving example of a baby health centre designed by the City Architect, notwithstanding changes that have taken place to the building's interior. Its original external form is generally intact. Other baby health centres constructed in the City of Sydney after World War II have been demolished. The building meets the threshold for listing at a Local level.
Representativeness SHR criteria (g)	Because of modifications to the building, the former Alexandria Baby Health Centre is not representative of this typology. However, many communal buildings designed by the City Architect continue to be used, although not for the purposes for which they were originally designed. In this sense the former baby health centre is representative. The building meets the threshold for listing at a Local level.
Integrity	The building has retained a relatively large amount of integrity externally but has been extensively modified internally.
RECOMMENDATIONS	
Recommendations	• Manage 12A Dadley Street in accordance with Sydney LEP 2012 and Sydney DCP 2012. • 12A Dadley Street should be retained and conserved. • The external form of 12A Dadley Street, any original spaces, fabric and finishes that remain should be retained and conserved in any future development. • No additions should be made at roof level which will affect the original eaves line or impact negatively on the building. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Strategy be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken. • Existing original unpainted brickwork should remain unpainted • Retain plaques at the main entrance in situ.

INFORMATION SOURCES

Type	Author/Client	Title	Year	Repository
Written	TKD Architects		2025	City of Sydney

AUTHOR OF THIS REPORT

Name	Date
TKD Architects	2025

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IMAGES	
Image Caption	Architectural drawing describing the original plan and elevations of the building.

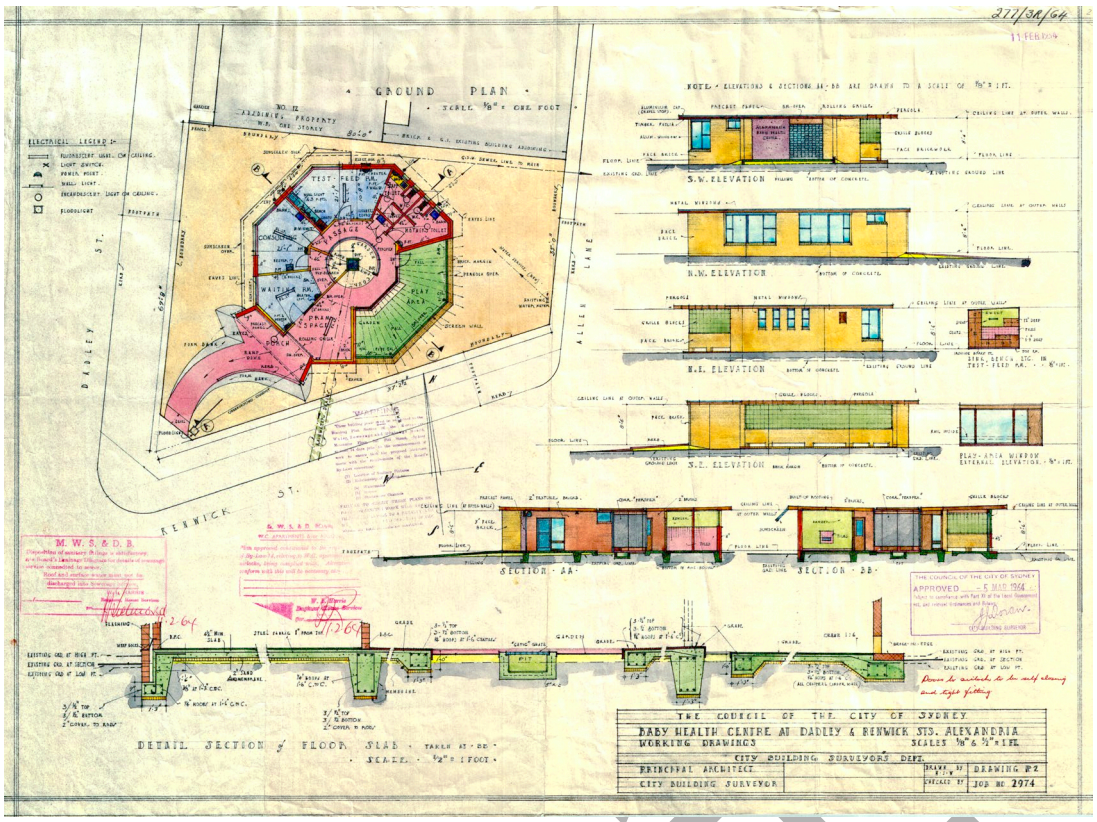

Image Year	1964	Image author and Copyright Holder	City Building Surveyor's Department; City of Sydney

IMAGES	
Image Caption	The Alexandria Baby Health Centre viewed from the south-west, photographed at time it was officially opened in July 1964.

Image Year	1964	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-00010293

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IMAGES	
Image Caption	Official opening of the Alexandria Baby Health Centre, July 1964.

Image Year	1964	**Image author and Copyright Holder**	State Library of NSW Government Printing Office 2 – 30341

DRAFT

IMAGES	
Image Caption	The Alexandria Baby Health Centre viewed from the south-west.

Image Year	1981	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-00021506

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IMAGES	
Image Caption	

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

DRAFT

IMAGES	
Image Caption	The former Baby Health Centre viewed from the corner of Renwick and Dadley Streets.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Western side of the building, showing the lightweight metal awnings installed to shade windows.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Pergola and laundry addition facing Allen Lane.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

IMAGES	
Image Caption	Rear of the building viewed from Allen Lane, adjacent to the northern site boundary.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	The former Baby Health Centre viewed from Allen Street. Brush fencing encloses the yard at the rear of the site.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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Attachment E

TKD Heritage Assessment – 2-14 Phelps Street, Surry Hills

Former John Carroll Kindergarten
2-14 Phelps Street, Surry Hills

Heritage assessment

TKDArchitects
Tanner Kibble Denton

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
The John Carroll Kindergarten, 2 September 1953
City of Sydney Archives, Unique ID A-00042717

Authorship
Dr Roy Lumby, Senior Heritage Specialist, TKD Architects

Image credits
All images are by TKD Architects except where noted.

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NSW Nominated Architects
Robert Denton Registration No. 5782 | Alex Kibble Registration No. 6015

Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL	
P2	27 August 2025	Revised draft issue	RL	
A	16 December 2025	Final issue	RL	GP
B	20 January 2026	Revised final issue	RL	

Contents

1	Introduction	3
2	Historical overview	4
3	Physical evidence	10
4	Comparative analysis	13
5	Assessment of heritage significance	22
6	Conclusions	25

1 Aerial location image (top) and aerial detail image of the former John J Carroll Kindergarten, Surry Hills..
Source: NearMaps with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of the former John Carroll Kindergarten at 2-14 Phelps Street, Surry Hills. The property was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects, October 2023). 2-14 Phelps Street is located in the Bourke Street South Heritage Conservation Area (C60) and is adjacent to the corner shop and residence group at 545-545A Bourke Street, Surry Hills (Item I1443 in Schedule 5 of Sydney LEP 2012).

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, *Assessing Heritage Significance* (2023),

1.2 Site description

The subject site is located on the northern side of Phelps Street at its intersection with Alexander Street. The eastern side of the site is partially bounded by Arthur Lane. The site is identified as Lot 1 Deposited Plan 50102.

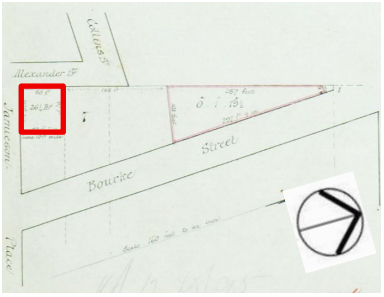
2 View of 2-14 Phelps Street. Source: TKD Architects.

2 Historical overview

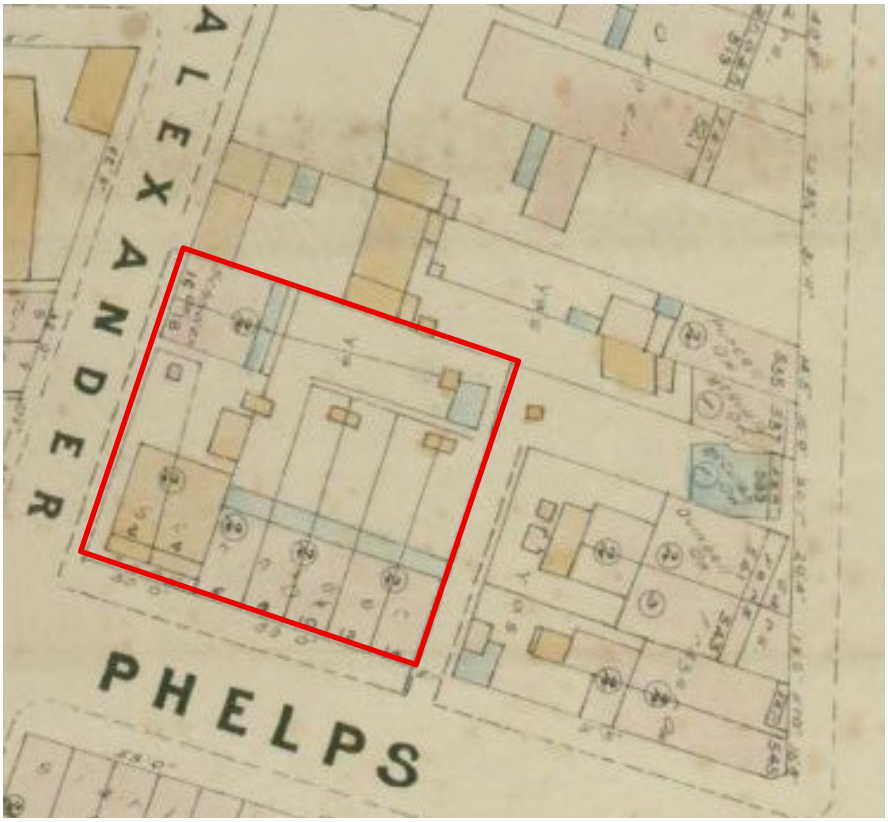
2.1 Early site history

The site of 2-14 Phelps Street is part of 28.33 hectares (70 acres) granted to commissary John Palmer on 1 April 1794. Businessman and speculator John Terry Hughes acquired at least a part of Palmer's grant by January 1837. He took out a mortgage over it with the Bank of Australia in March 1842. The Bank, as mortgagee, sold a substantial amount of land that included a triangle of land within the subdivision of Palmer's grant that included the future site of 2-14 Phelps Street, in January 1851.[1] It was acquired by Edward Bennett, described on title documents as an engineer or "gentleman".[2] At that time Phelps Street was identified as Jamieson Street. The name was changed to Phelps Street in 1873, honouring Thomas Phelps (circa 1836-1880), a property owner who contributed to the development of the street and other parts of Surry Hills[3]

In June 1873 Bennett sold part of this land, consisting of the subject site, to Surry Hills builder William Wagg.[4] Wagg subsequently sold the land to Enos Napper, a market gardener living at Randwick, in October 1876. Development of the land is understood to have commenced during the second half of the 1870s. Napper sold it to freeholder Samuel Bridgement in July 1885. About three years later Bridgement sold the land to commercial traveller Carl Freidrich Riemenschneider.



3 Land acquired by Edward Bennett included the site of 2-14 Phelps Street (highlighted).
Source: HLRV NSW Certificate of Title Volume 4 Folio 48.



4 Development across the site of 2-14 Phelps Street in 1888. The name "Schnider" is inscribed on it rather than Riemenschneider. Development consisted of brick terrace houses and a pair of semi-detached houses.
Source: City of Sydney Archives Rygate & West Sheet 35, 1888.

1 HLRV NSW Old Systems Title Book 20 Number 57
2 HLRV NSW Old Systems Title Book 20 Number 57 and Certificate of Title Volume 4 Folio 48.
3 John Walter Ross, *The History of Collins Street, Surry Hills*, p.54 at https://shazbeige.com/pdf/Collins_Street_History.pdf, accessed 16 June 2025.
4 HLRV NSW Certificate of Title Volume 12 Folio 95.

In December 1892 Carl Riemenschneider transferred the property title to his wife Alice. Following her death in July 1894 at the age of 33[5], the property passed back to him. He sold it to James Webber, described in title documents as a "gentleman", in June 1901. Webber subsequently sold the property to Miss Ida Gilder in August 1911.[6]

The site of 2-14 Phelps Street was resumed by the Municipal Council of Sydney. The resumption of the western part of the site, consisting of 2-4 Phelps Street and 16-18 Alexander Street, was resumed on 6 May 1925 and gazetted two days later. The remainder of the site was resumed on 5 November 1926.[7] Houses occupying the site were demolished and a children's playground established in their place.

5 Photographs of the children's playground taken during the 1930s showing children sitting near playground equipment (left) and the playground either before the equipment was installed or after the equipment was removed (right).
City of Sydney Archives Unique ID A-00055460 and Unique ID A-00015354

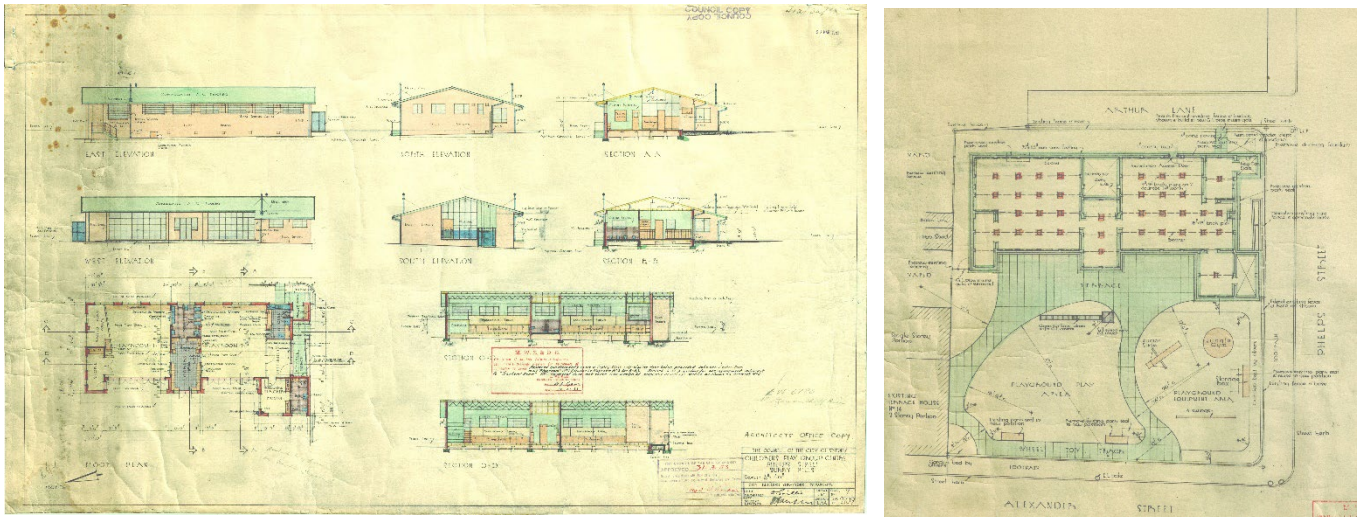
During World War II trenches providing shelter from air raids were excavated across the open space. Following the end of the war the trenches were filled in.

6 Aerial photograph showing air raid shelters in the children's playground.
Source: SIX Maps

2.2 The John Carroll Kindergarten

Architectural drawings describing what was termed a children's play group centre signed by architect Albert Smillie were lodged with Council on 24 March 1953. The play group centre comprised a building located on the southern side of the site containing two playrooms separated by a locker room and lavatories and supported by a kitchen, storage spaces, teacher's room and a raised play space. The building was extensively glazed on its southern and western sides to provide the interior with generous amounts of daylight. The glazing was set back and provided with deep roof overhangs. The rest of the site was given over to a carefully laid out playground that balanced areas for play equipment with paved areas.

5 Death notice, *Sydney Morning Herald*, 13 July 1894, p.1.
6 HLRV NSW Certificate of Title Volume 271 Folio 197.
7 Government Gazette of the State of New South Wales 8 May 1925 p.2154; City of Sydney Unique ID A-01203480, Parks, Reserves and Playgrounds Register, 1811-1985.



7 Drawing describing the plan, elevations and sections through the kindergarten at 2-14 Phelps Street, 1953. The detail plan at right shows the footprint of the building and the layout of the playground on the western side of the site.
Source: City of Sydney Archives Unique ID A-00548717.

8 Photographs of the new kindergarten reaching completion, September 1953 (left) and shortly after completion, March 1954 (right). Note the fencing along street boundaries.
Source: City of Sydney Archives Unique ID A-00042717 and Unique ID A-00042863.

9 Left: the kindergarten building viewed from the playground, May 1954. The projecting wing contained the teacher's room and attached bathroom.
Right: details of doors with highlight glazing over on the western side of the building. The doors were set well back and shaded by a deep roof overhang, supported by the exposed steel truss.
Source: City of Sydney Archives Unique ID A-00042906 and Unique ID A-00042907.

10 Two views of the kindergarten's interior, June 1954. The mezzanine shown in the photograph at right no longer exists.
Source: City of Sydney Archives Unique ID A-00042908 and Unique ID A-00042909.

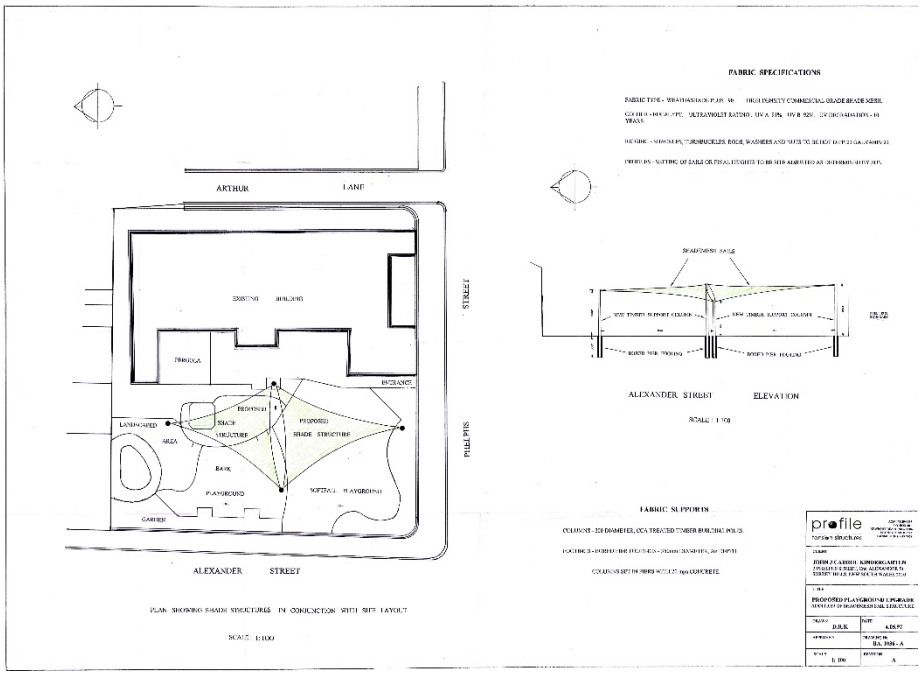
Approval was given to name the facility the John Carroll Kindergarten on 22 June 1953. John James Carroll (1890-1957) was an alderman for Flinders Ward between December 1934 and December 1953. He was Deputy Lord Mayor in 1949-1950 and Council representative on the City of Sydney Eisteddfod Council between 1949 and 1954. Carroll was a member of several

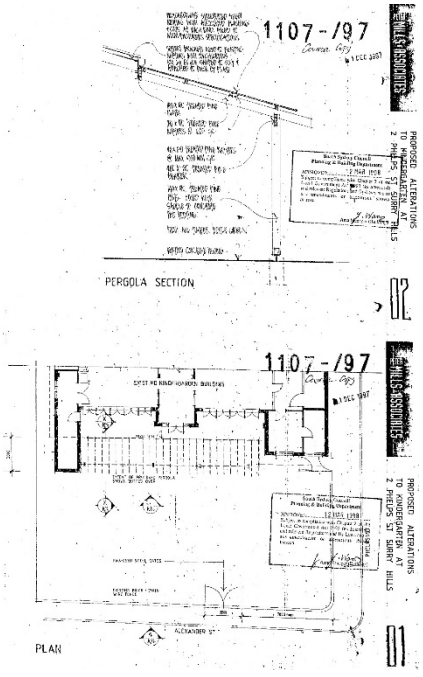
Council committees at various times and a Member of the Metropolitan Water Sewerage and Drainage Board from 1939 to 1955. Prior to his election as alderman, he worked for the Council's Assets Department between 1909-1915 and 1931. [8]

It is understood that the kindergarten opened in August 1954. There are relatively few documented modifications that have taken place since the building was completed. They include the following, largely relating to the exterior of the building:

- Installation of a shade structure in the playground, 1997.
- Construction of a pergola across the western elevation of the building to shade the extensive areas of glazing and installation of new gates in fencing along the Alexander Street site boundary, 1997.
- Installation of baby changing facilities in the locker room between the two playrooms, 2000, which necessitated a limited amount of demolition.

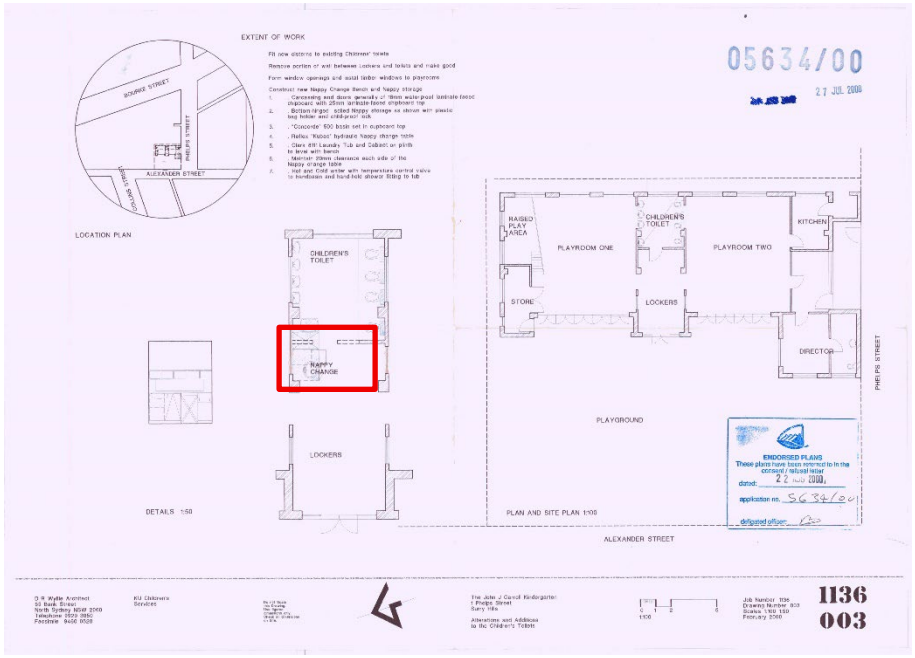
11 John James Carroll, 1942.
Source: City of Sydney Archives Unique ID A-00006306.





12 Proposed works from 1997 included the installation of a shade sail over the playground (left) and construction of a pergola across the western elevation of the building (right).
Source: City of Sydney Archives Unique ID A-01117539 and Unique ID A-00715642.

8 https://www.sydneyaldermen.com.au/alderman/john-carroll/, accessed 16 June 2025.



13 Drawing prepared for the installation of baby changing facilities, 2000.
Source: City of Sydney Archives Unique ID A-00759258 with TKD Architects overlay.

14 The kindergarten photographed from the intersection of Alexander and Phelps Streets, 31 October 2010.
Source: City of Sydney Archives Unique ID A-00072973 - Mark Stevens Collection.

3 Physical evidence

2-14 Phelps Street is a single storey brick building with a rectangular plan footprint and a shallow-pitched gabled roof located on the eastern side of the site. Its design shows the influence of what has been termed New Empiricism. This was a term coined by the English journal *The Architectural Review* in 1947 "to describe buildings produced in the 1940s and early 1950s that demonstrated a homely, unpretentious functionalist architecture, which relied on the honest use of local materials, colours and textures as well as familiar architectural elements such as gable roofs, small-scaled windows and accommodating porches without resorting to extremes of aesthetic abstraction." It was part of a "broader northern and Central European development dominant c 1930-1955 that combined modern movement structure and planning with materials and forms that asserted region and tradition." It was seen as a" regionally appropriate, crafted and humanist modernism" that was appreciated and interpreted by prominent Australian architects.[9]

The building is constructed with brick walls that are rendered internally. The roof is supported off steel trusses and comprises metal decking over timber rafters. The ceiling over the playrooms is raked to follow the pitch of the roof. Floors are constructed of timber. There is a deep recessed porch on the southern side of the building forming the principal entry to the building, while eaves on the eastern side of the building are relatively deep. The heads of the metal framed windows on the eastern and northern elevations are aligned with the eaves and have high sills. The pairs of doors and extensive glazing on the western side of the building is set back to provide sheltered conditions, which have been modified by the construction of the late 1990s pergola and the addition of corrugated metal decking over it. High windows in the eastern elevation would have assisted in cross ventilation of the playrooms. The playground area is heavily planted around its perimeter, effectively screening it from Alexander and Phelps Streets.

15 Eastern elevation of the kindergarten facing Phelps Street, showing the principal entry and porch.

9 Conrad Hamann, "New Empiricism" in Phillip Goad and Julie Willis, *The Encyclopedia of Australian Architecture* (Cambridge University Press, 2012), pp.491-492.

16 Looking north along Phelps Street towards the kindergarten. Small windows along Arthur Lane provide light and air but also provide privacy within the building.

17 Looking south along Phelps Street towards the kindergarten. Planting in the kindergarten's playground is in the foreground. The palisade type fencing is not original.

18 The kindergarten viewed from Alexander Street. Planting on the site obscures views to the building.

19 Looking across the playground to the kindergarten. The shade structure and pergola (since covered by a roof) were probably installed during the second half of the 1990s.
Source: https://kindicare.com/childcare/centres/Australia/NSW/2010/surry-hills/ku-john-j-carroll-preschool

20 Internal view looking to the northern end of the building. Compare to views in Figure 8 taken shortly after the building was completed.
Source: https://kindicare.com/childcare/centres/Australia/NSW/2010/surry-hills/ku-john-j-carroll-preschool

4 Comparative analysis

4.1 Albert Smillie

Albert Smillie was born Albert Alexander Smellie, the son of Alexander and Lillie M Smellie of Balmain South, on 13 March 1904.[10] The family appears to have been of Scottish extraction.[11] Smellie joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924. On 29 April 1926 he registered as an architect with the Board of Architects of New South Wales.[12] He subsequently became an Associate of the Royal Australian Institute of Architects, established in 1930. In July 1927 Albert Smellie changed his name via deed poll to Albert Alexander Smillie.[13] About three years later he married Ivy Hazel Martin.[14] A son was born to the couple in March 1932.[15]

21 Albert Alexander Smillie. The photograph was taken during the 1950s.
Source: CSA Unique ID A-00016548.

In 1928 the commissioners who replaced the sacked Labor Council amalgamated the City Architect and Building Surveyor's Department with three others. They became the City Engineering and Building Surveyor's Department headed by engineer A H Garnsey. The City Architect lost the status of head of department. In 1936 the Department was split in two, and the City Architect and Building Surveyor's Department was reinstated. In 1948 the title 'City Architect' was dropped from the Department's name and it became the City Building Surveyor's Department. John Rankin was appointed City Building Surveyor in 1936, remaining in the role until 1963. In July 1936 Smillie applied unsuccessfully for the position of City Building Surveyor but by the following September he had been promoted to the position of architectural assistant and from around this time his name appears on numerous drawings prepared in the Council's architectural department as Architect. On 29 November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch.

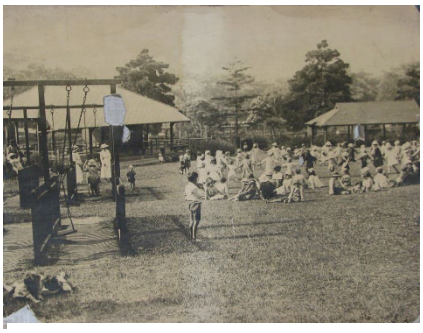
In 1950 Albert Smillie and City Building Surveyor John Rankin were sent to Great Britain, Europe and the United States to study trends in building control and modern building methods relating to civic infrastructure. They travelled to England, Scotland, Sweden, Denmark, Holland, Belgium, Frances, Switzerland, Italy, America and Canada, and were away from June to November 1950.[16] In June 1953 Smillie became the Council's Principal Architect. As the Chief Architect, and later Principal Architect, Smillie signed off on all the building plans but was not necessarily the designer of the buildings. According to Edward John Merewether, a member of Smillie's architectural team in the post-war period, "The bosses were mainly one hundred per cent keeping the Department going, dealing with the Council and that sort of thing. They signed the drawings, but I don't ever remember any design criteria. I think most blokes were left to do what they wanted to do."[17] Albert Smillie retired at the beginning of 1969. He died in March 1986, aged 82.

10 Birth registration number 10127/1904, accessed at https://familyhistory.bdm.nsw.gov.au/lifelink/familyhistory/search/result?4.
11 "Obituary", *Williamstown Chronicle*, 28 June 1924, p.2.
12 AIA
13 Government Gazette of the State of New South Wales, 'Private Advertisements,' Fri 29 Jul 1927 [Issue No.101], Page 3815.
14 5904/1930
15 "Family Notices", *Sydney Morning Herald*, 24 March 1932, p.10.
16 City of Sydney Archives File 2339/50 Building Projects Visit of City Building Surveyor and Chief Architect Overseas 1950; "Tour plan for Council men," *Daily Telegraph*, 9 May 1950, Page 11.
17 Biography supplied by City of Sydney - Interview transcript with Edward John Merewether, Trim 2019/007226

4.2 Development of kindergartens

Social concerns for the disadvantaged during the 1890s were reflected in one way by the development of kindergartens, of which there were four in state schools by 1893. The Froebelian system of kindergarten education was introduced in whole or in part to over 40 other state schools in 1894. The formation of the Kindergarten Union the following year led to the introduction of free kindergartens in underprivileged areas and efforts to spread kindergarten principles into every school in NSW. With the easing of the depression during the second half of the 1890s kindergarten methods became increasingly popular in state schools.[18]

The first free kindergarten in Australia was an initiative of the Kindergarten Union of NSW, which was founded in 1895. It opened in Charles Street, Woolloomooloo in May 1896 and was followed not long after by kindergartens in Newtown and Surry Hills, which were regarded at the time as slum areas.[19] What is understood to have been the first Municipal Council of Sydney initiative into child welfare occurred in the middle of 1912, when the Education Department approached it in regard to setting aside land in Victoria Park for a children's playground.[20] The playground was officially opened on 31 October 1913.[21] It was referred to as a kindergarten playground and was superintended by a trained instructor.



22 Victoria Park playground .
Source: City of Sydney Archives Unique ID A-00022828.

Victoria Park was followed some years later by a kindergarten playground at Moore Park equipped with play equipment and a shelter, which was officially opened by the Lord Mayor on 25 July 1917. Its use was granted to the Kindergarten Union, which was able to benefit financially as the Council granted it the right to supply teas to golfers using the nearby golf course "as the profit made from this undertaking will be expended on children's welfare in the city."[22] Additions to the small building at Moore Park were designed in 1924 by the City Architect's Department and officially opened the following year.[23]

During 1922 the Council sought powers from the State government to resume land for conversion to children's playgrounds.[24] Consent was granted, and the site of 2-14 Phelps Street was amongst the parcels of land resumed during the 1920s. The Council continued to establish playgrounds during the 1930s.

The passage of the Local Government (Areas) Act in 1948 enabled the extension of the city's municipal boundaries in 1949 to incorporate the surrounding municipalities of Alexandria, Darlinghurst, Erskineville, Glebe, Newtown, Paddington, Redfern and Waterloo, all characterised by Labor-voting, low income-earning residents. A Labor Party majority in Council held sway for the next 19 years. The construction of buildings, structures and parks to improve the condition of residents reflected the social agendas of aldermen relating to their electorates and the loss of residential population there as the demography of Sydney changed. Many socially responsible endeavours were initiated by the City of Sydney in the 1950s. They were one part of wider

18 Alan Barcan, *A Short History of Education in New South Wales* (Martindale Press, 1965), pp.159-160.
19 Hannah Lewi and David Nichols (editors), *Community: building modern Australia* (UNSW Press, 2010), p.55.
20 "Playgrounds. Victoria Park Site", *Sydney Morning Herald*, 28 June 1912, p.9; "Victoria Park. Site for Children's Playground", *Sydney Morning Herald*, 23 July 1912, p.7.
21 "The Real Issue", *Sydney Morning Herald*, 5 November 1913, p.12.
22 "Playgrounds. City Council Scheme", *Sydney Morning Herald*, 4 October 1924, p.17.
23 The Kindergarten Union enjoyed a very positive relationship with the City Council during the 1930s. Several mayors and their wives took what was termed a "keen interest" in its Free Kindergarten work, while the Town Clerk, City Engineer and Council Officers gave the Union "courteous treatment at all times." (Kindergarten Union 40th Annual Report, 1935, p.4). Council provided playground maintenance and salaries associated with the work, exempted Kindergarten Union buildings from rates and taxes, and by the end of the 1930s (if not before) was providing an annual grant. (Kindergarten Union 44th Annual Report, 1939, p.7).
24 Municipal Council of Sydney, *Proceedings*, 25 July 1922, Item 2990/22.

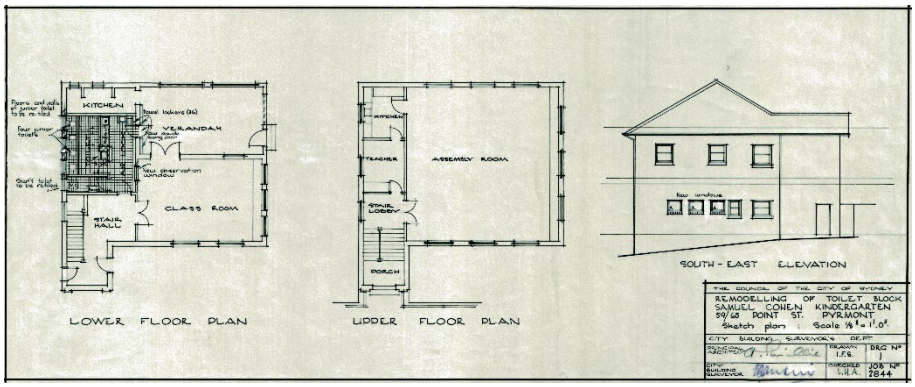
efforts to provide needed community amenities and services, which included welfare centres for the elderly, libraries, baby health centres, community halls and swimming pools.

By 1971 Council was subsidising nine kindergartens and two-day nurseries, which were operated by the Kindergarten Union and Day Nursery Association. It was responsible for seven supervised and 16 unsupervised playgrounds within the City of Sydney's boundaries.

Outside the boundaries of the City of Sydney, by the 1960s pre-school kindergartens were becoming a ubiquitous feature of early childhood, an accompaniment to rapid population growth in the post-war era. However, it is not clear how many were financed by the community or, apart from the City of Sydney, how many were funded by local councils. Ryde Council began planning to construct pre-school kindergartens in the mid-1940s. The first was at Eastwood, completed in 1948. Some funding came from the NSW Government. The Kindergarten Union was one recipient.

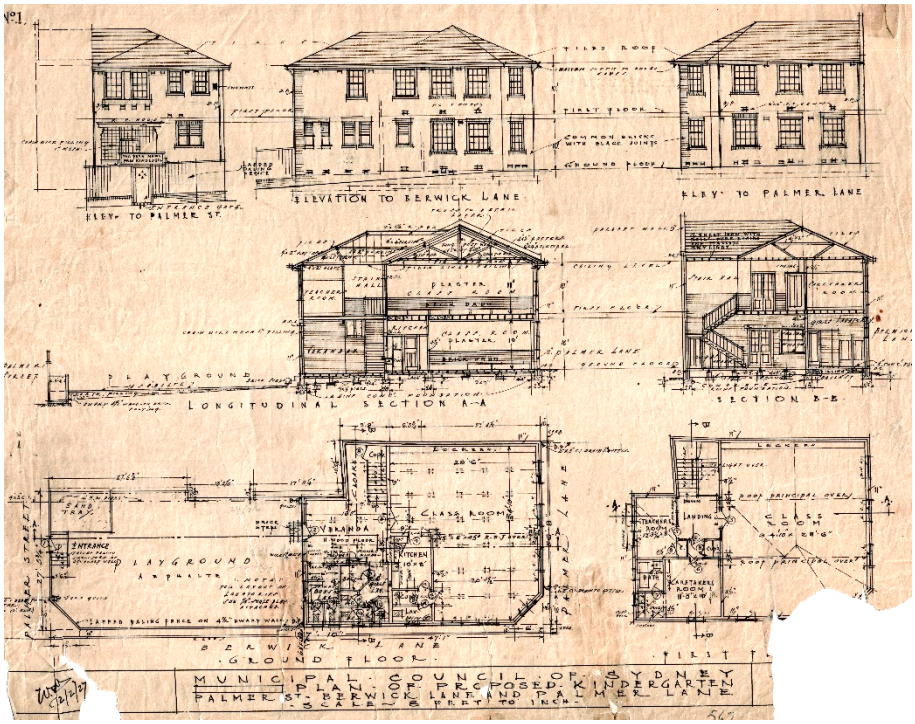
4.3 Architecture of kindergartens

A purpose-designed kindergarten and hall at 222 Palmer Street, Darlinghurst, was designed and documented In the City Architect's Branch in 1927. It has not been ascertained if Albert Smillie was involved with the project. The completed building, known as the Frances Newton Memorial Free Kindergarten in the John Birt Memorial Hall, was formally handed over to the Kindergarten Union at the beginning of July 1928. It was contemporary with the Outpost Kindergarten at 59-65 Point Street, Pyrmont, designed by architects Peddle Thorp & Walker for the Kindergarten Union and approved in August 1926. Both buildings were simple, domestically scaled two storey brick buildings with hipped roofs containing classrooms and assembly rooms supported by ancillary spaces such as small kitchens and lavatories.[25] Outpost later became the Samuel Cohen Kindergarten. Both buildings have been demolished, the Frances Newton Kindergarten in the middle of 2018.



23 Alterations to the Samuel Cohen Kindergarten documented by the City Architect, 1961.
Source: City of Sydney Archives.

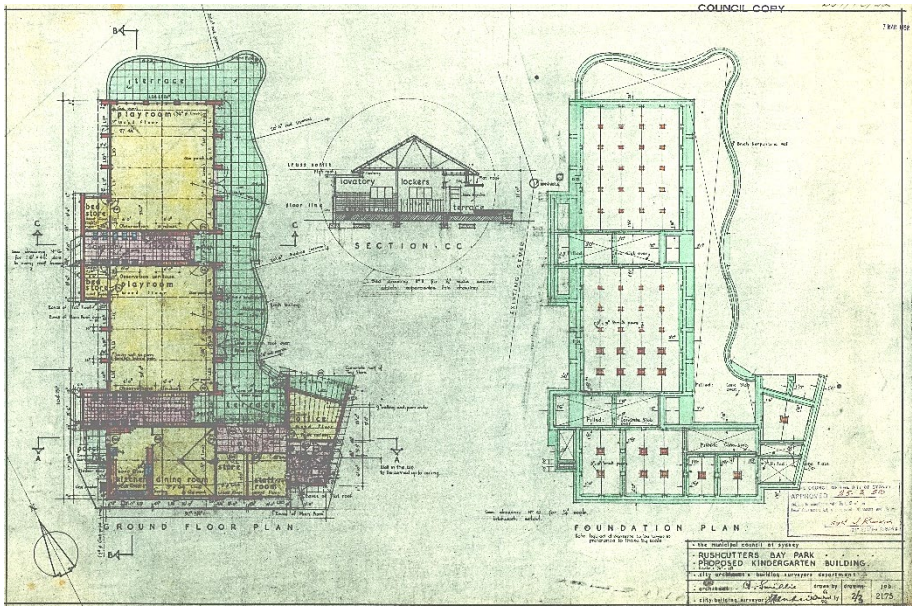
25 City of Sydney Archives Building Application 777/26 and Unique ID A-00545126.



24 Architectural plans prepared by the City Architect for the John Birt Hall and Frances Newton Kindergarten, February 1927.Sketch proposal describing a preschool playground building at Camperdown Park, 1938.
Source: City of Sydney Archives, Unique ID A-00545126.

The City of Sydney embarked on a program of kindergarten construction and had designed and built 15 kindergartens and day nurseries by 1965. They were restrained buildings designed in the prevailing Modernist aesthetic, tailored to meet strict budgets. Extensive areas of glass and deep eaves or verandahs provided cheerful bright interiors protected from the sun's worst effects. The following examples place the John Carroll Kindergarten into its context of kindergartens designed by the City of Sydney.

- **Kindergarten, Rushcutters Bay Park, 7A Waratah Street, Rushcutters Bay, c.1952**. The kindergarten is still operating under the auspices of the Kindergarten Union. The planning concept is close to the John Carroll Kindergarten, with two playrooms separated by amenities and enjoying cross ventilation. The building shares a similar New Empiricist aesthetic to John Carroll. It continues to function as a preschool and early childcare centre.



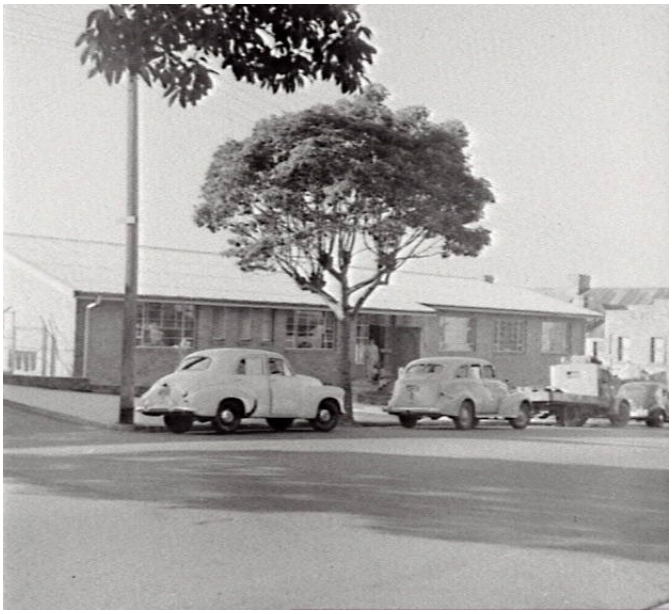
25 Left: plans of the Rushcutters Bay Kindergarten.
Above: photograph of the building, 1956. Additional sun protection has been added.
Source: City of Sydney Archives Unique ID A-00575530 and A-00015364.

- **Kindergarten, Lander Street, Darlington, c.1954**. A photograph of the building shows a similar building form to the John Carroll Kindergarten – a rectangular single storey brick building with metal framed windows and a shallow pitched gabled roof covered by metal decking. It is understood the building no longer exists.

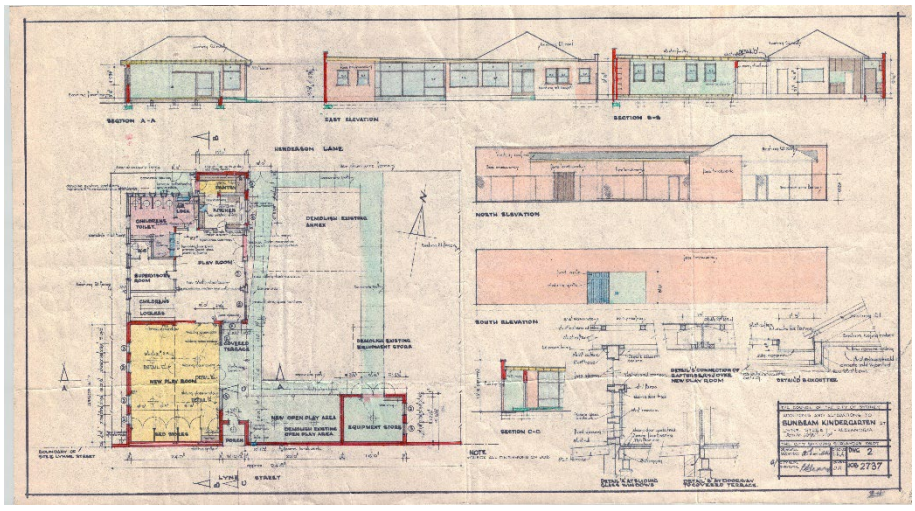
- **James Cahill Kindergarten, 7 Raglan Street, Waterloo**. Completed c.1955, still functioning as a Kindergarten Union preschool centre. The building shares several similarities with the John Carroll Kindergarten: face brick external walls, metal framed windows, extensive areas of glazing to playroom spaces, and shallow-pitched gabled roof.

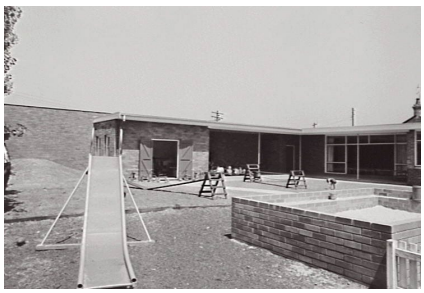
- **Alterations and flat-roofed additions to the Sunbeam Kindergarten, Lyne Street, Alexandria, 1957**. An additional playroom and other spaces were added, giving two playrooms. The kindergarten is still operating.

26 Kindergarten in Lander Street, Darlington, May 1954.
Source: City of Sydney Archives Unique ID A-00042900.



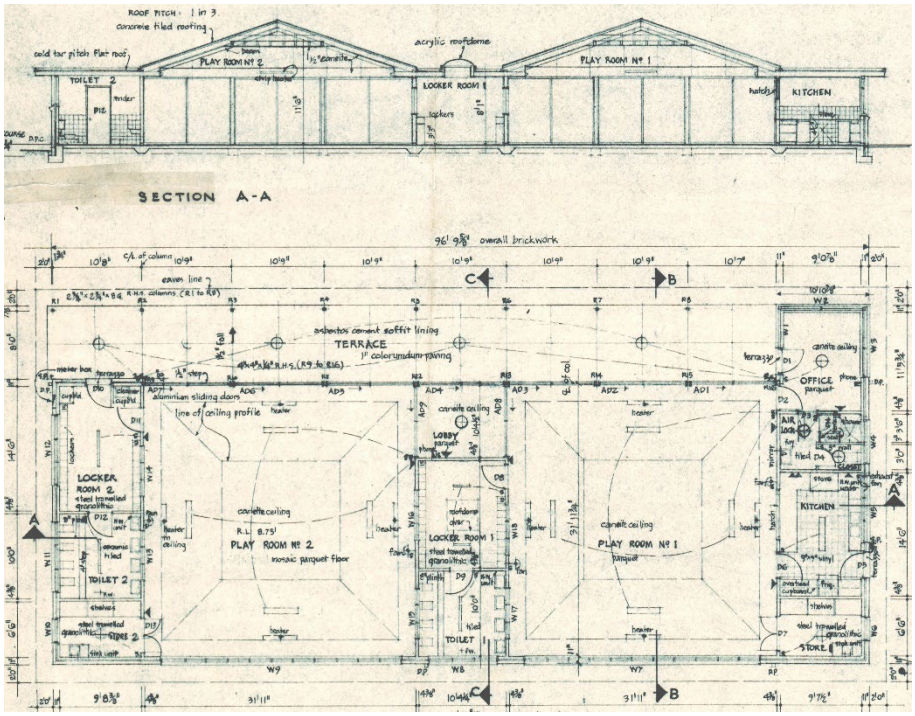
27 External views of the James Cahill Kindergarten, October 1955. The building is generally similar to the John Carroll Kindergarten in terms of architectural form, materials and glazing.
Source: City of Sydney Archives Unique ID A-00043026 and Unique ID A-00043025.





28 Left: plans and elevations of the additions to the Sunbeam Kindergarten.
Above: photograph of the additions. The building demonstrated a restrained Modernist aesthetic.
Source: City of Sydney Archives.

- **Hilda Booler Kindergarten, Jubilee Park, Glebe, 1965.** Although the aesthetic of this building had evolved from earlier kindergartens, its planning still conformed to their program of two playrooms separated by a block of amenities. The playrooms are expressed externally by separate pyramidal roofs and ceilings are lined to follow the rake of the roof planes. Extensive areas of glazing on the north-eastern side of the building are protected by a verandah extending the length of the building. The building still functions as a kindergarten.



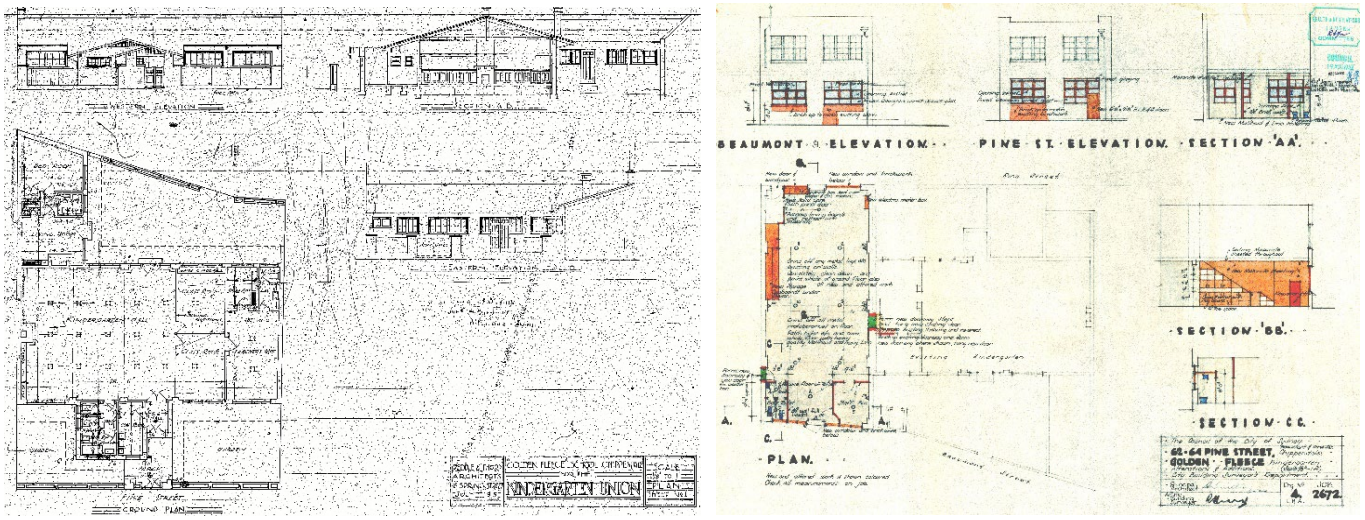
February 1965
Source: City of Sydney Archives Unique ID A- 00015363.

- Towards the end of 1906, the Kindergarten Union planned the establishment of the **Golden Fleece Kindergarten in Pine Street, Chippendale**. Officially opening in June 1907, it was largely financed by woolgrowers and initially housed in a former boot factory. In 1915 architects Peddle & Thorp designed a single storey building containing a large playroom with two small classrooms opening off it plus a teacher's room and lavatory accommodation. A small wing contained an equally small caretaker's flat.

  The building was completed the following year. The Municipal Council of Sydney resumed the two storey 1923 industrial building at 62-64 Pine Street in 1951 and completed the purchase of the Golden Fleece Kindergarten in 1955 following the suggestion of the Kindergarten Union.

  Modifications to the kindergarten and the former industrial building, adapting part of it to kindergarten use, were carried out in 1957-1958. To the south of 62-64 Pine Street was a playground consisting of properties resumed by the Council in 1925/1926 and 1937. The 1916 Peddle & Thorp building has survived but was extensively modified. In 2010. It is part of the Chippendale Child Care Centre, since 2020 run by Sydney Day Nursery (SDN).

30 Looking north along Beaumont Street - the playground on land resumed by Council in 1925-1926 and 1937, beyond which is 62-64 Pine Street and part of the former Golden Fleece Kindergarten at 60 Pine Street, November 1981.
Source: City of Sydney Archives Unique ID A- 00060687.



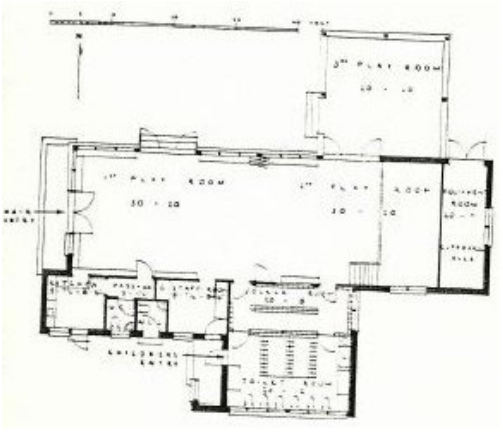
31 Left: Peddle & Thorp's drawing of the Golden Fleece Kindergarten at 60 Pine Street, 1915.
Right: City Architect's drawing of modifications to the kindergarten building and 62-64 Pine Street, 1955.
Source: City of Sydney Archives Unique ID A-00551826 and Unique ID A-00116842.

4.4 Some kindergartens outside the City of Sydney

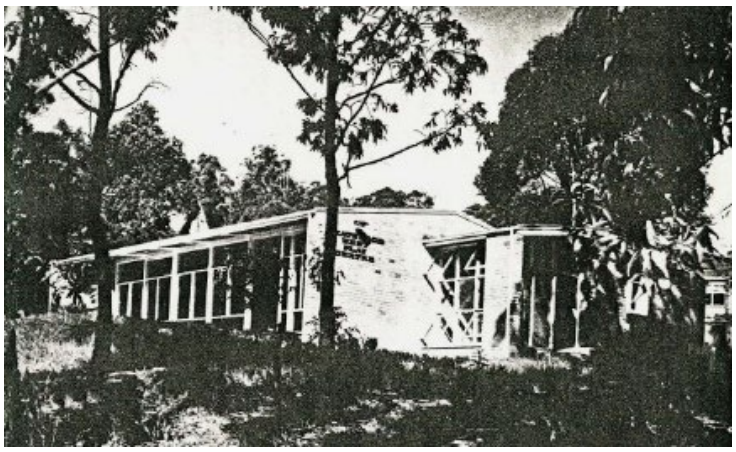
Regardless of where funding came from, some highly regarded kindergarten buildings were designed by prominent architects during the 1950s and 1960s. Eleanor Cullis-Hill designed two kindergartens for local community groups in Ku-ring-gai, at Turramurra (1961) and at Wahroonga (1954).[26] The latter, in Millewa Avenue, Wahroonga was a dual-purpose nursery school and hall and was entered for the prestigious Institute of Architects' Sulman Award in 1956. Its domestic scale, overall form and deep porch recall the John Carroll Kindergarten. The planning program was also similar, although the configuration of spaces differed from those of John Carroll. It is understood to have been modified but is still in use.

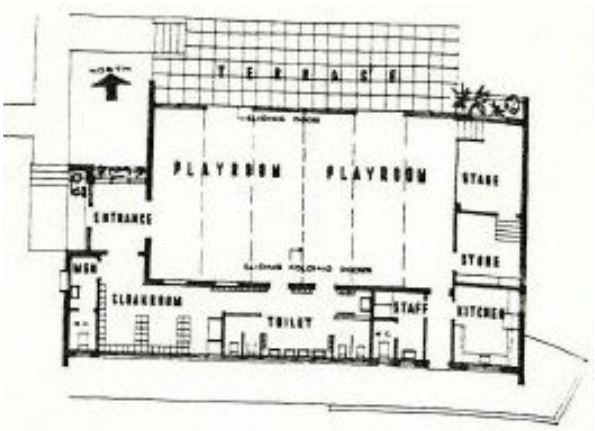
An informal Modernist kindergarten at 61 Dalrymple Avenue, Chatswood West designed by McConnel Smith & Johnson was constructed circa 1955. Its plan was not dissimilar to the kindergarten at Wahroonga, with service and ancillary spaces organised along two sides of the pair of playrooms. Externally it demonstrated a New Empiricist influence. It is understood to be still in use for the purposes it was designed. Architect Peter Muller designed a widely published kindergarten at Palm Beach. Originally established by community efforts in 1948 and housed in the local surf lifesaving club, it was relocated on Crown Land (Iluka Park). Construction was funded by the community, and the building was completed in 1961.[27] Its exterior reflected Muller's distinctive and individual approach to Modernist architectural design. It too is understood to be still in use.

26 Bronwyn Hanna, Absence and Presence: a historiography of early women architects in New South Wales (Doctor of Philosophy theses, Faculty of the Built Environment, University of NSW, 1999), p.281.
27 "Palm Beach War Memorial Kindergarten" at https://pbwba.org.au/newsletter-october-2022/, accessed 28 August 2023.



32 The kindergarten at Wahroonga designed by Eleanor Cullis-Hil, 1954 (left), building plan (right).
Source: reproduced in *The Encyclopedia of Australian Architecture* – Douglas Baglin photograph; *Architecture in Australia* Volume 45 No. 4, 1956.





33 McConnel Smith & Johnson's kindergarten at West Chatswood., 1956

34 The kindergarten at Palm Beach designed by Peter Muller,
Source: State Library Victoria Identifier H91.244/3802, Peter Wille photograph.

In 1960 a public meeting was called to discuss the establishment of a Community Kindergarten in St Ives. The formation of the St Ives Preschool Kindergarten followed, and the Ku-ring-gai Municipal Council leased some land in Garrick Road to the newly established association. Intensive fundraising activities were initiated and architects Collard, Clarke and Jackson were commissioned to design a building, completed in 1961. What emerged was described as "A charming innocence that is wholly suitable to the function pervades this rather perfect little pavilion with its exactly square plan, wide veranda [sic], and pyramid roof." [28] It still functions as a pre-school kindergarten.

35 The kindergarten at St Ives designed by Collard Clarke & Jackson. Source: https://www.csec.esrc.unimelb.edu.au/image_viewer.htm?CSEC00602,4, David Moore photograph published in *Cross-section*, September 1962.

4.5 Conclusions

The John Carroll Kindergarten is one of several designed and constructed by the City of Sydney's Architectural Department during the 1950s and 1960s. Like the kindergartens designed by architects in private practice for local community groups in other parts of metropolitan Sydney, they are mostly still in use as pre-school facilities. Kindergartens designed by private practitioners for community groups demonstrated a high level of architectural resolution. Those designed for the City Council may not have had quite the same architectural freedom but were still convincing examples of the New Empiricist strand of Modernist architecture and were designed to provide light and open spaces protected from the sun by eaves overhangs, setbacks and the like. Their planning reflects a well-defined program of spaces and is similar to the private community buildings. They continue to serve as preschool and early childcare centres, generally under Kindergarten Union auspices.

The John Carroll Kindergarten is very representative of the buildings designed by Council's architects in terms of its planning, architectural expression and response to climatic conditions.

28 "St Ives Preschool Kindergarten" at http://www.stivespreschool.org.au/uploads/8/3/3/9/83397228/information_booklet_2016.pdf, accessed 28 August 2023; Robin Boyd, *The New Architecture* (Croydon, Vic., 1963), p.25.

5 Assessment of heritage significance

Historical significance

Criterion A *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The John Carroll Kindergarten at 2-14 Phelps Street is one of several that were designed and constructed by the City of Sydney during the 1950s and 1960s. Its site history, of a block of land that was resumed for the purposes of a children's playground and then developed as a kindergarten site, is not unusual.

2-14 Phelps Street does not meet the threshold for listing.

Historical associations

Criterion B *An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).*

2-14 Phelps Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of kindergartens.

2-14 Phelps Street meets the threshold for listing at a Local level.

Aesthetic significance

Criterion C *An item is important in demonstrating aesthetic characteristics and/or and high degree of creative or technical achievement in NSW (or the local area).*

2-14 Phelps Street has aesthetic significance as a modest vernacular example of New Empiricist style architecture, which was a regional form of Modernist architecture that exploited regional design and construction techniques. The style was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda.

The building is notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control sun ingress, as well as provide thermal comfort through shading and cross ventilation.

2-14 Phelps Street meets this criterion at a Local level.

Social significance

Criterion D *An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

There is some evidence that the John Carroll Kindergarten has social significance. A community celebration was held at the 60th anniversary of the kindergarten's opening in August 2014.[29] It continues to fulfil an important role within the local community. Further research may confirm this level of heritage significance.

2-14 Phelps Street may meet the threshold for listing at a Local level.

Research potential

Criterion E *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Several kindergartens within the City of Sydney that are contemporary with 2-14 Phelps Street still fulfil the role for which they were designed. They have similar potential to yield information contributing to an understanding of the cultural history of the City of Sydney.

2-14 Phelps Street does not meet the threshold for listing at a State or Local level.

Rarity

Criterion F *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*

2-14 Phelps Street is not rare. There are several contemporary kindergartens fulfilling their original purpose in the City of Sydney.

2-14 Phelps Street does not meet the threshold for listing at a State or Local level.

Representativeness

Criterion G *An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.*

2-14 Phelps Street is representative of the kindergartens designed by the City of Sydney during the post-World War II period. This is because of its architectural design, planning and selection of materials. It is also representative more generally of kindergartens designed by architects in private practice for community groups in other parts of metropolitan Sydney.

2-14 Phelps Street meets the threshold for listing at a Local level.

5.1 Statement of significance

The KU John J Carroll Preschool at 2-14 Phelps Street, Surry Hills is one of several kindergarten buildings that were designed and constructed by the City of Sydney during the 1950s and 1960s.

[29] https://www.facebook.com/KUChildrensServices/posts/ku-john-j-carroll-preschool-celebrated-60-years-of-high-quality-service-on-sunda/716425881746448/

The building is associated with Albert Alexander Smillie, the City of Sydney's Chief Architect responsible for the City's architectural branch. Smillie was involved with numerous Council projects from the 1930s to the 1960s, which included several kindergartens.

2-14 Phelps Street has aesthetic significance as a modest vernacular example of New Empiricist style architecture, which was a regional form of Modernist architecture and was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda. It is notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control thermal comfort through shading and cross ventilation. The building is considered to be representative of the kindergartens designed by the City of Sydney during the post-World War II period and has retained a relatively high level of integrity.

There is evidence that the KU John Carroll Preschool has social significance, which would be confirmed by further research.

6 Conclusions

2-14 Phelps Street, Surry Hills fulfils the NSW Heritage Council's criteria for historical association, aesthetics and representativeness at a local level. It is also likely to fulfil the criterion for social significance. Because of this it warrants listing as a heritage item in Schedule 5 of Sydney Local Environmental Plan 2012.

Attachment F

Draft Inventory Sheet – 2-14 Phelps Street, Surry Hills

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**John J Carroll Kindergarten**		
Former name	**KU John Carroll Kindergarten**		
Item type	**Built**		
Address	Number **2**	Street **Phelps Street**	Suburb **Surry Hills**
Property description	Lot **1**		DP **50102**
Use	Current **Childcare facility**		Former **Kindergarten**
Statement of significance	The KU John J Carroll Preschool at 2-14 Phelps Street, Surry Hills, is one of several kindergarten buildings that were designed and constructed by the City of Sydney during the 1950s and 1960s. The building is associated with Albert Alexander Smillie, the City of Sydney's Chief Architect responsible for the City's architectural branch. Smillie was involved with numerous Council projects from the 1930s to the 1960s, which included several kindergartens. 2-14 Phelps Street has aesthetic significance as a modest vernacular example of New Empiricist style architecture, which was a regional form of Modernist architecture and was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda. It is notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control thermal comfort through shading and cross ventilation. The building is considered to be representative of the kindergartens designed by the City of Sydney during the post-World War II period and has retained a relatively high level of integrity. There is evidence that the KU John J Carroll Preschool has social significance, which would be confirmed by further research.		
Level of significance	State:	Local:	
Heritage listings			
DESCRIPTION			
Designer	City Building Surveyor's Department, Chief Architect Albert Smillie		
Builder	J Zenancheff		
Construction years	1953-1954		

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Physical description	2-14 Phelps Street is a single storey brick building with a rectangular plan footprint and a shallow-pitched gabled roof located on the eastern side of the site. Its design shows the influence of what has been termed New Empiricism. This was a term coined by the English journal The Architectural Review in 1947 "to describe buildings produced in the 1940s and early 1950s that demonstrated a homely, unpretentious functionalist architecture, which relied on the honest use of local materials, colours and textures as well as familiar architectural elements such as gable roofs, small-scaled windows and accommodating porches without resorting to extremes of aesthetic abstraction." It was part of a "broader northern and Central European development dominant c. 1930-1955 that combined modern movement structure and planning with materials and forms that asserted region and tradition." It was seen as a "regionally appropriate, crafted and humanist modernism" that was appreciated and interpreted by prominent Australian architects. The building is constructed with brick walls that are rendered internally. The roof is supported off steel trusses and comprises metal decking over timber rafters. The ceiling over the playrooms is raked to follow the pitch of the roof. Floors are constructed of timber. There is a deep recessed porch on the southern side of the building forming the principal entry to the building, while eaves on the eastern side of the building are relatively deep. The heads of the metal framed windows on the eastern and northern elevations are aligned with the eaves and have high sills. The pairs of doors and extensive glazing on the western side of the building is set back to provide sheltered conditions, which have been modified by the construction of the late 1990s pergola and the addition of corrugated metal decking over it. High windows in the eastern elevation would have assisted in cross ventilation of the playrooms. The playground area is heavily planted around its perimeter, effectively screening it from Alexander and Phelps Streets.
Physical condition	The building is in good physical condition.
Modification and Dates	Documented modifications to the building include the following actions: • Installation of a shade structure in the playground, 1997. • Construction of a pergola across the western elevation of the building to shade the extensive areas of glazing and installation of new gates in fencing along the Alexander Street site boundary, 1997. • Installation of baby changing facilities in the locker room between the two playrooms, 2000, which necessitated a limited amount of demolition.
Archaeological potential	The archaeological potential of the site has not been ascertained.

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in their surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

The site of 2-14 Phelps Street is part of 28.33 hectares (70 acres) granted to commissary John Palmer on 1 April 1794. Businessman and speculator John Terry Hughes acquired at least a

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part of Palmer's grant by January 1837. He took out a mortgage over it with the Bank of Australia in March 1842. The Bank, as mortgagee, sold a substantial amount of land that included a triangle of land within the subdivision of Palmer's grant that included the future site of 2-14 Phelps Street, in January 1851. It was acquired by Edward Bennett, described on title documents as an engineer or "gentleman". At that time Phelps Street was identified as Jamieson Street. The name was changed to Phelps Street in 1873, honouring Thomas Phelps (c.1836-1880), a property owner who contributed to the development of the street and other parts of Surry Hills.

In June 1873 Bennett sold part of this land, consisting of the subject site, to Surry Hills builder William Wagg. Wagg subsequently sold the land to Enos Napper, a market gardener living at Randwick, in October 1876. Development of the land is understood to have commenced during the second half of the 1870s. Napper sold it to freeholder Samuel Bridgement in July 1885. About three years later Bridgement sold the land to commercial traveller Carl Freidrich Riemenschneider.

In December 1892 Carl Riemenschneider transferred the property title to his wife Alice. Following her death in July 1894 at the age of 33 , the property passed back to him. He sold it to James Webber, described in title documents as a "gentleman," in June 1901. Webber subsequently sold the property to Miss Ida Gilder in August 1911.

The site of 2-14 Phelps Street was resumed by the Municipal Council of Sydney. The resumption of the western part of the site, consisting of 2-4 Phelps Street and 16-18 Alexander Street, was resumed on 6 May 1925 and gazetted two days later. The remainder of the site was resumed on 5 November 1926. Houses occupying the site were demolished and a children's playground established in their place.

During World War II trenches providing shelter from air raids were excavated across the open space. After the war ended the trenches were filled in.

Architectural drawings describing what was termed a children's play group centre signed by architect Albert Smillie were lodged with Council on 24 March 1953. The play group centre comprised a building located on the southern side of the site containing two playrooms separated by a locker room and lavatories and supported by a kitchen, storage spaces, teacher's room and a raised play space. The building was extensively glazed on its southern and western sides to provide the interior with generous amounts of daylight. The glazing was set back and provided with deep roof overhangs. The rest of the site was given over to a carefully laid out playground that balanced areas for play equipment with paved areas.

Approval was given to name the facility the John Carroll Kindergarten on 22 June 1953. John James Carroll (1890-1957) was an alderman for Flinders Ward between December 1934 and December 1953. He was Deputy Lord Mayor in 1949-1950 and Council representative on the City of Sydney Eisteddfod Council between 1949 and 1954. Carroll was a member of several Council committees at various times and a Member of the Metropolitan Water Sewerage and Drainage Board from 1939 to 1955. Prior to his election as alderman, he worked for the Council's Assets Department between 1909-1915 and 1931.

It is understood that the kindergarten opened in August 1954. There are relatively few documented modifications that have taken place since the building was completed.

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**
4. Building settlements, towns and cities	Towns, suburbs and villages	Post-World War II provision of community services in Surry Hills
6 Educating	Education	Council financed kindergarten
7 Governing	Government and administration	Council activities relating to social welfare in the electorate

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8 Developing Australia's cultural life	Creative endeavour	Architectural significance
9 Marking the phases of life	Persons	Associations with Albert Smillie

HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	The John Carroll Kindergarten at 2-14 Phelps Street is one of several that were designed and constructed by the City of Sydney during the 1950s and 1960s. Its site history, of a block of land that was resumed for the purposes of a children's playground and then developed as a kindergarten site, is not unusual. 2-14 Phelps Street does not meet the threshold for listing.
Historical association SHR criteria (b)	2-14 Phelps Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of kindergartens. 2-14 Phelps Street meets the threshold for listing at a Local level.
Aesthetic significance SHR criteria (c)	2-14 Phelps Street has aesthetic significance as a modest vernacular example of New Empiricist style architecture, which was a regional form of Modernist architecture that exploited regional design and construction techniques. The style was used extensively by the City of Sydney's architectural branch during the post-World War II period for buildings fulfilling a responsible social agenda. The building is notable for the modulation of the building mass, disposition of fenestration and roof overhangs to emphasise entry and to control sun ingress, as well as provide thermal comfort through shading and cross ventilation. 2-14 Phelps Street meets this criterion at a Local level.
Social significance SHR criteria (d)	There is some evidence that the John Carroll Kindergarten has social significance. A community celebration was held at the 60th anniversary of the kindergarten's opening in August 2014. It continues to fulfil an important role within the local community. Further research may confirm this level of heritage significance. 2-14 Phelps Street may meet the threshold for listing at a Local level.
Technical/Research significance SHR criteria (e)	Several kindergartens within the City of Sydney that are contemporary with 2-14 Phelps Street still fulfil the role for which they were designed. They have similar potential to yield information contributing to an understanding of the cultural history of the City of Sydney. 2-14 Phelps Street does not meet the threshold for listing at a State or Local level.

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Rarity SHR criteria (f)	2-14 Phelps Street is not rare. There are several contemporary kindergartens fulfilling their original purpose in the City of Sydney. 2-14 Phelps Street does not meet the threshold for listing at a State or Local level.
Representativeness SHR criteria (g)	2-14 Phelps Street is representative of the kindergartens designed by the City of Sydney during the post-World War II period. This is because of its architectural design, planning and selection of materials. It is also representative more generally of kindergartens designed by architects in private practice for community groups in other parts of metropolitan Sydney. 2-14 Phelps Street meets the threshold for listing at a Local level.
Integrity	Notwithstanding modifications that have taken place, 2-14 Phelps Street has retained a relatively high level of integrity.
RECOMMENDATIONS	
Recommendations	• Manage the KU John J Carroll Preschool in accordance with Sydney LEP 2012 and Sydney DPC 2012. • The KU John J Carroll Preschool should be retained and conserved. • The external form of the building, any original spaces, fabric and finishes should be retained and conserved in any future development. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Strategy be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken. • Unpainted brickwork should remain unpainted.

INFORMATION SOURCES

Type	Author/Client	Title	Year	Repository
Written	TKD Architects	Former John Carroll Kindergarten, 2-14 Phelps Street, Surry Hills Heritage Assessment	2025	City of Sydney

AUTHOR OF THIS REPORT	
Name	**Date**
TKD Architects	2025

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IMAGES	
Image Caption	Interwar period children's playground that was established on the site of 2-14 Phelps Street.

Image Year	C.1930	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-00015354

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IMAGES	
Image Caption	Architectural drawing describing the proposed kindergarten at 2-14 Phelps Street.

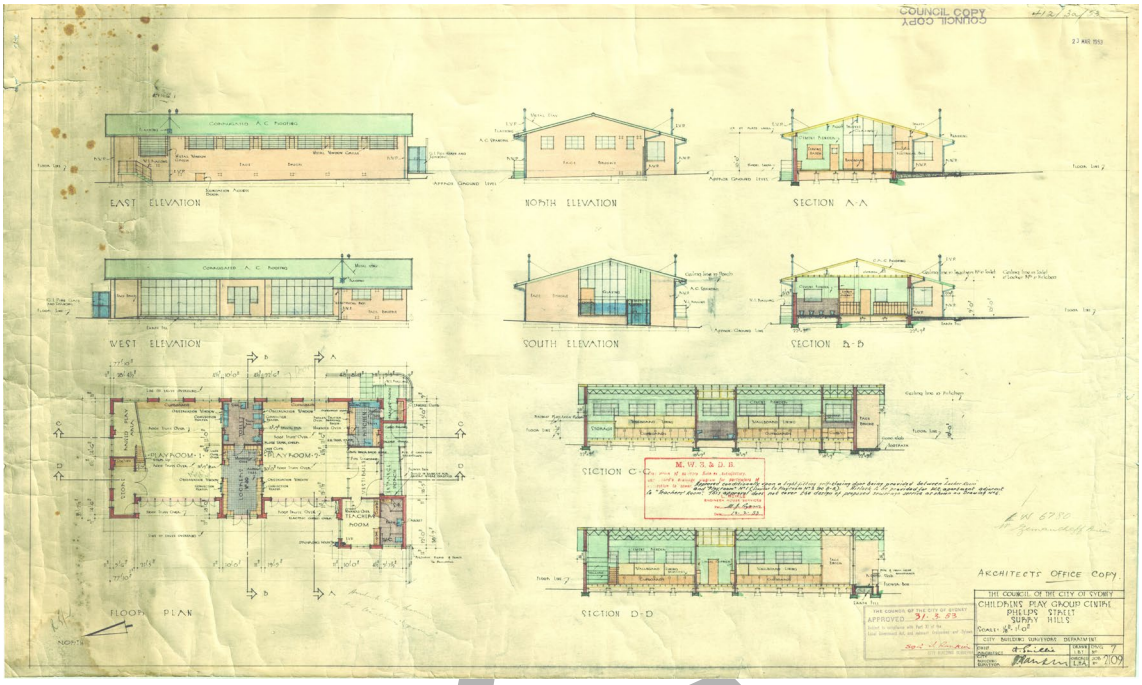

Image Year	1953	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-0054871

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IMAGES	
Image Caption	The John J Carroll Kindergarten nearing completion.

Image Year	1953	**Image author and Copyright Holder**	

IMAGES	
Image Caption	The John J Carroll Kindergarten shortly after it was opened for use.

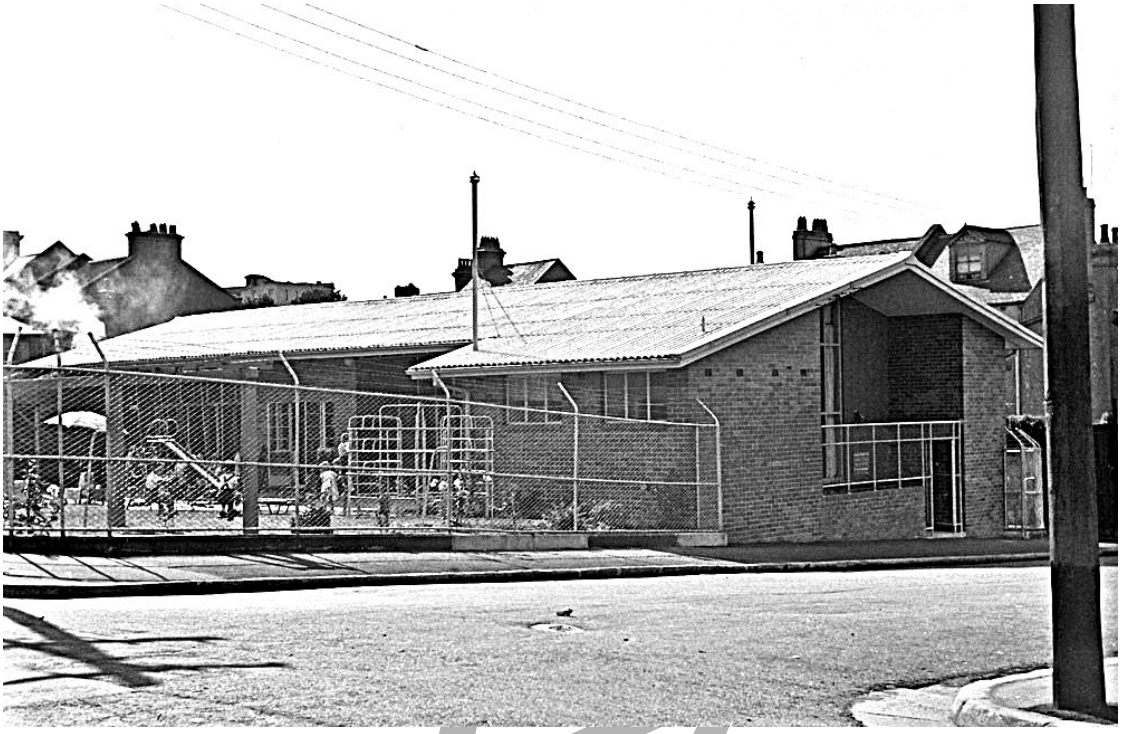

Image Year	1954	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-00042863

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

IMAGES	
Image Caption	Principal southern elevation of the KU John J Carroll Preschool facing Phelps Street.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Looking north along Arthur Lane to the eastern elevation of the building.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Looking south-east along Phelps Street towards the main building entrance.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

DRAFT

IMAGES	
Image Caption	Western side of the KU John J Carroll Preschool viewed from Alexander Street.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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Attachment G

TKD Heritage Assessment – 13-17 Riley Street, Woolloomooloo

Phillip Park Cleansing Depot
17 Riley Street, Woolloomooloo

TKDArchitects
Tanner Kibble Denton

Heritage assessment

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
The Depot as viewed from the south.

Authorship
Dr Roy Lumby, Senior Heritage Specialist, TKD Architects

Image credits
All images are by TKD Architects except where noted.

Acknowledgements
Jill Farish, archivist at City of Sydney Archives

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Robert Denton Registration No. 5782 | Alex Kibble Registration No. 6015

Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL	
P2	15 September 2025	Draft issue	RL	
A	13 November 2025	Final issue	RL	GP
B	20 January 2026	Revised final issue	RL	GP

Contents

1	Introduction	3
2	Historical overview	4
3	Physical evidence	9
4	Comparative analysis	13
5	Assessment of heritage significance	19
6	Conclusions	22

1 Aerial location image (top) and aerial detail image of the former Cleansing Depot, Riley Street Surry Hills.
Source: NearMaps with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of the former Phillip Park Cleansing Depot at 13-17 Riley Street, Woolloomooloo. The property was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects, October 2023). 13-17 Riley Street is located within the Woolloomooloo Heritage Conservation Area (C71) and in the immediate vicinity of several heritage items:

- Cook and Phillip Park including "Earth Mother" play sculpture (Item I1655).
- Former Australian Hotel, 2-4 Riley Street (Item I 2188).
- Sandstone wall remnant, 19-21 Riley Street (Item I2189)

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, *Assessing Heritage Significance* (2023),

1.2 Site description

The site is triangular in configuration. It is bounded by Riley Street to the east and Haig Lane to the north-west. The adjacent site to the south-west is vacant. The basketball court at the northern end of Phillip Park is to the west, while a building occupied by the Police Youth Citizens' Club Sydney is to the north on the opposite side of Haig Lane. The site is identified as Lot 1 Deposited Plan 83649.

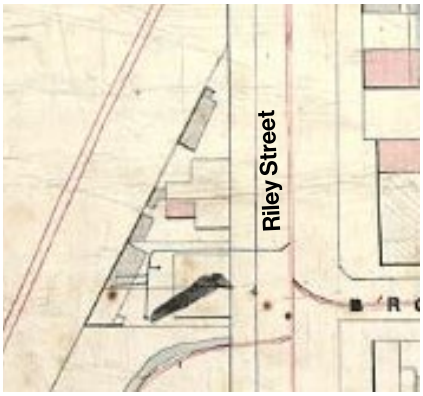
2 17 Riley Street in 2023.

2 Historical overview

13-17 Riley Street is located on a part of 100 acres granted to commissary John Palmer in February 1793. Here Palmer built Woolloomooloo Farm, one of the colony's first permanent residences. In 1810 Palmer travelled to England with colonial administrator William Bligh as a witness against Major George Johnston, a leader of the Rum Rebellion. During 1812 he gave valuable evidence to the select committee on transportation. In June 1813 he was re-employed in the commissariat and returned to New South Wales in May 1814 but on his return found his private affairs extremely straitened. The estate at Woolloomooloo was sold to merchant and pastoralist Edward Riley in May 1822,

Riley bought up lots of small land grants in the area between Woolloomooloo and Surry Hills during the 1820s. His land, called the Riley Estate, quickly grew, becoming not just a series of small land grants, but a vast estate. In 1825 Riley committed suicide, leaving behind two conflicting wills, which led to years of legal battle between his seven heirs. The site of 13-17 Riley Street subsequently became part of Block F23 of the partitioning of the Riley Estate in the 1840s.

Historically the site consists of two separate titles that were amalgamated after resumption by the City Council. Following subdivision of Block F23 the title to the allotment(s) comprising what was to become 13-15 Riley Street were conveyed on 4 February 1853 to labourer Joseph Kena (or Kenna).[1] He evidently built a house (or houses) and was living there by the end of the 1850s. Kenna died in November 1878. Probate was granted to his widow Ruth, but she died intestate in April 1879. The following August the Curator of Intestate Estates conveyed the title of 13-15 Riley Street to shoemaker David Denley.[2] He and his family occupied 15 Riley Street. Denley died at the end of October 1901, his will providing for his widow Mary to occupy one of the houses. She apparently resided at 13 Riley Street until her death in July 1914, after which the house was occupied by family members until it was resumed by the Municipal Council of Sydney.

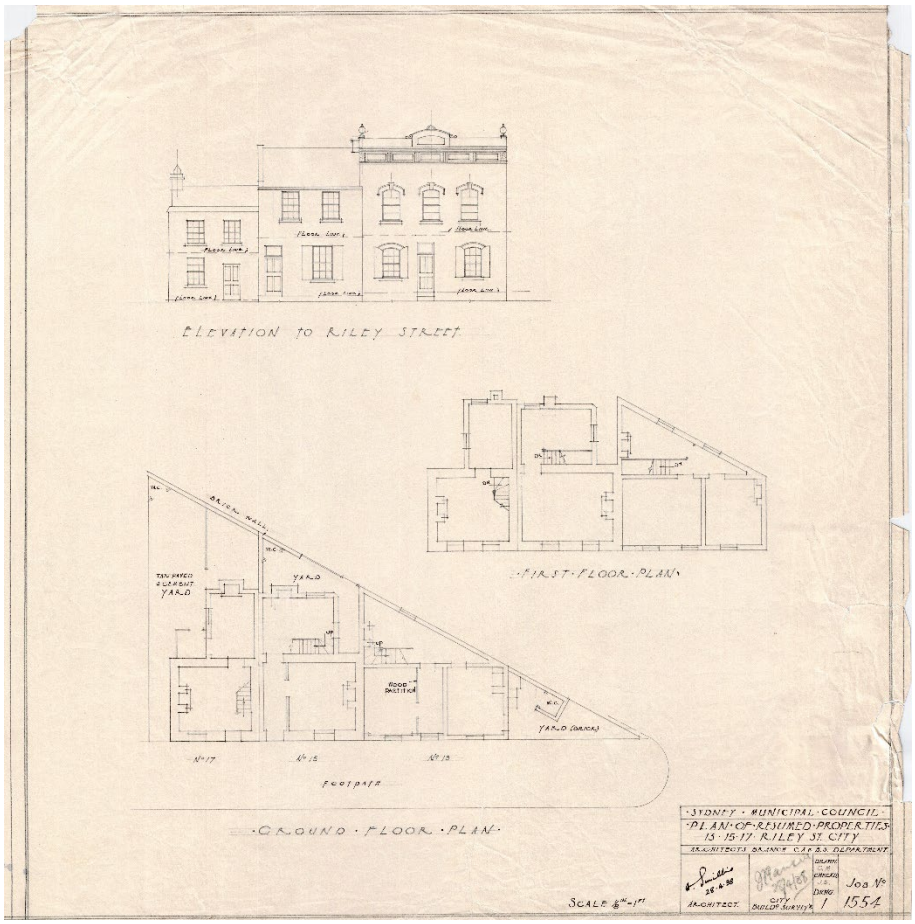


3 Development at and near 13-17 Riley Street, circa 1865.
Source: City of Sydney Archives
Trigonometrical Survey: 1855-1865, Block 11.

Following subdivision of Block F23 the site of 17 Riley Street was sold to brass founder James Turner. The conveyance is dated 7 June 1851.[3] Turner appears to have built a house on the property where he and his family lived for a short time. He conveyed the property title to butcher Thomas Higgins on 15 August 1864. Higgins subsequently conveyed it to tanner (later builder of wagons) William Sherlock on 9 October 1872. Sherlock also acquired the adjacent allotments at 19 and 21 Riley Street. He died in December 1894 and his wife died in September 1899. The trustees of his estate sold 17 Riley Street to Joseph Lynch in August 1901. Lynch is described as a tailor in *Sands directory*.

1 HLRV NSW Old Systems Title Book 25 Number 367.
2 HLRV NSW Old Systems Title Book 194 Number 329.
3 HLRV NSW Old Systems Title Book 25 Number 527.

4 Development at 13-17 Riley Street towards the end of the 1880s.
Source: City of Sydney Archives Rygate & West 1888, Sheet 8 with TKD overlay.

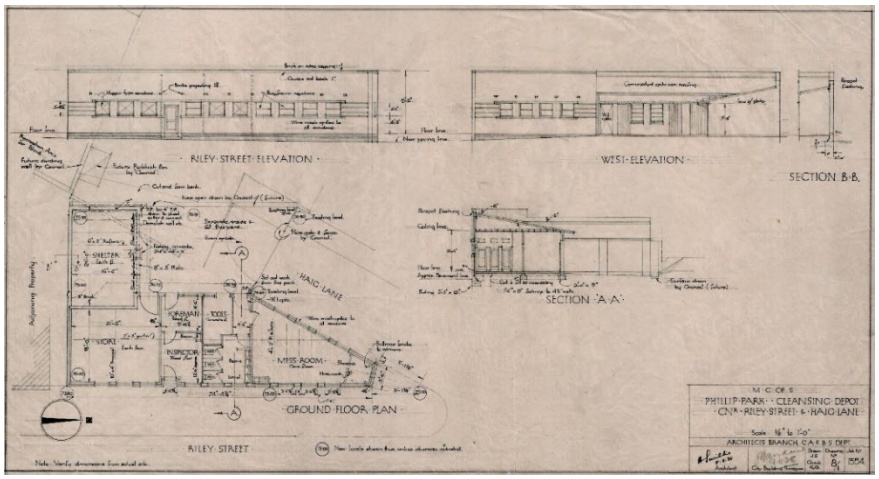


5 Measured drawing of the nineteenth century houses at 13-17 Riley Street. The drawing is dated 28 April 1938 and signed by Albert Smillie.
Source: City of Sydney Archives, Unique ID A-00545351.

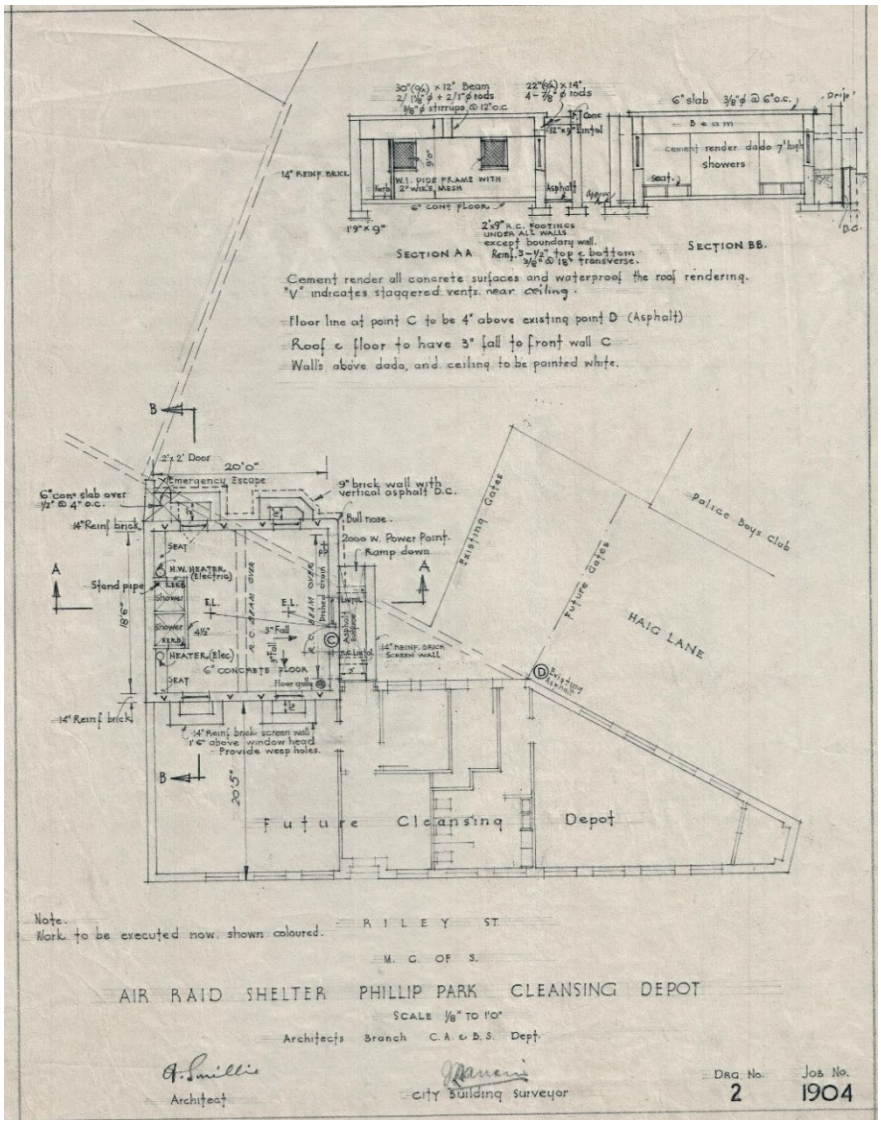
Towards the end of the 1930s the Municipal Council of Sydney resumed 13-17 Riley Street. 13-15 Riley Street was part of the estate of William Denley and 13 Riley Street was still occupied by members of the Denley family. 17 Riley Street was still the property of Joseph Lynch, although it is understood to have been tenanted. The Lieutenant-Governor of NSW approved the resumption "for the purpose of establishing thereon a Depot for use in connection with the sweeping and cleansing of public ways in the city" on 3 November 1937. The Council resolved to resume the properties on 14 February 1938. The resumption of 13-17 Riley Street was gazetted on 11 March 1938.[4]

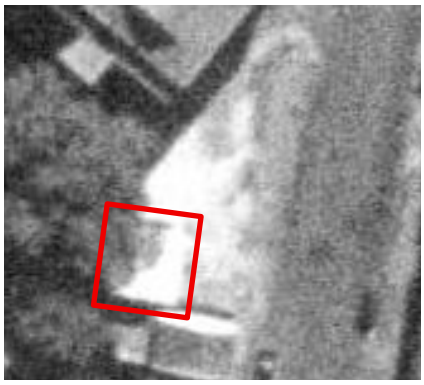
4 Government Gazette of the State of New South Wales, 11 March 1938, p.,1130.

Documentation describing the proposed single storey depot were prepared by the City of Sydney during 1938. The building is thought to have been designed by Albert Smillie, whose signature appears on the architectural drawing. However, construction did not commence for some time and was apparently postponed because of the outbreak of World War II. In 1942 the design was revised so that it accommodated an air raid shelter, which was constructed as the initial phase of development. In 1947 a two-storey building was documented (and subsequently constructed) that incorporated the air raid shelter while retaining the footprint of the 1938 scheme.

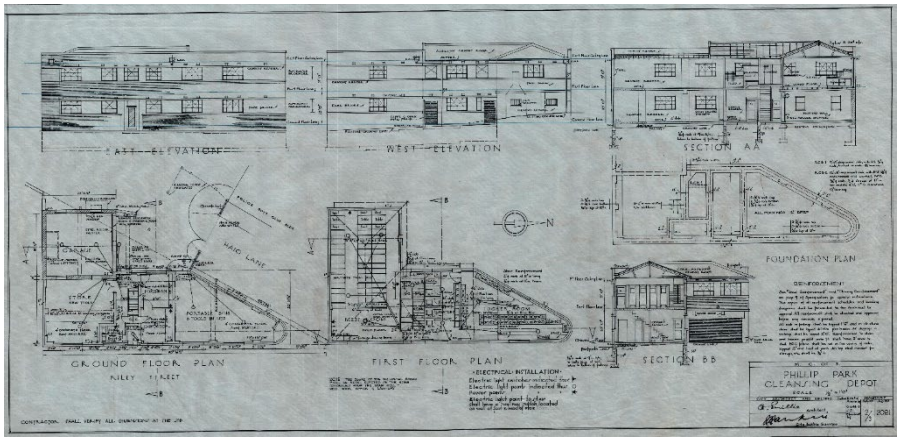


5 Plan, elevations and section of the original proposed Phillip Park Cleaning Depot. The drawing is dated 8 November 1938 and was signed by Albert Smillie.
Source: City of Sydney Archives Unique ID A-00545351.





6 Left: architectural drawing documenting the air raid shelter at the Phillip Park Cleansing Depot, which was integrated with the future depot building. The drawing was signed by Albert Smillie.
Above: portion of an aerial photograph taken in 1943 showing the completed air raid shelter (outlined in red).
Sources: City of Sydney Archives; SIX Maps with TKD Architects overlay.



8 Left: undated drawing describing the Phillip Park Cleaning Depot, which shows its existing two storey form. The drawing includes Albert Smillie's signature. The building application for the project was lodged on 22 September 1947.
Right: view of a small part of the building's interior, indicating one of the ways it was used. The photograph is dated 1 June 1967.
Source: City of Sydney Archives Unique ID A-00545549 and Unique ID A-00047218.

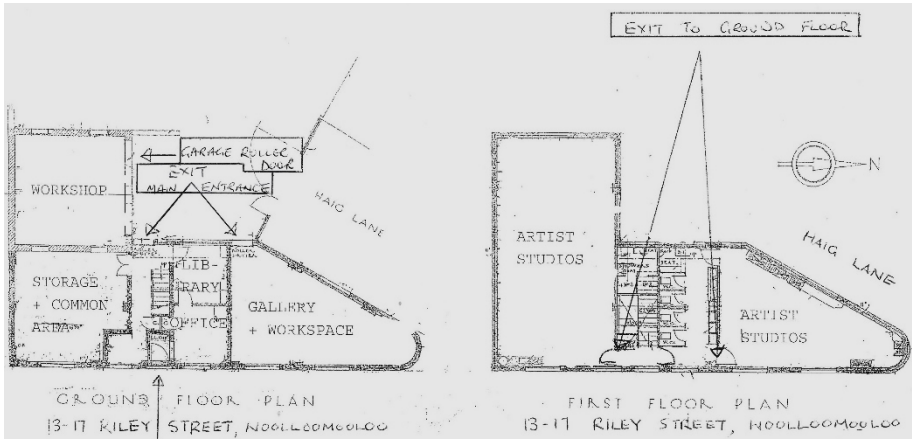
Until the early 1990s,13-17 Riley Street was a working base for street sweepers that looked after the locality. It then became a workshop for the City's parking meter mechanics, who serviced, built and repaired equipment in the building until early 2002. The building remained vacant for several years, although used sporadically for storage and short-term City accommodation.[5]

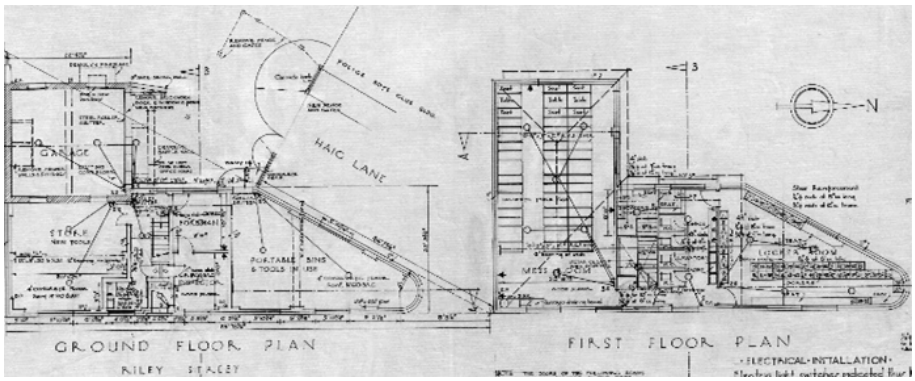
In November 2009 Firstdraft lodged a development application with the City of Sydney for a change of use of the building to artist studios, art gallery spaces and artist workshops for local artist residents and emerging artists.[6] Firstdraft was established in 1986 as an artist-run-initiative supporting emerging and early-career artists and bringing experimental practices to audiences. and is a member of Contemporary Art Organisations Australia (CAOA), a national network of fifteen public, independent, non-collecting contemporary art organisations from all Australian states and territories that advocates for the small-to-medium contemporary visual arts sector in Australia.[7] The application was approved at the beginning of 2010.

In 2014, the organisation's studio complex, which was known as the Depot, was converted into an all-encompassing facility to accommodate the development and presentation of contemporary arts practice. Firstdraft's adaptive use of the building included new exhibition spaces, two studios, collaborative workspaces, and a large, private outdoor courtyard. The gallery spaces opened in March 2014.[8]

9 Crowd gathering in the courtyard at the rear of the building during the 2014 Firstdraft auction.
Source: https://mgnsw.org.au/organisations/firstdraft-gallery/ - photograph by Lucy Parakhina.

5 Supporting information for D/2009/1852 at https://eplanning.cityofsydney.nsw.gov.au/Pages/XC.Track/SearchApplication.aspx?id=939872, accessed 20 June 2025.
6 Development application D/2009/1852 lodged 5 11 2009, approved 15 01 2010.
7 https://firstdraft.org.au/about-us, accessed 20 June 2025.
8 https://www.broadsheet.com.au/sydney/woolloomooloo/galleries/firstdraft-gallery; https://www.matchboxprojects.com/ariguide/firstdraft.php; Lucy Jones, "Firstdraft's new home", Broadsheet, 12 March 2014 at https://www.broadsheet.com.au/sydney/art-and-design/article/firstdrafts-new-home, accessed 20 June 2025.





10 Comparison of plans accompanying Firstdraft's 2009 development application (above) and the 1947 plans of the building (below). Little if any change has taken place to the building.
Sources: D/2009/1852; City of Sydney Archives Unique ID, A-00047218.

3 Physical evidence

13-17 Riley Street is a two storey building with a distinctive plan footprint that partially reflects its unusual triangular site. The northern section of the building tapers, ending with a tightly curved corner, while the southern section is L-shaped in plan. This is reflected in the configuration of the building's roof, which is flat on the northern section and hipped and gabled over the southern part. The roof is covered by profiled metal sheeting. The exterior of the building is constructed out of textured brick with horizontal rendered coursing at the window head and sill levels extending across the facades. Brickwork above and below windows is darker in hue than brickwork at the level of the windows. Windows consist of pairs of double hung timber framed sashes.

The building is a representative example of the Inter War Functionalist style which was utilised by architects from the mid-1930s through to the early 1950s. Characteristics of the style that the building demonstrates include the plain brick surfaces, a rounded corner, parapet concealing the roof and horizontal banding (in this case the rendered courses). The use of textured bricks was prevalent at the time the building was designed and constructed.

Windows are protected on ground floor by mesh and on the first floor by grilles. The roof over the southern part of the building has projecting eaves just above the rendered course over first floor windows on those elevations facing Haig Lane and the open area at the end of the lane. The eaves are lined with spaced timber battens. A portion of the ground floor in the projecting southern wing has been lined with cement render, which according to the 1947 drawings is original; the wide opening that served what was originally a garage now contains a metal framed sliding door set.

11 13-17 Riley Street viewed from the north-east.

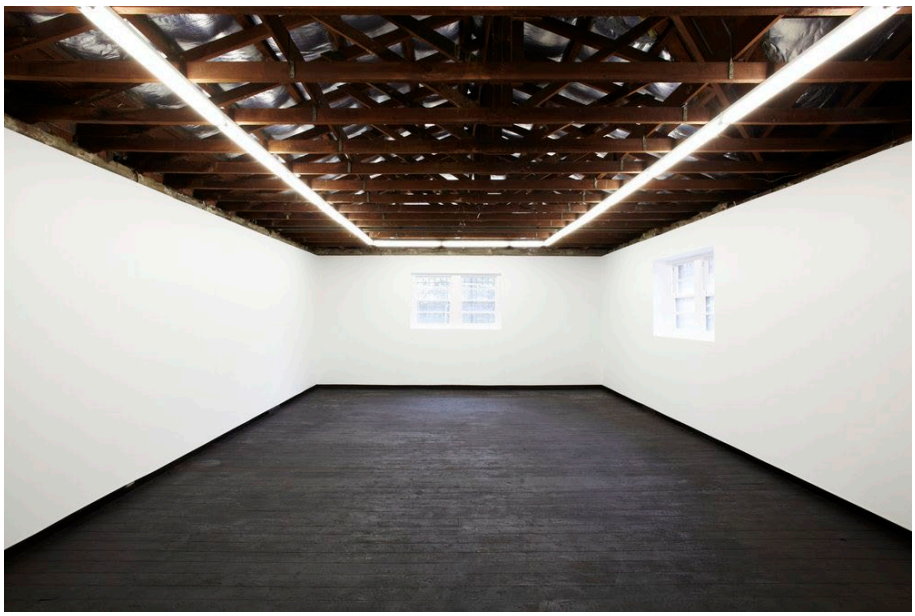
12 13-17 Riley Street viewed from the south along Riley Street.

13 Looking south along the western side of 13-17 Riley Street fronting Haig Lane.

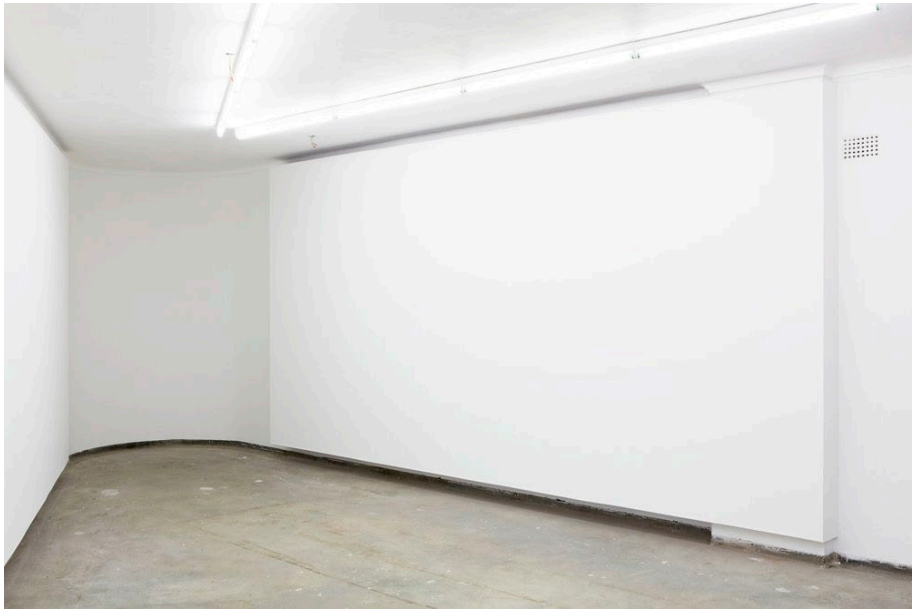
14 The southern section of the building viewed from Haig Lane. The open space in front of this part of the building is used by Firstdraft as a courtyard.

15 The southern section of 13-17 Riley Street viewed from Yurong Parkway across the Phillip Park Basketball Court.

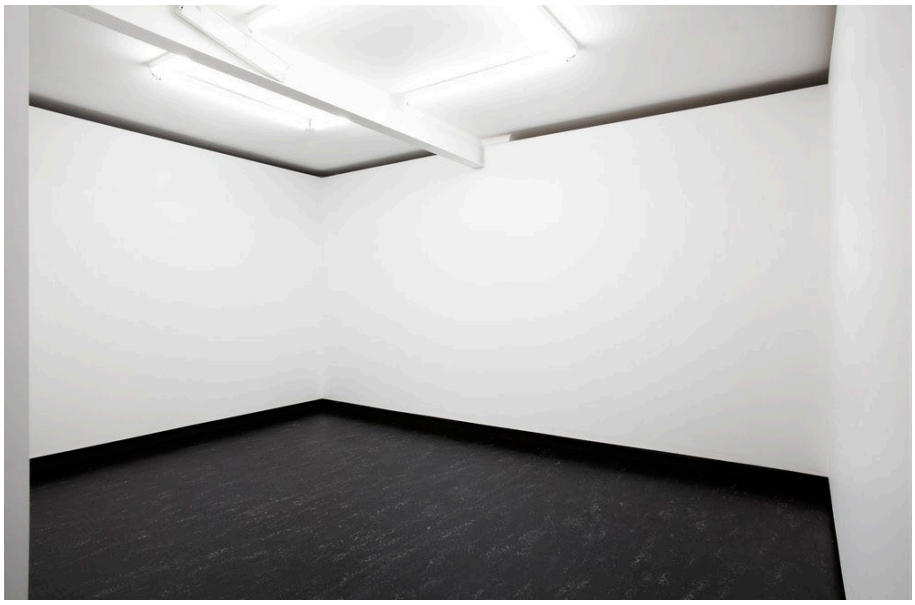
The interior of the building remains very much the same as when the building was completed. Its original plan is intact. Floors are generally constructed of concrete, some of which remains exposed. The first floor structure at the southern end is timber. The roof is also framed in timber, which in some parts of the building is exposed. Walls are lined with cement render. In some parts of the building plasterboard linings have been installed to facilitate the hanging and display of artworks.



16 First floor gallery space in the southern part of the building. The timber roof structure is exposed. Flooring is timber.
Source: Four Galleries https://firstdraft.org.au/helpful-links/about-our-space



17 Gallery space in the northern part of the building. Plasterboard has been installed across part of the existing walls. Flooring is exposed concrete.
Source: Four Galleries https://firstdraft.org.au/helpful-links/about-our-space



18 Another of the gallery spaces in the building. Plasterboard wall linings appear to have been installed over existing walls in this space.
Source: Four Galleries https://firstdraft.org.au/helpful-links/about-our-space

4 Comparative analysis

4.1 Albert Smillie

Albert Smillie was born Albert Alexander Smellie, the son of Alexander and Lillie M Smellie of Balmain South, on 13 March 1904.[9] The family appears to have been of Scottish extraction.[10] Smellie joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924. On 29 April 1926 he registered as an architect with the Board of Architects of New South Wales.[11] He subsequently became an Associate of the Royal Australian Institute of Architects, established in 1930. In July 1927 Albert Smellie changed his name via deed poll to Albert Alexander Smillie.[12] About three years later he married Ivy Hazel Martin.[13] A son was born to the couple in March 1932.[14]

19 Albert Alexander Smillie. The photograph was taken during the 1950s.
Source: CSA Unique ID A-00016548.

In 1928 the commissioners who replaced the sacked Labor Council amalgamated the City Architect and Building Surveyor's Department with three others. They became the City Engineering and Building Surveyor's Department headed by engineer A H Garnsey. The City Architect lost the status of head of department. In 1936 the Department was split in two, and the City Architect and Building Surveyor's Department was re-created. In 1948 the title 'City Architect' was dropped from the department's name and it became the City Building Surveyor's Department. John Rankin was appointed City Building Surveyor in 1936, remaining in the role until 1963. In July 1936 Smillie applied unsuccessfully for the position of City Building Surveyor but by the following September 1936 he had been promoted to the position of architectural assistant and from around this time his name appears on numerous drawings prepared in the Council's architectural department as Architect. On 29 November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch.

In 1950 Albert Smillie and City Building Surveyor John Rankin were sent to Great Britain, Europe and the United States to study trends in building control and modern building methods relating to civic infrastructure. They travelled to England, Scotland, Sweden, Denmark, Holland, Belgium, Frances, Switzerland, Italy, America and Canada, and were away from June to November 1950.[15] In June 1953 Smillie became the Council's Principal Architect. As the Chief Architect, and later Principal Architect, Smillie signed off on all the building plans but was not necessarily the designer of the buildings work. According to Edward John Merewether, a member of Smillie's architectural team in the post-war period, "The bosses were mainly one hundred per cent keeping the Department going, dealing with the Council and that sort of thing. They signed the drawings, but I don't ever remember any design criteria. I think most blokes were left to do what they wanted to do."[16] Albert Smillie retired at the beginning of 1969. He died in March 1986, aged 82.

9 Birth registration number 10127/1904, accessed at https://familyhistory.bdm.nsw.gov.au/lifelink/familyhistory/search/result?4.
10 "Obituary", *Williamstown Chronicle*, 28 June 1924, p.2.
11 *Government Gazette of the State of New South Wales*, 31 January 1930, p.475.
12 *Government Gazette of the State of New South Wales*, 'Private Advertisements,' Fri 29 Jul 1927 [Issue No.101], Page 3815.
13 https://www.nsw.gov.au/departments-and-agencies/births-deaths-marriages - marriage registration number 5904/1930
14 "Family Notices", *Sydney Morning Herald*, 24 March 1932, p.10.
15 City of Sydney Archives File 2339/50 Building Projects Visit of City Building Surveyor and Chief Architect Overseas 1950; "Tour plan for Council men," *Daily Telegraph*, 9 May 1950, Page 11.
16 Biography supplied by City of Sydney - Interview transcript with Edward John Merewether, Trim 2019/007226

4.2 Council Depots

Council depots were an essential component of the effective management, maintenance, cleaning and operation of facilities and parks under its jurisdiction, as well as an important component of street cleaning activities.

On 9 September 1899 the Council resolved to adopt a Minute by the Mayor, separating the duties of Superintendent of Street Cleansing from those of the Inspector of Nuisances. The first Superintendent of City Cleansing was William Matheson Gordon, who was appointed in October 1899. In 1901 the Department consisted of the Superintendent, 5 gangers, a clerk, 82 carters, 100 labourers, 97 block and footpath cleaners, 11 urinal cleaners and attendants, 7 night flushers and 3 horse brooms. The City Cleansing Department was responsible for the removal of all house garbage, trade refuse, street sweepings, mud, continuous cleansing of wood blocked streets and pavements, cleansing of gullies, urinals, horse troughs, fountains etc, and flushing and machine broom sweeping. In 1902 the Cleansing Department became a branch of the City Surveyor's Department.

The Council established two depots on the western side of the municipality. In March 1906, the site bounded by Bay, William Henry and Macarthur Streets at Ultimo was acquired by council as part of the Athlone Place resumption. The south-western section of the site (10-16 Bay Street) was developed as the depot from 1908 with the intention of increasing the efficiency of maintenance and cleansing works previously undertaken by private contractors. The depot centralised the cleaning service under single management and provided the facilities required for street cleansing, watering, sanding and repairing. These facilities included stables, repair and maintenance workshops and amenities for cleansing staff. The Bay Street Depot Ultimo served the northern part of the local government area.

The Wattle Street depot, on the site of Pyrmont's Hellhole Quarry was initially leased by owner Robert Saunders in 1906 for the purposes of tar distillation. It too became an important Council depot but ceased operating in 1990 and is currently due for redevelopment.

20 Aerial photograph of the Wattle Street Depot, 1943.
Source: SIX Maps.

Prior to the construction of the cleansing depot at 13-17 Riley Street a depot existed at nearby Phillip Park, which catered to the requirements of park maintenance. At times depots were little more than simple sheds with ample open space to allow for manoeuvring trucks and other motor vehicles.

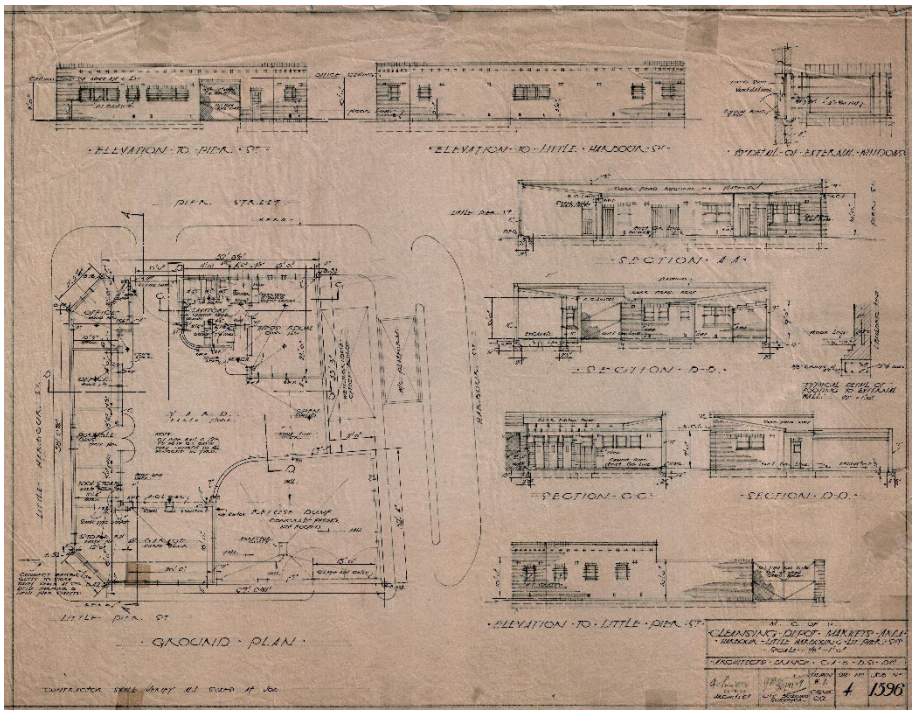
21 Left: shed-like structure associated with the park depot in Phillip Park, 1938.
Right: pragmatic structures at the Gerard Street Depot, Alexandria, 1953.
Source: City of Sydney Archives Unique ID A-00007705 and Unique ID A-00042700

The City Architect's office documented numerous depots and associated buildings, which tended to be functional and pragmatic buildings. These ranged from cleansing depots to parks depots, offices buildings, amenities blocks and even glass houses at Council nurseries. Some, however, demonstrated some architectural input on the part of designers. Albert Smillie's signature appears on numerous drawings associated with these buildings.

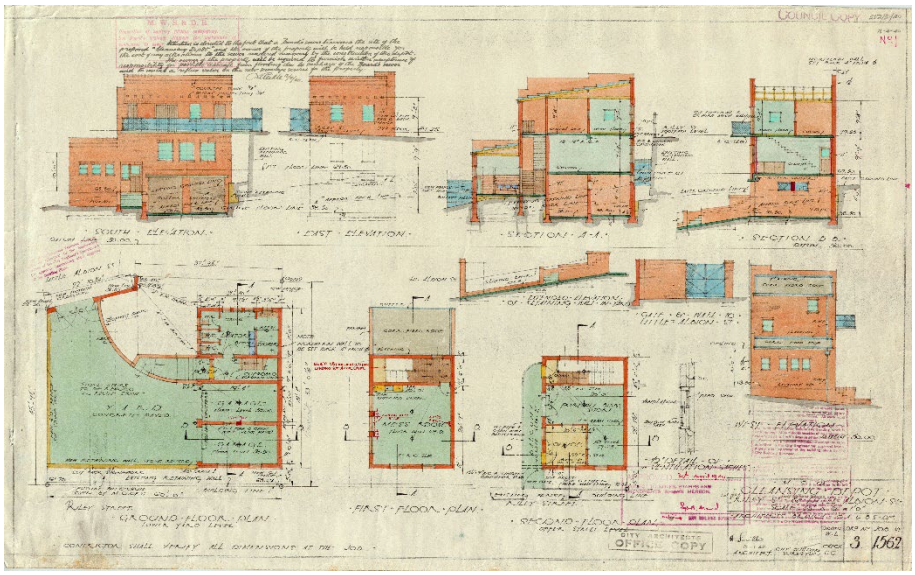
Smillie's involvement with cleansing depots extended from the late 1930s through to the late 1950s.Initially located in Central Sydney and adjoining suburbs, after the amalgamation of local government areas in the late 1940s their locations expanded to include the suburbs that were now under the jurisdiction of the Municipal Council of Sydney. Locations included Alexandria, Glebe, Redfern and Waterloo.

Where more substantial buildings were constructed, they tended to be pragmatic Functionalist style buildings with little embellishment. They were generally constructed of brick and contained storage and workshop space along with office space, a garage, staff amenities such as locker rooms, lavatories and lunch or mess rooms. When compared to these buildings, 13-17 Riley Street stands out for its distinctive form and the quality of its considered architectural resolution.

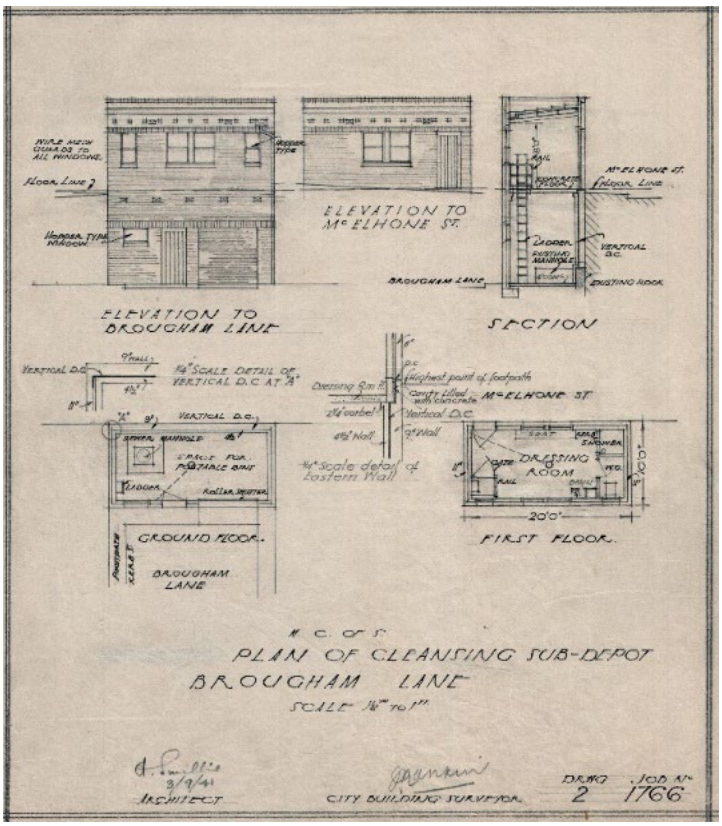
The following images summarise these cleansing depots.



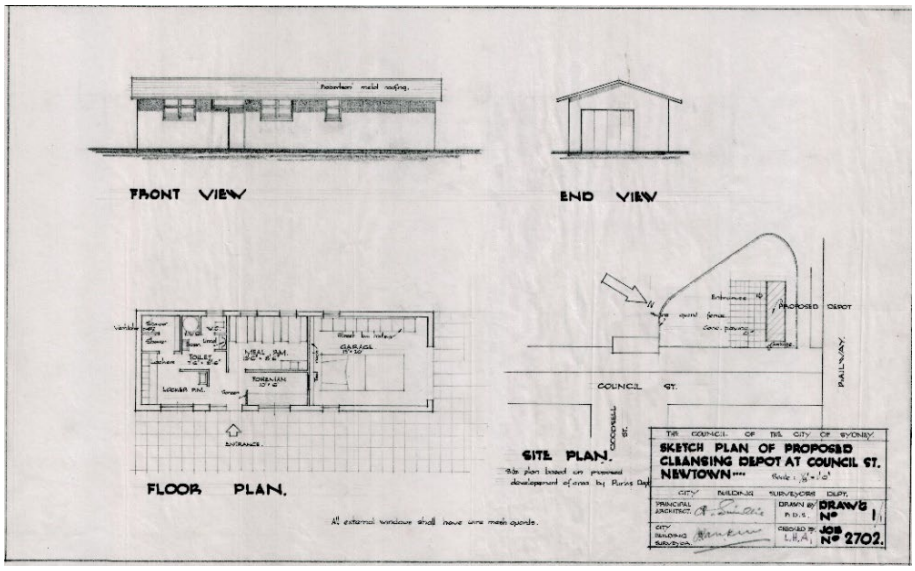
22 This severe Inter War Functionalist style building was designed in 1939 for the Markets Area Cleansing Depot in Pier Street, Darling Harbour. The Depot has since been demolished.
Source: City of Sydney Archives Unique ID A-00545367, Unique ID A-00007701.



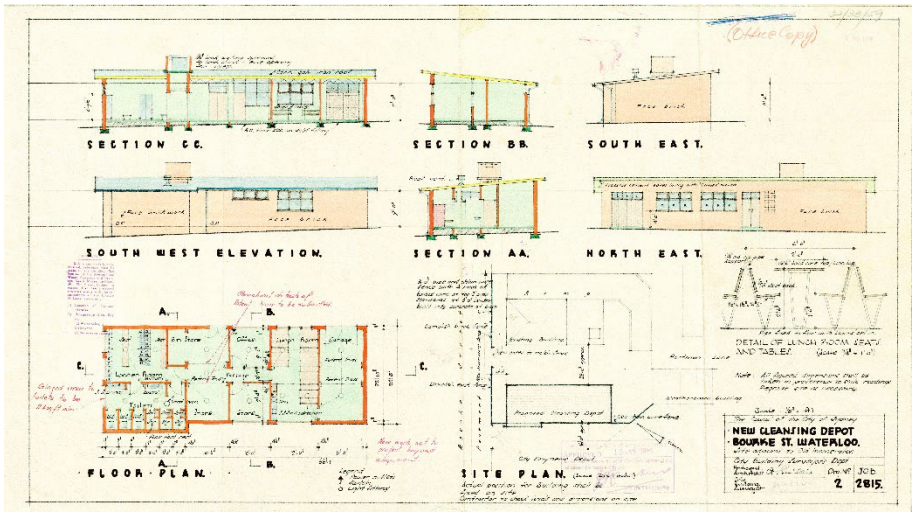
23 Severe Inter War Functionalist style building designed in 1940 for the Markets Area Cleansing Depot in Riley Sreet, Surry Hills . The building still exists.
Source: City of Sydney Archives Unique ID A-00545367, Unique ID A-00007701.



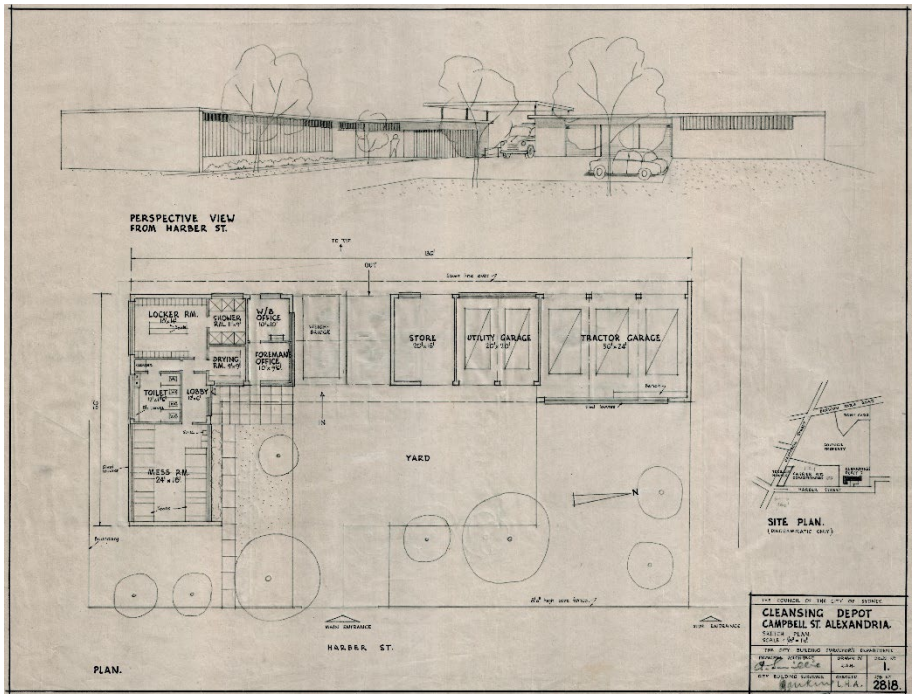
24 Architectural drawing of the Brougham Lane Cleansing sub-depot, 1941. It was converted to a Sydney County Council substation in the first half of the 1960s and, if still extant, has been modified since. Source: City of Sydney Archives Unique ID A-00545448



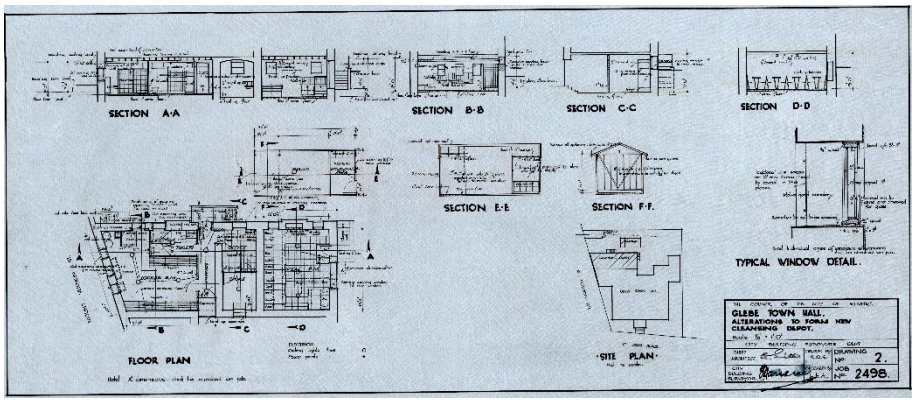
25 Proposed cleansing depot in Council Street, Newtown, 1956. Archival aerial photographs suggest it was not built. Source: City of Sydney Archives Unique ID A-00545850.



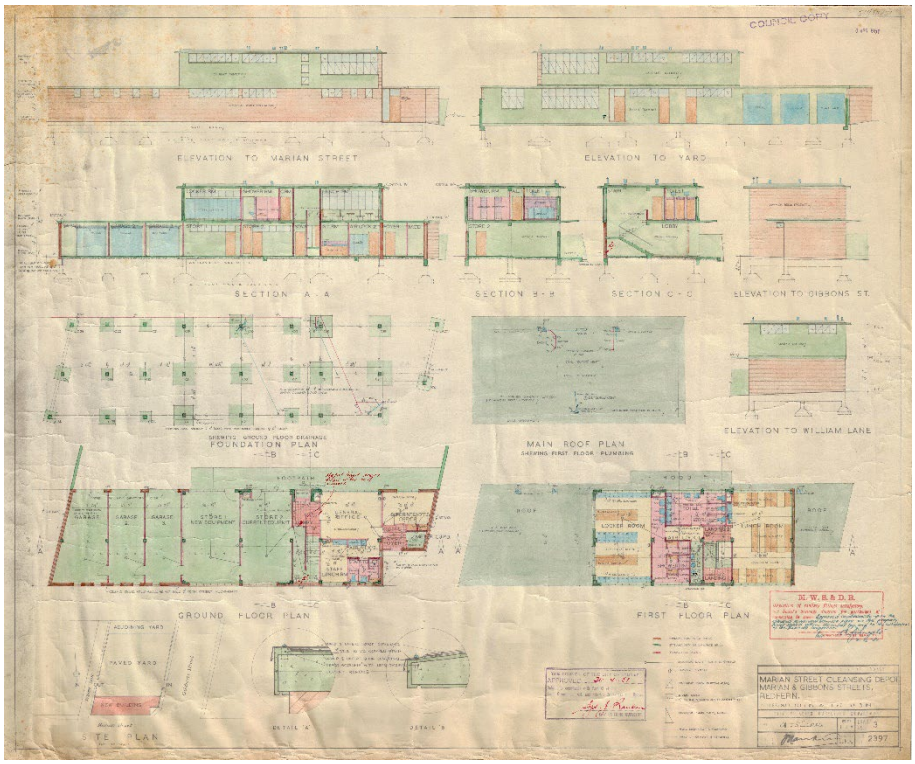
26 Conversion of an incinerator to a cleansing depot at Bourke Street, Waterloo, 1959. This building contained a garage, large lunchroom, an office, storage spaces, toilets/showers and a locker room. It is understood to have been demolished. Source: City of Sydney Archives Unique ID A-00545906..



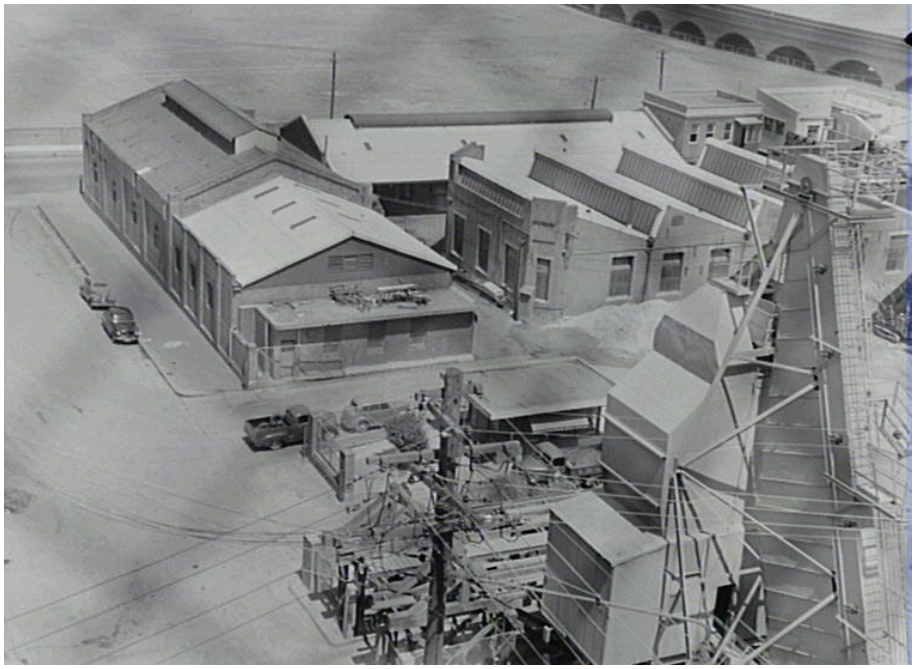
27 Proposed cleansing depot in Haber Street, Alexandria, which was documented around 1959. Archival aerial photographs suggest the stylish building was not constructed.
Source: City of Sydney Archives Unique ID A-00545907.



28 Documentation describing the conversion of a World War II air raid shelter at Glebe Town Hall into a cleansing depot, 1951.
Source: City of Sydney Archives Unique ID A-0054576.



29 Architectural drawing from 1951 and a photograph taken in May 1955 of the Marian Street Cleansing Depot in Redfern. The depot was demolished around the end of 2019.
Source: City of Sydney Archives Unique ID A-00561699 and A-00043032.



30 Aerial view of the Wattle Street Depot taken during December 1957. Buildings and structures of various ages are shown. Source: City of Sydney Archives Unique ID A-00044643.

31 Functionalist style building at the Wattle Street Depot constructed circa 1953. Source: City of Sydney Archives Unique ID A-00042838..

5 Assessment of heritage significance

5.1 Assessment

Historical significance

Criterion A *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

There is no evidence to suggest that the site of 13-17 Riley Street prior to its resumption by the City of Sydney is important in the course or patten of the City of Sydney's cultural or natural history.

The former Phillip Park Cleansing Depot at 13-17 Riley Street is one of several such depots constructed by the City of Sydney from the 1930s through to the end of the 1950s.The resumption of the land on which it was constructed is one amongst many resumptions that were carried out during the first half of the twentieth century by the City of Sydney.

13-17 Riley Street does not fulfil this criterion at a Local or State level.

Historical associations

Criterion B *An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).*

13-17 Riley Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of cleansing depots. His signature appears on several architectural drawings related to the site, indicating his involvement in the building's design.

13-17 Riley Street meets the threshold for listing at a Local level.

Aesthetic significance

Criterion C *An item is important in demonstrating aesthetic characteristics and/or and high degree of creative or technical achievement in NSW (or the local area).*

13-17 Riley Street is a restrained and assured example of the Inter War Functionalist style. Its architectural form and use of dichromatic brickwork relieved by expressed horizontal coursing are significant aesthetic contributors to the locality. The building appears to have retained a high level of external and internal integrity.

The building demonstrates a high quality of architectural resolution and form when compared to other cleansing depots designed by Council between the late 1930s and late 1950s.

13-17 Riley Street meets this criterion at a Local level.

Social significance

Criterion D *An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

As the Firstdraft Gallery, 13-17 Riley may have significance to Sydney's artistic community. Firstdraft, initially established as an artist-run-initiative, has been supporting emerging and early-career artists and bringing experimental practices to audiences since 1986. It converted 13-17 Riley Street to a complex of exhibition and studio spaces and collaborative workspaces to accommodate the development and presentation of contemporary arts practice.

13-17 Riley Street may meet this criterion at a State or Local level, although more research may be needed to firmly establish this.

Research potential

Criterion E *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Because of its integrity, 13-17 Riley Street has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots, which performed an important role in the management of the sanitation and hygiene of city and suburban streets. The building has research potential because it incorporated an air raid shelter during World War II, evidence of which still survives .

13-17 Riley Street has the potential to meet this criterion at a Local level.

Rarity

Criterion F *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*

13-17 Riley Street may be considered rare, as a surviving example of a purpose designed cleansing depot in the City of Sydney that demonstrates a high level of aesthetic significance. Although its use has changed, its high level of integrity allows early functions to be interpreted. Many other cleaning depots have been demolished and their sites redeveloped or turned over to other uses. The building also has rarity because it contains evidence of a World War II air raid shelter.

13-17 Riley Street meets this criterion at a Local level.

Representativeness

Criterion G *An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.*

13-17 Riley Street may be considered representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, although its architectural quality was much higher than others that were designed and actually constructed.

13-17 Riley Street meets this criterion at a Local level.

5.2 Statement of significance

The former Phillip Park Cleansing Depot at 13-17 Riley Street, Woolloomooloo is one of several such depots constructed by the City of Sydney from the 1930s through to the end of the 1950s.The resumption of the land on which it was constructed is one amongst many resumptions that were carried out during the first half of the twentieth century by the City of Sydney. The building is associated with Albert Alexander Smillie, who was promoted to the position of architectural assistant to the City Building Surveyor from 1936 and appointed the City of Sydney's Chief Architect from November 1949. He was involved with numerous Council projects, which included 13-17 Riley Street and several other cleansing depots.

13-17 Riley Street is a restrained and assured example of the Inter War Functionalist style that contributes significantly to the locality. The building appears to have retained a high level of external and internal integrity and demonstrates a high quality of architectural resolution when compared to other cleansing depots designed by Council between the late 1930s and late 1950s. Because of its integrity, 13-17 Riley Street has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots. While the building may be considered representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, it is a rare surviving example of a purpose designed cleansing depot in the City of Sydney and has rarity because it incorporates a World War II air raid shelter into its plan and fabric.

As the Firstdraft Gallery, 13-17 Riley may have significance to Sydney's artistic community through its endeavours to accommodate the development and presentation of contemporary arts practice.

6 Conclusions

13-17 Riley Street fulfils the NSW Heritage Council's criteria for historical association, aesthetic significance, rarity and representativeness at a Local level. The site may also have potential social and research significance. Because of this it warrants listing as a heritage item in Schedule 5 of Sydney Local Environmental Plan 2012.

Attachment H

Draft Inventory Sheet – 13-17 Riley Street, Woolloomooloo

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**Former Phillip Park Cleansing Depot**		
Former name	**Phillip Park Cleansing Depot**		
Item type	**Built**		
Address	Number **13-17**	Street **Riley Street**	Suburb **Woolloomooloo**
Property description	Lot **1**		DP **83649**
Use	Current **Art gallery**		Former **Council cleansing depot**
Statement of significance	The former Phillip Park Cleansing Depot at 13-17 Riley Street, Woolloomooloo is one of several such depots constructed by the City of Sydney from the 1930s through to the end of the 1950s. The resumption of the land on which it was constructed is one amongst many resumptions that were carried out during the first half of the twentieth century by the City of Sydney. The building is associated with Albert Alexander Smillie, who was promoted to the position of architectural assistant to the City Building Surveyor from 1936 and appointed the City of Sydney's Chief Architect from November 1949. He was involved with numerous Council projects, which included 13-17 Riley Street and several other cleansing depots. 13-17 Riley Street is a restrained and assured example of the Inter-War Functionalist style that contributes significantly to the locality. The building appears to have retained a high level of external and internal integrity and demonstrates a high quality of architectural resolution when compared to other cleansing depots designed by Council between the late 1930s and late 1950s. It has historical significance because of its early use as an air raid shelter, evidence of which is provided by its physical fabric. Because of its integrity, 13-17 Riley Street has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots. While the building may be considered representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, it is a rare surviving example of a purpose designed cleansing depot in the City of Sydney. As the Firstdraft Gallery, 13-17 Riley Street may have significance to Sydney's artistic community through its endeavours to accommodate the development and presentation of contemporary arts practice.		
Level of significance	State:	Local:	
Heritage listings			
DESCRIPTION			
Designer	City Building Surveyor's Department, Chief Architect Albert Smillie		
Builder			
Construction years	1942 – c.1948		

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Physical description	13-17 Riley Street is a two-storey building with a distinctive plan footprint that partially reflects its unusual triangular site. The northern section of the building tapers, ending with a tightly curved corner, while the southern section is L-shaped in plan. This is reflected in the configuration of the building's roof, which is flat on the northern section and hipped and gabled over the southern part. The roof is covered by profiled metal sheeting. The exterior of the building is constructed of textured brick with horizontal rendered coursing at the window head and sill levels extending across the facades. Brickwork above and below windows is darker in hue than brickwork at the level of the windows. Windows consist of pairs of double-hung timber framed sashes. The building is a representative example of the Inter-War Functionalist style which was utilised by architects from the mid-1930s through to the early 1950s. Characteristics of the style that the building demonstrates include the plain brick surfaces, a rounded corner, parapet concealing the roof and horizontal banding (in this case the rendered courses). The use of textured bricks was prevalent at the time the building was designed and constructed. Windows are protected on the ground floor by mesh and on the first floor by grilles. The roof over the southern part of the building has projecting eaves just above the rendered course over first floor windows on those elevations facing Haig Lane and the open area at the end of the lane. The eaves are lined with spaced timber battens. A portion of the ground floor in the projecting southern wing has been lined with cement render, which according to the 1947 drawings is original; the wide opening that served what was originally a garage now contains a metal framed sliding door set.
Physical condition	The building is in good condition.
Modification and Dates	2010 – change of use (Firstdraft Gallery) 2014 – internal modifications for gallery use.
Archaeological potential	The site is considered to have limited archaeological potential.

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in their surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

13-17 Riley Street is located on a part of 100 acres granted to commissary John Palmer in February 1793. Here Palmer built Woolloomooloo Farm, one of the colony's first permanent residences. In 1810 Palmer travelled to England with colonial administrator William Bligh as a witness against Major George Johnston, a leader of the Rum Rebellion. During 1812 he gave valuable evidence to the select committee on transportation. In June 1813 he was re-employed in the commissariat and returned to New South Wales in May 1814 but on his return found his private affairs extremely straitened. The estate at Woolloomooloo was sold to merchant and pastoralist Edward Riley in May 1822.

Riley bought up lots of small land grants in the area between Woolloomooloo and Surry Hills during the 1820s. His land, called the Riley Estate, quickly grew, becoming not just a series of

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small land grants, but a vast estate. In 1825 Riley committed suicide, leaving behind two conflicting wills, which led to years of legal battle between his seven heirs. The site of 13-17 Riley Street subsequently became part of Block F23 of the partitioning of the Riley Estate in the 1840s.

Historically the site consists of two separate titles that were amalgamated after resumption by the City Council. Following subdivision of Block F23 the title to the allotment(s) comprising what was to become 13-15 Riley Street were conveyed on 4 February 1853 to labourer Joseph Kena (or Kenna). He evidently built a house (or houses) and was living there by the end of the 1850s. Kenna died in November 1878. Probate was granted to his widow Ruth, but she died intestate in April 1879. The following August the Curator of Intestate Estates conveyed the title of 13-15 Riley Street to shoemaker David Denley. He and his family occupied 15 Riley Street. Denley died at the end of October 1901, his will providing for his widow Mary to occupy one of the houses. She apparently resided at 13 Riley Street until her death in July 1914, after which the house was occupied by family members until it was resumed by the Municipal Council of Sydney.

Following subdivision of Block F23 the site of 17 Riley Street was sold to brass founder James Turner. The conveyance is dated 7 June 1851. Turner appears to have built a house on the property where he and his family lived for a short time. He conveyed the property title to butcher Thomas Higgins on 15 August 1864. Higgins subsequently conveyed it to tanner (later builder of wagons) William Sherlock on 9 October 1872. Sherlock also acquired the adjacent allotments at 19 and 21 Riley Street. He died in December 1894 and his wife died in September 1899. The trustees of his estate sold 17 Riley Street to Joseph Lynch in August 1901. Lynch is described as a tailor in Sands directory.

Towards the end of the 1930s the Municipal Council of Sydney resumed 13-17 Riley Street. 13-15 Riley Street was part of the estate of William Denley and 13 Riley Street was still occupied by members of the Denley family. 17 Riley Street was still the property of Joseph Lynch, although it is understood to have been tenanted. The Lieutenant-Governor of NSW approved the resumption “for the purpose of establishing thereon a Depot for use in connection with the sweeping and cleansing of public ways in the city” on 3 November 1937. The Council resolved to resume the properties on 14 February 1938. The resumption of 13-17 Riley Street was gazetted on 11 March 1938.

Documentation describing the proposed single storey depot were prepared by the City of Sydney during 1938. The building is thought to have been designed by Albert Smillie, whose signature appears on the architectural drawing. However, construction did not commence for some time and was apparently postponed because of the outbreak of World War II. In 1942 the design was revised so that it accommodated an air raid shelter, which was constructed as the initial phase of development. In November 1947 a two-storey building was approved that incorporated the air raid shelter while retaining the footprint of the 1938 scheme.

Until the early 1990s, 13-17 Riley Street was a working base for street sweepers that looked after the locality. It then became a workshop for the City’s parking meter mechanics, who serviced, built and repaired equipment in the building until early 2002. The building remained vacant for several years, although used sporadically for storage and short-term City accommodation.

In November 2009 Firstdraft lodged a development application with the City of Sydney for a change of use of the building to artist studios, art gallery spaces and artist workshops for local artist residents and emerging artists. Firstdraft was established in 1986 as an artist-run initiative supporting emerging and early-career artists and bringing experimental practices to audiences, and is a member of Contemporary Art Organisations Australia (CAOA), a national network of fifteen public, independent, non-collecting contemporary art organisations from all Australian states and territories that advocates for the small-to-medium contemporary visual arts sector in Australia. The application was approved at the beginning of 2010.

In 2014, the organisation’s studio complex, which was known as the Depot, was converted into an all-encompassing facility to accommodate the development and presentation of contemporary arts practice. Firstdraft’s adaptive use of the building included new exhibition spaces, two studios, collaborative workspaces, and a large, private outdoor courtyard. The

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gallery spaces opened in March 2014.

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**
4 Building settlements, towns and cities	Towns, suburbs and villages	Growth and development of Woolloomooloo
4 Building settlements, towns and cities	Utilities	Provision of municipal cleaning services
8 Developing Australia's cultural life	Creative endeavour	Exemplar of Inter-War Functionalist style architecture
9 Marking the phases of life	Persons	Associations with City Architect Albert Smillie

HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	There is no evidence to suggest that the site of 13-17 Riley Street prior to its resumption by the City of Sydney is important in the course or pattern of the City of Sydney's cultural or natural history. The former Phillip Park Cleansing Depot at 13-17 Riley Street is one of several such depots constructed by the City of Sydney from the 1930s through to the end of the 1950s. The resumption of the land on which it was constructed is one amongst many resumptions that were carried out during the first half of the twentieth century by the City of Sydney The building has significance because it served as an air raid shelter during World War II, evidence of which remains in its building fabric.. 13-17 Riley Street fulfils this criterion at a Local or State level.
Historical association SHR criteria (b)	13-17 Riley Street is associated with Albert Alexander Smillie, who joined the Sydney Municipal Council's Architectural Branch as an architectural draftsman around 1924, registered as an architect in April 1926 and in September 1936 was promoted to the position of architectural assistant to the City Building Surveyor. In November 1949 Smillie was appointed the City of Sydney's Chief Architect and was responsible for the City's architectural branch. Smillie was involved with numerous Council projects, which included a number of cleansing depots. His signature appears on several architectural drawings related to the site, indicating his involvement in the building's design. 13-17 Riley Street meets the threshold for listing at a Local level.
Aesthetic significance SHR criteria (c)	13-17 Riley Street is a restrained and assured example of the Inter-War Functionalist style. Its architectural form and use of dichromatic brickwork relieved by expressed horizontal coursing are significant aesthetic contributors to the locality. The building appears to have retained a high level of external and internal integrity. The building demonstrates a high quality of architectural resolution and form when compared to other cleansing depots designed by Council between the late 1930s and late 1950s. 13-17 Riley Street meets this criterion at a Local level.

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Social significance SHR criteria (d)	As the Firstdraft Gallery, 13-17 Riley Street may have significance to Sydney's artistic community. Firstdraft, initially established as an artist-run-initiative, has been supporting emerging and early-career artists and bringing experimental practices to audiences since 1986. It converted 13-17 Riley Street to a complex of exhibition and studio spaces and collaborative workspaces to accommodate the development and presentation of contemporary arts practice. 13-17 Riley Street may meet this criterion at a State or Local level, although more research may be needed to firmly establish this.
Technical/Research significance SHR criteria (e)	Because of its integrity, 13-17 Riley Street has the potential to demonstrate the functions and operations of the City of Sydney's cleansing depots, which performed an important role in the management of the sanitation and hygiene of city and suburban streets. 13-17 Riley Street has the potential to meet this criterion at a Local level.
Rarity SHR criteria (f)	13-17 Riley Street may be considered rare, as a surviving example of a purpose designed cleansing depot in the City of Sydney that demonstrates a high level of aesthetic significance. Although its use has changed, its high level of integrity allows early functions to be interpreted. Many other cleaning depots have been demolished and their sites redeveloped or turned over to other uses. The building is likely to have rarity value because its early use as an air raid shelter, evidence of which still remains in place. 13-17 Riley Street meets this criterion at a Local level.
Representativeness SHR criteria (g)	13-17 Riley Street may be considered representative of the cleansing depots designed by the City of Sydney in the years before and after World War II, although its architectural quality was much higher than others that were designed and constructed. 13-17 Riley Street meets this criterion at a Local level.
Integrity	13-17 Riley Street has retained a relatively high level of integrity.
RECOMMENDATIONS	
Recommendations	• Manage 13-17 Riley Street in accordance with Sydney LEP 2012 and Sydney DCP 2012. • 13-17 Riley Street should be retained and conserved. • The external form of 13-17 Riley Street, any original spaces, fabric and finishes should be retained and conserved in any future development. • Any proposed additions above roof level should not obscure the architecture of the building, retain the legibility of its original form and be subservient in terms of materials and detailing. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Strategy be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken. • The exterior brickwork of the building should not be covered by paint or by cement render. • Consider undertaking further research on air raid shelters constructed in the City of Sydney and the extent to which they survive, to better understand the context and historical value of 13-17 Riley Street.

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

INFORMATION SOURCES				
Type	**Author/Client**	**Title**	**Year**	**Repository**
Written	TKD Architects	Phillip Park Cleansing Depot, 13-17 Riley Street, Surry Hills Heritage Assessment	2025	City of Sydney

AUTHOR OF THIS REPORT	
Name	**Date**
TKD Architects	November 2025

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IMAGES	
Image Caption	undated drawing describing the Phillip Park Cleaning Depot, which shows its existing two-storey form. The drawing includes Albert Smillie's signature.

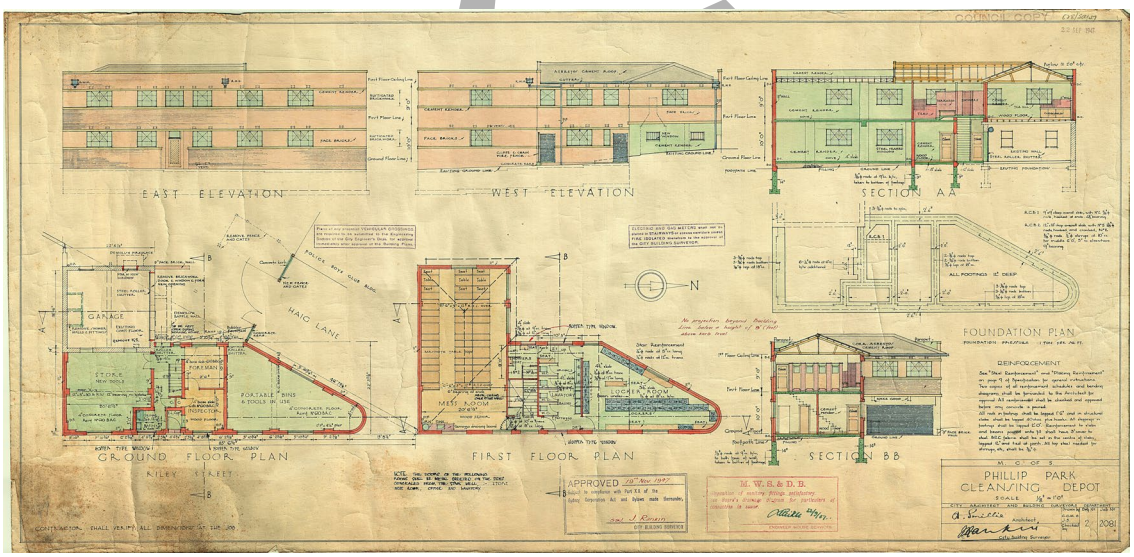

Image Year	C. 1947	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A- A-00555866

IMAGES	
Image Caption	13-17 Riley Street viewed from the north-east.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

VET

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

IMAGES	
Image Caption	13-17 Riley Street viewed from the south along Riley Street.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Looking south along the western side of 13-17 Riley Street fronting Haig Lane.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	The southern section of the building viewed from Haig Lane. The open space in front of this part of the building is used by Firstdraft as a courtyard.

Image Year	2023	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	The southern section of 13-17 Riley Street viewed from Yurong Parkway across the Phillip Park Basketball Court.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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Attachment I

TKD Heritage Assessment – 1A Billyard Avenue, Elizabeth Bay

Arthur McElhone Reserve
1A Billyard Avenue
Elizabeth Bay

TKDArchitects
Tanner Kibble Denton

Heritage assessment

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
Matthew Taylor photograph

Authorship
Dr Roy Lumby, Senior Heritage Specialist, TKD Architects
D Matthew Taylor, Landscape Architect

Image credits
All images are by TKD Architects except where noted.

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Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL, DMT	
P2	30 September 2025	Draft issue	RL, DMT	
A	13 November 2025	Final issue	RL, DMT	GP
B	20 January 2026	Revised final issue	RL, DMT	GP
C	21 January 2026	Revised final issue	RL, DMT	GP

Contents

1	Introduction	3
2	Historical overview	4
3	Physical evidence	17
4	Comparative analysis	20
5	Assessment of heritage significance	26
6	Conclusions	29

1 Aerial location image (top) and aerial detail image of McElhone Reserve Elizabeth Bay. Source: Nearmap with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of the Arthur McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay. The Reserve was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects and Taylor Brammer, October 2023). The reserve is included in Schedule 5 of Sydney LEP 2012 as part of the listing for the house and grounds, Elizabeth Bay House, 7-9 Onslow Avenue, Elizabeth Bay (Item I594).The Reserve is also located within the Elizabeth and Rushcutters Bay Urban Conservation Area (Item C20).

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, *Assessing Heritage Significance* (2023),

1.2 Site description

The Arthur McElhone Reserve is located at the intersection of Billyard and Onslow Avenues, between the western side of Billyard Avenue and the eastern side of Onslow Avenue. Elizabeth Bay House is located opposite the Reserve, on the western side of Onslow Avenue. Small apartment blocks constructed during the late 1930s are located to the south of the Reserve and overlook it.

The site is identified as Lot 1 Deposited Plan 15713.

2 View north within the reserve, 2023.

2 Historical overview

2.1 Early site history

The history of Elizabeth Bay House has been extracted and condensed from the history included in the State Heritage Register inventory for Elizabeth Bay House.

In 1815 Governor Macquarie established a fishing village known as Elizabeth Town for a composite group of Gadigal people under the leadership of Bungaree (died 1830). It was a well-meaning but misguided attempt to encourage Aboriginal people to learn about and adopt a more sedentary way of life. The site of Elizabeth Town was behind the sandy beach below what would later become Elizabeth Bay House, in the vicinity of its owner Alexander Macleay's kitchen garden (now Beare Park). The settlement had been abandoned by 1824.

The site of the Arthur McElhone Reserve is on part of 21.85 hectares (54 acres) of land formally granted to Colonial Secretary Alexander Macleay on 19 October 1831. The land had been promised to Macleay by Governor Darling in 1826. In 1828 Darling ordered the subdivision of Woolloomooloo Hill into allotments that could accommodate large residences and extensive grounds and deeds of grant were issued to select members of society, which included senior public servants. Formal grants were issued in 1828 and 1831.

Alexander Macleay (1767-1848) was well known in British and European natural history circles. He was elected a Fellow of the Linnean Society of London in 1794 and was elected a Fellow of the Royal Society in 1809. A civil servant in England, Macleay was forced to retire from 1817 when his department was abolished and his finances were stretched to support a large family, town and country residences, and his obsessive collecting of insects. He accepted the position of Colonial Secretary of NSW, arriving in 1826, and promptly set about improving his grant at Elizabeth Bay using assigned convict labour. He employed his horticultural expertise, assisted from the late 1820s by gardener Robert Henderson, to establish a private botanic garden with picturesque features of dwarf stone walls, rustic bridges, and winding gravel walks interspersed amongst indigenous trees and rare species. The garden became known internationally through the letters and published accounts of local naturalists and visiting scientific expeditions.

Plans for Elizabeth Bay House were in hand from 1832, but construction did not commence until 1835. It was completed by 1839 to the design of prominent architect John Verge. The siting of the house on an axis with Clark Island and the (Sydney Harbour) Heads was a significant aspect of the carefully stage-managed landscape and is recognisable today.

In 1835 prominent local nurseryman Thomas Shepherd wrote: "A splendid open lawn is placed in the main centre front of the house, leaving to view from the adjoining grounds and windows one of the most interesting prospects of the harbour". The site of the lawn is now the Arthur McElhone Reserve. The lawn was famous from the 1840s onwards for its massed bulbs imported from the Cape of Good Hope.

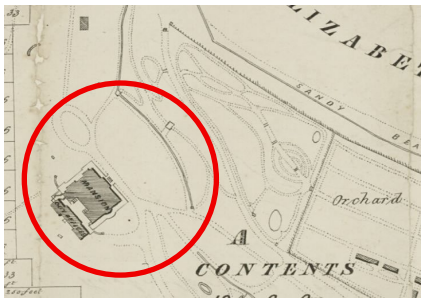
Macleay was ousted from public office in 1837 and by the early 1840s was in serious financial difficulty. An attempt was made to subdivide the land in 1841, but the blocks did not sell. Macleay was saved by his eldest son, William Sharp Macleay (1792-1865), who was a public servant, scholar and naturalist. Alexander Macleay was elected Speaker of the Legislative Council (1843-46) and died at Rose Bay in 1848. William Sharp Macleay lived alone at Elizabeth Bay House until his death in 1865.

3 Alexander Macleay – engraving by Charles Fox after Sir Thomas Lawrence
Source: https://www.portrait.gov.au/portraits/2009.131/alexander-macleay item 2009.131

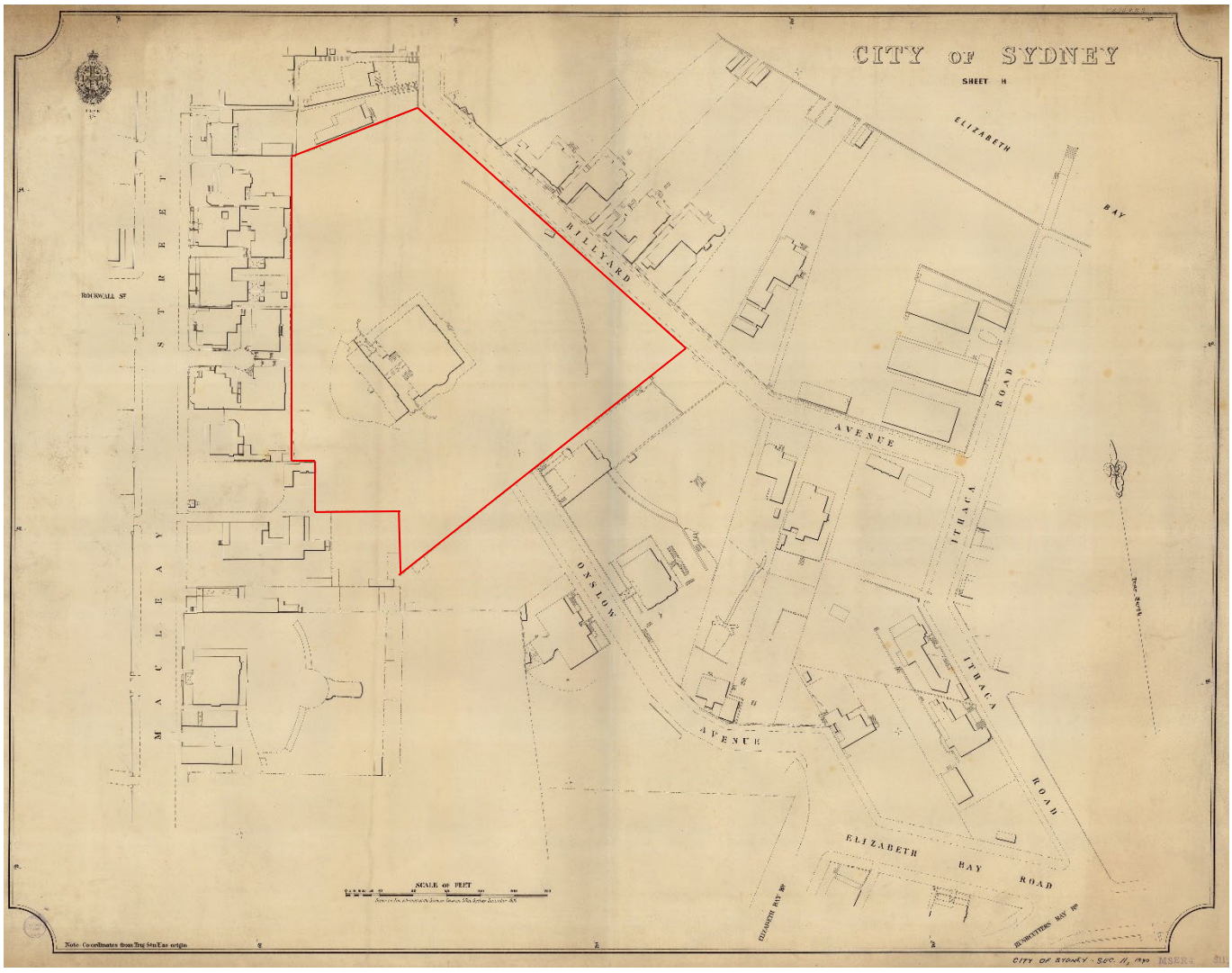
4 Detail of an 1839 watercolour by Conrad Martens showing Elizabeth Bay House and the expansive lawn in front of the building.
Source: National Gallery Victoria Accession Number 2231-4 at https://www.ngv.vic.gov.au/explore/collection/work/27443/

After William Macleay died the estate passed to his brother George, who progressively subdivided the estate and sold leaseholds of a substantial portion of it. Elizabeth Bay House was leased to his cousin William John Macleay and his wife Susan. Following the death of George Macleay in 1891, under the terms of William Sharp Macleay's will the house was passed from their nephew, the late Arthur Alexander Walton Onslow, to his eldest son James Macarthur Onslow of Camden Park. The connection with the Macarthur Onslow family was established by the marriage of Alexander Macleay's daughter Rosa Roberta, who married Arthur Pooley Onslow in 1832. By this time the grounds of Elizabeth Bay House had contracted sharply.

Alexander Macleay's nephew, Sir William John Macleay, occupied the house from around 1865 until his death in December 1891. Lady Macleay remained in occupation until her death in 1903. Late that year George Isaac Michaelis, a prominent businessman and member of Sydney's Jewish community, moved into the house. Michaelis' father-in-law and uncle, Moritz Gottheif, also a significant member of Sydney's Jewish community and a prominent merchant, also resided there.



5 Portion of a circa 1865 survey by Ferdinand Reuss of the Elizabeth Bay House Estate showing the house and the lawn to its north.
Source: State Library of NSW Z/M2 811.18112/1865/1



6 This 1890 survey indicates the extent of subdivision and development around Elizabeth Bay House at the end of the nineteenth century. The boundaries of remaining grounds are indicated.
Source: State Library of NSW Department of Lands Metropolitan Detail Series City of Sydney Sheet H, 1890.

7 View of Elizabeth Bay House circa 1895. Note the broad lawn and mature trees in the location of McElhone Reserve. Source: Museums of History NSW Caroline Simpson Collection, record number:34391 Freeman & Co photograph.

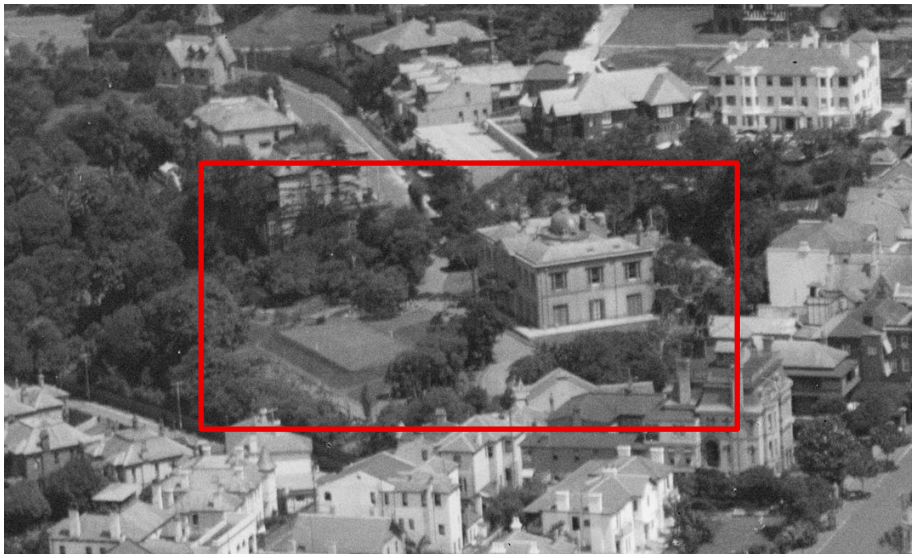
2.2 Subdivision and sale

In March 1911 the remaining area of land, including Elizabeth Bay House, was conveyed by James William McArthur Onslow to tenant George Michaelis, who with his family remained in occupation. However, in December 1926 Michaelis mortgaged the property to Gordon Snow Limited, which on the same day transferred the title to a company called Elizabeth Bay Estates Limited. The company was formed to acquire the land on which Elizabeth Bay House stood and was registered in December 1926.[1] Its directors were Leslie James O'Brien Bray (who was noted for his extensive real estate holdings), John Hartley Cook and Barclay Thomson Wright.

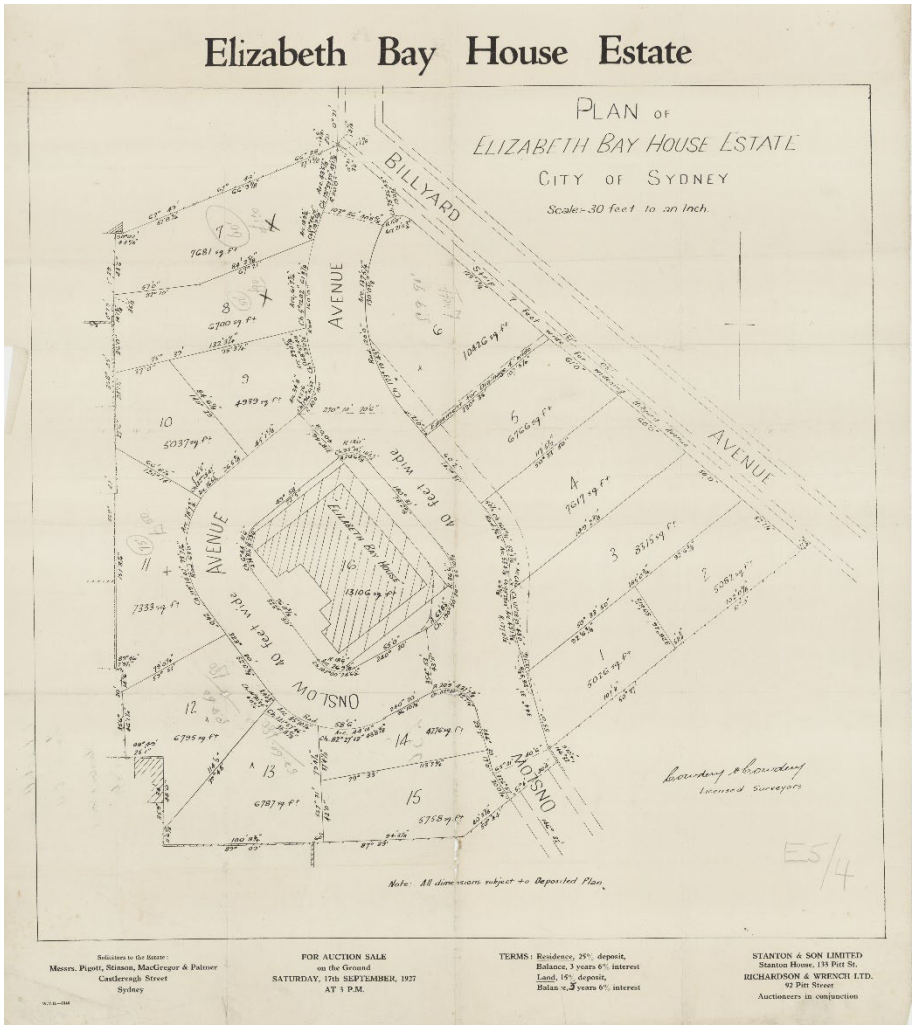
The following year the remainder of the land around the house was sold. In this final subdivision the kitchen wing at the rear of the house was demolished to allow an access road for allotments behind it. Elizabeth Bay House was isolated on a minimal sized allotment surrounded by the extension to Onslow Avenue, divorced from its remaining grounds and the famous lawn planted with massed bulbs: "... now it forms an island block within a branching concrete road that fronts the 15 building allotments which the old gardens and tennis courts have become."[2]

The initial sale of the Elizabeth Bay House Estate took place on 17 September 1927.

1 HLRV NSW Old Systems Title Book 1454 Number 200; "Company News", *Sydney Morning Herald*, 9 December 1926, p.13.
2 "Real Estate. Cut Up Historical Estate. Elizabeth Bay House", *The Sun*, 31 August 1927, p.19.



8 Portion of a circa 1923 aerial photograph of Elizabeth Bay/Potts Point during its occupation by the Michaelis family, showing Elizabeth Bay House and grounds, and what appears to be a tennis court to its east.
Source: State Library of NSW ON 447/Box 092, Milton Kent photograph.



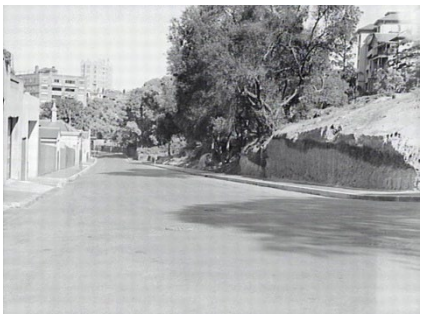
9 Above: people gathered outside Elizabeth Bay House on the day of the sale of the Elizabeth Bay House Estate in September 1927.
Left: Subdivision of the Elizabeth Bay House Estate.
Sources: MHNSW Caroline Simpson Library Record number: 34456, Broughton, Ward & Chaseling photographers; State Library of NSW Z/SP/E5/4.

Although it was reported that Elizabeth Bay House, was purchased for £14,000, apparently by lawyer, property developer and arts patron Arthur Wigram Allen,[3] there is no evidence on title documents to establish this. Instead, it remained unsold, along with most of the other allotments, and a caretaker was installed. Evidently a number of artists took up residence in the house. Amongst them was Melbourne based artist Sir John Longstaff, who travelled to other cities as his work dictated.[4] In September 1935 the house was leased and functioned as a reception house, then in 1940 sold and converted to flats. Lots 4, 5 and 6, the site of the famous Macleay bulb garden, remained unsold.

10 Portion of a circa 1935 aerial photograph showing the area of the McElhone Reserve as unformed ground and the dramatically reduced curtilage of Elizabeth Bay House.
Source: State Library of NSW ON 447/Box 019, Milton Kent photograph.

2.3 The Arthur McElhone Reserve

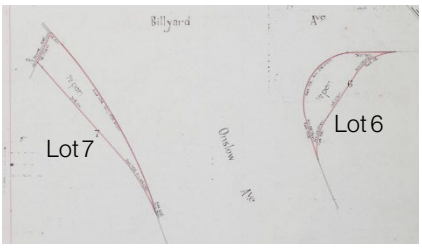
The construction of the Arthur McElhone Reserve was in part the result of local demands for open space and parkland in the locality. In September 1938 a petition signed by 288 "residents, rate payers and property-owners, and claiming to represent 1,450 residents" was submitted to Council requesting it to turn the open land in front of Elizabeth Bay House into a park. The request to acquire the land was declined but the principle of the residents acquiring the land themselves or by public subscription was supported.[5] This was followed by correspondence from the Town Clerk to the alderman of Fitzroy Ward the following month "informing him that Council agreed to the need for the immediate provision of more garden spaces in Kings Cross and to support a public movement which sought to raise funds for the acquisition of Elizabeth Bay House and the grounds fronting it."[6]



11 Circa 1938 photograph looking east along Billyard Avenue. The site of the Arthur McElhone Reserve can be seen at right.
Source: City of Sydney Archives UID A-00010413.

3 https://mhnsw.au/stories/general/kings-cross-bohemian-life-sydney/; "Elizabeth Bay Property. Historic House Sold", Sydney Morning Herald, 19 September 1927, p.12. The purchaser is not named in this article or others reporting on the sale at this time.
4 Scott Carlin, *Elizabeth Bay House: a history and guide* (Historic Houses Trust of New South Wales, 2000), pp.52-54; *Sands Sydney and suburban directory* 1931 and 1932-33 editions.
5 "Ratepayers Ask to be Taxed", *Daily Telegraph*, 20 September 1938., p.9.
6 James Quoyle, Draft SHR listing nomination for Elizabeth Bay House and Landscape Setting (Arthur McElhone Reserve), pp.11-12.

The site of the Arthur McElhone Reserve was the last of several purchases of land in the Elizabeth Bay House Estate made by the Council of the City of Sydney. The first, acquired in June 1929, was for a narrow strip of land 2.1 metres wide along Billyard Avenue[7] The second acquisition, made in January 1940, was for small portions of Lots 6 and 7 of the Elizabeth Bay House Estate, which was similar to the third purchase made in June 1941 and possibly an adjustment of it.[8] The land was likely acquired to facilitate street realignment. The land required for the Reserve was not purchased until the end of the decade.



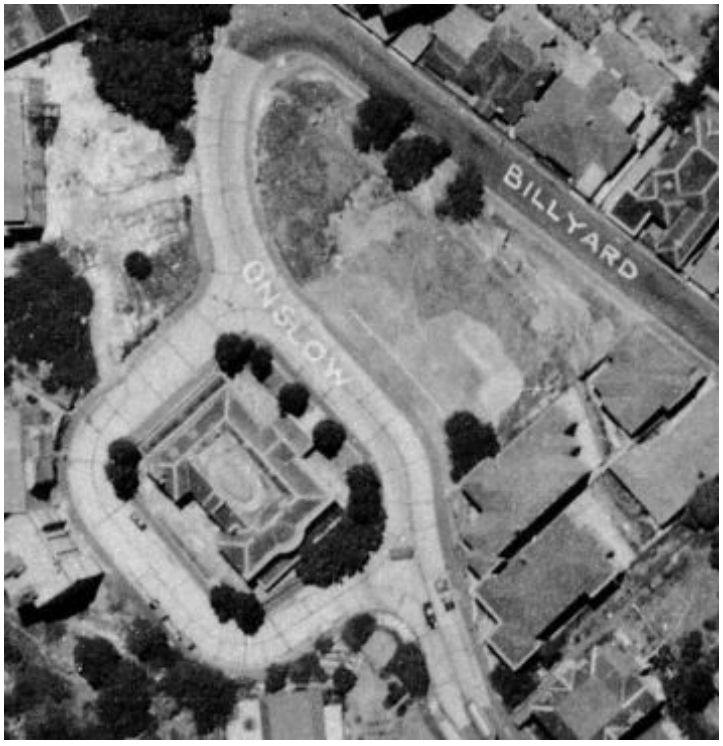
12 Land acquired by the Municipal Council of Sydney in January 1940 (outlined in red). Source: HLRV NSW Certificate of Title Volume 5142 Folio 152 with TKD overlay.

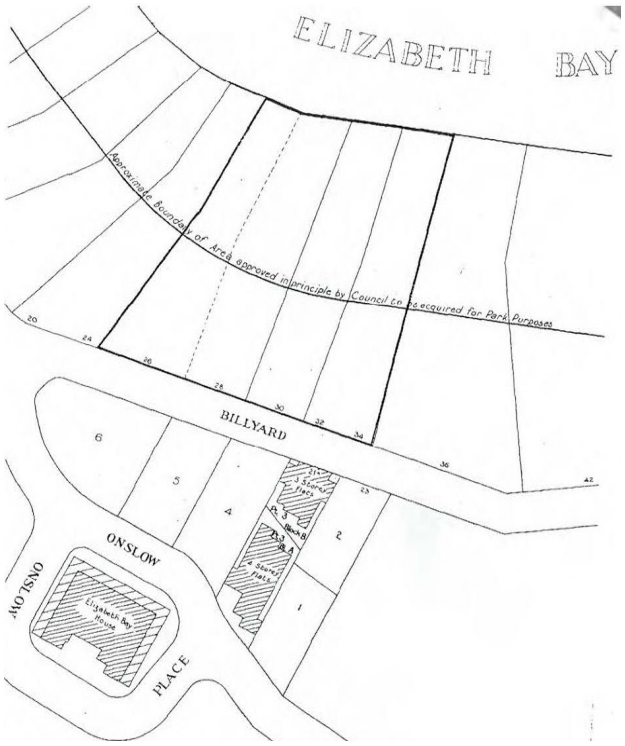
The creation of the Arthur McElhone Reserve was accompanied by significant events within the City Council. After the conclusion of World War II City Engineer Arnold Garnsey expressed his concerns about the inadequacies of Sydney's parks and playgrounds. He submitted a master plan for the improvement of Sydney's parks and playing fields and the acquisition of new parkland to the Council's Health and Recreation Committee on 11 June 1946, which was accepted shortly afterwards. The following month Garnsey and another Council engineer, Ken Andrews, departed on an extensive eight-month tour of cities in North America, Europe and Great Britain. Amongst the numerous recommendations in Garnsey's subsequent report were those for bringing the standard of parks in Sydney up to match those he had seen in in cities overseas. He suggested that qualified professionals were critical to the successful implementation of park design and management.

Following the release of Garnsey's report to Council in 1947, its adoption led to the creation of a dedicated Parks and Recreations Department in 1948. Architect Clarence (Clarrie) Garth was appointed to head up the new parks department in 1948, and he oversaw the appointment of several draftsmen, horticulturalists and technicians between 1949 and 1951. None of the original senior officers were landscape architects, but some had had architectural training. However, qualified landscape architect Ilmar Berzins started working at Sydney Municipal Council in June 1951 as a first-grade draftsman (refer to Section 4.1).

Against this background, in July 1946 the Council approved in principle the concept of securing a strip of land that would extend all the way along the waterfront of Elizabeth Bay for 'park purposes'.[9] In January 1948 Lord Mayor Reg Bartley suggested there would be no difficulty financing this and he would request a report advising on its purchase.[10] A plan dated 1 April 1948, prepared by Sydney City Council staff, indicated this intent. It identified lots 4, 5, and 6 of the Elizabeth Bay House Estate as well as land along the harbour foreshore. However, when a formal resolution was passed for the creation of the reserve, the notion of the foreshore parkland lots had been abandoned.[11] The Council of the City of Sydney then acquired Lots 4 and 5 and Lot 6. The transfer of title took place on 20 May 1949.[12]

7 HLRV NSW Certificate of Title Volume 4075 folio 199.
8 HLRV NSW Certificate of Title Volume4731 Folio163.
9 Quoyle, p.12.
10 "Elizabeth Bay Park Move", *Sydney Morning Herald*, 22 January 1948, p.2.
11 Quoyle, p.12.
12 HLRV NSW Certificate of Title Volume 5386 Folio 202.

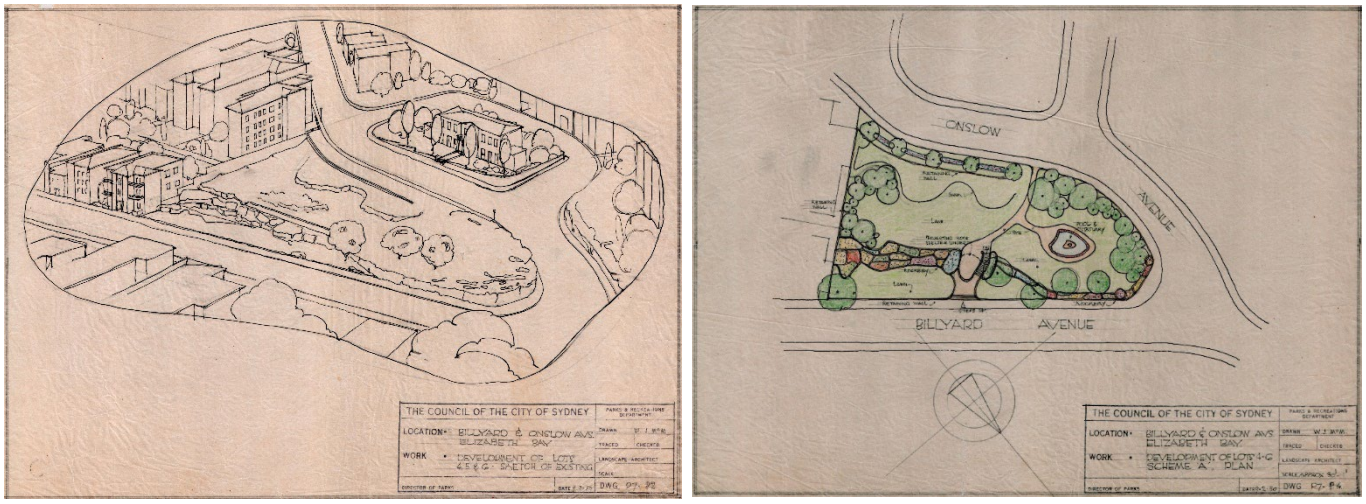




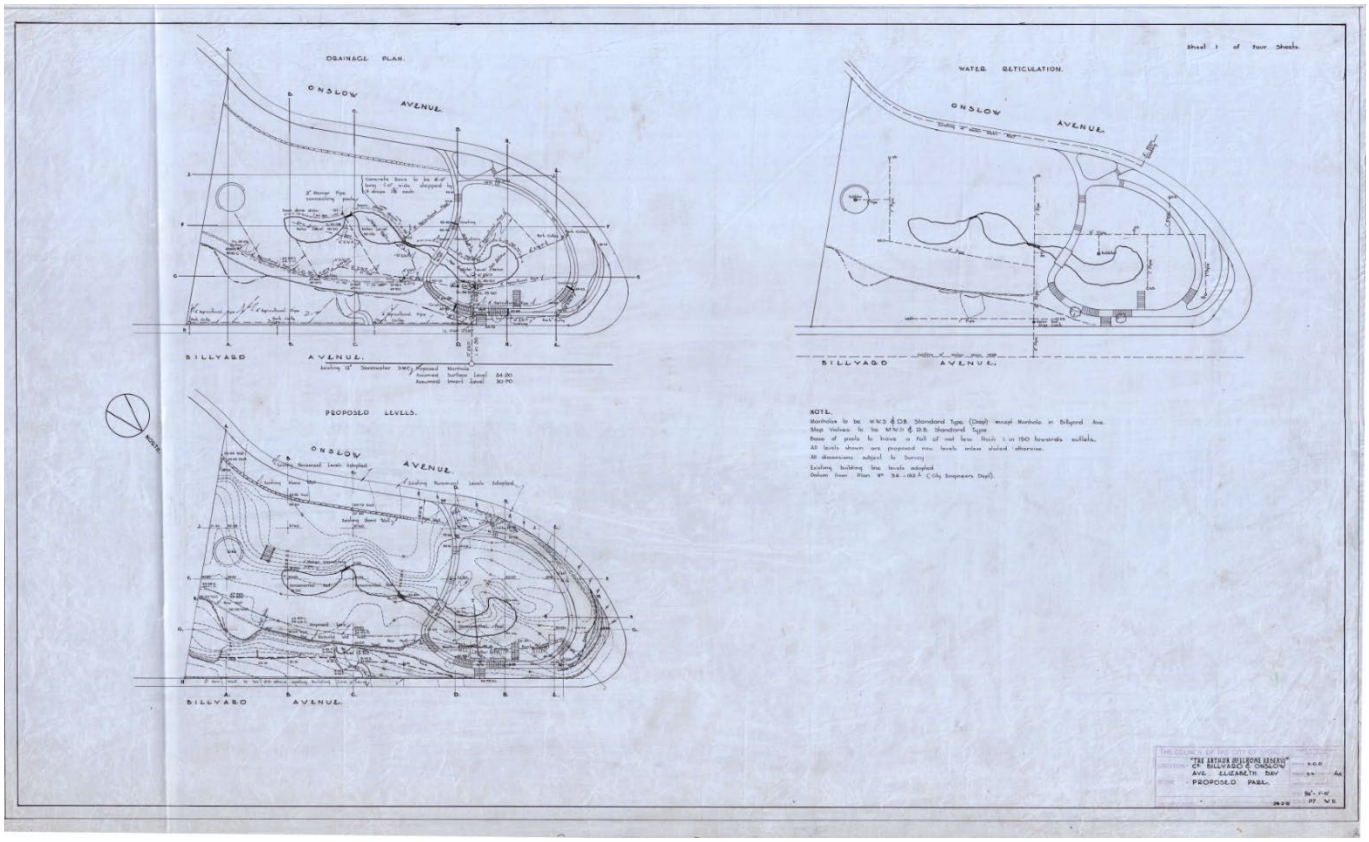
13 Left: 1949 aerial photograph from 1949 showing the development of flats constructed around 1938 on the eastern side of the future McElhone Reserve and flat development to the west of Elizabeth Bay House. The Reserve remains unformed.
Right: plan showing the Municipal Council of Sydney's proposed acquisition of allotments extending to Elizabeth Bay, 1948.
Sources: City of Sydney Archives Aerial Photographic Survey 1949, Image 26; reproduced in Mayne-Wilson & Associates, Draft Heritage Study and Review of Proposed Landscape Master Plan of the McElhone Reserve.

An early sketch layout of the proposed park is dated 9 February 1950, as is an aerial perspective showing existing site conditions. The sketch investigating the park layout included expanses of lawn traversed by a path between Onslow and Billyard Avenues and partially enclosed by perimeter planting. A rockery mediated the slope in the north-eastern section and a pool with a statue in its centre was located in the north-western section of the park.[13] The design of the park continued to evolve and in October 1950 Council approved the sum of £5,700 for its construction and completion. The new park was named in honour of Arthur McElhone during the year. The final plan was completed in January 1953.[14] By this time Ilmar Berzins had been working on the project for up to eighteen months, although the exact time that his involvement commenced has not been ascertained.

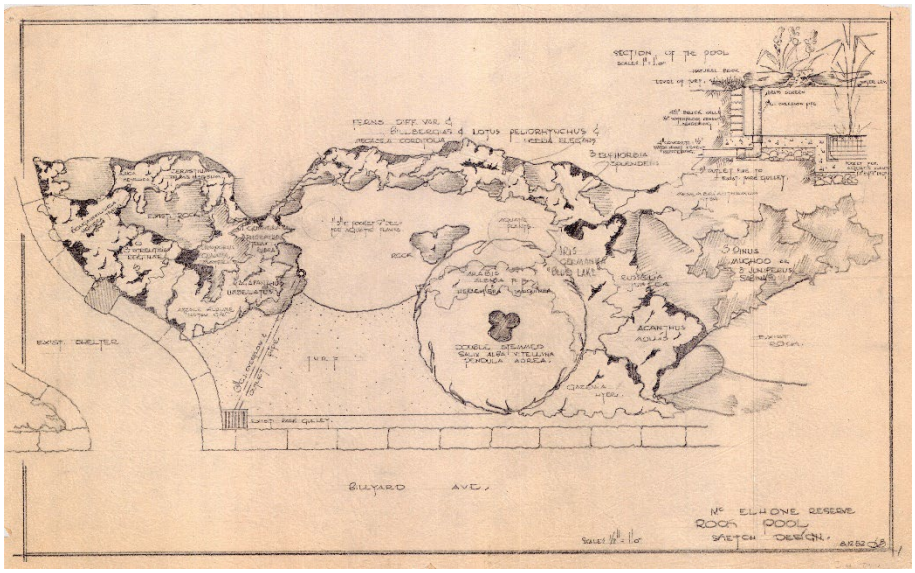
13 City of Sydney Archives Unique ID A-01200449 and Unique ID A-01200448
14 Mayne-Wilson & Associates, Draft Heritage Study and Review of Proposed Landscape Master Plan of the McElhone Reserve, February 2001, no pagination.



14 Left: aerial render of the site of the Arthur McElhone Reserve showing existing conditions in 1950.
Right: early conceptual sketch of the proposed Reserve, February 1950.
Source: City of Sydney Archives Unique ID A- -01200448 and Unique ID A-01200449.



15 Drawing dated 28 February 1951 describing drainage, water reticulation and levels at the McElhone Reserve.
Source: City of Sydney Archives UID A- 00006416.



16 Sketch design for the rock pool at the McElhone Reserve. The drawing is dated 8 December 1952 and initialled by Ilmar Berzins.
Source: City of Sydney Archives Unique ID A-01200447

17 View to Elizabeth Bay House from the site of the McElhone Reserve, January 1954. Structural works associated with the Reserve are very evident.
Source: Museums of History NSW Caroline Simpson Library & Research Collection PIC 1999/1, Barry Wollaston photograph.

18 Selected views of the Arthur McElhone Reserve taken in 1954 showing some of the features designed by Ilmar Berzins.
Source: City of Sydney Archives UID A-00013997 and Unique ID A-00013998.

2.4 Arthur McElhone (1868-1946)

Arthur Joseph McElhone (1868-1946) was the son of politician John McElhone and his wife Mary Jane, née Browne. He married Eva Catherine Walshe in 1897 and had two sons and two daughters; his son John Fitzroy McElhone also served on Council. McElhone was Alderman for Fitzroy Ward from December 1899 to December 1927 and was subsequently re-elected, serving from June 1930 to June 1946. When the incumbent Lord Mayor, Alfred Livingstone Parker, died in October 1935, McElhone briefly fulfilled the role from late October to December 1935. At various times he served as a member of the Board of Water Supply and the Metropolitan Water Sewerage and Drainage Board. He established a record as an Alderman, serving for 44 years other than a short period when the City of Sydney was controlled by a Commission. When the Sydney County Council was formed to take over the control and administration of the City Council's electricity undertaking, McElhone became one of its first chairmen. He was Councillor of the Sydney County Council between 1935 and 1937 and between 1942 and 1946, Chairman in 1937 and 1945, and Deputy Chairman between 1943 and 1944 and again in 1946.

19 Arthur Joseph McElhone, circa 1923. Source: City of Sydney Archives Unique ID A- 00006416.

At the time of his death, Arthur McElhone was the managing director of Nicholson's Pty Ltd. and the chairman of directors of the North Coast Steamship Company and the Eagle and Star Insurance Company Ltd. He was a director of the Royal Prince Alfred Hospital for 27 years and gave service to several other hospitals.[15]

2.5 Later history of the Arthur McElhone Reserve

The maintenance of the Arthur McElhone Reserve was given high priority by the Council's Parks & Gardens Department and evidently only the best of the Department's gardeners were permitted to work there. This was reflected by gardening awards sponsored by *The Sydney Morning Herald* it received during the period when Sydney's Waratah Festival was staged, between 1956 and 1973:

> ... for the excellence of its design and plantings, augmented by showy displays of annuals in the front of some of its beds. That, combined with the launching by Lord Mayor Leo Port of the "Greening of Sydney" campaign in 1972, encouraged more extensive and larger plantings in the Reserve ... This lusher, more exuberant planting was much loved by many, partly because it gave an increased sense of comfort and privacy ... but it also largely obscured views to Elizabeth Bay House from the central garden room of the Reserve.[16]

The title to the Reserve was transferred to the Council of the City of South Sydney around 1995. It has since returned to the City of Sydney.

15 https://www.sydneyaldermen.com.au/alderman/arthur-mcelhone/
16 Mayne-Wilson & Associates, no pagination.

20 1960s photograph of the water feature located to the northwestern end of the park. This has similarities to the 1962 Fragrance Garden in Phillip Park designed by Berzins in Phillip Park. The water feature has since been removed. The detailed planting around the water feature is typical of horticultural expression of the 1950s. Use of detail planting of this type declined in the latter part of the 20th century. Arthur Joseph McElhone, circa 1923. Source: City of Sydney Archives Unique ID A-00013999.

21 Photographs taken during 1965 showing details of the cascade water feature that forms part of the original park design by Berzins (left) and looking south to the stone bridge and stone edging to the pond that was added after the Reserve was initially completed. Note the maturity of the landscape that provides a sense of place screening adjacent residential flats.
Source: City of Sydney Archives Unique ID

22 Photograph of the Arthur McElhone Reserve looking south from Billyard Avenue taken during the 1980s. The Reserve reflects changes to the original concept undertaken by South Sydney Council. Note the open character of the Reserve.
Source: City of Sydney Archives Unique ID A-00019663.

Landscape consultant Warwick Maye Wilson, writing in 2001, noted that

> In the past few years, Berzins' design has been incrementally altered, with much of the vegetation pruned back, and some of it replaced with smaller species. While the reduction in plant size and volume is consistent with Berzins' original design ntentions, there has also been some loss of shade, screening and privacy. This has led to public criticism, to the point where Council recognised the need for a study to assess its essential character, and advise on how that should be maintained into the future.[17]

The reserve has indeed experienced some changes over time, particularly in relation to the ongoing changes to the vegetation where plantings, azaleas to the northern end and tree planting to the southern end that formed part of the Berzins plan were removed in the late 20th century. The effect of this removal was the reduction in the amenity of the Reserve where formerly a sense of enclosure was enjoyed from the surrounding apartments; the park was more exposed. The result was a number of complaints to South Sydney Council and a revised master plan was prepared by Warwick Mayne-Wilson around 2001 on behalf of Council and these and other concerns were addressed. The horticultural diversity that was a feature of the Berzins plan was retained and unsympathetic details such a sandstone edge to the pond was removed.

23 Photograph taken in the first half of 2003 showing the view across Sydney Harbour available from the Reserve. Seating appears to be a standard design.
Source: City of Sydney Archives Unique ID A-00064250, Paul Green photograph.

17 Mayne-Wilson & Associates, no pagination.

24 photograph taken in the first half of 2003 showing modest screen planting that superseded the earlier poplars planted along the southern boundary. New hedge planting above Billyard Avenue.
Source: City of Sydney Archives Unique ID A-00064221,

26 photograph taken in May 1965 showing established poplars along the southern boundary. The lighting fixture remained in place in 2003.
Source: Paul Green photograph; Unique ID A-00014002

25 Photograph of the Reserve taken in October 2004. Railings have been introduced for public safety, while user amenity is facilitated by the installation of a bin and signage.
Source: City of Sydney Archives Unique ID A-00065404, Sharon Hickey photograph.

3 Physical evidence

The Arthur McElhone Reserve occupies an area in front of Elizabeth Bay House and is separated by Onslow Avenue from the house. The majority of the park occupies a level area that has been formed through the erection of stone retaining walls at the top and bottom of the park, the walls at the bottom incorporating the naturally occuring sandstone outcrops. The design ensures that the views from Elizabeth Bay house to the harbour are retained and that its setting, while much modified since colonial times, can still be appreciated. The park has a number of built features including a stone bridge, pond, stairs and seating that encourage its use and enjoyment as a place of respite.

The Arthur McElhone Reserve is distinguished by a sequence of grassed areas that are arranged as small interlocking spaces that are framed by shrub planting with taller trees to the periphery of the park. Berzins built on the formal eliptical grassed form that was implemented by Alexander Macleay in the form of a 'carriage round', a typical colonial garden feature, but due to the physical restrictions of the site it was not used as such.

The stonework is of a sandstone bookleaf style that was typical of both residential and civic works at the time and also used by Berzins in the contemporary Sandringham Gardens in Hyde Park. Minor modifications have occurred over time, focused on the evolving planting types that have been used. In general, the layout and character of the Reserve designed by Berzins has been maintained. The hard landscape features of access stairs, terracing, stone bridge and paths have remained intact and with this, the overall setting to Elizabeth Bay House and its relationship with the harbour.

27 View from Billyard Avenue indicating the extensive stonework that was constructed as part of the Berzins plan. Source: Matthew Taylor.

28 General view of reserve looking north. Note the established trees to the periphery of the reserive that forms a sense of enclosure.
Source: Matthew Taylor.

29 Detail views of the reserve noting the intact stonework and paving and grass edge to water feature.
Source: Matthew Taylor.

30 Contemporary photographs of the park showing the water feature and bubbler on the corner of Onslow Avenue and Billyard Avenue. Source: Matthew Taylor.

4 Comparative analysis

4.1 Ilmar Berzins

Ilmar Berzins (1921-1993) was born in Latvia.[18] He studied horticulture at the State Horticultural College in Riga, Latvia and landscape architecture at the State Horticultural College and University of Technology in Hanover, Germany. He, along with his wife Lucija and son Alnis arrived in Melbourne on 23 February 1949. Migration records indicate the family's destination as a property called "Hazelhome" in Orange, the home of members of the Sampson family.[19] While in Orange Berzins worked in the Email Ltd whitegoods factory to pay off the bond for the fares to Australia. During this time Berzins prepared a master plan and nominated plantings for the Orange Golf Course:

> Something between two and three thousand trees and shrubs have been planted since 1949 – pines, elms, magnolias, chestnuts, crab-apples, flowering cherries and prunuses, rhododendrons, berry-bushes, viburnums, azaleas and a multitude of others. The plantings have been carried out under the supervision of Elmar [sic] Berzins, who has had wide European experience in landscape-planning.[20]

31 Ilmar Berzins, 1949. Source: National Archives of Australia Series A2571, ID 203663834.

Ilmar Berzins and his family moved to Sydney in 1951. Berzins started working at Sydney Municipal Council on 13 June as a first-grade draftsman. His recruitment by the Council is widely said to be the first employment by local government of a formally trained landscape architect in Australia. According to pioneering landscape architect Allan Corry,

> ... he brought Modernist European design styles to a city desperately seeking innovative civic design ideas. Berzins was given many opportunities to create new community spaces and redesign existing parks. He developed a distinctive style that incorporated free-form shapes. Sandstone book-leaf walling, naturally sculpted boulders, water-worn pebbles, and strongly contrasting plant forms and textures, all artistically arranged to form pleasing compositions, a marked contrast to the traditional council designs of that time. His most important designs were completed during the 1950s and 1960s ...[21]

In 1953 Ilmar Berzins was promoted to senior draftsman. He and Lucija became naturalised citizens in April 1958.[22] His abilities were recognised by the City Council and he was promoted to supervising draftsman in 1964, followed by assistant landscape architect in 1966. He was then promoted to chief technical officer in 1971, followed in 1984 by promotion to Director of Parks and Gardens. In this role he would advise external consultants on major urban projects. Berzins retired in 1986.

Ilmar Berzins was described by his colleague John Sweaney as "very flamboyant, probably one of the best draughtsmen and most knowledgeable person associated with horticulture that I'd encountered".[23] According to landscape architect and urban designer Tempe McGowan,

18 His name appears as Ilmars Berzins on immigration records held at the National Archives of Australia.
19 National Archives of Australia Series A2571, ID 203663834
20 "Golf and Blossom", *The Bulletin*, 21 October 1953, p.4.
21 Allan Correy, "Berzins, Ilmars" in Richard Aitken and Michael Looker (editors), *Oxford Companion to Australia Gardens* (Oxford University Press in association with the Australian Garden History Society, 2002), p.87.
22 Commonwealth of Australia Gazette, 'Certificates of Naturalization,' Thursday 24 Apr 1958 [Issue No.23], Page 1261.
23 John Sweaney, Interviewed by Jo Kijas on 8 May 2012 (City of Sydney oral history collection), quoted in biography of Ilmars Berzins provided by the City of Sydney.

"[Berzins] held the passionate belief that all people need to enjoy nature and that nature in turn can ameliorate the human temperament. ... His designs were socially responsive and typical of trends in international, modernist design culture in the way he created little arcadian retreats in the city wilderness."[24]

Berzins' abilities were suited to the task, for he had the unwavering aim of introducing nature into the city and he instigated very liberal planting programs. His aesthetic was not related to Australian indigenous landscapes, instead introducing a European sensibility to the thoughtful design of public open spaces in Sydney, detailing his landscape designs in a way that was unprecedented in public works. Over his long career, Berzins gradually utilised more Australian natives and applied the principles of the Sydney Bush School of landscape architecture.

4.2 Other parks and reserves

This section of the report discusses other parks and reserves undertaken by the City of Sydney during the periods in which Ilmar Berzins worked there.

Beare Park

Beare Park is a harbourside park that also formed part of the original Elizabeth Bay House grounds. It is characterised by a broad grassed area to the waterfront that is in part the result of land reclamation when the seawall to the park was constructed in 1901. The detailed changes of level and stonework that are a feature of McElhone Reserve are not evident in this park. However, there are a number of features such as the ornamental drinking fountain of 1870 and a group of mature Washington Palms that are thought to be remnants from Elizabeth Bay House. The fountain and birdbath inserted into the existing octagonal pool were apparently designed by Ilmar Berzins, installed circa 1955. More recent works completed in 2008 included upgrades by Landscape Architect Jane Irwin, refurbishment of the c1960 toilet block (overseen by Council Architect Albert Smillie) by Sam Crawford Architects, and installation of a playground.[25]

32 Looking east across Beare Park and the fountain and birdbath associated with Ilmar Berzins (right). Source: https://www.regalinnovations.com.au/completed-projects/beare-park-nsw

24 Tempe McGowan, 'Humanising the City', *Monument*, Issue No. 25, 1998, p.58.
25 https://www.regalinnovations.com.au/completed-projects/beare-park-nsw

John Armstrong Reserve

Named after one-time Lord Mayor of Sydney and former NSW senator John Armstrong, the Reserve was formed after the extension of Greenknowe Avenue to Elizabeth Bay Road. It has not been ascertained if Ilmar Berzins was involved in its design. The Reserve formed a portion of the garden to Greenknowe, a colonial era house that was demolished in the early 20th century. The design of the Reserve has a grassed area with seating on the more level top portion and garden beds to the periphery that make up the slope from Elizabeth Bay Road to Onslow Avenue. A pre-existing sandstone retaining wall to a portion of the Onslow Avenue frontage takes up a section of this level change. Originally conceived as a park to appreciate views of the harbour, plantings of trees have since obscured this view. The drawings for the Reserve, dated 1965, indicate a number of exotic species planted as shrubs, informal rockeries making up much of the grades, and an existing Camphor Laurel tree. The open lawn area to the top of the reserve has been retained with a supplementary path inserted to the toe of the bank at the corner of Onslow Avenue.

33 The John Armstrong Reserve, July 1967. Source: City of Sydney Archives Unique ID A-00012628.

Fitzroy Gardens, Potts Point

The area that the gardens occupy originally formed part of the grounds of the Elizabeth Bay Estate. The gardens have gone through a number of iterations, these including the demolition of the colonial house Osterley in 1927 and enlargement with the demolition of Maramanah and the resumption of Tanilba on Macleay Street in 1954. In 1959 the Florence Bartley Library was constructed on the site of Tanilba followed by the construction of the El Alamein Fountain in 1961. The park was considerably extended in 1975 with a portion of Elizabeth Bay Road closed to traffic. Prior to the road closure in 1975, the park was substantially upgraded in 1971 with extensive paving, raised planters, planting and sitting areas. These works were undertaken under the direction of Berzins and indicate an evolving style of landscape design that reflected contemporary needs for a park in an urban setting. Details included elements of the so-called Sydney School, which preferred direct use of materials left in their natural state, in the selection of brickwork, along with Berzins' interest in broader horticultural trends in the use of Bird of Paradise plants and other exotic species. These changes changed the character of the park to a substantially urban form with extensive areas of paving that recognised the importance and high use of the park in a dense urban setting.

34 Looking across Fitzroy Gardens towards the Florence Bartley Library during the 1980s. The library has since been demolished.
Source: City of Sydney Archives Unique ID A-00012065.

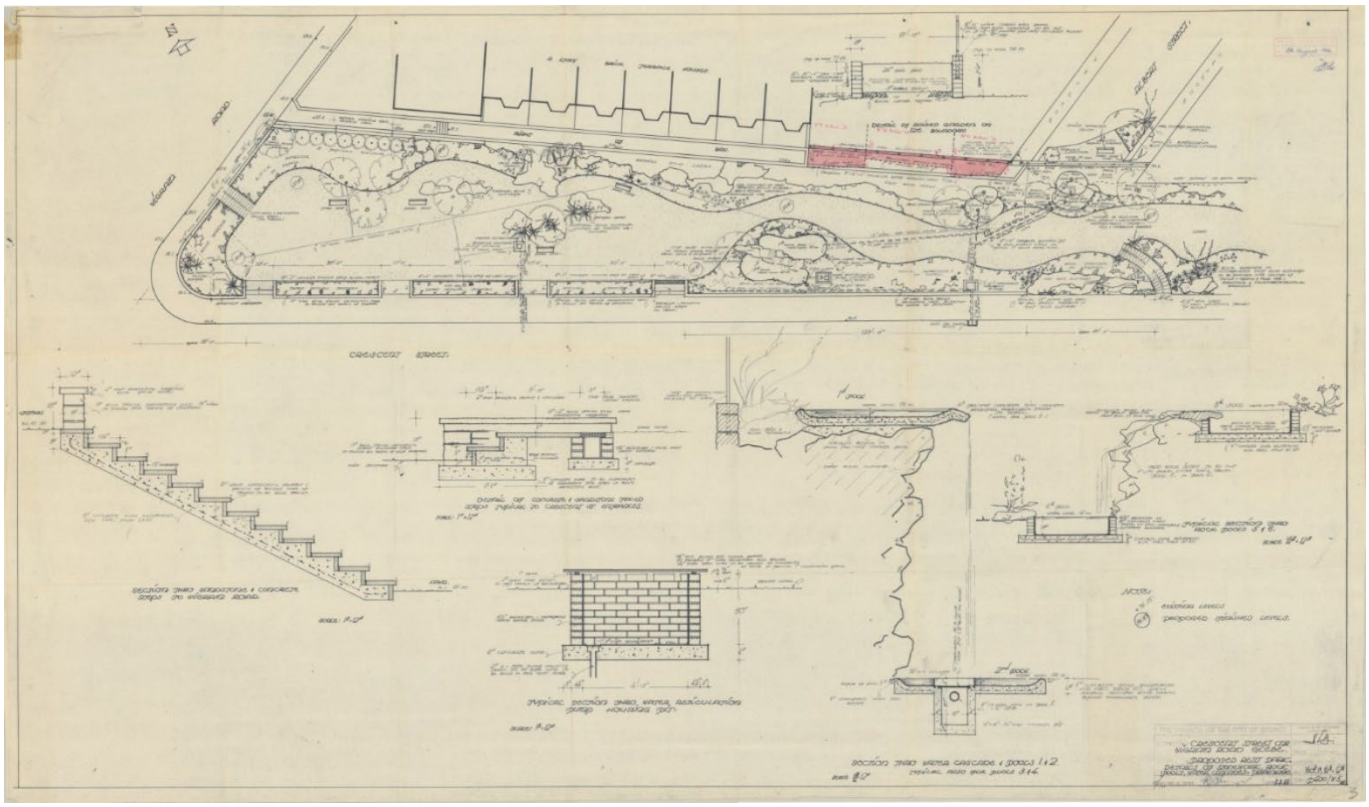
Sandringham Gardens and the Fragrance Garden

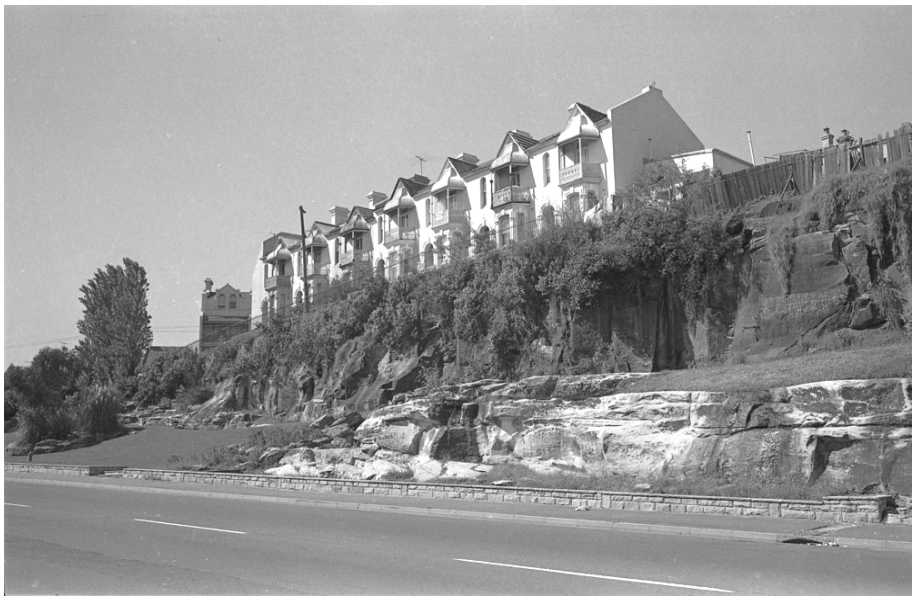
Other notable gardens in the City of Sydney that are associated with Ilmar Berzins include Sandringham Gardens in Hyde Park (1954) and the Fragrance Garden constructed for the Industrial Blind Institute in Phillip Park (1962; both the Institute and Garden have since been demolished). These formal gardens shared similar characteristics in the use of materials, retaining walls and detailed planting. Water, including fountains, was also integral to both these gardens as an integral part of the design.

35 Left: Sandringham Gardens, 1952.
Right: looking along the fountain cascade at the Fragrance Garden, 1964.
Source: City of Sydney Archives Unique ID A-00014658 and Unique ID A-00014864.

Lewis Hoad Reserve

Ilmar Berzins was also associated with the landscaping for the Lewis Hoad Reserve, named after the champion tennis player, on Minogue Crescent at Forest Lodge. It was sited on a residue of land associated with road widening. A drawing describing the layout of the "rest park" and details of its construction is dated 5 March 1965 and initialled by Berzins. Like the Arthur McElhone Reserve its design incorporated an open if narrow expanse of lawn enclosed by planting, stone retaining walls and pools of water linked by gentle cascades. A natural rock outcrop was retained. It has not been determined how much of the original design was constructed, but sections of low stone wall and steps along Minogue Crescent still remain in place.





36 Above: drawing prepared in the first quarter of 1965 describing the layout and detailing of the Lewis Hoad Reserve. Left: looking south-east along Minogue Crescent to the Lewis Hoad Reserve, 1970.
Source: City of Sydney Archives Unique ID A-00088259 and Unique ID A-00032730, Albert Renshaw photograph.

Other public spaces

Ilmar Berzins' time with the City of Sydney coincided with a later twentieth century movement toward pedestrianizing public spaces or closing sections of road to expand public space. According to Andrew Briger, former Deputy Lord Mayor and an important figure in the formulation of the 1971 City of Sydney Strategic Plan,

> In December 1971 a new Floor Space Ratio Code and a Parking Code were approved and the long-term process of implementing the integrated city-wide pedestrian network commenced following the closure of the first section of Martin Place to vehicular traffic. This led to numerous streetscape improvements in what was referred to as the "greening" of the city. Most notable amongst these were Sydney Square, the Circular Quay ad Dixon Street (Chinatown) malls, Railway Square, Wynyard Place and the street closures of South Paddington, Surry Hills, Chippendale, Pyrmont, Elizabeth Bay and the Fitzroy Gardens extensions at Potts Point.[26]

Berzins designed the layout and landscape treatment of a number of such pedestrianising schemes. Some notable streetscape upgrades designed by or under Berzins include landscaping to public space in Ulster Street, Paddington (1974), the street closure and landscaping for Springfield Avenue, Kings Cross (1983) and streetscape treatment of Macquarie Place and Macquarie Place Park (1975). The Arthur McElhone Reserve is not the result of a street closure and is not part of this body of work.

26 Andrew Briger, "The Politics of Planning" in Peter Webber (editor), *The Design of Sydney: Three Decades of Change in the City Centre* (Law Book Company, 1988), p.52.

5 Assessment of heritage significance

5.1 Assessment

Historical significance

Criterion A *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The Arthur McElhone Reserve is significant for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage, which reflect a respect and understanding of historic landscapes. The site was extensively developed to meet contemporary recreation needs.

It is significant as a seminal park development initiated, designed and executed by the City of Sydney in the immediate Post World War II period in the City of Sydney.

The Arthur McElhone Reserve fulfils this criterion at a Local level.

Historical associations

Criterion B *An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).*

The site of the Arthur McElhone Reserve is associated with Alexander Macleay, being part of the grounds of Elizabeth Bay House. It was subsequently formed as a public park that in its name commemorates Arthur McElhone, a long serving alderman of the City of Sydney.

The Reserve is associated with the landscape architect Berzins, reputedly the first professional landscape architect to be engaged by a municipal council in Australia. It is amongst the earliest works by Berzins while employed by the City of Sydney, demonstrating at a high level of sensitivity to the broader setting of Elizabeth Bay House and the creation of a park that incorporates modernist concepts of landscape design.

The Reserve meets this criterion at a State and Local level.

Aesthetic significance

Criterion C *An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).*

The Arthur McElhone Reserve is a rare intact landscape design of Ilmar Berzins that encompasses a number of significant features. It incorporates topographic changes of level, and its detailed design features a water feature and stone bridge and varied planting. The landscape design has a reliance on the underlying architectural layout of the Reserve that provides an integrity and structure to the modulation of the park as a whole. The park design respects the original setting of Elizabeth Bay House by ensuring that the relationship of the house and broader setting to the harbour is respected and enhanced while providing a high level of detailed landscape design and amenity to the park itself. International design ideas of the time by leading landscape architects such as Christopher Tunnard and others were applied by Berzins.

The Reserve's location to the formal axis of Elizabeth Bay House forms an important interpretative tool in the understanding of the setting of the house and its relationship to its harbour setting. The Reserve demonstrates a sensitivity to this significant colonial setting by reinforcing Elizabeth Bay House's views to and from the harbour while recognising the park's role as an important public amenity in the provision of much needed open green space.

The park demonstrates important landscape concepts of park design taking in modernist ideas of providing an internal setting of green spaces for the use and enjoyment for the public, the formation of access pathways, water feature and a pedestrian bridge over this water feature. The hard landscape elements are carefully detailed and constructed in sandstone, resulting in a long-lasting legacy for the form and shapes designed by Berzins. It is considered his most significant work for the City of Sydney.

The planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad and diverse interests in horticultural specimens, both Australian and exotic and Berzins intent of a horticulturally diverse planting scheme.

The Reserve meets this criterion at a Local level.

Social significance

Criterion D *An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

The Arthur McElhone Reserve is understood to have great significance to residents and visitors to the locality because of its high level of visual amenity and as a valuable landscaped open recreational area.

The Reserve meets this criterion at a local level.

Research potential

Criterion E *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The Arthur McElhone Reserve demonstrates the evolving landscape design in post-World War II Sydney that fused international design movements to a significant location within the visual curtilage of Elizabeth Bay House. The design demonstrates the intellectual approach of Berzins as a post-World War II immigrant and his training as a landscape designer that reflected international design trends of the day.

The Reserve meets the criterion at a Local level.

Rarity

Criterion F *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The Arthur McElhone Reserve is a rare intact design of the significant landscape architect Ilmar Berzins and a rare intact example of advanced mid twentieth century landscape design in the City of Sydney.

The Reserve meets this criterion at a Local level.

Representativeness

Criterion G — An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.

The Arthur McElhone Reserve is representative of mid twentieth century landscape design expressed in the use of detailed sandstone walling and plant types. The design responds to the immediate visual curtilage of a significant colonial house by maintaining the prospect and views to the harbour from the house.

The Reserve meets this criterion at a Local level.

5.2 Statement of significance

The Arthur McElhone Reserve is significant at State and local levels for several reasons.

Historically its site is associated with historically significant Colonial Secretary Alexander Macleay, being part of the grounds of Elizabeth Bay House. It commemorates Arthur McElhone, a long serving alderman of the City of Sydney. Importantly, it is associated with the significant landscape architect Ilmar Berzins, notable as the first professionally trained landscape architect employed by a local government instrumentality in Australia. It is a rare and intact early work of Berzins and significant as a seminal park development initiated, designed and executed by the City of Sydney in the immediate Post World War II.

The Arthur McElhone Reserve demonstrates a highly sensitive response to the curtilage and setting of Elizabeth Bay House . It incorporates modernist concepts of landscape design and encompasses a number of significant features, respecting the original setting of Elizabeth Bay House by ensuring that the relationship of the house and its Sydney Harbour setting is and enhanced while providing a high level of detailed landscape design and amenity to the Reserve itself. It demonstrates the evolution of landscape design in post-World War II Sydney, fusing international design movements to a significant location within the visual curtilage of Elizabeth Bay House. Its planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad interests in horticultural specimens and Berzins' intent of a horticulturally diverse planting scheme. It is considered Berzins' most significant work for the City of Sydney.

The Arthur McElhone Reserve is understood to have great significance to residents and visitors because of its high level of visual amenity and as a valuable landscaped open recreational area. It is a rare intact example of advanced mid twentieth century landscape design in the City of Sydney.

6 Conclusions

The Arthur McElhone Reserve fulfils the NSW Heritage Council's criteria for historical association, historical significance, aesthetic significance, social significance, research significance, rarity and representativeness at a local level. Because of this it warrants listing as a heritage item in the City of Sydney Local Environmental Plan 2012.

Attachment J

Draft Inventory Sheet – 1A Billyard Avenue, Elizabeth Bay

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**Arthur McElhone Reserve**		
Former name	**Arthur McElhone Reserve**		
Item type	**Landscape**		
Address	Number **1A**	Street **Billyard Avenue**	Suburb **Elizabeth Bay**
Property description	**Lot 1**		**DP 15713**
Use	Current **Recreational reserve**		Former **Recreational reserve**
Statement of significance	The Arthur McElhone Reserve is significant at State and Local level for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage, which reflect a respect and understanding of historic landscapes. The site was extensively developed to meet contemporary recreation needs. It is significant as a seminal park development initiated, designed and executed by the City of Sydney in the immediate post-World War II period in the City of Sydney. The site of the Arthur McElhone Reserve is associated with Alexander Macleay, being part of the grounds of Elizabeth Bay House. It was subsequently formed as a public park that in its name commemorates Arthur McElhone, a long serving alderman of the City of Sydney. It is associated with the landscape architect Berzins, demonstrating a high level of sensitivity to the broader setting of Elizabeth Bay House and the creation of a park that incorporates modernist concepts of landscape design. The Arthur McElhone Reserve is a rare intact landscape design of Ilmar Berzins that encompasses a number of significant features. It incorporates topographic changes of level, and its detailed design features a water feature and stone bridge and varied planting. The landscape design has a reliance on the underlying architectural layout of the Reserve that provides an integrity and structure to the modulation of the park as a whole. The park design respects the original setting of Elizabeth Bay House by ensuring that the relationship of the house and broader setting to the harbour is respected and enhanced while providing a high level of detailed landscape design and amenity to the park itself. International design ideas of the time by leading landscape architects such as Christopher Tunnard and others were applied by Berzins. The Reserve's location to the formal axis of Elizabeth Bay House forms an important interpretative tool in the understanding of the setting of the house and its relationship to its harbour setting. The Reserve demonstrates a sensitivity to this significant colonial setting by reinforcing Elizabeth Bay House's views to and from the harbour while recognising the park's role as an important public amenity in the provision of much needed open green space. The park demonstrates important landscape concepts of park design taking in modernist ideas of providing an internal setting of green spaces for the use and enjoyment for the public, the formation of access pathways, water feature and a pedestrian bridge over this water feature. The hard landscape elements are carefully detailed and constructed in sandstone, resulting in a long-lasting legacy for the form and shapes designed by Berzins. It is considered his most significant work for the City of Sydney.		

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	The planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad and diverse interests in horticultural specimens, both Australian and exotic and Berzins intent of a horticulturally diverse planting scheme. Arthur McElhone Reserve is understood to have great significance to residents and visitors to the locality because of its high level of visual amenity and as a valuable landscaped open recreational area. The Arthur McElhone Reserve demonstrates the evolving landscape design in post-World War II Sydney that fused international design movements to a significant location within the visual curtilage of Elizabeth Bay House. The design demonstrates the intellectual approach of Berzins as a post-World War II immigrant and his training as a landscape designer that reflected international design trends of the day.	
Level of significance	State:	Local:
Heritage listings		
DESCRIPTION		
Designer	Ilmar Berzins	
Builder	City of Sydney	
Construction years	1950-1953	
Physical description	The Arthur McElhone Reserve occupies an area to the north-east of Elizabeth Bay House and is separated by Onslow Avenue from the house. The majority of the park occupies a level area that has been formed through the erection of stone retaining walls at the top and bottom of the park, the walls at the bottom incorporating the naturally occurring sandstone outcrops. Its design ensures that the views from Elizabeth Bay House to the harbour are retained and that its setting, while much modified since colonial times, can still be appreciated. The park has a number of built features including a stone bridge, pond, stairs and seating that encourage its use and enjoyment as a place of respite. The Arthur McElhone Reserve is distinguished by a sequence of grassed areas that are arranged as small interlocking spaces that are framed by shrub planting with taller trees to the periphery of the park. Berzins built on the formal elliptical grassed form that was implemented by Alexander Macleay in the form of a 'carriage round', a typical colonial garden feature, but due to the physical restrictions of the site it was not used as such. The stonework is of a sandstone bookleaf style that was typical of both residential and civic works at the time and also used by Berzins in the contemporary Sandringham Gardens in Hyde Park. Minor modifications have occurred over time, focused on the evolving planting types that have been used. In general, the layout and character of the Reserve designed by Berzins has been maintained. The hard landscape features of access stairs, terracing, stone bridge and paths have remained intact and with this, the overall setting to Elizabeth Bay House and its relationship with the harbour.	
Physical condition	The Arthur McElhone Reserve is in good condition.	
Modification and Dates	Incremental upgrade of planting. Upgrades undertaken as part of the implementation of the 2001 master plan.	

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Archaeological potential	The archaeological potential of the place has not been assessed.

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

In 1815 Governor Macquarie established a fishing village known as Elizabeth Town for a composite group of Gadigal people. The site of Elizabeth Town was behind the sandy beach below what would later become Elizabeth Bay House, in the vicinity of its owner Alexander Macleay's kitchen garden (now Beare Park). The settlement had been abandoned by 1824.

The site of the Arthur McElhone Reserve is on part of 21.85 hectares (54 acres) of land formally granted to Colonial Secretary Alexander Macleay on 19 October 1831. The land had been promised to Macleay by Governor Darling in 1826. In 1828 Darling ordered the subdivision of Woolloomooloo Hill into allotments that could accommodate large residences and extensive grounds and deeds of grant were issued to select members of society, which included senior public servants, in 1828 and 1831.

Alexander Macleay (1767-1848) was elected a Fellow of the Linnean Society of London in 1794 and a Fellow of the Royal Society in 1809. A civil servant in England, Macleay was forced to retire from 1817 when his department was abolished. He accepted the position of Colonial Secretary of NSW, arriving in 1826, and promptly set about improving his grant at Elizabeth Bay and established a private botanic garden with picturesque features of dwarf stone walls, rustic bridges, and winding gravel walks interspersed amongst indigenous trees and rare species. The garden became known internationally through the letters and published accounts of local naturalists and visiting scientific expeditions. Elizabeth Bay House was completed by 1839 to the design of prominent architect John Verge. The siting of the house on an axis with Clark Island and Sydney Heads was a significant aspect of the carefully stage-managed landscape. Prominent local nurseryman Thomas Shepherd wrote: “A splendid open lawn is placed in the main centre front of the house, leaving to view from the adjoining grounds and windows one of the most interesting prospects of the harbour”. The site of the lawn is now the Arthur McElhone Reserve. The lawn was famous from the 1840s onwards for its massed bulbs imported from the Cape of Good Hope.

Macleay was ousted from public office in 1837 and by the early 1840s was in serious financial difficulty. He was saved by his eldest son, William Sharp Macleay, and died at Rose Bay in 1848. William Sharp Macleay lived alone at Elizabeth Bay House until his death in 1865. The estate passed to his brother George, who progressively subdivided the estate and sold leaseholds of a substantial portion of it. Alexander Macleay’s nephew, Sir William John Macleay, occupied the house from around 1865 until his death in December 1891. Lady Macleay remained in occupation until her death in 1903. Late that year George Isaac Michaelis, a prominent businessman and member of Sydney’s Jewish community, moved into the house. Michaelis’ father-in-law and uncle, Moritz Gottheif, also a significant member of Sydney’s Jewish community and a prominent merchant, also resided there. Michaelis subsequently acquired the house in 1911.

In December 1926 the land on which Elizabeth Bay House stood was acquired by Elizabeth Bay Estates Limited and subsequently subdivided, going to sale in September 1927.

The construction of the Arthur McElhone Reserve was in part the result of local demands for open space and parkland in the locality. In September 1938 a petition signed by 288 “residents, rate payers and property-owners, and claiming to represent 1,450 residents” was submitted to Council requesting it to turn the open land in front of Elizabeth Bay House into a park. The

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request to acquire the land was declined but the principle of the residents acquiring the land themselves or by public subscription was supported. This was followed by correspondence from the Town Clerk to the alderman of Fitzroy Ward the following month "informing him that Council agreed to the need for the immediate provision of more garden spaces in Kings Cross and to support a public movement which sought to raise funds for the acquisition of Elizabeth Bay House and the grounds fronting it. The site of the Arthur McElhone Reserve was the last of several purchases of land in the Elizabeth Bay House Estate made by the Council of the City of Sydney between June 1929 and May 1949. The 1949 purchase became the site of the Reserve.

After the World War II ended City Engineer Arnold Garnsey expressed concern about the inadequacies of Sydney's parks and playgrounds. He submitted a master plan for the improvement of Sydney's parks and playing fields and the acquisition of new parkland to the Council's Health and Recreation Committee on 11 June 1946, which was accepted shortly afterwards. The following month Garnsey and another Council engineer, Ken Andrews, departed on an extensive eight-month tour of cities in North America, Europe and Great Britain. Amongst the numerous recommendations in Garnsey's subsequent report were those for bringing the standard of parks in Sydney up to match those he had seen in cities overseas. He suggested that qualified professionals were critical to the successful implementation of park design and management.

Following the release of Garnsey's report to Council in 1947, its adoption led to the creation of a dedicated Parks and Recreation Department in 1948. Architect Clarence (Clarrie) Garth was appointed to head up the new parks department in 1948, and he oversaw the appointment of several draftsmen, horticulturalists and technicians between 1949 and 1951. None of the original senior officers were landscape architects, but some had received architectural training. However, qualified landscape architect Ilmar Berzins started working at Sydney Municipal Council in June 1951 as a first-grade draftsman.

Against this background, in July 1946 the Council approved in principle the concept of securing a strip of land that would extend all the way along the waterfront of Elizabeth Bay for 'park purposes'. In January 1948 Lord Mayor Reg Bartley suggested there would be no difficulty financing this and he would request a report advising on its purchase. A plan dated 1 April 1948, prepared by Sydney City Council staff, indicated this intent. It identified lots 4, 5, and 6 of the Elizabeth Bay House Estate as well as land along the harbour foreshore. However, when a formal resolution was passed for the creation of the reserve, the notion of the foreshore parkland lots had been abandoned. The Council of the City of Sydney then acquired Lots 4 and 5 and Lot 6. The transfer of title took place on 20 May 1949.

An early sketch layout of the proposed park is dated 9 February 1950, as is an aerial perspective showing existing site conditions. The sketch investigating the park layout included expanses of lawn traversed by a path between Onslow and Billyard Avenues and partially enclosed by perimeter planting. A rockery mediated the slope in the north-eastern section and a pool with a statue in its centre was located in the north-western section of the park. The design of the park continued to evolve and in October 1950 Council approved the sum of £5,700 for its construction and completion. The new park was named in honour of Arthur McElhone during the year. The final plan was completed in January 1953. By this time Ilmar Berzins had been working on the project for up to eighteen months, although the exact time that his involvement commenced has not been ascertained.

Arthur Joseph McElhone (1868-1946) was the son of politician John McElhone and his wife Mary Jane, née Browne. He married Eva Catherine Walshe in 1897 and had two sons and two daughters; his son John Fitzroy McElhone also served on Council. McElhone was Alderman for Fitzroy Ward from December 1899 to December 1927 and was subsequently re-elected, serving from June 1930 to June 1946. When the incumbent Lord Mayor, Alfred Livingstone Parker, died in October 1935, McElhone briefly fulfilled the role from late October to December 1935. At various times he served as a member of the Board of Water Supply and the Metropolitan Water Sewerage and Drainage Board. He established a record as an Alderman, serving for 44 years other than a short period when the City of Sydney was controlled by a Commission. When the Sydney County Council was formed to take over the control and administration of the City Council's electricity undertaking, McElhone became one of its first chairmen. He was Councillor of the Sydney County Council between 1935 and 1937 and

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between 1942 and 1946, Chairman in 1937 and 1945, and Deputy Chairman between 1943 and 1944 and again in 1946.

At the time of his death, Arthur McElhone was the managing director of Nicholson's Pty Ltd. and the chairman of directors of the North Coast Steamship Company and the Eagle and Star Insurance Company Ltd. He was a director of the Royal Prince Alfred Hospital for 27 years and gave service to several other hospitals.

The maintenance of the Arthur McElhone Reserve was given high priority by the Council's Parks & Gardens Department and evidently only the best of the Department's gardeners were permitted to work there. This was reflected by gardening awards sponsored by The Sydney Morning Herald it received during the period when Sydney's Waratah Festival was staged, between 1956 and 1973:

> … for the excellence of its design and plantings, augmented by showy displays of annuals in the front of some of its beds. That, combined with the launching by Lord Mayor Leo Port of the "Greening of Sydney" campaign in 1972, encouraged more extensive and larger plantings in the Reserve … This lusher, more exuberant planting was much loved by many, partly because it gave an increased sense of comfort and privacy … but it also largely obscured views to Elizabeth Bay House from the central garden room of the Reserve (Mayne-Wilson & Associates, no pagination).

The title to the Reserve was transferred to the Council of the City of South Sydney around 1995. It has since returned to the City of Sydney.

Landscape consultant Warwick Maye Wilson, writing in 2001, noted that

> In the past few years, Berzins' design has been incrementally altered, with much of the vegetation pruned back, and some of it replaced with smaller species. While the reduction in plant size and volume is consistent with Berzins' original design intentions, there has also been some loss of shade, screening and privacy. This has led to public criticism, to the point where Council recognised the need for a study to assess its essential character, and advise on how that should be maintained into the future. (Mayne Wilson & Associates, no pagination).

The reserve has indeed experienced some changes over time, particularly in relation to the ongoing changes to the vegetation where plantings, azaleas to the northern end and tree planting to the southern end that formed part of the Berzins plan were removed in the late 20th century. The effect of this removal was the reduction in the amenity of the Reserve where formerly a sense of enclosure was enjoyed from the surrounding apartments; the park was more exposed. The result was a number of complaints to South Sydney Council and a revised master plan was prepared by Warwick Mayne-Wilson around 2001 on behalf of Council and these and other concerns were addressed. The horticultural diversity that was a feature of the Berzins plan was retained and unsympathetic details such a sandstone edge to the pond was removed.

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**
3. Developing local, regional and national economies	Environment – cultural landscape	Parks in the City of Sydney
3. Developing local, regional and national economies	Health	Well-being of local residents
4. Building settlements, towns and cities	Towns, suburbs and villages	Subdivision and townscape
8. Developing Australia's cultural life	Creative endeavour	Exemplar of public garden.
9. Marking the phases of life	Persons	Associations with Alexander Macleay's Elizabeth Bay estate and a seminal work of significant landscape architect Ilmar Berzins.

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HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	The Arthur McElhone Reserve is significant for its location within the visual curtilage of Elizabeth Bay House and the sensitive demonstration of modernist landscape design principles within that curtilage, which reflect respect and understanding of historic landscapes. The site was extensively developed to meet contemporary recreation needs. It is significant as a seminal park development initiated, designed and executed by the City of Sydney in the immediate post-World War II period in the City of Sydney. The Arthur McElhone Reserve fulfils this criterion at a Local level.
Historical association SHR criteria (b)	The site of the Arthur McElhone Reserve is associated with Alexander Macleay, being part of the grounds of Elizabeth Bay House. It was subsequently formed as a public park that in its name commemorates Arthur McElhone, a long serving alderman of the City of Sydney. It is associated with the landscape architect Berzins, demonstrating a high level of sensitivity to the broader setting of Elizabeth Bay House and the creation of a park that incorporates modernist concepts of landscape design. The Reserve meets this criterion at a State and Local level.
Aesthetic significance SHR criteria (c)	The Arthur McElhone Reserve is a rare intact landscape design of Ilmar Berzins that encompasses a number of significant features. It incorporates topographic changes of level, and its detailed design features a water feature and stone bridge and varied planting. The landscape design has a reliance on the underlying architectural layout of the Reserve that provides an integrity and structure to the modulation of the park as a whole. The park design respects the original setting of Elizabeth Bay House by ensuring that the relationship of the house and broader setting to the harbour is respected and enhanced while providing a high level of detailed landscape design and amenity to the park itself. International design ideas of the time by leading landscape architects such as Christopher Tunnard and others were applied by Berzins. The Reserve's location to the formal axis of Elizabeth Bay House forms an important interpretative tool in the understanding of the setting of the house and its relationship to its harbour setting. The Reserve demonstrates a sensitivity to this significant colonial setting by reinforcing Elizabeth Bay House's views to and from the harbour while recognising the park's role as an important public amenity in the provision of much needed open green space. The park demonstrates important landscape concepts of park design taking in modernist ideas of providing an internal setting of green spaces for the use and enjoyment for the public, the formation of access pathways, water feature and a pedestrian bridge over this water feature. The hard landscape elements are carefully detailed and constructed in sandstone, resulting in a long-lasting legacy for the form and shapes designed by Berzins. It is considered his most significant work for the City of Sydney. The planting character reflects a broad diversity and horticultural interest, consistent both with Alexander Macleay's broad and diverse interests in horticultural specimens, both Australian and exotic and Berzins intent of a horticulturally diverse planting scheme. The Reserve meets this criterion at a Local level.

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Social significance SHR criteria (d)	Arthur McElhone Reserve is understood to have great significance to residents and visitors to the locality because of its high level of visual amenity and as a valuable landscaped open recreational area. The Reserve meets this criterion at a local level.
Technical/Research significance SHR criteria (e)	The Arthur McElhone Reserve demonstrates the evolving landscape design in post-World War II Sydney that fused international design movements to a significant location within the visual curtilage of Elizabeth Bay House. The design demonstrates the intellectual approach of Berzins as a post-World War II immigrant and his training as a landscape designer that reflected international design trends of the day. The Reserve meets the criterion at a Local level.
Rarity SHR criteria (f)	The Arthur McElhone Reserve is a rare intact design of the significant landscape architect Ilmar Berzins and a rare intact example of advanced mid-twentieth century landscape design in the City of Sydney. The Reserve meets this criterion at a Local level.
Representativeness SHR criteria (g)	The Arthur McElhone Reserve is representative of mid-twentieth century landscape design expressed in the use of detailed sandstone walling and plant types. The design responds to the immediate visual curtilage of a significant colonial house by maintaining the prospect and views to the harbour from the house. The Reserve meets this criterion at a Local level.
Integrity	The overall form and key elements of the Reserve have retained a high level of integrity. The original horticultural intent has been retained.
RECOMMENDATIONS	
Recommendations	• Manage the Arthur McElhone Reserve in accordance with Sydney LEP 2012 and Sydney DPC 2012. • The Arthur McElhone Reserve should be retained and conserved. It is a highly significant place, the original design of which reflected a strong Modernist character. Future works should take advantage of opportunities to reinstate lost elements and regain its early Modernist character. • The external form of the Arthur McElhone Reserve, any original spaces, fabric and finishes should be retained and conserved in any future development. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Plan be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken. • Retain the Plaque above the Billyard Avenue stairs • Develop an Interpretation Strategy for the Reserve that reflects the history and development of the site.

INFORMATION SOURCES

Type	Author/Client	Title	Year	Repository
Written	TKD Architects	Arthur McElhone Reserve, 1A Billyard Avenue, Elizabeth Bay Heritage Assessment		City of Sydney

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AUTHOR OF THIS REPORT	
Name	**Date**
TKD Architects	2026

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IMAGES	
Image Caption	Late nineteenth century view of Elizabeth House from the east. The expansive open lawn in front of the house was famous from the 1840s onwards for its massed bulbs imported from the Cape of Good Hope. The lawn is now the site of the Arthur McElhone Reserve.

Image Year	1895	**Image author and Copyright Holder**	Museums of History NSW Caroline Simpson Collection, record number 34391, Freeman & Co photograph

IMAGES	
Image Caption	Aerial photograph from the 1920s of Elizabeth Bay House and grounds. What appears to be a tennis court was situated on a part of the grounds where the bulb-planted lawn was located.

Image Year	Circa 1923	**Image author and Copyright Holder**	Source: State Library of NSW ON 447/Box 092, Milton Kent photograph.

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IMAGES	
Image Caption	Portion of an aerial photograph from the 1930s showing the site of the McElhone Reserve as unformed ground and the dramatically reduced curtilage of Elizabeth Bay House.

Image Year	Circa 1935	**Image author and Copyright Holder**	State Library of NSW ON 447/Box 019, Milton Kent photograph.

IMAGES	
Image Caption	View to Elizabeth Bay House from the site of the McElhone Reserve during construction of the landscaping works.

Image Year	1954	**Image author and Copyright Holder**	Museums of History NSW Caroline Simpson Library & Research Collection PIC 1999/1, Barry Wollaston photograph.

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IMAGES	
Image Caption	Newly completed landscaping along Billyard Avenue.

Image Year	1954	**Image author and Copyright Holder**	Source: City of Sydney Archives Unique ID A-00013998.

IMAGES	
Image Caption	

Image Year	1965	**Image author and Copyright Holder**	Source: City of Sydney Archives

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IMAGES	
Image Caption	

Image Year	1965	**Image author and Copyright Holder**	Source: City of Sydney Archives

DRAFT

IMAGES			
Image Caption			
Image Year	1980s	**Image author and Copyright Holder**	Source: City of Sydney Archives, UID A-00019663

DRAFT

IMAGES	
Image Caption	The Arthur McElhone Reserve viewed from the intersection of Onslow and Billyard Avenues.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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IMAGES			
Image Caption	The Arthur McElhone Reserve viewed from the northern side of Billyard Avenue.		
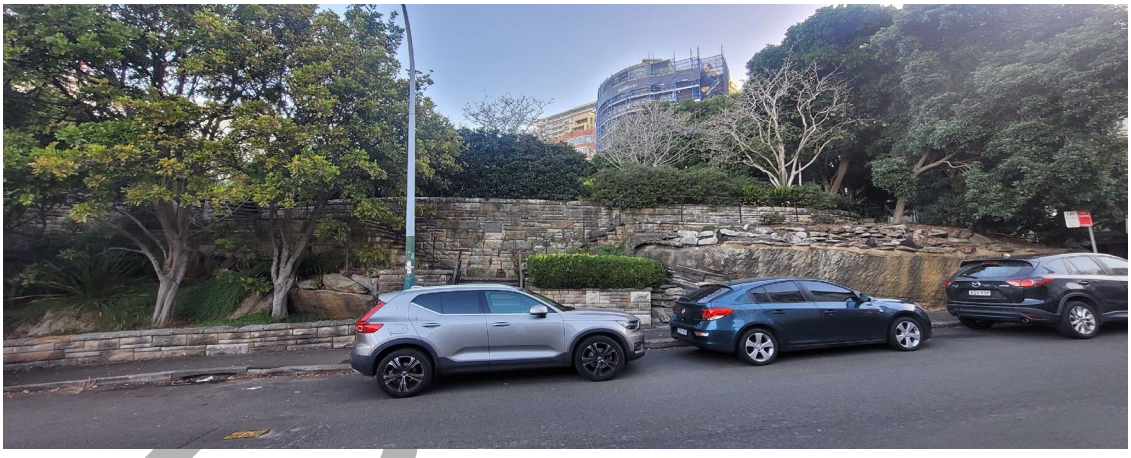			
Image Year	2023	**Image author and Copyright Holder**	Taylor Brammer Landscape Architects

IMAGES			
Image Caption	View of the northern end of the Arthur McElhone Reserve.		
Image Year	2023	**Image author and Copyright Holder**	Taylor Brammer Landscape Architects

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IMAGES	
Image Caption	

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

IMAGES	
Image Caption	

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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Image Caption	

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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Image Caption	

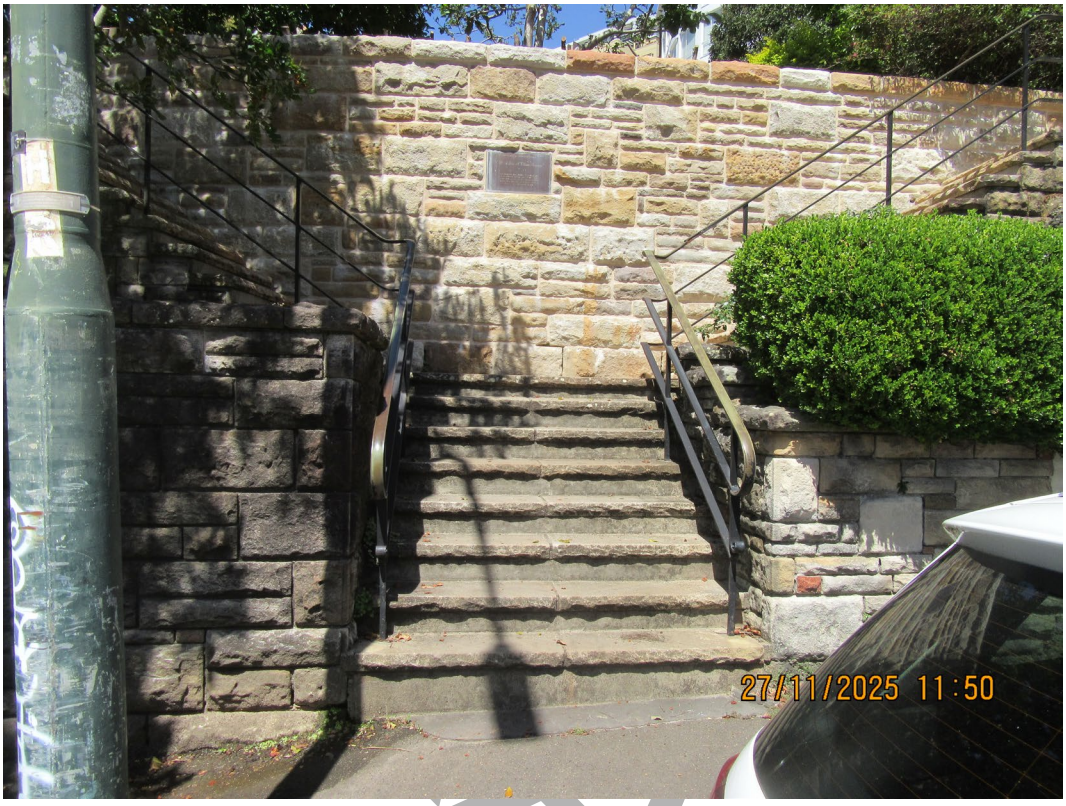

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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IMAGES	
Image Caption	Stone shelter and associated curved dwarf walls on Billyard Avenue, part of the original works associated with the Reserve.

Image Year	2025	**Image author and Copyright Holder**	TKD Architects

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Attachment K

TKD Heritage Assessment – Quarry Street, Ultimo

Landscaping
Quarry Green Reserve, Ultimo

Heritage Assessment

TKDArchitects
Tanner Kibble Denton

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
Photograph by Matthew Taylor.

Authorship
Dr Roy Lumby, Senior Heritage Specialist, TKD Architects; Matthew Taylor

Image credits
All images are by TKD Architects except where noted.

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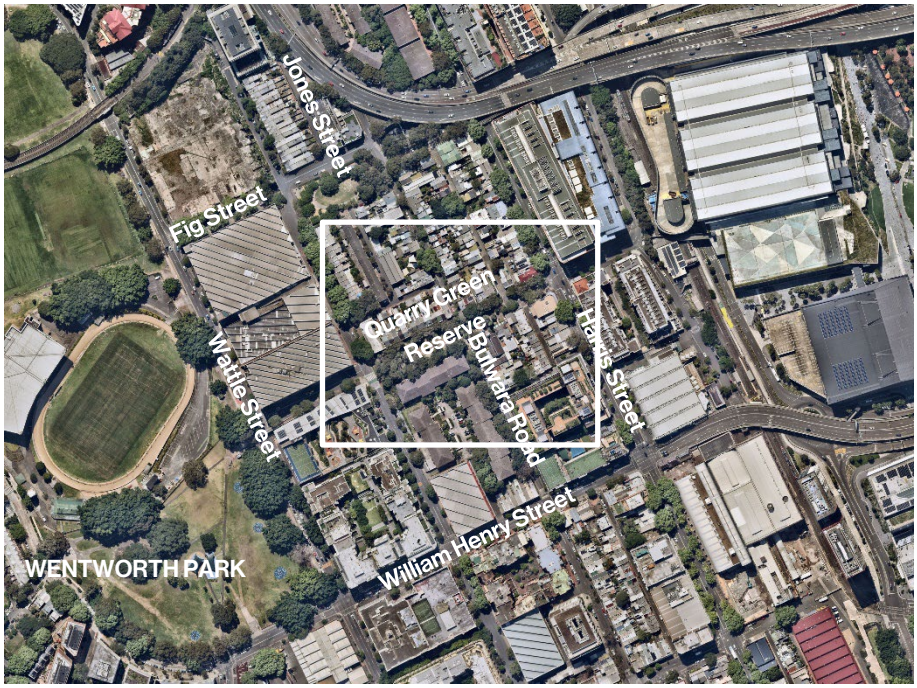
Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL, DMT	
P2	8 October 2025	Draft issue	RL, DMT	
A	4 November 2025	Final issue	RL, DMT	GP
B	20 January 2026	Revised final issue	RL, DMT	GP
C	21 January 2026	Revised final issue	RL, DMT	GP

Contents

1	Introduction	3
2	Historical overview	4
3	Physical evidence	8
4	Comparative analysis	10
5	Assessment of heritage significance	15
6	Conclusions	17



1 Aerial location image (top) and aerial detail image of Quarry Green Reserve, Ultimo. Source: NearMaps with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of landscaping in Quarry Green Reserve, Ultimo. The property was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects and Taylor Brammer Landscape Architects, October 2023). Quarry Street is located within the Ultimo Heritage Conservation Area (C69).

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, Assessing *Heritage Significance* (2023).

1.2 Site description

The site is located between Jones Street and Ada Place, Ultimo. The reserve forms a landscaped open space on what was Quarry Street and lies along an east west axis.

The site is bounded by two storey 19th century terraces to the north and a late 20th century four to five storey apartment complex to the south. The terraces have a traditional relationship with the reserve with a formed footpath to the property alignment while the apartments have a landscape buffer and grassed berm to the reserve with limited pedestrian access from the reserve by way of a concrete path to the basement of the complex.

2 View of Quarry Green Reserve. Source: Taylor Brammer.

2 Historical overview

2.1 Early site history

Originally the country of the Gommerigal people, the land that the reserve is located formed part of the Ultimo Estate that was developed as a rural retreat by surgeon John Harris. The estate comprised of 232 acres that was made of up land grants to Harris from 1803 to 1806.

From the mid nineteenth century the area was subdivided for housing and industrial uses and became a densely populated working class suburb with employment gained in the extensive wool stores and quarries. By the early 20th century, the development of factories replaced many houses with a resultant decline in the residential population.

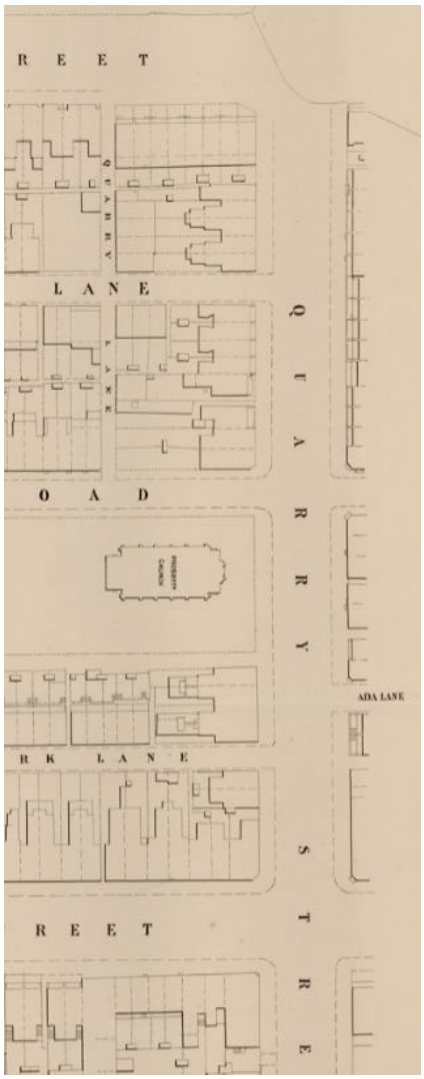
The area remained as farmland, in possession of the Harris family, until it was subdivided in 1859. At that time, most of the current streets in the locality were laid out, and the descendants of John Harris constructed the first residences in the area (at least one of which – a row of terrace houses in Wattle Street – was still owned by the family in the early 1980s). The first entry for Quarry Street (Pyrmont) appeared in the 1875 edition of Sands Directory, but no occupants were included in the entry. Two years later residences, along with vacant undeveloped land, were listed on both sides of the street.

Residential development accelerated in the 1880s. By 1888, the area was fully with houses and a Presbyterian church on south side corner of Brown Street. However, the construction of factories, quarries, woolstores and a power station in the early twentieth century saw the demolition of hundreds of houses, and a steady decline in population.

After World War II, the traditional industries that had used Ultimo were in decline, with the suburb experiencing a general period of decay. Outlying suburbs consisting of primarily detached housing became popular in the post-World War II expansion of Sydney and attached terrace housing that formed the primary housing stock of Ultimo was seen as a poor alternative.

From the 1970s onwards, Ultimo experienced a revitalisation, along with other inner city areas such as Paddington for its convenience and changing social attitudes to what were formerly seen as less desirable working class suburbs. This social movement led to a continuing gentrification of the area and introducing contemporary concepts of Greening Cities and the benefits of open green spaces within the prevailing urban framework. With this movement, many of the existing warehousing and other large scale buildings in Ultimo and Pyrmont were adaptively reused for both commercial and residential purposes.

The greening cities movement occasioned the urban greening policies of the then Labor government and resulted in extensive street tree planting through the suburb. Quarry Green Reserve Road forms one of a series of road closures undertaken by the City of Sydney in the 1970s and 80s as an ongoing outcome of the City of Sydney 'Greening of Sydney' 1971 plan, more particularly Action Plan 2, the Low-cost Streetscapes Improvements Action Plan.[1] This Action Plan related to various locations in Central Sydney and streets in various suburbs close to it.

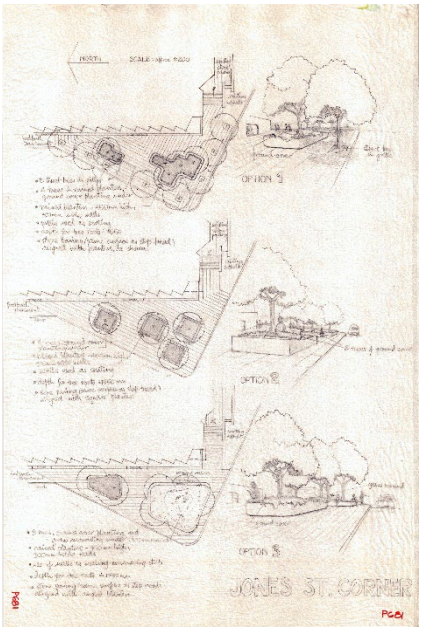


3 Development on the southern side of Quarry Street between Jones Street (top) and Harris Street (bottom) in 1888.
Source: State Library of NSW
Metropolitan Detail Series City of Sydney
Sheet R3, 1888

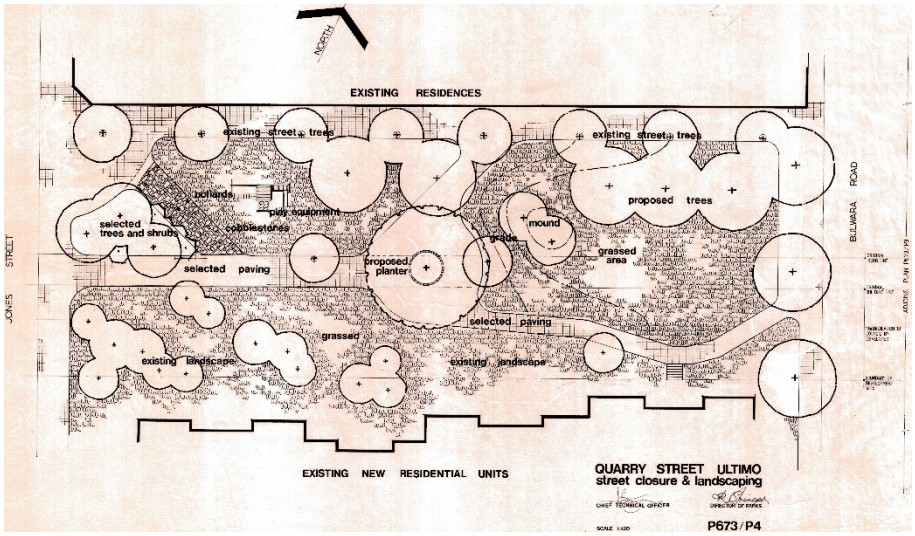
1 *The City of Sydney Strategic Plan Objectives, Policies and Action Priorities* (Council of the City of Sydney, 1974), p.72

The demand for further pedestrian amenity through the city was the result of social changes and the impact of gentrification where former working class neighbourhoods such as Paddington, Ultimo and Glebe had been rediscovered by a new (generally) middle class educated generation as convenient places to live. Along with the street closures and increased pedestrian amenity was the extensive street tree planting that was undertaken through the city. This had the effect of increasing the aesthetic and ecological values of the place and thereby attracting further middle class people to the areas.

As part of this, the reserve was created in concert with the development of the apartments to the south of the reserve providing much needed green open space to what was once a dense working class suburb. Early conceptual plans of the reserve show the use of broad grassed areas, canopy trees to the periphery and a feature tree to the centre of the park. These plans are signed by Andrew Prouse, at that time a recent landscape architectural graduate from the University of New South Wales undergraduate program. The plans indicate pathways, sitting areas and an indication of play equipment. Later drawings document the evolution of the scheme. The completed landscaped closure was officially opened by the deputy mayor, Tony Bradford, on 12 May 1983.



4 Above: undated sketch drawing describing options for landscape design at the corner of Quarry and Jones Street.
Left: sketch plan of landscape works in Quarry Street, 1982. Ilmar Berzins signed the drawing as Chief Technical Officer.
Source: City of Sydney Archives Unique ID A-01200783 and Unique ID A- 01200782



The following images describe the evolution of the place

5 Left: 1943 aerial view of Quarry Street showing the substantial industrial building to the south that is now apartments.
Right: 1982 aerial view - the Quarry Green Reserve, possibly under construction. The landscape grassed berm to the early 1980s apartments on the south side of Quarry Street is in place.
Source: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery

6 Left: 1986 aerial view - the reserve completed showing the development of the canopies of the trees including a number to the centre. A paved path is located leading from Jones Street and terminating in the centre. The Casuarina trees are well established to the Jones Street entry.
Right: 1991 aerial view. The reserve characterised by further maturity of tree canopies and identification of two open grassed spaces separated by trees.
Source: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery

7 View looking west to Bulwara Street showing new kerbing and open space, August 1986. Kerbing incorporates access to lane and vehicular parking locations. Source: City of Sydney Archives Unique ID A-00059322.

8 Photograph taken in November 1994. The Reserve is maturing in form. Note the semi mature tree canopies to the left hand side of the image, which was established prior to the reserve being implemented as a whole. The Casuarina trees to the centre of the park have been removed to provide an enhanced resident amenity. Source: City of Sydney Archives Unique ID A-00042343.

9 Left: 1997 aerial view. The reserve exhibits a dense tree canopy with an open grassed area to the east.
Right: 2025 aerial (Six maps) The reserve's tree canopy has been rationalised with a broader grassed area to the centre and mature trees to the western portion. Trees are retained to the periphery and a pathway is located through the centre.
Sources: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery; SIX Maps.

3 Physical evidence

The landscape design of the Quarry Green Reserve features an extensive grassed open space at the centre with mature native trees forming a vegetated curtilage to the reserve. Paperbarks and Eucalypts predominate as the main tree species with Casuarina trees at the Jones Street entry. Garden beds are located adjacent to the apartments to the south, in shady areas under the canopy trees and to the footpath adjacent to the terraces to the north. These garden beds are characterised by low planting with a combination of both native and exotic plantings. These low plantings ensure clear sightlines through the reserve and to the properties that face it, assisting in the safety and security of the reserve.

Traversing the open space are a series of brick paved paths linking Bulwara Road and Jones Street. Supplementary paved areas with seating are located to the periphery of the open space and provide both tables and seats located under the tree canopy. These seats are in the form of typical park bench seating used by the City of Sydney in their parks from the late twentieth century. There is a low sandstone wall that forms the edge of a planter at the Jones Street entry to the park.

There is extensive street tree planting in the surrounding streets that complements the treed nature of the reserve, with vegetated views gained from the reserve to the western and eastern aspects. The reserve is well cared for and is enjoyed by the community as a valued green open space in Ultimo.

Popular community events, including the Ultimo Pyrmont Uptown festival, Christmas carols and Lunar New Year celebrations are held in the park.[2]

Layout

The Quarry Green Reserve retains much of the original conceptual layout of tree planting to the periphery to the reserve and grassed areas to the centre. The grassed central area has been rationalised to a larger and more cohesive space with the removal of some smaller trees in the middle of the reserve as a response to the maturing of the canopies of the trees. Major tree plantings are retained to the western end and to the periphery of the reserve. In recent times, some smaller trees have been placed along the central path, these forming a discordant element in the reserve.

Hard Landscape Elements

A brick paved path has been formed through the centre of the reserve that links Jones Street and Bulwara Road, along with the retention of the earlier footpath in front of the terraces along the northern edge. Brick paving is retained as the main pathways' material. A concrete path links the carpark of the neighbouring apartments to the central pathway, creating a discordant element. A low sandstone wall is located at the Jones Street entry.

2 https://www.cityofsydney.nsw.gov.au/park-playground-works/quarry-green-upgrade-works, accessed 9 October 2025.

Vegetation

There has been a rationalisation of the trees and vegetation through the reserve. While the concept of major plantings has been retained, a rationalisation of tree locations has occurred. The retained mature trees to the western portion are of a substantial canopy width, height and form, and along with the planting to the periphery are the major vegetative form. Smaller trees, previously located through the centre have been removed to form a broader grassed area. This adaption has made the reserve more suitable for year-round use, allowing access to winter sunshine in the centre of the site.

The now mature trees to the reserve are typical of the species that were used at the time of the reserves' implementation. Native evergreen trees predominate with Paperbark trees (*Melaleuca quinquenervia*) extensively used for both street tree and park plantings across Sydney. Eucalyptus trees are also well established and form part of the original planting from the 1980s.

The underplanting, while perhaps consistent in character with the original plantings (possibly *Lomandra longifolia*) have been changed over time, reflecting both evolving ecological micro climate of developed tree canopies and limited life span of some of these species.

10 Images of the reserve showing the low sandstone wall to Jones Street, low underplanting and the mature form of the evergreen native trees. Note the broad grassed central area.
Source: Taylor Brammer.

4 Comparative analysis

4.1 Ilmar Berzins

Ilmar Berzins (1921-1993) was born in Latvia.[3] He studied horticulture at the State Horticultural College in Riga, Latvia and landscape architecture at the State Horticultural College and University of Technology in Hanover, Germany. He, along with his wife Lucija (and son Alnis, arrived in Melbourne on 23 February 1949. Migration records indicate the family's destination as "Hazelhome" in Orange, the home of Lionel Sampson.[4] While in Orange Berzins worked in the Email Ltd whitegoods factory to pay off the bond for the fares to Australia. During this time Berzins prepared a master plan and nominated plantings for the Orange Golf Course:

> Something between two and three thousand trees and shrubs have been planted since 1949 – pines, elms, magnolias, chestnuts, crab-apples, flowering cherries and prunuses, rhododendrons, berry-bushes, viburnums, azaleas and a multitude of others. The plantings have been carried out under the supervision of Elmar [sic] Berzins, who has had wide European experience in landscape-planning.[5]

Ilmar Berzins and his family moved to Sydney in 1951. Berzins started working at Sydney Municipal Council on 13 June as a first-grade draftsman. His recruitment by the Council is widely said to be the first employment by local government of a formally trained landscape architect in Australia. According to pioneering landscape architect Allan Corry,

> ... he brought Modernist European design styles to a city desperately seeking innovative civic design ideas. Berzins was given many opportunities to create new community spaces and redesign existing parks. He developed a distinctive style that incorporated free-form shapes. Sandstone book-leaf walling, naturally sculpted boulders, water-worn pebbles, and strongly contrasting plant forms and textures, all artistically arranged to form pleasing compositions, a marked contrast to the traditional council designs of that time. His most important designs were completed during the 1950s and 1960s ...[6]

In 1953 Ilmar Berzins was promoted to senior draftsman. He and Lucija became naturalised citizens in April 1958.[7] His abilities were recognised by the City Council and he was promoted to supervising draftsman in 1964, followed by assistant landscape architect in 1966. He was promoted to chief technical officer in 1971, followed by promotion to Director of Parks and Gardens. In this role he would advise external consultants on major urban projects. Berzins retired in 1986.

Ilmar Berzins was described by his colleague John Sweaney as "very flamboyant, probably one of the best draughtsmen and most knowledgeable person associated with horticulture that I'd encountered".[8] According to landscape architect and urban designer Tempe McGowan, "[Berzins] held the passionate belief that all people need to enjoy nature and that nature in turn

11 Ilmar Berzins, 1949. Source: National Archives of Australia Series A2571, ID 203663834.

3 His name appears as Ilmars Berzins on immigration records held at the National Archives of Australia.
4 National Archives of Australia Series A2571, ID 203663834
5 "Golf and Blossom", *The Bulletin*, 21 October 1953, p.4.
6 Allan Correy, "Berzins, Ilmars" in Richard Aitken and Michael Looker (editors), *Oxford Companion to Australia Gardens* (Oxford University Press in association with the Australian Garden History Society, 2002), p.87.
7 Commonwealth of Australia Gazette, 'Certificates of Naturalization,' Thursday 24 Apr 1958 [Issue No.23], Page 1261.
8 John Sweaney, Interviewed by Jo Kijas on 8 May 2012 (City of Sydney oral history collection), quoted in biography of Ilmars Berzins provided by the City of Sydney.

can ameliorate the human temperament. ... His designs were socially responsive and typical of trends in international, modernist design culture in the way he created little arcadian retreats in the city wilderness."[9]

Berzins' abilities were suited to the task, for he had the unwavering aim of introducing nature into the city and he instigated very liberal planting programs. His aesthetic was not related to Australian indigenous landscapes, instead introducing a European sensibility to the thoughtful design of public open spaces in Sydney, detailing his landscape designs in a way that was unprecedented in public works. Over the many years which his career spanned, Berzins gradually utilised more Australian natives and applied the principles of the Sydney Bush School of landscape architecture.

4.2 Other reserves, parks and street closures

Ilmar Berzins' time with the City of Sydney coincided with a later twentieth century movement toward pedestrianizing public spaces or closing sections of road to expand public space. According to Andrew Briger, former Deputy Lord Mayor and an important figure in the formulation of the 1971 City of Sydney Strategic Plan,

> In December 1971 a new Floor Space Ratio Code and a Parking Code were approved and the long-term process of implementing the integrated city-wide pedestrian network commenced following the closure of the first section of Martin Place to vehicular traffic. This led to numerous streetscape improvements in what was referred to as the "greening" of the city. Most notable amongst these were Sydney Square, the Circular Quay ad Dixon Street (Chinatown) malls, Railway Square, Wynyard Place and the street closures of South Paddington, Surry Hills, Chippendale, Pyrmont, Elizabeth Bay and the Fitzroy Gardens extensions at Potts Point.[10]

Berzins designed the layout and landscape treatment of a number of such pedestrianising schemes. Some notable streetscape upgrades designed by or under Berzins include landscaping to public space in Ulster Street, Paddington (1974), the street closure and landscaping for Springfield Avenue, Kings Cross (1983) and streetscape treatment of Macquarie Place and Macquarie Place Park (1975).

Quarry Green Reserve is part of a series of open spaces that have been developed by The City in the Ultimo area. Major parks in the Ultimo/Pyrmont area were formed by deliberate planning in the redevelopment of major industrial and residential sites. These sites include Ballaarat Park and Refinery Square, Cadi Park, Tumbalong Park and Metcalfe Park. Other parks were formed from left over land from development sites. These include Jones Street Pocket Park and Paradise Reserve.

Paradise Reserve

Located on a leftover portion of land in Pyrmont between Bulwara Road and the expressway that links Sydney CBD to the Anzac Bridge, the reserve is defined to the south by an extensive sound wall to the expressway. The reserve is densely treed with Australian natives including Casuarinas and Eucalypts with a Hills Weeping Fig located in a raised grassed platform. Its

9 Tempe McGowan, 'Humanising the City', *Monument*, Issue No. 25, 1998, p.58.
10 Andrew Briger, "The Politics of Planning" in Peter Webber (editor), *The Design of Sydney: Three Decades of Change in the City Centre* (Law Book Company, 1988), p.52.

name commemorates the Paradise Quarry, so named because of the good quality workable stone that came from it.[11]

Jones Street Pocket Park

This park is located at the base of the old Pyrmont Paradise Quarry and forms an important pedestrian link between Quarry Masters Drive and Mount Street. The park was the site of the quarry was the source of the celebrated Pyrmont Sandstone that was used in significant government buildings in Sydney. The park is located between the remnant quarry face and apartments and forms an important visual amenity for the apartments and the pedestrian strategy for Pyrmont.

The park was designed by Taylor Brammer Landscape Architects and features a bitumen path that meanders through the park and low vegetated berms. Plantings include tree ferns that allow for an appreciation of the former quarry face.

12 Views of the Jones Street Pocket Park taken in January 2009. Source: City of Sydney Archives Unique ID A—00062071 and Unique ID A-00062067. Mark Goddard photographs.

Fig Lane Park

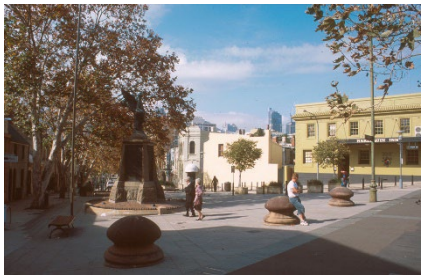
Fig Lane Park was designed in 1996 by Clouston Associates for the City of Sydney. The land was left over from plans for an expressway that was thwarted by community action. The park features a central grassed area and concrete unit paving around the periphery with a Fig tree in the centre of the grassed area. There are a number of stone walls and a small children's playground. The park design continues the landscape design principles of Quarry Green Reserve of a central broad open grassed space with dense tree planting to the periphery providing a vegetated curtilage to the park. Evolution of the landscape concept of Quarry Green Reserve is represented in varying tree species and a feature sandstone sculpture to the central grassed area.

11 "The Quarries of Pyrmont" at https://www.visitsydneyaustralia.com.au/lost-quarries8.html, accessed 7 October 2025.

13 Views of Fig Lane Park taken in January 2009.
Source: City of Sydney Archives Unique ID A-00062327 and Unique ID A-00062325. Mark Goddard photographs.

Union Square, Pyrmont

Union Square is an irregular and informal space between Union Street, Paternoster Row and Harris Street. It was formed in 1998 after Union Street and Pyrmont Bridge were closed to vehicular traffic. The Square comprises open paved space and level surfaces between steps, with a row of mature deciduous trees along its northern side. It also contains the Pyrmont War Memorial, which was unveiled in this location during April 1922. Union Square has become an important focus of community activity in Pyrmont.



14 Looking south-east across Union Square towards Central Sydney, May 2004.
Source: City of Sydney Archives Unique ID A-01130533

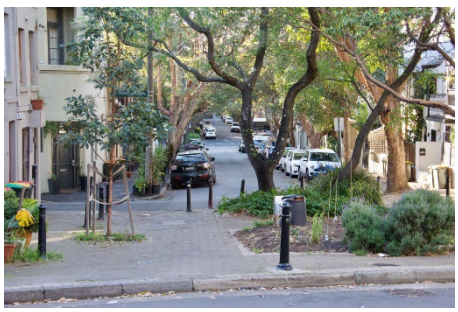
Street closures

The City of Sydney undertook a relatively large number of street closures during the 1970s and 1980s. Apart from major civic precincts such as Martin Place (1968-1979), sections of streets in inner suburbs were closed off to control traffic movements and provide amenity to residents and pedestrians. They included the following closures.

Mountain Street at Macarthur Street in Ultimo was formed to form the Mountain Street Reserve, a small community park. The works are understood to have taken place between 1984 and 1986. They consisted of circular brick planting beds and low curved walls, brick paving, an area of grass and standard seating. Trees include evergreen and deciduous species, which have matured since the reserve was completed.

15 The landscaping of the Mountain Street Reserve in August 1986.
Source: City of Sydney Archives Unique ID A-00059318.

A pocket park was formed by the closure of Arthur Street at Alexander Street in Surry Hills, which is understood to have been completed circa 1984. Photographs taken at this time show brick paving, standard bench seating, beds containing native ground covers and Eucalypts on the edges of the small park. These details and elements are characteristic of street closure landscaping during the mid-1980s.



16 The small park formed by the closure of a part of Arthur Street in Surry Hills in September 1984 (left) and September 2021 (right).
Source: City of Sydney Archives Unique ID A- 00058726 and Unique ID A-0171874. Ken Ryan photograph.

Other closures in Surry Hills demonstrating a similar palette of materials to Mountain Street and Arthur Street include Tudor Street at Crown Street that was completed circa 1987, Cooper Street at Riley Street that was constructed during 1978-1979 and Napier Street at Selwyn Street, completed in 1985.

17 Left: Tudor Street at Crown Street, photographed in February 2010.
Right: Cooper Street at Riley Street, photographed in February 2010.
Source: City of Sydney Archives Unique ID A-00071755 and Unique ID A-00071829. Mark Stevens photographs.

Not all street closures within the boundaries of the City of Sydney were initiated or documented by Council. For instance, the Forbes Street Reserve in Woolloomooloo was documented in 1982 by Environmental Landscapes Pty Ltd. Some years later, the southern end of Jones Street, Ultimo, was closed off as a continuation of Mary Ann Street Park. The City West Development Corporation is understood to have been responsible for the design and construction of the park.

4.3 Conclusions

The Quarry Street Reserve is representative of the social undertaking in the greening cities movement that was prevalent in the mid to late twentieth century. The closure and landscaping of the street resulted from the initiation of 1971 City of Sydney Strategic Plan and the associated Low Cost Streetscapes Improvements Action Plan (Action Plan 2), which informed street closures and landscaping in many parts of the City of Sydney.

Quarry Green Reserve is representative of a number of open space improvements through the Pyrmont and Ultimo area, along with other localities such as Surry Hills, which were inspired by the Sydney Bush School aesthetic through the use of Australian native planting as its main structural form and the use of materials such as brick for paving and planters.

5 Assessment of heritage significance

5.1 Assessment

Historical significance

Criterion A *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Quarry Green Reserve is one of a relatively large number of landscaped street closures resulting from the implementation of the 1971 City of Sydney 'Strategic Plan in Central Sydney and inner-city suburbs within the local government area. It is historically important as one of a group of landscaped street closures providing evidence of the "greening" of Sydney that came out of the Strategic Plan.

Quarry Green Reserve meets the threshold for listing at a Local level.

Criterion B *An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).*

Quarry Green Reserve is associated with Ilmar Berzins, the City of Sydney's landscape architect who oversaw extensive development of green open spaces throughout the city. Quarry Green Reserve is representative of the parks and open spaces that Berzins was associated with. It is a fine and attractive example of landscaping, but may not have been wholly the work of by Berzins

Quarry Green Reserve meets the threshold for listing at a Local level.

Aesthetic significance

Criterion C *An item is important in demonstrating aesthetic characteristics and/or and high degree of creative or technical achievement in NSW (or the local area).*

Quarry Green Reserve is representative of a number of open space improvements through the Ultimo area that were inspired by the Sydney Bush School aesthetic through the use of Australian native planting as its main structural form with Sydney School detailing of brick paving and sandstone. The planting has matured to form an attractive landscape and provide an attractive recreational precinct in Ultimo.

Quarry Green Reserve meets this criterion at a Local level.

Social significance

Criterion D *An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

It has not been determined whether Quarry Green Reserve has strong or special associations with the local community, although evidence indicates it is a focus of regular community activities and celebrations.

Quarry Green Reserve may meet the threshold for listing at a Local level, but more research is needed to confirm this.

Research potential

Criterion E *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Quarry Green Reserve is representative of the greening cities movement and social change through the gentrification of inner city suburbs. However, similar evidence can be provided by other comparable sites across the City of Sydney.

Quarry Green Reserve does not meet the threshold for listing at a State or Local level.

Rarity

Criterion F *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Quarry Green Reserve is not rare. There are numerous examples of street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s.

Quarry Green Reserve does not meet the threshold for listing at a State or Local level.

Representativeness

Criterion G *An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.*

Quarry Green Reserve is representative of the street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s. It is also representative of the greening cities movement and social change taking place as evidenced by the gentrification of inner city suburbs.

Quarry Green Reserve meets the threshold for listing at a Local level.

5.2 Statement of significance

Quarry Green Reserve is one of several landscaped street closures resulting from the implementation of the 1971 City of Sydney 'Strategic Plan in Central Sydney and inner-city suburbs. It is historically important as one of a group of landscaped street closures, providing evidence of the "greening" of Sydney that came out of the Strategic Plan. The Reserve is is associated with the significant City of Sydney landscape architect Ilmar Berzins, It is representative of the parks and open spaces that Berzins was associated with and is a fine and attractive example of landscaping, but may not have been wholly the work of by Berzins . The Reserve demonstrates the influence of the Sydney Bush School aesthetic by its use of Australian native planting and detailing of brick paving and sandstone.

6 Conclusions

Quarry Green Reserve, Ultimo, fulfils the NSW Heritage Council's criteria for historical significance, historical associations, aesthetics and representativeness at a local level. It is also likely to fulfil the criterion for social significance. Because of this it warrants listing as a heritage item in Schedule 5 of Sydney Local Environmental Plan 2012.

Attachment L

Draft Inventory Sheet – Quarry Street, Ultimo

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**Quarry Green Reserve**		
Former name			
Item type	**Landscape**		
Address	Number	Street **Quarry Street**	Suburb **Ultimo**
Property description	Lot		DP
Use	Current		Former
Statement of significance	Quarry Green Reserve is one of several landscaped street closures resulting from the implementation of the 1971 City of Sydney 'Strategic Plan in Central Sydney and inner-city suburbs. It is historically important as one of a group of landscaped street closures, providing evidence of the 'greening' of Sydney that came out of the Strategic Plan. The Reserve is associated with the significant City of Sydney landscape architect Ilmar Berzins. It is representative of the parks and open spaces that Berzins was associated with and is a fine and attractive example of landscaping but may not have been wholly the work of Berzins. The Reserve demonstrates the influence of the Sydney Bush School aesthetic by its use of Australian native planting and detailing of brick paving and sandstone.		
Level of significance	State:	Local:	
Heritage listings			
DESCRIPTION			
Designer	City of Sydney Parks and Civic Affairs Department – Ilmar Berzins, Chief Technical Officer/Director of Parks; Andrew Prowse		
Builder			
Construction years	1981-1983		

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Physical description	The landscape design of the Quarry Green Reserve features an extensive grassed open space at the centre with mature native trees forming a vegetated curtilage to the reserve. Paperbarks and Eucalypts predominate as the main tree species with Casuarina trees at the Jones Street entry. Garden beds are located adjacent to the apartments to the south, in shady areas under the canopy trees and to the footpath adjacent to the terraces to the north. These garden beds are characterised by low planting with a combination of both native and exotic plantings. These low plantings ensure clear sightlines through the reserve and to the properties that face it, assisting in the safety and security of the reserve. Traversing the open space are a series of brick paved paths linking Bulwara Road and Jones Street. Supplementary paved areas with seating are located to the periphery of the open space and provide both tables and seats located under the tree canopy. These seats are in the form of typical park bench seating used by the City of Sydney in their parks from the late twentieth century. There is a low sandstone wall that forms the edge of a planter at the Jones Street entry to the park. There is extensive street tree planting in the surrounding streets that complements the treed nature of the reserve, with vegetated views gained from the reserve to the western and eastern aspects. The reserve is well cared for and is enjoyed by the community as a valued green open space in Ultimo. Popular community events, including the Ultimo Pyrmont Uptown festival, Christmas carols and Lunar New Year celebrations are held in the park. The Quarry Green Reserve retains much of the original conceptual layout of tree planting to the periphery of the reserve and grassed areas to the centre. The grassed central area has been rationalised to a larger and more cohesive space with the removal of some smaller trees in the middle of the reserve as a response to the maturing of the canopies of the trees. Major tree plantings are retained to the western end and to the periphery of the reserve. In recent times, some smaller trees have been placed along the central path, these forming a discordant element in the reserve. A brick paved path has been formed through the centre of the reserve that links Jones Street and Bulwara Road, along with the retention of the earlier footpath in front of the terraces along the northern edge. Brick paving is retained as the main pathways' material. A concrete path links the carpark of the neighbouring apartments to the central pathway, creating a discordant element. A low sandstone wall is located at the Jones Street entry.
Physical condition	
Modification and Dates	Upgrading circa 2014
Archaeological potential	

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in their surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many

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centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

Originally the country of the Gommerigal people, the land that the reserve is located formed part of the Ultimo Estate that was developed as a rural retreat by surgeon John Harris. The estate comprised of 232 acres that was made up of land grants to Harris from 1803 to 1806. From the mid nineteenth century the area was subdivided for housing and industrial uses and became a densely populated working class suburb with employment gained in the extensive wool stores and quarries. By the early 20th century, the development of factories replaced many houses with a resultant decline in the residential population.

The area remained as farmland, in possession of the Harris family, until it was subdivided in 1859. At that time, most of the current streets in the locality were laid out, and the descendants of John Harris constructed the first residences in the area (at least one of which – a row of terrace houses in Wattle Street – was still owned by the family in the early 1980s). The first entry for Quarry Street (Pyrmont) appeared in the 1875 edition of Sands Directory, but no occupants were included in the entry. Two years later residences, along with vacant undeveloped land, were listed on both sides of the street.

Residential development accelerated in the 1880s. By 1888, the area was fully developed with houses and a Presbyterian church on south side corner of Brown Street. However, the construction of factories, quarries, woolstores and a power station in the early twentieth century saw the demolition of hundreds of houses, and a steady decline in population.

After World War II, the traditional industries that had used Ultimo were in decline, with the suburb experiencing a general period of decay. Outlying suburbs consisting of primarily detached housing became popular in the post-World War II expansion of Sydney and attached terrace housing that formed the primary housing stock of Ultimo was seen as a poor alternative.

From the 1970s onwards, Ultimo experienced a revitalisation, along with other inner city areas such as Paddington for its convenience and changing social attitudes to what were formerly seen as less desirable working class suburbs. This social movement led to a continuing gentrification of the area and introducing contemporary concepts of Greening Cities and the benefits of open green spaces within the prevailing urban framework. With this movement, many of the existing warehousing and other large scale buildings in Ultimo and Pyrmont were adaptively reused for both commercial and residential purposes.

The greening cities movement occasioned the urban greening policies of the then Labor government and resulted in extensive street tree planting through the suburb. Quarry Green Reserve Road forms one of a series of road closures undertaken by the City of Sydney in the 1970s and 80s as an ongoing outcome of the City of Sydney ‘Greening of Sydney’ 1971 plan, more particularly Action Plan 2, the Low-cost Streetscapes Improvements Action Plan. This Action Plan related to various locations in Central Sydney and streets in various suburbs close to it.

The demand for further pedestrian amenity through the city was the result of social changes and the impact of gentrification where former working class neighbourhoods such as Paddington, Ultimo and Glebe had been rediscovered by a new (generally) middle class educated generation as convenient places to live. Along with the street closures and increased pedestrian amenity was the extensive street tree planting that was undertaken through the city. This had the effect of increasing the aesthetic and ecological values of the place and thereby attracting further middle class people to the areas.

As part of this, the reserve was created in concert with the development of the apartments to the south of the reserve providing much needed green open space to what was once a dense working class suburb. Early conceptual plans of the reserve show the use of broad grassed areas, canopy trees to the periphery and a feature tree to the centre of the park. These plans are signed by Andrew Prowse, at that time a recent landscape architectural graduate from the University of New South Wales undergraduate program. The plans indicate pathways, sitting areas and an indication of play equipment. Later drawings document the evolution of the

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scheme. The completed landscaped closure was officially opened by the deputy mayor, Tony Bradford, on 12 May 1983.

Quarry Green was formed out of the road closure of the central section of Quarry Street. Land was given to the City when the Country Producers Store site was redeveloped. Part of the approval conditions for the development of the site was the granting of lots 1 and 2 facing Quarry Street as public reserve. In return, the City agreed to the closure of Burlinson Street (which ran parallel between Bulwara Road and Jones Street) to permit development. The City prepared Landscape Plans for the `Green' between 1981-82 and it was constructed in 1983. The current layout still reflects this design of pathways, turf areas and mix of native tree planting. The existing round brick planter bed within the park marks the site of the former junction of Burlinson and Quarry Street. The paperbarks street trees were planted in the 1970s

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**

HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	Quarry Green Reserve is one of a relatively large number of landscaped street closures resulting from the implementation of the 1971 City of Sydney 'Strategic Plan in Central Sydney and inner-city suburbs within the local government area. It is historically important as one of a group of landscaped street closures providing evidence of the 'greening' of Sydney that came out of the Strategic Plan. Quarry Green Reserve meets the threshold for listing at a Local level.
Historical association SHR criteria (b)	Quarry Green Reserve is associated with Ilmar Berzins, the City of Sydney's landscape architect who oversaw extensive development of green open spaces throughout the city. Quarry Green Reserve is representative of the parks and open spaces that Berzins was associated with. It is a fine and attractive example of landscaping but may not have been wholly the work of Berzins. Quarry Green Reserve meets the threshold for listing at a Local level.
Aesthetic significance SHR criteria (c)	Quarry Green Reserve is representative of several open space improvements through the Ultimo area that were inspired by the Sydney Bush School aesthetic through the use of Australian native planting as its main structural form with Sydney School detailing of brick paving and sandstone. The planting has matured to form an attractive landscape and provide an attractive recreational precinct in Ultimo. Quarry Green Reserve meets this criterion at a Local level.
Social significance SHR criteria (d)	It has not been determined whether Quarry Green Reserve has strong or special associations with the local community, although evidence indicates it is a focus of regular community activities and celebrations. Quarry Green Reserve may meet the threshold for listing at a Local level, but more research is needed to confirm this.

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Technical/Research significance SHR criteria (e)	Quarry Green Reserve is representative of the greening cities movement and social change through the gentrification of inner city suburbs. However, similar evidence can be provided by other comparable sites across the City of Sydney. Quarry Green Reserve does not meet the threshold for listing at a State or Local level.
Rarity SHR criteria (f)	Quarry Green Reserve is not rare. There are numerous examples of street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s. Quarry Green Reserve does not meet the threshold for listing at a State or Local level.
Representativeness SHR criteria (g)	Quarry Green Reserve is representative of the street closures and attendant landscaping designed by Ilmar Berzins and others and constructed across the City of Sydney during the 1970s and 1980s. It is also representative of the greening cities movement and social change taking place as evidenced by the gentrification of inner city suburbs. Quarry Green Reserve meets the threshold for listing at a Local level.
Integrity	
RECOMMENDATIONS	
Recommendations	• Manage Quarry Green Reserve in accordance with Sydney LEP 2012 and Sydney DPC 2012. • Quarry Green Reserve should be retained and conserved. • The external form of Quarry Green, any original spaces, fabric and finishes should be retained and conserved in any future development. The original landscaping, including planting selection and use of materials, reflected the influence of the Sydney Bush School aesthetic and future works should respond to this. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Strategy be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken.

INFORMATION SOURCES

Type	Author/Client	Title	Year	Repository
Written	TKD Architects, Taylor Brammer Landscape Architects	Landscaping, Quarry Street Reserve, Ultimo, Heritage Assessment	2025	City of Sydney

AUTHOR OF THIS REPORT	
Name	**Date**
TKD Architects	2025

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IMAGES			
Image Caption	Looking north-east along Quarry Street from its intersection with Bulwara Road.		
Image Year	Circa 1924	**Image author and Copyright Holder**	State Library of NSW – Alice Haigh photograph.

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IMAGES	
Image Caption	Aerial photograph of Quarry Street showing the site of Quarry Green Reserve.

Image Year	1943	**Image author and Copyright Holder**	https://portal.spatial.nsw.gov.au/portal/apps/webappviewer/index.html

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

IMAGES	
Image Caption	

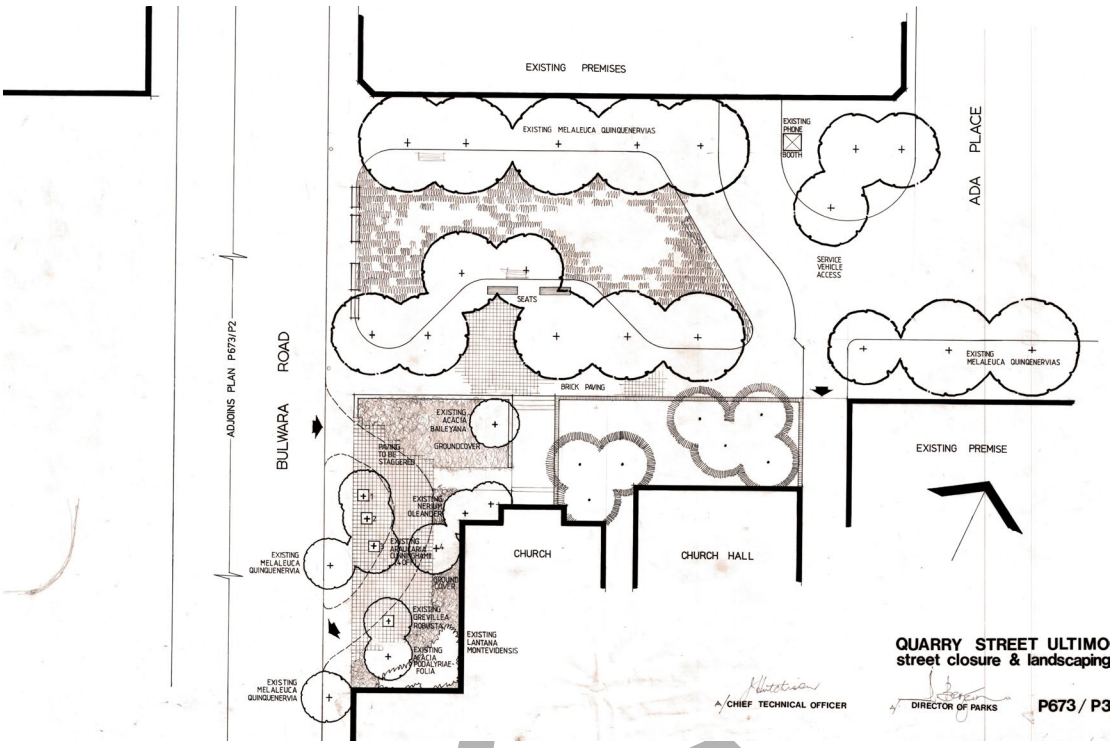

Image Year		Image author and Copyright Holder	

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Image Caption	

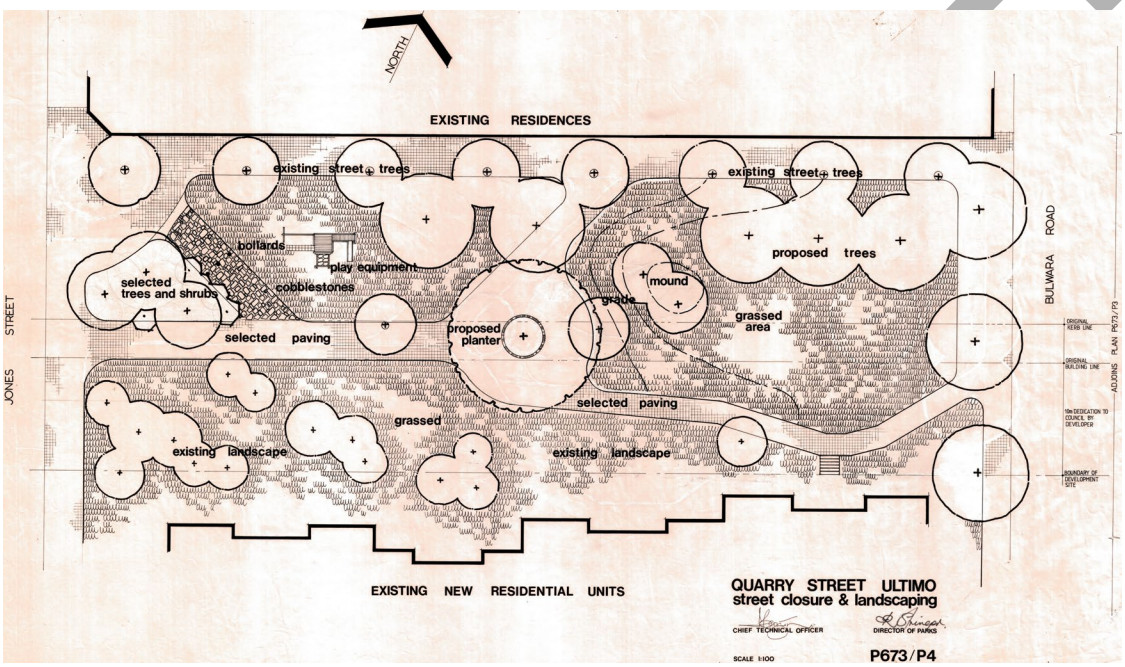

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Image Year		**Image author and Copyright Holder**	

IMAGES	
Image Caption	South-west along Quarry Street from Ada Place

Image Year	1986	**Image author and Copyright Holder**	City of Sydney Archives

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Image Caption	

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Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

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Attachment M

TKD Heritage Assessment – Ulster Street, Paddington

Landscaping
Ulster Street, Paddington

TKDArchitects
Tanner Kibble Denton

Heritage assessment

Prepared for City of Sydney

January 2026

TKD Architects acknowledge the Traditional Custodians of the lands where we work and create, recognising their continuing and unbroken connection to the land, water and sky.

We pay our respects to Elders past and present and express our gratitude for their sharing of knowledge and cultures.

Cover
Photograph by Matthew Taylor

Authorship
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Matthew Taylor, Landscape Architect

Image credits
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Document issue

Issue	Date	Purpose	Written	Reviewed
P1	25 June 2025	Preliminary draft issue	RL, DMT	
P2	9 October 2025	Draft issue	RL, DMT	
A	16 December 2025	Final issue	RL, DMT	GP
B	20 January 2026	Revised final issue	RL, DMT	GP

Contentsp

1	Introduction	3
2	Historical context	4
3	Physical evidence	8
4	Comparative analysis	9
5	Assessment of heritage significance	15
6	Conclusions	18

1 Aerial location image (top) and aerial detail image of the Ulster Street landscaping Source: Nearmap with TKD Architects overlay.

1 Introduction

1.1 Background and purpose of report

This report has been prepared on behalf of the City of Sydney to assess the heritage significance of landscaping in Ulster Street, Paddington. The property was identified as a potential heritage item in the Albert Smillie and Ilmar Berzins City Architect and City Landscape Architect Heritage Study (TKD Architects and Taylor Brammer Landscape Architects, October 2023). Ulster Street is located in the Paddington South Heritage Conservation Area (C48).

The assessment of heritage significance has been undertaken using the heritage assessment criteria contained in the New South Wales Heritage Office Guidelines, Assessing *Heritage Significance* (2023),

1.2 Site description

Ulster Street is a small street closure between Oxford Street and Church Place in Paddington. It is rectangular in shape and is bounded on the south-eastern side by the St Matthias Church Hall. A two-storey residential building defines the street's north-western boundary. Both buildings are located on the site boundary, with their main orientation relating to Oxford Street.

The design of the street closure consists of a formally laid out brick paved plaza with four raised rectangular brick garden beds. Located in these planters, mature Chinese Weeping Elm and two Jacarandas form a treed canopy through the street closure. The layout of the brick paving is characterised by a strict rectangular grid that is highlighted with a contrasting lighter brick colour. There is minor planting in the raised garden beds of a ground cover nature.

2 View of the Ulster Street landscaping, looking south through the space.

2 Historical context

The Ulster Street Road closure is one of a series of road closures undertaken by the City of Sydney in the 1970s and 1980s. Locally, the road closure is part of a series of road closures along the southern side of Oxford Street, Paddington that were part of Action Plan 26 South Paddington Precinct C4, approved by Council on 2 July 1973. The streets selected for closure were Regent Street, Newcombe Street (subsequently partially reopened), Elizabeth Street (Strong Memorial Reserve), Ulster Street and Stewart Street. The locations of these road closures were deliberate as they are located adjacent or close to the busy Oxford Street, a main arterial road. The road closures recognised and enabled pedestrian priority as an ongoing outcome of the City Council's 1971 'Greening of Sydney' plan, and were closed as part of a traffic management initiative after lobbying by the Paddington Society to prevent constant "rat-running" from Oxford Street to Moore Park Road. The closures evidently improved amenity for residents.[1] Prior to the road closure, Ulster Street formed a minor road that linked Oxford Street through to Church Lane.

3 Looking down Ulster Street towards Gordon Street, 3 May 1961. St Matthias Church Hall is visible at left.
Source: City of Sydney Archives Unique ID A-00007270.

Documentation describing the closure and attendant landscaping was prepared in 1974. Ilmar Berzins was involved with the project – his signature appears as Chief Technical Officer on the drawings prepared by the Council's Parks and Recreations Department.

The demand for increased pedestrian amenity through the city was the result of social changes and the impact of gentrification where former working-class neighbourhoods such as Paddington, Ultimo and Glebe had been rediscovered by a new (generally) middle class educated generation as convenient places to live. Along with the street closures and increased pedestrian amenity was the extensive street tree planting that was undertaken through the city. This had the effect of increasing the aesthetic and ecological values of the place and thereby attracting further middle-class people to the areas.

4 Looking north-east from Gordon Street along Ulster Street to Oxford Street, 22 November 1972.
Source: City of Sydney Archives Unique ID A-00017626.

Significant road closures were being instigated across the city, Martin Place being the most prominent example with the final stages being opened in 1979. Road closures and rationalisation of road alignments to allow for greater pedestrian amenity were just some of the measures that were undertaken. Taking advantage of Sydney's irregular grid for example, the corner of Hunter and Bligh Streets, where the memorial to the Reverend Richard Johnson occupied a traffic island, was incorporated as part of an extended pedestrian pathway while retaining traffic functions for the intersection.

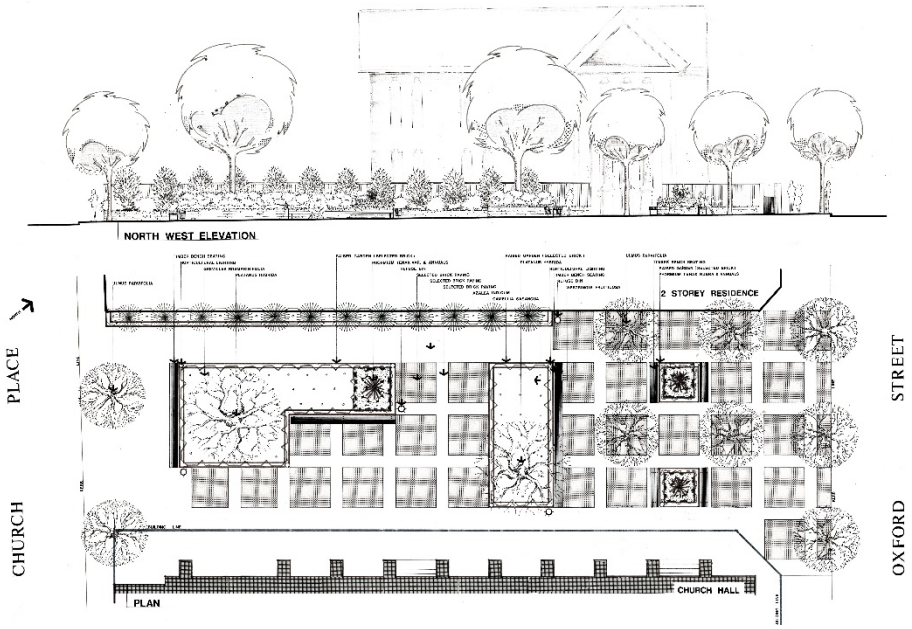
Other methods of extending further pedestrian amenity included blisters on corners that in some cases incorporated street planting, raised pedestrian crossings and the like. Planting to streets were generally of Australian native species with Paperbarks, Eucalypts, Callistemons and Casuarinas widely used across the city in both the public domain and residential areas.

Exotic species, notably London Plane trees and Chinese Weeping Elms, were extensively used for their deciduous habit and were allocated to more urban areas such as Central Sydney. These species were also used extensively across Sydney suburbs, with minor variations and reflected the social and political attitudes of the time with an emphasis on Australian natives. The focus on Australian native was further encouraged by the election of the Labor Federal Government in 1972 as part of a broader national identity. Many of the natives were cultivars

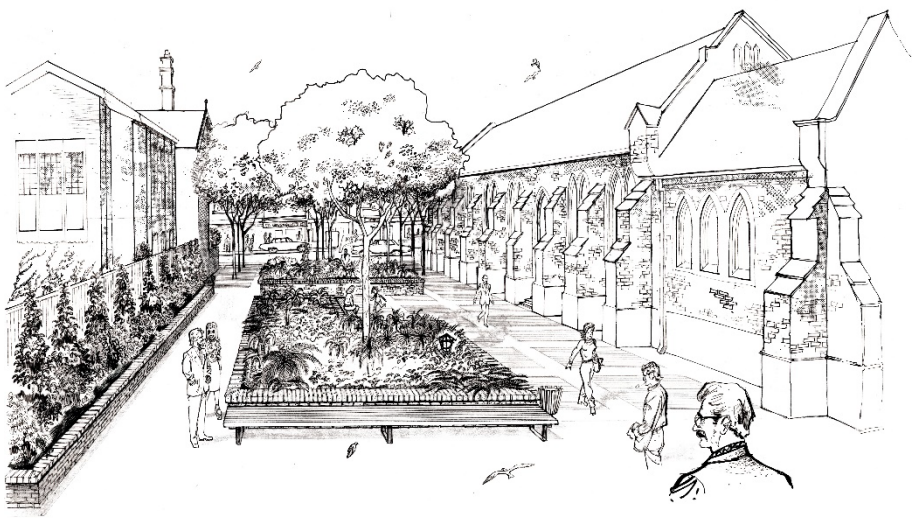
1 "A brief history of the Paddington Society" at https://paddingtonsociety.org.au/paddington/our-history/ accessed 14 July 2025.

from across Australia (Grevillea "Robyn Gordon", a cultivar from Western Australia for example) that had shown resilience to a wide range of conditions found in public landscapes where maintenance was not a high priority. These species and others became the staple for the new generation of landscape architects that were graduating from universities.

It is noted on the original plans that instead of the existing Jacaranda trees that are located to the southern portion of the closure, London Plane trees were proposed. The Chinese Weeping Elm trees were retained as per the concept plan. Under planting consisted of Australian native shrubs such as *Grevillea rosemarinifolia* with some Azaleas to the side of the closure. This selection of shrubs reflects species that were widely used through both the public domain and private holdings. Photographs show the mature canopy of Chinese Weeping Elms and Jacarandas. The original seating shown that is very similar to the timber seats that were installed in Fitzroy Gardens.



5 Initial plan of landscaping at the Ulster Street closure. The layout of the paving responds to the buttressing of the adjacent St Matthais Church Hall. Ilmar Berzsins signature appears as chief technical officer. The drawing is dated 2 July 1974.
Source: City of Sydney Archives Unique ID A-01200749.



6 Perspective rendering of the Ulster Street road closure. Note the formal nature of the layout and clear sightlines along the street shown.
Source: City of Sydney Archives Unique ID A-0120074.

7 Left: 1943 aerial view of Ulster Street, a short connecting vehicular thoroughfare between Oxford Street and Church Lane. There is a lack of vegetation to all streets in the vicinity with some limited planting associated with St Matthais Church grounds.
Right: this 1971 aerial view of Ulster Street shows that it remained essentially unchanged from 1943.
Source: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery with TKD Architects overlay.

8 Left: 1982 aerial view of Ulster Street. The distinctive grid of the brick paving is evident along with immature tree canopies in the reserve. There is evidence of some limited street tree planting to Gordon Street and private plantings to selected terrace house backyards.
Right: 1986 aerial view of Ulster Street. There is evidence of the maturing of the tree canopies within the reserve with some further planting noted in the adjacent streets and the two churches St Matthais and St Francis. The two Jacaranda trees are noted to the southern section of the reserve.
Source: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery with TKD Architects overlay.

9 2005 aerial view of Ulster Street. The canopies of the trees within the reserve have matured with a substantial tree canopy to the Oxford Street entry. Substantial plantings are evident in the church properties, the extension of Ulster Street to the south, streets and private plantings terrace house gardens. Source: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery with TKD Architects overlay.

3 Physical evidence

The Ulster Street road closure extends from Oxford Street to the north to Church Lane to the south. The place retains the original formal character of raised planters constructed out of clinker bricks and the formal grid of brick paving. Of note is the extension of the formal brick grid to the Oxford Street kerb, thus extending the form and character of the reserve in to the main public domain of Oxford Street.

The built form adjacent to the reserve remains comprising the 19th century context of the St Matthais Church Hall to the southeastern side and the two storey terrace house to the northwestern side.

The raised planters are of clinker brick laid in a stretcher bond pattern terminated with a brick header course. The detailing of the planters is consistent with Fitzroy Gardens in Kings Cross, undertaken by Berzins in 1971 as part of the upgrading of that park.

Planting consists of the Chinese Weeping Elm trees in the planters to the north of the closure and two Jacaranda trees in the southern portion. Underplanting consists of newly planted ground covers and reflects an ongoing refurbishment of the place that responds to changes in shade density as the trees mature and the need for underplanting to adjust to the environmental conditions.

Seats are located adjacent to the raised garden beds that are of a design used by the City of Sydney from the early 2000s and were purpose-designed by Alex Tzannes for the City.

10 Looking south-west along Ulster Street from Oxford Street.
Source: Matthew Taylor.

4 Comparative analysis

4.1 Ilmar Berzins

Ilmar Berzins (1921-1993) was born in Latvia.[2] He studied horticulture at the State Horticultural College in Riga, Latvia and landscape architecture at the State Horticultural College and University of Technology in Hanover, Germany. He, along with his wife Lucija (and son Alnis) arrived in Melbourne on 23 February 1949. Migration records indicate the family's destination as "Hazelhome" in Orange, the home of the Sampson family.[3] While in Orange Berzins worked in the Email Ltd whitegoods factory to pay off the bond for the fares to Australia. During this time Berzins prepared a master plan and nominated plantings for the Orange Golf Course:

> Something between two and three thousand trees and shrubs have been planted since 1949 – pines, elms, magnolias, chestnuts, crab-apples, flowering cherries and prunuses, rhododendrons, berry-bushes, viburnums, azaleas and a multitude of others. The plantings have been carried out under the supervision of Elmar [sic] Berzins, who has had wide European experience in landscape-planning.[4]

Ilmar Berzins and his family moved to Sydney in 1951. Berzins started working at Sydney Municipal Council on 13 June as a first-grade draftsman. His recruitment by the Council is widely said to be the first employment by local government of a formally trained landscape architect in Australia. According to pioneering landscape architect Allan Correy,

> ... he brought Modernist European design styles to a city desperately seeking innovative civic design ideas. Berzins was given many opportunities to create new community spaces and redesign existing parks. He developed a distinctive style that incorporated free-form shapes. Sandstone book-leaf walling, naturally sculpted boulders, water-worn pebbles, and strongly contrasting plant forms and textures, all artistically arranged to form pleasing compositions, a marked contrast to the traditional council designs of that time. His most important designs were completed during the 1950s and 1960s ...[5]

In 1953 Ilmar Berzins was promoted to senior draftsman. He and Lucija became naturalised citizens in April 1958.[6] His abilities were recognised by the City Council, and he was promoted to supervising draftsman in 1964, followed by assistant landscape architect in 1966. He was promoted to chief technical officer in 1971, followed in 1984 by promotion to Director of Parks and Gardens. In this role he would advise external consultants on major urban projects. Berzins retired in 1986.

Ilmar Berzins was described by his colleague John Sweaney as "very flamboyant, probably one of the best draughtsmen and most knowledgeable person associated with horticulture that I'd encountered".[7] According to landscape architect and urban designer Tempe McGowan, "[Berzins] held the passionate belief that all people need to enjoy nature and that nature in turn

11 Ilmar Berzins, 1949. Source: National Archives of Australia, Series A2571, ID 203663834.

2 His name appears as Ilmars Berzins on immigration records held at the National Archives of Australia.
3 National Archives of Australia Series A2571, ID 203663834
4 "Golf and Blossom", *The Bulletin*, 21 October 1953, p.4.
5 Allan Correy, "Berzins, Ilmars" in Richard Aitken and Michael Looker (editors), *Oxford Companion to Australia Gardens* (Oxford University Press in association with the Australian Garden History Society, 2002), p.87.
6 Commonwealth of Australia Gazette, 'Certificates of Naturalization,' Thursday 24 Apr 1958 [Issue No.23], Page 1261.
7 John Sweaney, Interviewed by Jo Kijas on 8 May 2012 (City of Sydney oral history collection), quoted in biography of Ilmars Berzins provided by the City of Sydney.

can ameliorate the human temperament. ... His designs were socially responsive and typical of trends in international, modernist design culture in the way he created little arcadian retreats in the city wilderness."[8]

Berzins' abilities were suited to the task, for he had the unwavering aim of introducing nature into the city and he instigated very liberal planting programs. His aesthetic was not related to Australian indigenous landscapes, instead introducing a European sensibility to the thoughtful design of public open spaces in Sydney, detailing his landscape designs in a way that was unprecedented in public works. Over the many years which his career spanned, Berzins gradually utilised more Australian natives and applied the principles of the Sydney Bush School of landscape architecture.

4.2 Comparative reserves

Ilmar Berzins' time with the City of Sydney coincided with a later twentieth century movement toward pedestrianizing public spaces or closing sections of road to expand public space. According to Andrew Briger, former Deputy Lord Mayor and an important figure in the formulation of the 1971 City of Sydney Strategic Plan,

> In December 1971 a new Floor Space Ratio Code and a Parking Code were approved and the long-term process of implementing the integrated city-wide pedestrian network commenced following the closure of the first section of Martin Place to vehicular traffic. This led to numerous streetscape improvements in what was referred to as the "greening" of the city. Most notable amongst these were Sydney Square, the Circular Quay and Dixon Street (Chinatown) malls, Railway Square, Wynyard Place and the street closures of South Paddington, Surry Hills, Chippendale, Pyrmont, Elizabeth Bay and the Fitzroy Gardens extensions at Potts Point.[9]

Berzins designed the layout and landscape treatment of a number of such pedestrianising schemes. Some notable streetscape upgrades designed by or under Berzins include landscaping to public space in Ulster Street, Paddington (1974), the street closure and landscaping for Springfield Avenue, Kings Cross (1983) and streetscape treatment of Macquarie Place and Macquarie Place Park (1975).

The following reserves provide a comparative context for the street closure and works undertaken at Ulster Street. Examples in Paddington that are contemporary with Ulster Street include Newcombe, Stewart, Regent and Elizabeth Street (Strong Memorial Reserve).

Strong Memorial Reserve, Paddington

Located between Oxford Street and Elizabeth Street leading to Gordon Street, Strong Memorial Reserve is characterised by a formed grassed mound as a focal centrepiece. The reserve features the memorial fountain *Boy with Paddle* that was the first drinking fountain installed in a suburb in New South Wales in 1881. It was reinstalled in 1968 as part of the park works. The reserve is one a series of pedestrian open spaces through road closures that were formed to the southern side of Oxford Street during this time. Concrete unit pavers and concrete edge blocks are used for the reserve, this contrasting to the use of brick paving in Ulster Street.

12 Elizabeth Street, Paddington, looking towards Oxford Street, November 1972. Source: City of Sydney Archives Unique ID A-00011939.

8 Tempe McGowan, 'Humanising the City', *Monument*, Issue No. 25, 1998, p.58.
9 Andrew Briger, "The Politics of Planning" in Peter Webber (editor), *The Design of Sydney: Three Decades of Change in the City Centre* (Law Book Company, 1988), p.52.

13 Circa 1977 photograph of the Strong Memorial Reserve. It remains intact in its layout and concept.
Source: City of Sydney Archives Unique ID A-00063314.

14 Photograph taken in March 1988 showing the memorial fountain (Boy with Paddle) and its relationship to the Strong Memorial Reserve.
Source: City of Sydney Archives Unique ID A- A-00060069.

Regent Street Closure, Paddington

Located between Gordon Street and Oxford Street, the Regent Street closure was being planned during 1975 but only completed in 1982. It is characterised by substantial mature evergreen street trees, a broad brick paved area that links Oxford Street to Regent Street, seating and supplementary planting to the sides of the closure. Regent Street closure forms part of the pattern of road closures on the southern side of Oxford Street.

15 Above: the Regent Street closure after completion, 1982.
Left: perspective sketch of the Regent Street closure. The drawing is dated 20 March 1975.
Source: City of Sydney Archives Unique ID A- 01200752.

Newcombe Street closure, Paddington

Newcombe Street is adjacent to Paddington Uniting Church, the scene of the Paddington Markets since 1973. The street was the subject of a plan for temporary closure using movable planter boxes and seating in 1973.[10] The north-eastern end of the street is understood to have been closed off and planted with trees and was and regularly used for Market activities. A strip of lawn extended south-west along one side of Newcombe Street to Gordon Street. Following community consultation, in 2016 the northern-eastern end of the street was re-opened to vehicular traffic and some Jacaranda trees planted.[11] The south-western end of the street was closed to vehicular traffic at this time.

Fitzroy Gardens, Kings Cross

This area was part of the 1841 subdivision of Colonial Secretary Alexander Macleay's 54-acre Elizabeth Bay Estate. The first stage of the park was the site of Osterley at 62 Macleay Street which was built in the 1870s and demolished in 1927. It was resumed and landscaped in 1939 and named Fitzroy Gardens after the Fitzroy Ward of the City of Sydney, named after NSW Governor Sir Charles FitzRoy. The park was enlarged with the purchase of Maramanah at 64 Macleay Street in 1943. This house was built in the 1860s and demolished in 1954, at the same time as the council resumed the house known as Tenilba at 60 Macleay Street. In 1959 the Florence Bartley Library was built on the site of Tenilba and in 1961 the El Alamein Fountain was added to the park.

Fitzroy Gardens was considerably extended in 1975 with a portion of Elizabeth Bay Road closed to traffic. Prior to the road closure in 1975, the park was substantially upgraded in 1971 with extensive paving, raised planters, planting and sitting areas. These works were undertaken under the direction of Berzins and indicated an evolving style of landscape design that reflected

10 City of Sydney Archives Unique ID A-01200745. The drawing is dated 9 November 1973.
11 "Newcombe Street upgrade works" at https://www.cityofsydney.nsw.gov.au/improving-streets-public-spaces/newcombe-street-upgrade-works accessed 14 July 2025.

contemporary needs for a park in an urban setting. Details reflect the influence of the "Sydney School" of architecture that was popular at the time, such as the selection of brickwork. The works also reflected Berzins' interest in broader horticultural trends in the use of Bird-of-Paradise plants and other exotic species.

16 1980s photograph of Fitzroy Gardens showing raised planters, extensive paving and urban nature of park as instigated by Berzins.
Source: City of Sydney Archives Unique ID A-00012065.

Richard Johnson Square, Sydney

From the beginning of the 1970s the City of Sydney initiated several streetscape projects in Central Sydney that involved closing sections of streets, one of the outcomes of its 1971 Strategic Plan. It contained 16 major policies that dealt with the economic, social and physical environment of the city. In some ways the Strategic Plan mirrored post-war European planning practice, which embraced car-free spaces and pedestrianisation of shopping and civic places. Successful initiatives included the following:

17 Macquarie Place following its closure and conversion to pedestrian space. The photograph was taken in August 1974.
Source: City of Sydney Archives Unique ID A-0001372.

- the pedestrianisation of Martin Place, which took place in several stages between 1968 and 1979.
- the incorporation of Macquarie Place into the adjoining Macquarie Place Park, circa 1974.
- the formation of public open space by the closure and landscaping of Farrer Place, documented in 1976 by the City of Sydney.
- The eastern section of Wynyard Street, which was closed to traffic and transformed into a pedestrian plaza in 1973. It is known as Regimental Square.
- Closure of Dixon Street and conversion to a pedestrian mall, which opened in 1980.

Richard Johnson Square, at the intersection of Hunter and Bligh Streets, is named in honour of Australia's first Anglican clergyman in Australia, Richard Johnson. It is reputedly the site of Australia's first church, erected in 1793 and destroyed by fire five years later. In October 1908 members of the Anglican Church hierarchy committed to the erection of a memorial to the first church on its site. The City Council reserved the site in March 1909 and then granted it in November 1911. In February 1916 details of a splendid octagonal Gothic spire were released. Little happened until August 1924, when a revised design by architect John Burcham Clamp, was submitted to the City Council. The memorial was completed around May 1925. For about 50 years the memorial remained a small island separating the flow of traffic at the intersection. The

platform around the monument was enlarged and integrated with the Bligh Street footpath in 1974. The simple, economical and very effective works were designed in the architectural office of Clarke Gazzard Pty Ltd. Architect, which was also involved in the pedestrianisation of Martin Place.

18 Pedestrian space created by the street closure and landscaping works at Richard Johnson Square, circa 1980.
Source: City of Sydney Archives Unique ID A-00012866, photographers Diane Graham, John Garth.

4.3 Conclusions

Ulster Street, Paddington, is representative of the social undertaking in the greening cities movement that was prevalent in the mid to late 20th century. Ulster Street was part of the Action Plan 26 South Paddington Precinct C4 of 1973 that created the road closures along Oxford Street, others being Regent Street, Newcombe Street, Elizabeth Street and Stewart Street. This action formed a deliberate and comprehensive achievement to prioritise pedestrian amenity within the local government area. The formal design of the paving and planter layout and materiality tracks the project stimulus of Fitzroy Gardens as an evolving design for urban spaces. The design is reflective of the influence of the "Sydney School" architectural aesthetic on landscape design (the "bush school"). This is reflected in the use of materials such as clinker bricks, a counterpoint to the nineteenth century setting of Paddington.

5 Assessment of heritage significance

5.1 Assessment

Historical significance

Criterion A *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Ulster Street, Paddington, is part of a series of street closures from the 1970s that continued into the 1980s to pedestrianise urban precincts as part of the City Council's "Greening Sydney" policy, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans. It forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington.

Ulster Street Paddington has social/historical significance in relation to urban and conservation measures in Paddington. The gentrification and resultant demand for community open space is embodied through the displacement of vehicular access for communal use, and resulted from agitation from the Paddington Society during the1970s. This resulted in the closure and landscaping of Ulster, Newcombe, Stewart, Regent and Elizabeth Street, of which Ulster Street is the finest.

Ulster Street fulfils this criterion at a Local level.

Historical associations

Criterion B *An item has strong or special association with the life or works of a person, or group of persons, of importance to NSW's cultural or natural history (or the cultural or natural history of the local area).*

Ulster Street, Paddington, is associated with Ilmar Berzins, the City of Sydney landscape architect who was responsible for extensive improvement works throughout the City of Sydney from the beginning of the 1950s to the second half of the 1980s. It is a distinctive example of his work related to street closures.

Ulster Street meets the threshold for listing at a Local level.

Aesthetic significance

Criterion C *An item is important in demonstrating aesthetic characteristics and/or and high degree of creative or technical achievement in NSW (or the local area).*

Ulster Street, Paddington is a formal landscape treatment informed by the so-called "Sydney School". It is representative of the application of the Sydney School aesthetic, most evidently the use of a type of clinker brick for the planter boxes and brick paving. The selection of materials brought design elements of the Sydney School into an established 19th century urban context. Ulster Street continues the design themes exemplified in Ilmar Berzins' significant redesign of Fitzroy Gardens in Kings Cross (circa 1971), notably the use of raised planters as a solution in urban areas to raise trees above the urban floor.

Ulster Street fulfils this criterion at a Local level.

Social significance

Criterion D *An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

Ulster Street, along with the other contemporary street closures in Paddington, is evidence of the gentrification of the suburb during the 1960s and 1970s. Although it may be of significance to the community, more research is required to establish this.

Research potential

Criterion E *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Ulster Street has limited research potential as a demonstration of the attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. Ulster Street provides evidence of the successful implementation of Action Plan 26 South Paddington Precinct C4.

Ulster Street meets the threshold for listing at a Local level.

Rarity

Criterion F *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*

Ulster Street is not a rare example of a 1970s landscaped street closure in the City of Sydney and does not meet the threshold for listing at a State or Local level.

Representativeness

Criterion G *An item is important in demonstrating the principal characteristics of a class of NSW's (or local area's) cultural or natural places, or cultural or natural environment.*

Ulster Street is representative of street closures from 1970s and 1980s resulting from implementation of Action Plans associated with the 1971 City of Sydney Strategic Plan and is distinctive for its formal character established by the gridded brick paving and planter boxes.

Ulster Street meets the threshold for listing at a Local level.

5.2 Statement of significance

Ulster Street, Paddington, is historically significant as one of a series of street closures from the 1970s that continued into the 1980s to pedestrianise urban precincts, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans. It forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington. Ulster Street also has social/historical significance in relation to urban and conservation measures in Paddington during the 1970s. Ulster Street is associated with the significant City of Sydney landscape architect Ilmar Berzins and is a distinctive example of his work related to street closures.

Ulster Street, Paddington is a formal landscape treatment informed by the so-called "Sydney School" and is representative of the application of the Sydney School aesthetic. It demonstrates attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. It is representative of street closures from 1970s and 1980s and is distinctive for its formal character established by gridded brick paving and planter boxes.

6 Conclusions

Ulster Street, Paddington fulfils the NSW Heritage Council's criteria for historical association, aesthetics, research potential and representativeness at a local level. It is also likely to fulfil the criterion for social significance. Because of this it warrants listing as a heritage item in Schedule 5 of Sydney Local Environmental Plan 2012.

Attachment N

Draft Inventory Sheet – Ulster Street, Paddington

Heritage inventory sheet

Based on the NSW Heritage Office State Heritage Inventory sheet

ITEM DETAILS			
Name of Item	**Ulster Street Landscaping**		
Former name	**Ulster Street road closure**		
Item type	**Landscape**		
Address	Number	Street	Suburb
Property description	Lot		DP
Use	Current		Former
Statement of significance	Ulster Street, Paddington, is historically significant as one of a series of street closures from the 1970s that continued into the 1980s to pedestrianise urban precincts, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans. It forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington. Ulster Street also has social/historical significance in relation to urban and conservation measures in Paddington during the 1970s. Ulster Street is associated with the significant City of Sydney landscape architect Ilmar Berzins and is a distinctive example of his work related to street closures. Ulster Street, Paddington is a formal landscape treatment informed by the so-called “Sydney School” and is representative of the application of the Sydney School aesthetic. It demonstrates attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. It is representative of street closures from 1970s and 1980s and is distinctive for its formal character established by gridded brick paving and planter boxes.		
Level of significance	State:	Local:	
Heritage listings			
DESCRIPTION			
Designer	Ilmar Berzins.		
Builder			
Construction years	Circa 1974		

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Physical description	The Ulster Street road closure extends from Oxford Street to the north to Church Lane to the south. The place retains the original formal character of raised planters constructed out of clinker bricks and the formal grid of brick paving. Of note is the extension of the formal brick grid to the Oxford Street kerb, thus extending the form and character of the reserve into the main public domain of Oxford Street. The built form adjacent to the reserve remains and comprises the nineteenth-century context of the St Matthais' Church Hall to the southeastern side and the two-storey terrace house to the northwestern side. The raised planters are of clinker brick laid in a stretcher bond pattern terminated with a brick header course. The detailing of the planters is consistent with Fitzroy Gardens in Kings Cross, undertaken by Berzins in 1971 as part of the upgrading of that park. Planting consists of the Chinese Weeping Elm trees in the planters to the north of the closure and two Jacaranda trees in the southern portion. Underplanting consists of newly planted ground covers and reflects an ongoing refurbishment of the place that responds to changes in shade density as the trees mature and the need for underplanting to adjust to the environmental conditions. Seats are located adjacent to the raised garden beds that are of a design used by the City of Sydney from the early 2000s and were purpose-designed by Alex Tzannes for the City.
Physical condition	
Modification and Dates	
Archaeological potential	

HISTORY

The coastal regions of Sydney between Port Jackson and Botany Bay are the ancestral territories of the Eora people. The traditional owners of the land now within the City of Sydney local government area were the Cadigal (Gadigal) people. In common with other tribes living by Sydney Harbour, the Cadigal lived in harmony with the natural resources within their country, fishing from canoes or hunting the animals that lived in their surroundings. The tribe appears to have moved within its territory in response to the seasons and family connections. Shell middens and other archaeological remains in the area provide material evidence of many centuries of sustained connection to the land that also sustained them. The arrival of white settlers caused the wholesale disruption of traditional life and the cultural practices of the Eora people generally. Despite enormous challenges, today many Indigenous people identify as Eora and maintain cultural practices and a connection to Country.

Ulster Street is situated on land that was once a part of the Sydney Common, which was proclaimed on 5 October 1811. The Common was dedicated on 5 October 1866 under the Sydney Commons Improvement Act, which appointed the Municipal Council of Sydney trustees. The Act empowered the Council to sell a portion of the Common lands and the money raised was to go towards improving the remainder of the Common, renamed Moore Park in 1871. Ulster Street is included in the late 1860s surveys identifying the various allotments of the Sydney Common subdivision that were to be offered for sale. Land to the east of Ulster Street was granted to the Anglican church in 1872 and St Matthais' church hall, adjacent to the street, was constructed around 1882. Initial residential development along the street is understood to have been undertaken at this period.

The Ulster Street road closure is one of a series of road closures undertaken by the City of

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Sydney in the 1970s and 1980s. Locally, the road closure is part of a series of road closures along the southern side of Oxford Street, Paddington that were part of Action Plan 26 South Paddington Precinct C4, approved by Council on 2 July 1973. The streets selected for closure were Regent Street, Newcombe Street (subsequently partially reopened), Elizabeth Street (Strong Memorial Reserve), Ulster Street and Stewart Street. The locations of these road closures were deliberate as they are located adjacent or close to the busy Oxford Street, a main arterial road. The road closures recognised and enabled pedestrian priority as an ongoing outcome of the City Council's 1971 'Greening of Sydney' plan, and were closed as part of a traffic management initiative after lobbying by the Paddington Society to prevent constant "rat-running" from Oxford Street to Moore Park Road. The closures evidently improved amenity for residents. Prior to the road closure, Ulster Street formed a minor road that linked Oxford Street through to Church Lane.

Documentation describing the closure and attendant landscaping was prepared in 1974. Ilmar Berzins was involved with the project – his signature appears as Chief Technical Officer on the drawings prepared by the Council's Parks and Recreation Department.

The demand for increased pedestrian amenity through the city was the result of social changes and the impact of gentrification where former working-class neighbourhoods such as Paddington, Ultimo and Glebe had been rediscovered by a new (generally) middle-class educated generation as convenient places to live. Along with the street closures and increased pedestrian amenity was the extensive street tree planting that was undertaken through the city. This had the effect of increasing the aesthetic and ecological values of the place and thereby attracting further middle-class people to the areas.

Significant road closures were being instigated across the city, Martin Place being the most prominent example with the final stages being opened in 1979. Road closures and rationalisation of road alignments to allow for greater pedestrian amenity were just some of the measures that were undertaken. Taking advantage of Sydney's irregular grid for example, the corner of Hunter and Bligh Streets, where the memorial to the Reverend Richard Johnson occupied a traffic island, was incorporated as part of an extended pedestrian pathway while retaining traffic functions for the intersection.

Other methods of extending further pedestrian amenity included blisters on corners that in some cases incorporated street planting, raised pedestrian crossings and the like. Planting to streets was generally of Australian native species with Paperbarks, Eucalypts, Callistemons and Casuarinas widely used across the city in both the public domain and residential areas. Exotic species, notably London Plane trees and Chinese Weeping Elms, were extensively used for their deciduous habit and were allocated to more urban areas such as Central Sydney. These species were also used extensively across Sydney suburbs, with minor variations and reflected the social and political attitudes of the time with an emphasis on Australian natives. The focus on Australian native species was further encouraged by the election of the Labor Federal Government in 1972 as part of a broader national identity. Many of the natives were cultivars from across Australia (Grevillea "Robyn Gordon", a cultivar from Western Australia for example) that had shown resilience to a wide range of conditions found in public landscapes where maintenance was not a high priority. These species and others became the staple for the new generation of landscape architects that were graduating from universities.

It is noted on the original plans that instead of the existing Jacaranda trees that are located to the southern portion of the closure, London Plane trees were proposed. The Chinese Weeping Elm trees were retained as per the concept plan. Under planting consisted of Australian native shrubs such as Grevillea rosemarinifolia with some Azaleas to the side of the closure. This selection of shrubs reflects species that were widely used through both the public domain and private holdings. Photographs show the mature canopy of Chinese Weeping Elms and Jacarandas. The original seating shown is very similar to the timber seats that were installed in Fitzroy Gardens.

HISTORICAL THEMES		
Australian Theme	**State theme**	**Local theme**

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HERITAGE SIGNIFICANCE ASSESSMENT	
Historic significance SHR criteria (a)	Ulster Street, Paddington, is part of a series of street closures from the 1970s that continued into the 1980s to pedestrianise urban precincts as part of the City Council's "Greening of Sydney" policy, formalised in the 1971 City of Sydney Strategic Plan and its attendant Action Plans. It forms part of a series of contemporary landscaped road closures to the southern side of Oxford Street, Paddington. Ulster Street, Paddington, has social and historical significance in relation to urban and conservation measures in Paddington. The gentrification and resultant demand for community open space is embodied through the displacement of vehicular access for communal use, and resulted from agitation from the Paddington Society during the 1970s. This resulted in the closure and landscaping of Ulster, Newcombe, Stewart, Regent and Elizabeth Street, of which Ulster Street is the finest. Ulster Street fulfils this criterion at a Local level.
Historical association SHR criteria (b)	Ulster Street, Paddington, is associated with Ilmar Berzins, the City of Sydney landscape architect who was responsible for extensive improvement works throughout the City of Sydney from the beginning of the 1950s to the second half of the 1980s. It is a distinctive example of his work related to street closures. Ulster Street meets the threshold for listing at a Local level.
Aesthetic significance SHR criteria (c)	Ulster Street, Paddington, is a formal landscape treatment informed by the so-called "Sydney School". It is representative of the application of the Sydney School aesthetic, most evidently the use of a type of clinker brick for the planter boxes and brick paving. The selection of materials brought design elements of the Sydney School into an established nineteenth-century urban context. Ulster Street continues the design themes exemplified in Ilmar Berzins' significant redesign of Fitzroy Gardens in Kings Cross (c.1971), notably the use of raised planters as a solution in urban areas to raise trees above the urban floor. Ulster Street fulfils this criterion at a Local level.
Social significance SHR criteria (d)	Ulster Street, Paddington, along with the other contemporary street closures in Paddington, is evidence of the gentrification of the suburb during the 1960s and 1970s. Although it may be of significance to the community, more research is required to establish this.
Technical/Research significance SHR criteria (e)	Ulster Street, Paddington, has limited research potential as a demonstration of the attitudes to, and the design and implementation of, landscaped street closures in the 1970s and 1980s in the City of Sydney. Ulster Street provides evidence of the successful implementation of Action Plan 26 South Paddington Precinct C4. Ulster Street meets the threshold for listing at a Local level.
Rarity SHR criteria (f)	Ulster Street, Paddington, is not a rare example of a 1970s landscaped street closure in the City of Sydney and does not meet the threshold for listing at a State or Local level.

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Representativeness SHR criteria (g)	Ulster Street, Paddington, is representative of street closures from the 1970s and 1980s resulting from implementation of Action Plans associated with the 1971 City of Sydney Strategic Plan and is distinctive for its formal character established by the gridded brick paving and planter boxes. Ulster Street meets the threshold for listing at a Local level.
Integrity	

RECOMMENDATIONS

Recommendations	• Manage Ulster Street landscaping in accordance with Sydney LEP 2012 and Sydney DCP 2012. • Ulster Street Landscaping has retained a high level of intactness, which should be retained and conserved. • The external form of Ulster Street Landscaping, any original spaces, fabric and finishes should be retained and conserved in any future development. • All conservation and new works should be undertaken in accordance with the Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter). • It is recommended that a Conservation Management Strategy be prepared to guide future works and conservation at the place. A heritage impact statement should be prepared prior to any major works being undertaken.

INFORMATION SOURCES

Type	Author/Client	Title	Year	Repository
Written	TKD Architects			City of Sydney

AUTHOR OF THIS REPORT

Name	Date
TKD Architects	2026

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IMAGES			
Image Caption			
Image Year	1961	**Image author and Copyright Holder**	UID A-00007270

IMAGES			
Image Caption			
Image Year	1972	**Image author and Copyright Holder**	UID A-00017626

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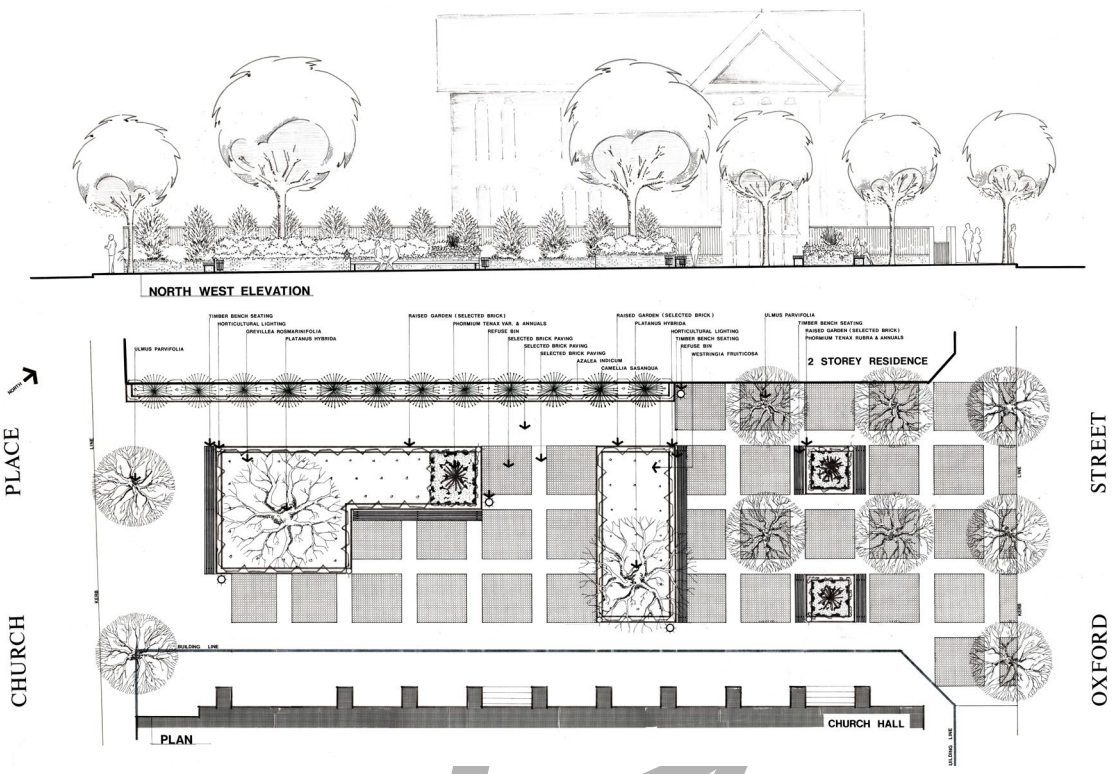

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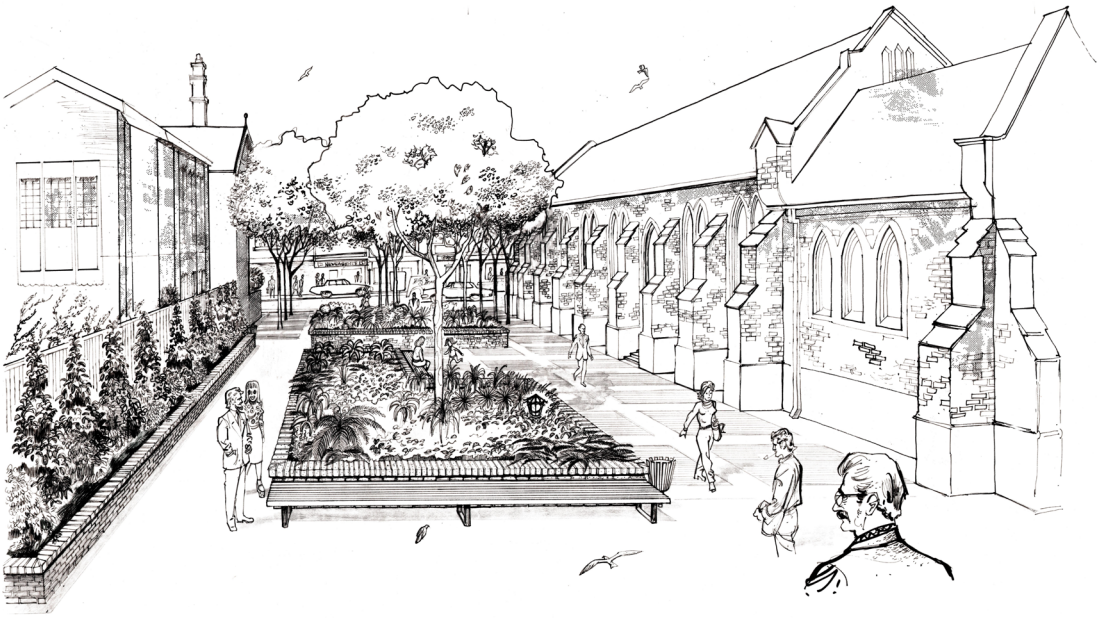

Image Year	C. 1974	**Image author and Copyright Holder**	City of Sydney Archives Unique ID A-0120074.

IMAGES	
Image Caption	

Image Year	2023	**Image author and Copyright Holder**	Taylor Brammer Landscape Architects

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Image Year		**Image author and Copyright Holder**	

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Image Year		**Image author and Copyright Holder**	

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Attachment O

Council Resolution – City Architect and Landscape Architect Works Heritage Study

Resolution of Council

9 August 2021

Item 2.5

City Architect and Landscape Architect Works Heritage Study

Moved by Councillor Thalis, seconded by the Chair (the Lord Mayor) -

It is resolved that:

(A) Council note:

(i) the importance of the work of City Architect Albert Smillie and City Landscape Architect Ilmar Berzins in the design of post-war Sydney;

(ii) Albert Smillie joined the Sydney Municipal Council as an architectural draftsman in 1924, was appointed Chief Architect in 1949 and became the Council's Principal Architect in 1953, a position held to 1969;

(iii) the period following World War Two was characterised by economic prosperity and a full job market. Albert Smillie's appointment as Council's head architect in 1949 coincided with a period of intense post-war reconstruction, which was accompanied by a boom in the construction of community facilities including baby health centres, libraries and welfare centres;

(iv) Albert Smillie oversaw many public projects while at Council such as; sports facilities including Victoria Park Pool, welfare centres, kindergartens, baby health centres, Council housing including in Pyrmont and Glebe and libraries including Anthony Doherty in Surry Hills, Catherine Sloss in Woolloomooloo and Florence Bartley in Kings Cross (awarded the Sulman Medal and now demolished);

(v) Ilmar Berzins was the first qualified landscape architect to be employed in local government in Australia when he was employed by the City in 1951 and became Director of Parks and Gardens in 1984;

(vi) in 1946, the City Engineer A H Garnsey and Alderman Ernest Marks had produced a major report to Council which recommended a program of increasing the City’s parks, open spaces, children’s playgrounds and street tree planting.

The scheme was adopted by Council as a ‘master plan to prevent haphazard development’ for the next 30 years. Ilmar Berzins was recruited to this team;

(vii) Ilmar Berzins designed many existing public spaces while at Council including; Arthur McElhone Reserve in Elizabeth Bay, Sandringham Gardens in Hyde Park, Fitzroy Gardens in Kings Cross (much altered), Chessboard Garden in Hyde Park and others which have been demolished including; Fragrance Garden in Cook and Phillip Park;

(viii) there is a risk that other public works by Albert Smillie and Ilmar Berzins could be lost if they are not identified and if necessary protected;

(ix) the City commissioned a Heritage Study Review in 2019 into Modern Movement Architecture in Central Sydney;

(x) Council endorsed the planning proposal for the Modern Movement Heritage Items in June 2020. The report told Council that:

> "Central Sydney contains one of the greatest concentrations of post-war Modern Movement buildings in New South Wales. The Modern Movement represents one of the most significant and far-reaching twentieth century design aesthetics. For Sydney, 1945 to 1975 was an exciting and challenging architectural period that determined much of the present physical form of the city centre. The dominance of modern office buildings from this period records the changing role of Australia in an international context and Sydney’s new-found role as a major world financial centre during the 'Long Boom'."

(xi) a further heritage study could be expanded to include important works under Albert Smillie and Ilmar Berzins in the City of Sydney Local Government Area; and

(B) the Chief Executive Officer be requested to:

(i) investigate the commissioning of a heritage study of City projects under Albert Smillie and Ilmar Berzins in the Local Government Area; and

(ii) report back to Council via the CEO Update on which items could be considered for heritage listing.

Carried unanimously.

S129265

Item 6.

Public Exhibition - Planning Proposal - 41-49 Mountain Street, Ultimo - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment

File No: X117267

Summary

A planning proposal has been prepared for 41-49 Mountain Street, Ultimo following a request by the proponent, apt.Residential, to amend the planning controls for the site.

The site is located within the western City Fringe area, close to Broadway and within the Camperdown-Ultimo Health and Education Precinct, which includes 3 universities and TAFE NSW, and is within walking distance of the Broadway Shopping Centre and Victoria Park.

This planning proposal seeks to change the building height and floor space ratio controls to allow a new build-to-rent housing development. The future development will be up to 14 storeys with retail on the ground floor and approximately 107 residential apartments above. An estimated 15 of these apartments will be affordable rental housing apartments provided in perpetuity.

The proposal includes the adaptive re-use of the State heritage-listed former electrical substation on the site, and the delivery of a pedestrian through-site link to improve access and activate the ground level.

The proposal will support the delivery of diverse housing, being build-to-rent housing, and affordable housing in perpetuity, which will contribute to the City's housing targets. The proposal is in an accessible location and has a good contextual fit with adjoining buildings and the wider Mountain Street Conservation Area.

A draft site-specific development control plan has been prepared to support the planning proposal, providing guidance on the built form, heritage, residential amenity, servicing, public art, landscaping and sustainability.

The proponent has submitted a public benefit offer to enter into a planning agreement to provide long-term affordable housing on site 'in perpetuity' consistent with the City’s draft affordable housing program. The offer also includes establishing an easement up to 3m in height for the pedestrian through-site link.

This report recommends approval of the planning proposal for submission to the Department of Planning, Housing and Infrastructure seeking a Gateway Determination, followed by public exhibition and referral to government agencies for comment. It also recommends that the draft site-specific development control plan be endorsed and publicly exhibited, and the draft planning agreement be prepared based on the public benefit offer. It is proposed that all documents are exhibited together. After this consultation, the planning proposal and any issues raised in submissions will be reported back to Council and the Central Sydney Planning Committee.

Recommendation

It is resolved that:

(A) the Central Sydney Planning Committee approve Planning Proposal - 41-49 Mountain Street, Ultimo, as shown at Attachment A to the subject report, to be submitted to the Minister for Planning and Public Spaces with a request for Gateway Determination;

(B) the Central Sydney Planning Committee approve Planning Proposal - 41-49 Mountain Street, Ultimo, as shown at Attachment A to the subject report, for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(C) the Central Sydney Planning Committee note the recommendation to Council's Transport, Heritage and Planning Committee on 16 February 2026, that Council seek authority from the Minister for Planning and Public Spaces to exercise the delegation of all the functions under section 3.36 of the Environmental Planning and Assessment Act 1979 to make the local environmental plan and to put into effect Planning Proposal - 41-49 Mountain Street, Ultimo;

(D) the Central Sydney Planning Committee note the recommendation to Council's Transport, Heritage and Planning Committee on 16 February 2026, that Council approve the Draft Sydney Development Control Plan 41-49 Mountain Street, Ultimo, shown at Attachment B to the subject report for public authority consultation and public exhibition concurrent with the Planning Proposal;

(E) authority be delegated to the Chief Executive Officer to make any variations to Planning Proposal - 41-49 Mountain Street, Ultimo, to correct any drafting errors or to ensure consistency with the Gateway Determination;

(F) authority be delegated to the Chief Executive Officer to make any variations to Draft Sydney Development Control Plan 2012 - 41-49 Mountain Street, Ultimo, to correct any drafting errors or ensure it is consistent with the Planning Proposal following the Gateway Determination;

(G) the Central Sydney Planning Committee note the Chief Executive Officer will prepare a draft planning agreement in accordance with the letter of offer dated 10 November 2025 at Attachment C to the subject report, and the requirements of the Environmental Planning and Assessment Act 1979, to be exhibited in accordance with the Act; and

(H) the Central Sydney Planning Committee, as consent authority in relation to a development application, approve the design excellence strategy in principle for 41-49 Mountain Street, Ultimo, as shown at Attachment D to the subject report.

Attachments

Attachment A. Planning Proposal - 41-49 Mountain Street, Ultimo, and Appendices

Attachment B. Draft Sydney Development Control Plan 2012 - 41-49 Mountain Street, Ultimo

Attachment C. Public Benefit Offer Letter dated 10 November 2025

Attachment D. Design Excellence Strategy - 41-49 Mountain Street, Ultimo

Background

1. In November 2025, a request to prepare a planning proposal was lodged on behalf of the proponent, apt.Residential for the site at 41-49 Mountain Street Ultimo, as shown in Figure 1.

Figure 1: Site outlined in red

2. The site comprises two lots with an area of 1,452.6 square metres, with frontages to Mountain Street and Smail Street. It is essentially vacant except for a State heritage listed former substation built in 1906. The buildings were demolished in 2007 for a commercial development that did not proceed. Parts of the neighbouring buildings are on the western and southern boundaries, including walls with windows. An image of the site is shown at Figure 2.

Figure 2: The site with lot boundary in red, with Mountain Street (left), and Smail Street (right)

3. A mature plane tree adjoins the south-eastern corner of the site in Mountain Street, with canopy extending into the site. Removal of the tree is necessary, as on detailed inspection by City arborists, the tree was found to have multiple defects and damage from birds to create breeding hollows. It is expected that the damage to this tree will progress, reducing the life of the tree, and therefore removal of the tree is supported.

4. Further details of the site and existing planning controls can be found in sections 1 and 2 of the Planning Proposal at Attachment A.

5. Preliminary plans were presented to the Design Advisory Panel (DAP) in February and September 2025, with advice that future development feature:

   - limited street wall height in Mountain Street to respond to adjoining buildings, with additional height closer to the western side of the site
   - setbacks to respond to the heritage building and adjacent development
   - the heritage building be creatively adapted and integrated with the development
   - explore deep soil planting options.

6. The proponent has requested changes to height and floor space controls to allow a development with build-to-rent housing, affordable housing, adaptive re-use of the heritage item and a pedestrian link through the site.

7. The proponent has requested a planning proposal to facilitate redevelopment of the site to provide for:

   (a) a 14 storey building up to a maximum height of RL 58.85 metres, or around 52 metres

   (b) a floor space ratio (FSR) of 5.4:1

   (c) reduced height street wall of 6 floors to Mountain Street in response to DAP advice

   (d) approximately 107 apartments, with around 15 apartments to be affordable housing in perpetuity, and the remaining apartments operated as build-to-rent housing

   (e) approximately 550 square metres of ground floor retail

   (f) adaptive reuse of the State Heritage listed former substation

   (g) pedestrian through-site link connecting Mountain Street and Smail Street adjoining the State heritage listed former substation

8. An image prepared by the proponent of the indicative development scheme can be found at Figure 3.

Figure 3: Indicative development scheme for the site

9. Build-to-rent housing requirements are in State Environmental Planning Policy (Housing).

10. Built-to-rent housing is defined in Chapter 3, Part 4 of State Environmental Planning Policy (Housing) 2021 (Housing SEPP) as a type of multi dwelling housing, residential flat building or shop top housing which meets specified criteria including being owned and controlled by one owner. For sites outside the E2 Commercial Centre and SP5 Metropolitan Centre zones (Central Sydney), such as this proposal, build-to-rent housing must also not be subdivided into separate strata lots for at least 15 years. After this time, it potentially can be strata subdivided and cease to be build-to-rent housing.

11. Build-to-rent housing can be more secure housing for long term renters and likely to be a better designed product for longer term renting. The federal government also encourages this type of housing through recent changes to federal foreign investment laws and tax arrangements for build-to-rent housing.

12. The City has prepared a planning proposal to increase the height and floor space controls for a build-to-rent housing development.

13. The planning proposal details the proposed amendments to the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) by inserting new site-specific provisions. These provisions are to:

    (a) permit a maximum building height of RL 58.85 metres (around 52m above ground), an increase from the current maximum of 35 metres above ground

(b) increase the maximum floor space ratio control from 2:1 to 5.35:1 inclusive of design excellence bonus

(c) ensure the resulting building would be for the purpose of build-to-rent housing as defined in the Housing SEPP, other than for those parts of the building used for affordable housing to meet the City's affordable housing program

(d) encourage a built form that respects and adaptively reuses the existing State heritage listed building on the site

(e) ensure adequate on-site loading and servicing including waste collection

(f) includes a public pedestrian through-site link connecting Mountain Street and Smail Street.

14. Further explanation of the provisions can be found in section 4 of the Planning Proposal. Changes to the Development Control Plan will make sure the development fits within the area, and protects amenity with good access and activation

15. A site-specific development control plan (DCP) is at Attachment B and provides further guidance for development facilitated by this planning proposal. The draft DCP provisions include:

(a) maximum building envelope including setbacks and heights (as shown at Figure 4)

(b) heritage considerations including built form and materiality

(c) vehicular access, and loading and servicing requirements

(d) ground floor level and street activation

(e) public pedestrian through-site link with a minimum unencumbered width of 3m adjoining the State heritage item and connecting Mountain and Smail Streets

(f) residential amenity including communal open space and shared facilities

(g) landscaping

(h) sustainability

(i) flooding risk management.

16. A site-specific design excellence strategy is at Attachment D. The development will be required by the LEP to go through a competitive design process. The strategy has been prepared to satisfy the requirement in the City's Competitive Design Policy for a competitive design process to be undertaken in accordance with a design excellence strategy. It may be approved by the consent authority as part of any associated planning proposal, site-specific DCP or concept stage development application.

17. A Voluntary Planning Agreement will deliver affordable housing and a dedicated pedestrian link through the site.

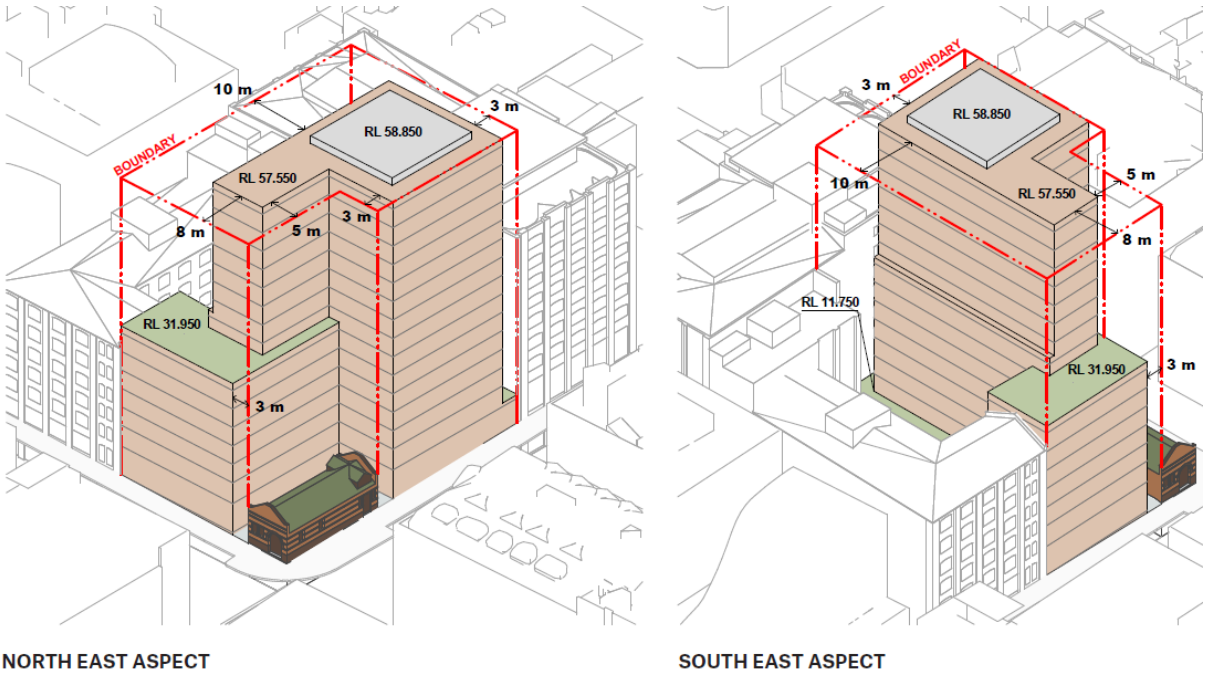

Figure 4: Planning envelope including minimum setbacks and maximum heights

18. The proponent has offered to enter into a Voluntary Planning Agreement (VPA) with Council for public benefits as part of this planning proposal. The Environmental Planning and Assessment Act 1979 (the Act) allows the proponent to enter into a legally binding VPA with Council. VPAs are voluntary and must be freely entered into by the public authority and a proponent. They are also publicly exhibited and held on a publicly accessible register.

19. The letter of offer from apt.Residential at Attachment C to this report outlines the proposed public benefits. The proposed benefits will be:

    (a) affordable housing delivered in-kind and in perpetuity, calculated at 3% of the gross floor area (GFA) of the eventual development plus 17% of the GFA above 2:1 FSR of the development. Based on the reference scheme, this will be around 1,060sqm GFA, or around 15 apartments. At least 50% will be allocated for Moderate Income Households and no less than 5% for Very Low-Income Households, although the final allocation percentages are to be agreed with Council.

    (b) an easement measuring 3m in width and 3m in height above finished ground level for a pedestrian through-site link adjoining the State heritage item connecting Mountain and Smail Street.

20. The VPA will not be offset against local infrastructure contributions under section 7.11 or section 7.12, and housing and productivity contributions under division 7.1, subdivision 4 of the Act. These will be addressed as part of the future development application. The affordable housing contribution to be delivered through the VPA will be made in lieu of the current contribution requirements under 7.13 of the LEP.

21. The VPA will be prepared and publicly exhibited with the planning proposal.

Figure 5: Indicative image of the pedestrian through-site link

The proposal demonstrates strategic and site-specific merit

22. The proposal is well located and provides a good contextual fit and has site-specific merit. The proposed controls provide for a development that will be a good contextual fit and have site-specific merit, while achieving additional diverse housing with good residential amenity for occupants and for those in adjoining buildings.

23. The proposed building envelope and supporting controls have been designed to address hazards affecting the site including flood risk management, contamination and acid sulfate soils.

24. Further information on the urban design, environmental, social and economic impacts of the planning proposal can be found in section 5.3 of the Planning Proposal. The proponent has also prepared technical reports to support their proposal, including an Urban Design Report, Traffic Impact Statement, Flood Impact Risk Assessment and Heritage Impact Statement.

Floor space ratio

25. The recommended floor space ratio of 5.35:1 is more than the proponent’s reference scheme of 5.32:1, but less than the proponent's requested FSR of 5.4:1.

26. An FSR of 5.35:1 provides for around 47 square metres more floor space than the reference scheme, compared to a FSR of 5.4:1 which provides for around 120 square metres more. The recommended FSR is considered to be suitable for the site, as on balance it provides for sufficient design flexibility for future development on the site, while maintaining confidence that the following can be managed appropriately:

    - impacts on the conservation area and State heritage listed former substation,
    - impacts on adjoining buildings located on the site boundary,
    - meeting Apartment Design Guide requirements, and
    - meeting flood risk planning requirements.

Heritage

27. The Design Advisory Panel considered the planning envelope in detail to determine appropriate distribution of height across the site and on balance fit within the conservation area while providing for affordable housing to be delivered as part of the development. As a result, the planning envelope locates the tallest part of the building closer to the adjoining building 5 Smail Street, to better maintain the street wall height in Mountain Street.

28. Preliminary advice was sought from Heritage NSW as development of the State heritage item will require their approval at Development Application stage under the Heritage Act.

29. Heritage NSW recommended the width of the pedestrian link through the site should be increased to more than 3m or a colonnade be provided within the site to increase separation of the new buildings from the heritage item. It was also recommended the overall height be reconsidered to reduce impacts on the State heritage listed former substation.

30. To respond to these comments, while balancing the strategic need for greater and more diverse housing, DCP controls have been recommended to provide guidance for consideration of Heritage NSW comments for the detailed design stage.

31. The proponent advised that further consideration of urban design, architectural and public domain options based on the advice from Heritage NSW will be included within, and progressed as part of, the Design Competition and future DA.

Residential amenity

32. The Housing SEPP requires the consent authority to be flexible in the application of ADG design criteria for build-to-rent housing, with clarification on flexibility provided by a Department of Planning, Housing and Infrastructure Fact Sheet dated February 2023. Flexibility must be applied in the consideration of balconies, storage and apartment mix, and potentially, depending on site characteristics, for solar and daylight access, apartment size and layout, and common circulation spaces.

33. The Fact Sheet states that flexibility is achieved by providing high amenity communal spaces and facilities in excess of minimum ADG requirements in the building to offset impacts, while also requiring the applicant to demonstrate how the amenity of residents still meets the objectives of the ADG.

34. Controls are included in the site-specific draft DCP to provide design guidance for achieving acceptable levels of flexibility for amenity, based on the characteristics of this site.

Communal open space and landscaping

35. The NSW Apartment Design Guide (ADG) requires communal open space to be at least 25% of the site area. For this site at least 363.15 square metres is required. The reference scheme only shows 270.86 square metres of communal open space on the Level 7 rooftop, which is 92.29 square metres less than required, although it has good solar orientation. An additional large, landscaped courtyard is shown on Level 1 in the southern setback area of at least 100 square metres, which although would receive lower levels of sunlight, could provide an additional area for supplementary communal open space with shade and planting to complement the principal open space on the roof. Therefore, it is considered acceptable in principle for a future development to provide adequate communal open space for this site.

36. The site is located in an established high density area, where achieving deep soil requirements of the ADG is challenging. However, landscaping can be included on the roof and above-ground courtyards to still achieve several benefits, including slowing stormwater runoff, improving air quality and reducing urban heat island effects. Landscaping controls are recommended to be included in the site-specific DCP to provide guidance for achieving quality landscaping of the site.

Access, loading and servicing

37. Due to high flood hazard risk in Mountain Street, driveway access from this street is not supported, with controls recommended in the site-specific draft DCP accordingly.

For this project, the City will trial a concurrent Planning Proposal and Development Application Process to reduce housing delivery times

38. The City is using this project to trial a process where the planning proposal and development application can be exhibited concurrently following Design Advisory Panel consideration. This approach is permitted under the Environmental Planning and Assessment Act 1979 and may reduce housing delivery times where appropriate. Under this compressed timeline, the design competition is brought forward and carried out prior to the planning controls being finalised. At this time only the planning proposal has been lodged, although work on the design competition brief is progressed and the proponent wants to commence the competition promptly, noting that the risk exists that the planning proposal does not proceed following the gateway and public exhibition processes.

39. In order for the design competition to commence prior to the finalisation of the planning proposal and site specific DCP, the design excellence strategy at Attachment D will need to be approved in principle by the consent authority.

40. This trial process is being undertaken at the request of the proponent. There remains the risk for the proponent of completing the design competition and lodging a DA before the planning proposal has been finalised or in a manner which is inconsistent with the final version of the planning controls, however the proponent understands this and is willing to fully accept this risk.

41. This trial is not a commitment to offer this process for other sites. The learnings from this trial will inform under what circumstances it may be used in the future.

Key Implications

Strategic Alignment - Sustainable Sydney 2030-2050 Continuing the Vision

42. Sustainable Sydney 2030-2050 Continuing the Vision renews the communities' vision for the sustainable development of the city to 2050. It includes 10 strategic directions to guide the future of the city, as well as 10 targets against which to measure progress. This planning proposal is aligned with the following strategic directions:

    (a) Direction 2 - A leading environmental performer - this planning proposal enables future development that aligns with the City's Net Zero requirements and features increased landscaping to meet the City's Greening Sydney Strategy.

    (b) Direction 3 - Public places for all - future development will include improved retail activation and a pedestrian link through the site to create more attractive and safe public streets.

    (c) Direction 4 - Design excellence and sustainable development - the new building shall be guided by a competitive design process to achieve design excellence.

    (d) Direction 5 - A city for walking, cycling and public transport - site is well located to nearby transport and accessible by walking to shops, services, parks and educational establishments.

    (e) Direction 6 - An equitable and inclusive city - provides for diverse housing through build-to-rent housing for at least 15 years, and affordable housing in perpetuity.

    (f) Direction 7 - Resilient and diverse communities - the proposal addresses hazard risk including flooding and contamination.

    (g) Direction 8 - A thriving cultural life - increased activation and public art will provide creative and cultural experiences and opportunities for increased engagement with the public.

    (h) Direction 10 - Housing for all - additional housing to provide more diverse housing options for renters and in perpetuity affordable housing.

Strategic alignment - Local Strategic Planning Statement

43. The City's Local Strategic Planning Statement, City Plan 2036, sets the vision, priorities and planning context, outlining how the City will plan for change and actions needed to achieve the vision. This planning proposal gives effect to the following priorities:

    - infrastructure - this planning proposal facilitates new housing and retail development in a strategically appropriate location, with extensive public and active transport options, supporting efficient use of existing infrastructure.

    - liveability - future development will support the delivery of a range of housing types and tenures to support a diverse community including provision of more affordable housing, while protecting the character of heritage neighbourhoods and delivering design excellence and high amenity in the built environment.

- sustainability - the new building will be required to meet the City's sustainability benchmarks with efficient water and reduced waste, greening measures, and management of risks to people and infrastructure from flooding and stormwater, and contaminated land.

Risks

44. City staff have undertaken a thorough assessment of the planning proposal and found that it demonstrates strategic and site-specific merit in accordance with NSW Government guidelines. The planning proposal is consistent with City policies and strategies.

45. Progressing the planning proposal is within the City's risk tolerance and appetite. The planning proposal has demonstrated that development can be capable of complying with relevant environmental and planning laws, regulations and industry standards and is within the City's minimal appetite for non-compliance with environmental laws, regulations and industry standards.

46. The concurrent processes as a trial is within our risk tolerance and appetite. The delivery of new housing is a priority for City and the NSW Government, and the concurrent process could help accelerate the timing of housing delivery. It provides an opportunity to test if the total time taken for the approval process is reduced, while still achieving good outcomes. All due process, legislative requirements and community consultation requirements will be met. There is no commitment from the City that the planning proposal will be finalised as requested by the proponent and it may be subject to amendment as a result of the gateway and public exhibition processes, as well as the input of various public authorities. This risk sits with the proponent at all times and the City makes no undertakings as to the time and nature of the finalisation of the planning proposal process.

47. Should Council and the Central Sydney Planning Committee endorse the planning proposal, it will progress to the Department of Planning, Housing and Infrastructure for Gateway Determination. Proceeding with the planning proposal will meet the City's minimal appetite for disruption to our regulatory functions as decisions will be within the timeframes set in the NSW Government's Statement of Expectations Order 2024.

Relevant Legislation

48. Environmental Planning and Assessment Act 1979

Critical Dates / Time Frames

49. Should Council and the Central Sydney Planning Committee endorse the planning proposal for public exhibition, it will be forwarded to the Department of Planning, Housing and Infrastructure for Gateway Determination in accordance with section 3.34 of the Act. The Gateway Determination will detail the Local Environmental Plan amendment's required completion date. Following public exhibition, the outcomes will be reported back to Council and the Central Sydney Planning Committee.

Public Consultation

50. Public exhibition for this planning proposal will be determined by the Department of Planning, Housing and Infrastructure. Consultation will be in accordance with:

    (a) the Gateway Determination issued by the Department of Planning, Housing and Infrastructure under section 3.34 of the Act

    (b) the Environmental Planning and Assessment Regulation 2021

    (c) the City of Sydney's Community Engagement Strategy and Participation Plan

51. It is likely that the public exhibition period for the planning proposal would be a minimum of 20 working days.

52. It is intended the planning proposal, draft Development Control Plan and draft VPA will be publicly exhibited concurrently on the City of Sydney website.

53. The public consultation outcomes will be reported back for consideration by Council and the Central Sydney Planning Committee.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

Michelle Cramsie, Specialist Planner

Attachment A

Planning Proposal – 41-49 Mountain Street, Ultimo

CITY OF SYDNEY

Planning Proposal: 41-49 Mountain Street, Ultimo

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

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Executive Summary

This planning proposal has been prepared by the City of Sydney (the City) for 41-49 Mountain Street, Ultimo (the site), in response to a request from the landowner to amend the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) and the Sydney Development Control Plan 2012 (Sydney DCP 2012) as they apply to the site.

This planning proposal has been prepared by the City in accordance with section 3.33 of the Environmental Planning and Assessment Act 1979 and the Department of Planning, Housing and Infrastructure's (the Department) Local Environmental Plan Making Guideline dated August 2023.

The Site

Located in the western City Fringe area and within the Camperdown-Ultimo Health and Education precinct, the site has an area of 1,452.6 square metres with frontages to Mountain Street and Smail Street. Existing development comprises a State heritage listed former substation, and previously demolished buildings. Surrounding development includes several large former warehouses used mainly for business use, with more recent development further south towards Broadway.

Existing development controls

The site is zoned MU1 Mixed Use in the Sydney LEP 2012 which permits a range of uses including residential, office, retail, and entertainment facilities. The site has a maximum building height of 18 metres and maximum floor space ratio of 2:1, with up to an additional 10% floor space or height available should the future development demonstrate design excellence through the competitive design process.

Intended outcome for development on the site

The proposed change to the planning controls will facilitate redevelopment delivering the following key benefits:

- additional height and floor space in the form of a shop-top housing development used for build-to-rent housing in accordance with State Environmental Planning Policy (Housing) 2021
- provision of affordable housing consistent with the City's affordable housing program
- built form which respects and sensitively adaptively reuses the State heritage item on the site and is responsive to the heritage conservation area
- street activation and a pedestrian link through the site
- adequate provision of on-site loading to service the site
- ecologically sustainable development
- high quality residential amenity and public art
- achieves design excellence.

The planning proposal – Sydney Local Environmental Plan 2012 controls

This planning proposal seeks to insert a new site-specific clause in Division 5 of the Sydney LEP 2012 to:

- increase the maximum height to RL 58.85m, or about 52m above ground, from the current 18m above ground
- increase the maximum floor space ratio to 5.35:1, inclusive of design excellence
- ensure development consent may only be granted under this clause provided the future development:
  - will be for the purposes of shop top housing operated as build-to-rent housing under State Environmental Planning Policy (Housing) 2021 (the Housing SEPP), with provision for affordable housing to meet the City's affordable housing program

  - is respectful of, and sensitively adaptively reuses the State heritage listed former substation
  - includes a pedestrian link through the site
  - provides adequate on-site loading to service the development
- not permit additional height or floor space as a result of competitive design process under clause 6.21 as already included.
- continue to permit alternative development utilising the existing Sydney LEP 2012 controls.

Draft site specific Development Control Plan

The City has prepared a draft site-specific amendment to the Sydney DCP 2012 to help ensure the objectives and intended outcomes of this planning proposal are delivered, including built form, heritage, access and loading, residential amenity, public art and sustainability.

1. Background

1.1 Site identification

This planning proposal relates to the site known as 41-49 Mountain Street, Sydney (the site).

The site consists of two lots, known as Lot 21 DP 5567 and Lot 1 DP 191928. It is a corner site with frontages to Mountain Street to the east and Smail Street to the north. A map of the site, outlined in red, is shown in Figure 1.

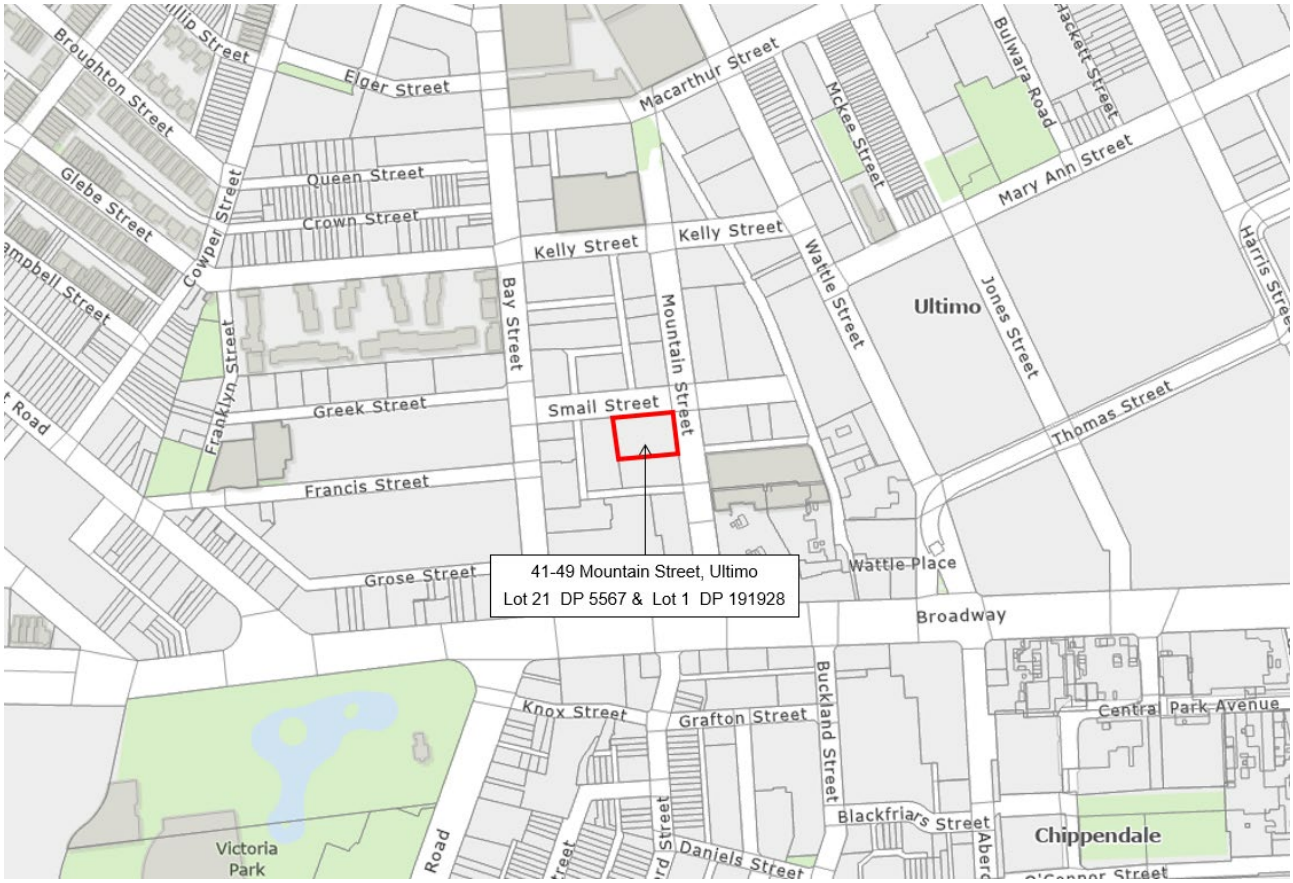

Figure 1. Land affected by this planning proposal

1.2 Site location

The site is located in Ultimo within the western City Fringe area and is located within the Camperdown-Ultimo Health and Education Precinct, which includes 3 universities and TAFE NSW, all within 600m of the site.

Public open spaces nearby include Victoria Park approximately 250m to the south-west, Central Park approximately 450m to the south-east, and Wentworth Park approximately 450m to the north.

The site is located approximately 900m from Central Railway Station with intercity, suburban, light rail, metro and bus connections. Parramatta Road is situated close to site to the south, which serves as a key connector between the CBD and the western suburbs. The site is close to bus stops along Parramatta Road and City Road which provide access to various destinations across metropolitan Sydney.

An aerial photo of the site and surrounding area is shown in Figure 2.

Figure 2. Aerial view of subject site and local area

1.3 Site characteristics

The site comprises two lots with a combined total area of 1,452.6m^2. It has frontages of approximately 31m to Mountain Street and approximately 46m to Smail Street. The site has common boundaries of approximately 46m to the southern adjoining lot and approximately 32m to the western adjoining lot. The site is generally rectangular in shape, and its topography is relatively level, with a minor fall to the north-east corner.

Existing development on the site consists of a single storey State heritage listed former electrical substation located on Lot 1 DP 191928 in the north-eastern corner of the site. The remainder of site is generally vacant, with the exception of some single storey ancillary sheds, with buildings demolished in 2007 for a commercial development that did not proceed. Vehicle access to the site is via Smail Street.

A mature Plane tree, and smaller Jacaranda tree adjoin the site, in the public footpath area in Mountain Street. Inspection by City arborists has found that the Plane tree has multiple defects and damage from birds to create breeding hollows. It is expected that the damage to this tree will progress, reducing the life of the tree. Removal is supported.

The site is located within the Mountain Street heritage conservation area. Surrounding development consists of a large number of former warehouses, as well as more recent buildings used for a mixture of residential, commercial, retail and educational uses. Adjoining the site to the south is a 6 storey mixed use building at 51-55 Mountain Street which accommodates a retail tenancy on ground floor and office premises above. The west-adjoining site at 1-3 Small Street currently accommodates an 8 storey commercial building with ground floor retail use. This site is, however, subject to an approved development application (D/2024/984) for alterations and additions to the existing building to allow for a co-living development with ground floor retail

tenancy and an additional rooftop area. The approval allows for a maximum building height of 35.22m and an FSR of 5.9:1.

Development opposite the site to the east is a 3 storey commercial building at 38-44 Mountain Street. The opposite site to the north-east is a 4 storey mixed use building at 22-36 Mountain Street accommodating commercial and residential uses. A 5 storey commercial building at 46-52 Mountain Street is located to the south-east of site, and further south at 70 Mountain Street, is a 9-15 storey residential apartment complex with ground floor retail and central courtyard.

Development on the northern side of Mountain Street opposite site includes a 4 storey hotel building at 35-39 Mountain Street, and a 5 storey residential strata building at 2-12 Smail Street.

The site is within the Mountain Street locality under the Sydney DCP 2012, which is an important entry to Central Sydney. Development principles are for a diverse and sustainable mix of uses in restored and adaptively reused warehouse buildings, or in new buildings of sympathetic bulk and scale. Avenue planting along Mountain Street is to enhance the streetscape and help break down scale of larger buildings.

Photographs of the site and its immediate context are shown in Figures 3 to 7.

Figure 3. Subject site outlined in red, looking south-west at corner of Mountain and Smail Streets

Figure 4. Looking south at the Smail Street frontage

Figure 5. Looking west at the Mountain Street frontage

Figure 6. Looking south down Mountain Street towards Broadway

Figure 7. Looking south-east down Smail Street towards the site

2. Existing planning controls

2.1 Zoning

The site is zoned MU1 Mixed Use in Sydney LEP 2012, as shown in Figure 8. The objectives of this zone are to:

- encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.
- ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.
- minimise conflict between land uses within this zone and land uses within adjoining zones.
- encourage business, retail, community and other non-residential land uses on ground floors.
- ensure land uses support the viability of nearby centres.
- integrate suitable business, office, residential, retail and other land uses in accessible. locations that maximise public transport patronage and encourage walking and cycling.

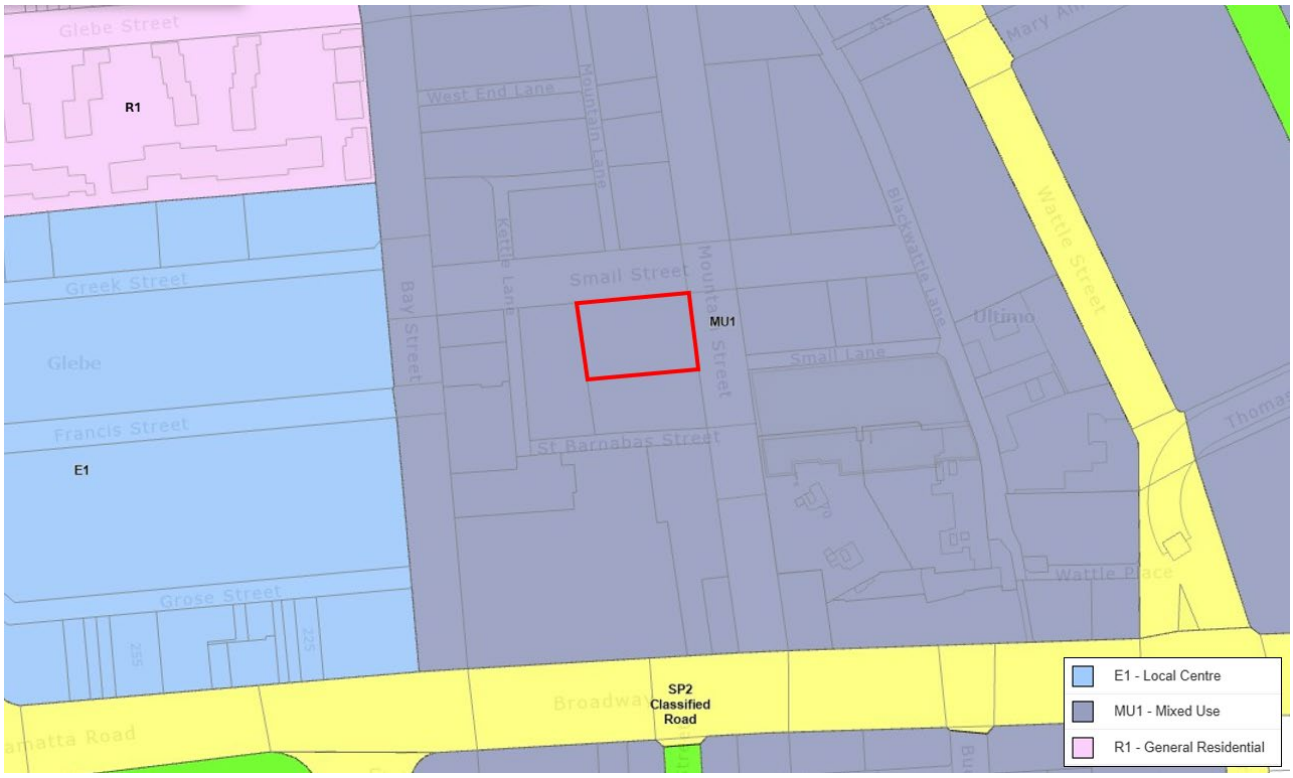

Figure 8. Extract from the Land Zoning map in Sydney LEP 2012

2.2 Building Height

Maximum height of building

The site is subject to a maximum height of building control of 18 metres in Sydney LEP 2012, as represented by 'P' and the light beige shading in Figure 9.

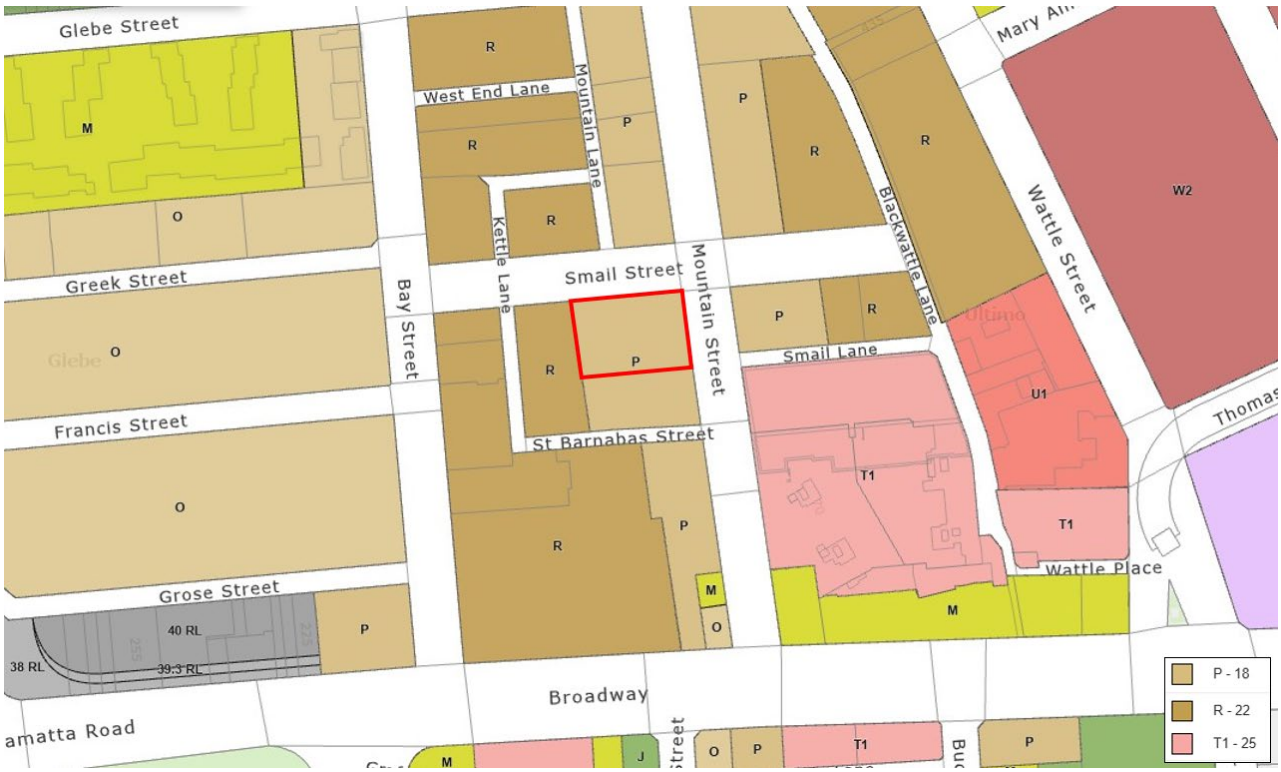

Figure 9. Extract from the Height of Buildings map in Sydney LEP 2012

2.3 Floor space ratio

The site is subject to a maximum floor space ratio control of 2:1 in Sydney LEP 2012, as represented by 'T1' and the pink shading in Figure 10.

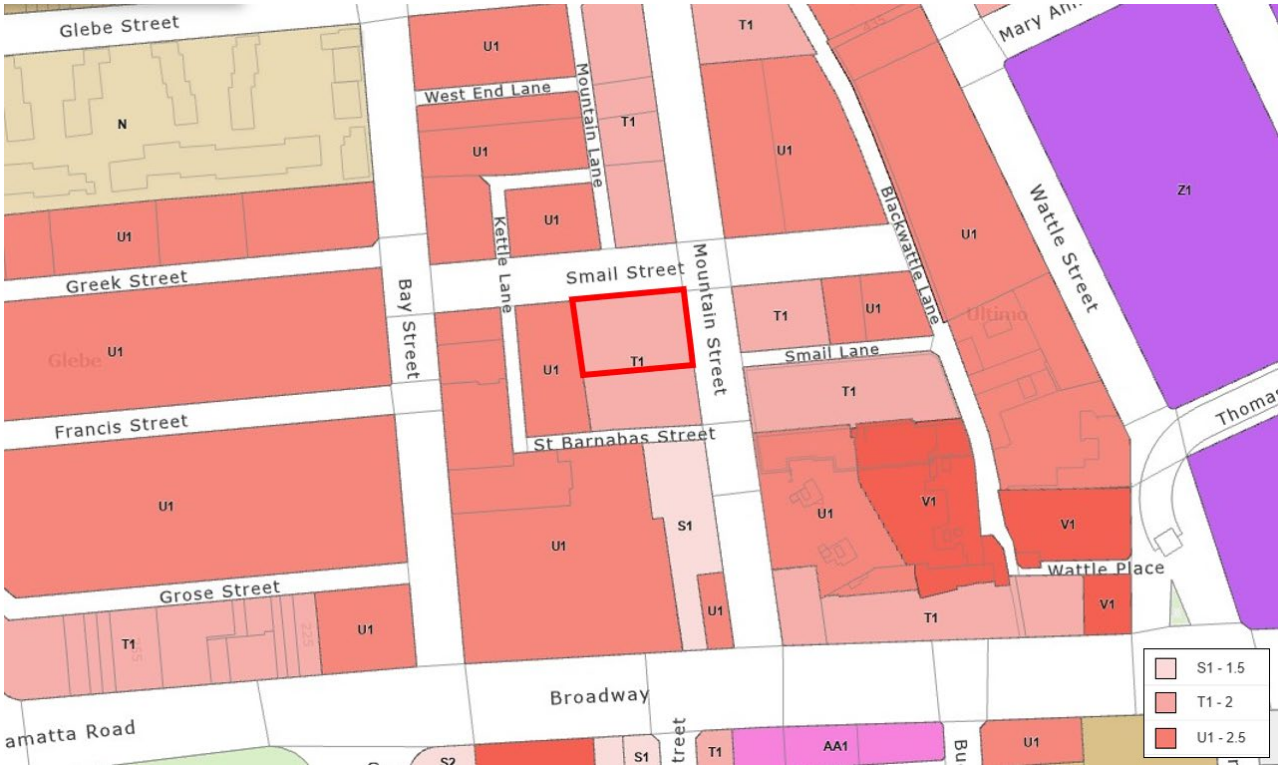

Figure 10. Extract from the Floor Space Ratio map in Sydney LEP 2012

2.4 Heritage

The site contains a State and locally listed heritage item, Item No. I2053: “Electrical substation” in the Sydney LEP 2012, located in the north-eastern corner of site on Lot 1 DP 191928.

The site is also located within the Mountain Street Heritage Conservation Area, identified as C68 in Sydney LEP 2012. This conservation area contains a large number of substantial Federation warehouses, and substantial street trees in Mountain Street softening the streetscape. Maintaining building alignments, retaining finishes and details, retaining stable buildings, and maintaining and enhancing street planting is recommended.

The site is located close to a number of local heritage items, shown in Figure 11, including:

- I2054 – Warehouse “Wilcox Mofflin Ltd” – 46-52 Mountain Street, Ultimo
- I2055 – St Barnabas Anglican Church site remnant building components and grounds – 57-61 Mountain Street, Ultimo
- I2018 – Former “Grace Bros Homewares” including interior – 185-211 Broadway, Ultimo
- I2003 – “Bay House” including interior – 76-82 Bay Street, Ultimo
- I2052 – Former Sydney Technical College School of Rural Studies including interior – 16-20 Mountain Street, Ultimo.

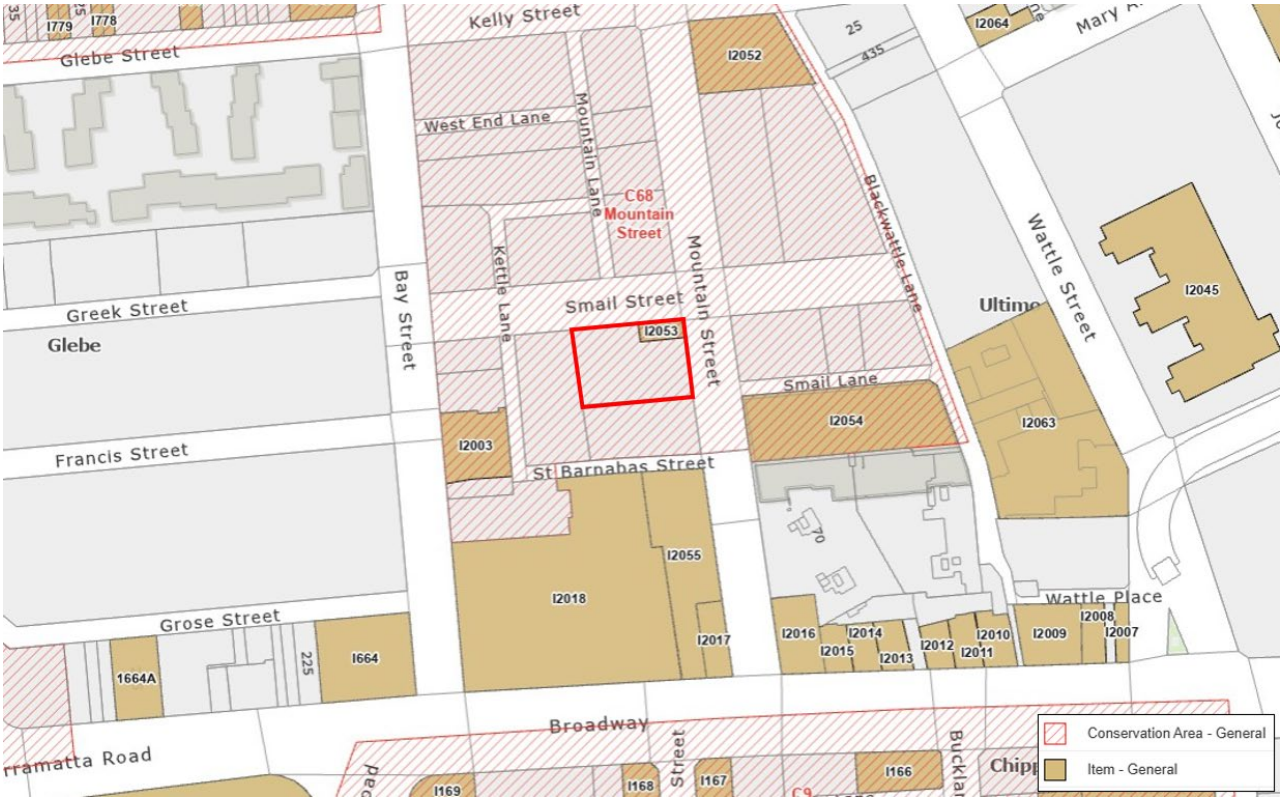

Figure 11. Extract from the Heritage map in Sydney LEP 2012

3. Objectives and intended outcomes

The objective of this planning proposal is to amend the Sydney LEP 2012 to insert new site specific provisions that increase the maximum floor space ratio and maximum height for the subject site to accommodate a new build-to-rent housing development.

Specifically, the objectives and intended outcomes of this planning proposal are to:

- facilitate additional height and floor space in a strategic location to support a new shop-top housing development used for build-to-rent housing in accordance with Chapter 3, Part 4 of the Housing SEPP
- provision for affordable housing consistent with the City's affordable housing program
- facilitate a built form which respects and sensitively adaptively reuses the State heritage listed former substation and is consistent with the desired future character of the Mountain Street heritage conservation area
- improve pedestrian access and amenity through active street frontages and provision of a publicly accessible pedestrian link through the site
- ensure adequate provision of on-site loading and servicing spaces to service the development
- deliver high quality residential amenity, sustainability outcomes and public art.

Draft site-specific amendments to the Sydney DCP 2012 accompanying this planning proposal provide detailed guidance for the future redevelopment of the site.

A planning agreement (VPA) will be exhibited to secure the delivery of affordable housing in perpetuity, and public access to the pedestrian link.

4. Explanation of provisions

4.1 Sydney Local Environmental Plan 2012

To achieve the objectives and intended outcomes, this planning proposal seeks to amend the Sydney LEP 2012 by inserting a new site specific clause under Division 5 Site Specific Provisions, as follows:

- Permit a maximum height of RL 58.85m.
- Permit a maximum floor space ratio of 5.35:1 that could be accommodated within the planning envelope for the site, inclusive of the following:
  - floor space ratio as shown on the Floor Space Ratio Map (under clause 4.4);
  - additional site-specific floor space; and
  - where the building demonstrates design excellence through a competitive design process, additional design excellence floor space of up to 10% of the sum of the mapped and site-specific floor space.
- Prevent development consent being granted under this clause unless the consent authority is satisfied that the future building:
  - will be for the purposes of build-to-rent housing under Chapter 3 Part 4 of the Housing SEPP, with the exception of any affordable housing delivered to meet the City's affordable housing program;
  - provides adequate on-site loading to service the development; and
  - includes a pedestrian link connecting Mountain Street and Smail Street adjoining the State heritage item.
- Clarify that no additional building height is available under clause 6.21D(3).

These controls should not prevent alternative development on the site taking place under the existing Sydney LEP 2012 controls.

Appendix 1 of this planning proposal provides some example clauses of the proposed controls. The final version of the clauses to be inserted into the Sydney LEP 2012 would be subject to drafting and agreement with the NSW Parliamentary Counsel's Office.

4.2 Sydney Development Control Plan 2012

To ensure future development is consistent with the objectives of the planning proposal, and to provide design guidance to address Chapter 3, Part 4 – Build-to-rent housing of the Housing SEPP, site specific provisions for the Sydney DCP 2012 DCP will be drafted to ensure development provides for a high-quality built form and public domain, and high quality residential amenity. These provisions are to include:

- maximum building envelope dimensions including setbacks and heights
- heritage considerations including materials and finishes
- vehicular access, loading and servicing
- ground floor level and street activation
- pedestrian link through the site including minimum unencumbered width
- residential amenity requirements
- landscaping

- sustainability
- flooding.

A draft of the new site specific provisions for the Sydney DCP 2012, also to be placed on exhibition, can be found at Attachment B.

5. Justification

This planning proposal amends the floor space ratio and building height controls to facilitate redevelopment for build-to-rent housing. No change to the land use zoning is proposed.

The following section provides justification for the planning proposal, outlining strategic and site specific merit, outcomes and process for implementation.

5.1 Landowner request

In November 2025, Apt.residential, the proponent, supported by Urbis, lodged a planning proposal request to insert site specific controls in Part 6, Division 5 of the Sydney LEP 2012.

The proposal is intended to deliver a shop-top housing development for the purposes of build-to-rent housing in accordance with the Housing SEPP. Retail and active uses are to front Mountain Street and Smail Street on the ground floor.

An indicative design of the proposed development for the site prepared by the proponent is at Figure 12.

Figure 12. Rendered drawing of indicative design

5.2 Need for the planning proposal

Is the planning proposal a result of an endorsed LSPS, strategic study or report?

This planning proposal has been prepared following a request from the landowner to change the planning controls that relate to the site in response to provisions in the Housing SEPP.

The landowner has provided a Planning Proposal Report prepared by Urbis and technical studies to their support their request, including an Urban Design Report prepared by Bates Smart. The report demonstrates how the proposal exhibits strategic and site specific merit and how the site could be capable of accommodating new residential floor space without unacceptable impacts.

Documentation submitted by the proponent in support of their request are as follows:

- Attachment A1 – Planning Proposal Report – Urbis
- Attachment A2 – Draft Site specific DCP – Urbis
- Attachment A3 – Urban Design Report – Bates Smart
- Attachment A4 – Arboricultural Impact Assessment – Arbor Express
- Attachment A5 – Aboriginal Object Due Diligence Assessment -Urbis
- Attachment A6 – Heritage Impact Statement - Urbis
- Attachment A7 – Historical Archaeological Assessment - Urbis
- Attachment A8 – Traffic Impact Statement – PDC Consultants
- Attachment A9 – Report on Detailed Site (Contamination) Investigation – Douglas Partners
- Attachment A10 – ESD Strategies - Flux
- Attachment A11 – Flood Impact Risk Assessment - ADP
- Attachment A12 – Landscape Report – Subtropic Design
- Attachment A13 – Design Excellence Strategy - Urbis
- Attachment A14 – Owners consent
- Attachment A15 – Architectural Plans – Bates Smart
- Attachment A16 – Dewatering Management Plan – Douglas Partners
- Attachment A17 – Water Cycle and Stormwater Management – ADP
- Attachment A18 – Site Survey and adjoining elevations - Geoserv

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

This planning proposal seeks to insert new site-specific provisions into Division 5 of Sydney LEP 2012 for the subject site. The proposed envelope has been assessed to ensure future development is appropriate to its context and will not result in any unacceptable impacts on adjoining properties or the public domain. The amended controls facilitate additional residential floor space consistent with the Local Strategic Planning Statement.

As the proposed changes are greater than those acceptable through an application to vary development standards via clause 4.6 of the Sydney LEP 2012, the planning proposal approach is the most appropriate option.

5.2 Relationship to the strategic planning framework

Will the planning proposal give effect to the objectives and actions of the applicable regional or district plan or strategy?

This planning proposal is consistent with the relevant actions and objectives of the applicable regional and district plans, as summarised below.

A Metropolis of Three Cities – The Greater Sydney Region Plan

The Greater Sydney Region Plan is the NSW Government's overarching strategic plan for growth and change in Sydney.

The Plan outlines how Greater Sydney will manage and deliver growth and guide infrastructure delivery. This planning proposal gives effect to the Plan, as follows:

- Infrastructure – the site is well-positioned to benefit from surrounding public infrastructure including rail, light rail, metro and bus services, ensuring future growth is supported by necessary infrastructure.
- Liveability – future development on site will contribute to greater housing supply and choice through the provision of build-to-rent housing with adequate dwelling mix. Additionally, future development will improve the public domain surrounding site through new retail, greater activation and passive surveillance.
- Productivity – future redevelopment on site will enable a greater number of dwellings and employment floor space to be located within 30 minutes by public transport of the Sydney CBD metropolitan centre. Future development will also contribute to local employment through the introduction of active ground floor retail premises.
- Sustainability – future development on site will achieve high sustainability targets.

Eastern City District Plan

The Eastern City District Plan sets out the vision, priorities and actions for the Eastern District of the Greater Sydney area, which includes the City of Sydney.

This planning proposal is consistent with the following priorities from the Plan:

- Planning Priority E1 – Planning for a city supported by infrastructure – this planning proposal will deliver additional housing and employment-generating floor space on a site close to existing and future transport infrastructure, helping maximise infrastructure assets.
- Planning Priority E5 – Providing housing supply, choice and affordability, with access to jobs, services and public transport – this planning proposal will contribute to increased housing supply and diversity in a well-serviced location through the provision of build-to-rent dwellings and will help in addressing housing affordability issues through the provision of on-site affordable housing.
- Planning Priority E6 – Creating and renewing great places and local centres, respecting the District's heritage – this planning proposal will adaptively reuse the existing heritage substation building on site to facilitate retail use, street level activation and increased pedestrian permeability through the introduction of a through-site link.
- Planning Priority E10 – Delivering integrated land use and transport planning for a 30 minute city – the future development scheme supports the goal for a 30 minute city by delivering additional housing and employment floor space close to public transport.
- Planning Priority E19 – Reducing carbon emissions and managing energy, water and waste efficiency – this planning proposal will achieve high sustainability targets.

Draft Sydney Plan

The draft Sydney Plan sets out how growth is to be addressed in Sydney over the next 20 years. The planning proposal is consistent with the following priority responses of the draft plan:

- Implement Sydney housing targets – the future development provides for additional housing to assist in meeting the City of Sydney's housing targets.
- Increase housing diversity and choice – this planning proposal will provide for additional and diverse housing to increase housing choice, in an area identified in Council's strategic plans for jobs, services and amenities.
- Secure the supply of affordable housing – the proponent has offered to enter into a VPA with the City for the delivery of affordable housing in perpetuity as part of a future development.

- Grow well-located jobs – this planning proposal facilitates jobs growth by providing for non-residential uses on the ground floor, that will increase activation of the adjoining streets which supports walking and public transport use.
- Create a more vibrant Sydney – the future development provides for more jobs and housing with active street frontages, in an area well serviced by public transport that promotes active travel.
- Minimise the impact of natural hazards to communities – the future development is capable of minimising impacts from natural hazards, especially flooding, including provision of flood planning levels and managing hazard risk during flood events.
- Protect and enhance the natural environment – the Plane tree in Mountain Street adjoining the site can be removed due to defects found in this tree, however future development will be required to provide landscaping and greening to support biodiversity, reduce water run-off and minimise urban heat island effects.

Is the planning proposal consistent with a council LSPS that has been endorsed by the Planning Secretary or GCC, or another endorsed local strategy or strategic plan?

City Plan 2036 – Local Strategic Planning Statement

The City's local strategic planning statement (LSPS) sets the land use planning context, vision and planning priorities to positively guide future development in the City. This planning proposal aligns with the following priorities of the LSPS:

Infrastructure

- Priority I1 – Movement for walkable neighbourhoods and a connected city – this planning proposal will facilitate additional dwellings and new retail development in a well-located area that enables integration with existing and future transport connections, within walking distance to key destinations for shopping, socialising, exercising and essential services.
- Priority I2 – Align development and growth with supporting infrastructure – future redevelopment on site would ensure additional residential and commercial floor space is appropriately located close to existing infrastructure, including heavy rail, light rail and metro connections, as well as bus services and cycleways.

Liveability

- Priority L2 – Creating great places – this planning proposal would deliver improved street life and public domain outcomes through ground floor retail activation of Mountain St and Smail St.
- Priority L3 – New homes for a diverse community – this planning proposal would contribute to increased housing supply through the provision of BTR housing with an appropriate apartment mix, along with the delivery of affordable housing on site. This will assist in meeting the diverse housing needs of the community.

Sustainability

- Priority S2 – Creating better buildings and places to reduce emissions and waste and use water efficiently – future development on site will prioritise energy efficient outcomes through the implementation of 5-Star NABERS, WELS and Green Star Rating targets, BASIX compliance for residential components. Any future development will also deliver an all-electric building with renewable energy generation and will avoid using HFC synthetic greenhouse gases.

Sustainable Sydney 2030-2050: Continuing the vision

Sustainable Sydney 2030-2050 provides a vision for a green, global and connected city and includes directions for sustainable growth, creativity and innovation. This planning proposal gives effect to the following strategic directions:

- Direction 2 – A leading environmental performer – this planning proposal ensures future development on site achieves adequate environmental sustainability outcomes through the

implementation of 5-Star NABERS, WELS and Green Star Rating targets as well as BASIX compliance for residential components.

- Direction 3 – Public places for all – future redevelopment on site would activate the ground floor with retail premises to improve the public domain and street life experience surrounding site.
- Direction 4 – Design excellence and sustainable development – future development on site would be subject to a competitive design process to ensure the built form achieves design excellence. Although the mature Plane tree in Mountain Street will be removed due to defects, additional greening of the site will support sustainability and biodiversity outcomes.
- Direction 5 – A city for walking, cycling and public transport – the site is well positioned to take advantage of existing transport infrastructure, including rail, light rail, metro and bus connections as well as nearby cycleways.
- Direction 10 – Housing for all – this planning proposal contributes to increased housing supply that is diverse in its dwelling mix and tenure and is to includes a portion of affordable housing in perpetuity, delivered through a voluntary planning agreement, to help meet the complex housing needs of our community.

Is the planning proposal consistent with any other applicable State or regional studies or strategies?

Housing for All: City of Sydney local housing strategy

The City's local housing strategy establishes priorities, objectives and actions for future housing delivery to 2036 in line with the housing related priorities of the Eastern City District Plan. This planning proposal aligns with the following priorities of the strategy:

- Priority H1 – Facilitating more homes in the right locations – this planning proposal would deliver additional dwellings in a well-established area that is close to public transport, social infrastructure, public facilities and retail uses.
- Priority H3 – Increasing diversity and choice in housing – this planning proposal would contribute to increased housing diversity and affordability with the provision of build-to-rent housing with a mix of dwelling sizes, as well as the delivery of on-site affordable housing through a voluntary planning agreement.
- Priority H4 – Increasing the diversity and number of homes available for lower-income households – this planning proposal includes a dedication of 20% of the total floor space uplift for affordable housing, delivered through the voluntary planning agreement, to provide greater housing opportunities for lower-income households.
- Priority H7 – Increasing liveability, sustainability and accessibility through high-quality residential design – future development would be subject to a competitive design process to ensure delivery of a high-quality residential building that demonstrates design excellence.

Is the planning proposal consistent with applicable SEPPs?

The following table (Table 1) outlines the consistency of this planning proposal with applicable State Environmental Planning Policies (SEPPs).

Table 1. Consistency with State Environmental Planning Policies

State Environmental Planning Policy	Comment
SEPP (Biodiversity and Conservation) 2021	This planning proposal is consistent. Chapters 3, 4, 5 and 13 are not applicable to this site. In regard to Chapter 2, the proposal is accompanied by an Arboricultural Impact Assessment that recommends protection of 2 existing street trees, but

State Environmental Planning Policy	Comment
	removal of 2 trees adjoining site due to current tree health. Street tree planting is proposed as part of the future development and will need to be addressed at the DA stage including number and species of trees consistent with the City's Urban Forest Strategy. In regard to Chapter 6, the site is located within the Sydney Harbour Catchment Area but not within the Foreshores and Waterways Area. The planning proposal request was accompanied by a Flood Impact Risk Assessment (Attachment A11) and a Water Cycle and Stormwater Management Report (Attachment A17). These have been considered as part of the planning proposal to demonstrate that the site can accommodate the proposed redevelopment, with either planning controls recommended, or additional details required at the DA stage.
SEPP (Exempt and Complying Development Codes) 2008	This planning proposal is consistent.
SEPP (Housing) 2021	This planning proposal is to allow a build-to-rent housing development in accordance with the SEPP. Future development will need to be consistent with Departmental Fact Sheet for Build-to-Rent Housing and Flexible Design, which states build-to-rent developers tend to focus on shared facilities and services and more communal space for each apartment. The Housing SEPP identifies 3 areas where flexibility is to be considered by the consent authority – balconies and open space, storage and apartment mix, and non-compliance with Apartment Design Guide for these criteria can be achieved by replacing some of the 'missing' elements for apartments elsewhere in the development through additional communal open space and/or storage space, and to reflect apartment mix tailored to the area's demographics. Solar and day light access, apartment size and layout and common circulation spaces can also be considered flexibly. To provide guidance for appropriate consideration of flexibility for this site, controls have been recommended in the draft site specific DCP.
SEPP (Industry and Employment) 2021	This planning proposal is consistent.
SEPP (Planning Systems) 2021	This planning proposal is consistent.
SEPP (Precincts–Eastern Harbour City) 2021	This planning proposal is consistent.
SEPP (Resilience and Hazards) 2021	This planning proposal is consistent. The site is not located within the Coastal Environment Area nor the Coastal Use Area.

State Environmental Planning Policy	Comment
	This planning proposal is accompanied by a Report on Detailed Site (Contamination) Investigation (Attachment A9) which identified potential sources of contamination on site such as imported fill of unknown origin and demolition of previous structures that may have included hazardous materials. The reports have been reviewed, and it is considered that the site can be made suitable for the proposed development, subject to the implementation of a Remediation Action Plan that will need to be lodged with a future development application.
SEPP (Resources and Energy) 2021	This planning proposal is consistent.
SEPP (Sustainable Buildings) 2022	This planning proposal is consistent.
SEPP (Transport and Infrastructure) 2021	This planning proposal is consistent. The site is not located in or adjacent to rail corridors, road corridors or reservations listed in Section 2.121 of the SEPP. The proposed development is not a traffic generating development for the purposes of this SEPP.

The following SEPPs are not applicable to this planning proposal:

- SEPP (Precincts – Central River City) 2021, SEPP (Precincts – Regional) 2021, SEPP (Precincts – Western Parkland City) 2021, SEPP (Primary Production) 2021

Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Directions) or key government priority?

The following table (Table 2) outlines the consistency of this planning proposal with applicable Ministerial Directions.

Table 2. Consistency with Ministerial Directions

Ministerial Direction	Comment
Focus area 1: Planning Systems	
1.1 Implementation of Regional Plans	This planning proposal is consistent, as demonstrated in section 5.3 of this document.
1.3 Approval and Referral Requirements	This planning proposal is consistent. The subject site contains a State listed heritage item known as former “Electrical substation”. Agency consultation is likely to be required with NSW Heritage as part of the Gateway Determination. In addition, future development will be Integrated Development and will require concurrence from NSW Environmental and Heritage.

Ministerial Direction	Comment
1.4 Site Specific Provisions	This planning proposal is consistent. The planning proposal does not restrict the permitted uses on the land. The planning proposal provides development uplift for residential and retail uses. This is consistent with strategic priorities established in the relevant regional and district plan and LSPS. Development that does not make use of the uplift provided by the planning proposal can continue to make use of the full range of uses permitted in the MU1 Zone.
1.4A Exclusion of Development Standards from Variation	This planning proposal is consistent. The planning proposal does not propose to exclude a development standard from variation under clause 4.6.
Focus area 3: Biodiversity and Conservation	
3.1 Conservation Zone	This planning proposal is consistent. The site is located within the Mountain Street Conservation Area. This planning proposal will not reduce the conservation standards that apply to the land.
3.2 Heritage Conservation	This planning proposal is consistent. The site contains a State and locally listed heritage item identified as Item No. I2053: “Electrical substation” in Sydney LEP 2012. A Heritage Impact Statement and Historical Archaeological Assessment were prepared submitted with the proposal, attached to this document at Attachment A6 and Attachment A7. These serve to inform the consideration of future development on the site Initial consultation with Heritage NSW has been undertaken. Additionally, a site specific DCP accompanies this planning proposal which includes heritage provisions that facilitate conservation and sympathetic adaptive reuse of the significant heritage item on site.
3.5 Recreation Vehicle Areas	This planning proposal is consistent. The site is not being developed for the purpose of a recreation vehicle area.
3.7 Public Bushland	This planning proposal is consistent. The site does not contain any urban bushland.

Ministerial Direction	Comment
3.9 Sydney Harbour Foreshores and Waterways Area	This planning proposal is consistent. The site is not located within the Foreshores and Waterways Area.
3.10 Water Catchment Protection	This planning proposal is consistent. The site is located within the Sydney Harbour Catchment but outside the Foreshores and Waterways Area boundary. The planning proposal does not conflict with the objectives of the Direction. A Water Cycle and Stormwater Management Report (Attachment A17) accompanies this planning proposal which identifies strategies to allow for stormwater runoff across the site to be conveyed to the designated legal point of discharge, to ensure water flows within the catchment are not adversely impacted.
Focus area 4: Resilience and Hazards	
4.1 Flooding	This planning proposal is consistent. Mountain Street and an eastern portion of Smail Street adjoining site are impacted by high hazard flooding in a PMF event. An eastern portion of the site is impacted by low hazard flooding in a PMF event. A Flood Risk Assessment Report accompanies this planning proposal (Attachment A11) and has been reviewed by the City's environment and water engineers. The site is capable of redevelopment to meet the requirements in the NSW Flood Risk Management Guideline including EM01 Support for Emergency Management Planning, FB01 Understanding and Managing flood, and NSW shelter in-place guidelines. A detailed Flood Impact and Risk Assessment (FIRA), and Flood Emergency Response Plan, along with other supporting studies is required at the DA stage to address these requirements and suitably manage flooding impacts. The flood planning levels have been indicated on the reference design plan to indicate the proposed development can be accommodated within the envelope, and the draft DCP will require vehicular access to the site from Smail Street due to the high hazard risk in Mountain Street.
4.2 Coastal Management	This planning proposal is consistent. The site is not located within the coastal environment area or coastal use area.

Ministerial Direction	Comment
4.4 Remediation of Contaminated Land	This planning proposal is consistent. The Detailed Site Investigation prepared by Douglas Partners as part of the planning proposal request identifies several contamination risks, which can be addressed as part of a Remediation Action Plan to be prepared as part of the development application to make the site suitable for the proposed development.
4.5 Acid Sulfate Soils	Consistent. The site is classified as part Class 2 and part Class 5 Acid Sulfate Soils as per the LEP. A Report on Detailed Site (Contamination) Investigation (Attachment A9) that accompanies this planning proposal identified low risk of acid sulfate soils on the subject site and that testing for acid sulfate soils was not considered warranted. Further detailed investigation and the need for an Acid Sulfate Soils Management Plan will be addressed through any future development application.
Focus area 5: Transport and Infrastructure	
5.1 Integrating Land Use and Transport	This planning proposal is consistent. The site is located in an area that is well serviced by existing public transport options.
5.3 Development near Regulated Airports and Defence Airfields	The planning proposal is consistent. The proposed maximum height of RL 58.85m (approximately 53m) is less than the obstacle Limitation Surfaces (OLS) of 120m for this site for Sydney Airport.
Focus area 6: Housing	
6.1 Residential Zones	This planning proposal is consistent. The provision of diverse housing through build-to-rent and affordable housing, will be enabled by this planning proposal. Requirements for the land to be adequately serviced will be included in the planning proposal.
6.2 Caravan Parks and Manufactured Home Estates	This planning proposal is consistent. It provides an alternative set of planning controls for residential and retail use of the site. It is not a suitable zone or location for the provision of a caravan park.
Focus area 7: Industry and Employment	
7.1 Employment Zones	This planning proposal is consistent. It will facilitate additional retail floor space to encourage

Ministerial Direction	Comment
	employment opportunities in a suitable location, helping to protect and support the viability of this area.

The following Directions are not applicable to this planning proposal:

– Ministerial Direction 1.2 Development of Aboriginal Land Council Land, 1.4A Exclusion of Development Standards from Variation, 1.5 Parramatta Road Urban Transformation Strategy, 1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan, 1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan, 1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan, 1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor, 1.10 Implementation of the Western Sydney Aerotropolis Plan, 1.11 Implementation of Bayside West Precincts 2036 Plan, 1.12 Implementation of Planning Principles for the Cooks Cove Precinct, 1.13 Implementation of St Leonards and Crows Nest 2036 Plan, 1.14 Implementation of Greater Macarthur 2040, 1.15 Implementation of the Pyrmont Peninsula Place Strategy, 1.16 North West Rail Link Corridor Strategy, 1.17 Implementation of the Bays West Place Strategy, 1.18 Implementation of the Macquarie Park Innovation Precinct, 1.19 Implementation of the Westmead Place Strategy, 1.20 Implementation of the Camellia-Rosehill Place Strategy, 1.21 Implementation of the South West Growth Area Structure Plan, 1.22 Implementation of the Cherrybrook Station Place Strategy, 3.3 Sydney Drinking Water Catchments, 3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs, 3.6 Strategic Conservation Planning, 3.8 Willandra Lakes Region, 4.3 Planning for Bushfire Protection, 4.6 Mine Subsidence and Unstable Land, 5.3 Development Near Regulated Airports and Defence Airfields, 5.4 Shooting Ranges, 5.5 High Pressure Dangerous Goods Pipelines, 7.2 Reduction in non-hosted short-term accommodation period, 7.3 Commercial and Retail Development along the Pacific Highway, North Coast, 8.1 Mining, Petroleum Production and Extractive Industries, 9.1 Rural Zones, 9.2 Rural Lands, 9.3 Oyster Aquaculture, 9.4 Farmland of State Regional Significance on the NSW Far North Coast.

5.3 Environmental, social and economic impact

Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected because of the proposal?

This planning proposal is unlikely to adversely affect any critical habitat or threatened species, populations or ecological communities of their habitats. The site does not currently contain any vegetation within its boundaries. The site is located in Ultimo close to the Sydney CBD, which does not contain any known critical habitats or threatened species, populations or ecological communities.

Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

Floor space ratio, building height and building envelope

An FSR of 5.35:1 provides for around 47 square metres more floor space than the proponent's reference scheme. The recommended FSR is considered to be suitable for the site, as on balance it provides for sufficient design flexibility for future development on the site, while maintaining confidence that the following can be managed appropriately:

– impacts on the heritage conservation area and State heritage listed former substation
– impacts on adjoining buildings located on the site boundary;

- meeting Apartment Design Guide requirements including flexibility provisions under the Housing SEPP; and
- meeting flood risk planning requirements.

Future development using the controls for this planning proposal will be subject to a competitive design process under Clause 6.21D of the Sydney LEP 2012, which currently requires a competitive design process for buildings greater than 25m on this site, or 35 metres in accordance with the amendment to the LEP adopted by Council on 23 June 2025.

Heritage

The planning envelope, which accommodates the maximum floor space ratio and maximum height, was informed by DAP and controls have been provided in the draft DCP. The envelope distributes height across the site to balance the impacts of the conservation area while providing for affordable housing to be delivered as part of the development. As a result, the planning envelope locates the tallest part of the building closer to the adjoining building 5 Smail Street, to better maintain the street wall height in Mountain Street.

Preliminary advice was sought from Heritage NSW due to the State listing of the item as it will require their approval at the development application stage as it will be Integrated Development under the Act. Heritage NSW recommended the width of the pedestrian link through the site should be increased to more than 3m or a colonnade be provided within the site to increase separation of the new buildings from the heritage item. It was also recommended the overall height considered to reduce impacts on the State heritage listed former substation.

To respond to these comments, while balancing the strategic need for greater and more diverse housing, draft DCP controls have been recommended to provide guidance for consideration of Heritage NSW comments for the detailed design stage.

The proponent advised that further consideration of urban design, architectural and public domain options based on the advice from Heritage NSW will be included within and progressed as part of the Design Competition and future DA. It was also stated that they will work with Heritage NSW and the City to strengthen the heritage considerations in the DCP in consultation with the City's Heritage specialists.

Residential amenity

The Housing SEPP requires the consent authority to be flexible in the application of Apartment Design Guide (ADG) design criteria for build-to-rent housing, with clarification on flexibility provided by a Department of Planning, Housing and Infrastructure Fact Sheet dated February 2023. Flexibility must be applied in the consideration of balconies, storage and apartment mix, and potentially, depending on site characteristics, for solar and daylight access, apartment size and layout, and common circulation spaces. Flexibility is achieved by providing high amenity communal spaces and facilities in excess of minimum ADG requirements in the building, while also requiring the applicant to demonstrate how the amenity of residents still meets the objectives of the ADG.

The reference scheme prepared by the proponent for the site indicates that a future development on the site is capable of providing high amenity communal spaces to exceed the quantum of spaces required in the ADG, including rooftop spaces, courtyard spaces and internal communal spaces. These spaces could also be appropriately landscaped to achieve environmental and amenity benefits such as slowing stormwater runoff, improving air quality and reducing urban heat island effects. Controls are proposed for the draft DCP to provide site specific guidance for the consideration of communal and common spaces should a future development application not achieve the minimum standards in the ADG.

Access, Servicing and Flooding

Mountain Street and an eastern portion of Smail Street adjoining site are identified as having a high flood hazard risk. The reference scheme and Flood Risk Assessment Report prepared to support the planning proposal request demonstrate that future development sought for the site is

capable of meeting NSW Government flood planning requirements, including Ministerial Directions. A future development application for the site will need to be supported by a detailed Flood Impact and Risk Assessment (FIRA) and Flood Emergency Response Plan, and supporting studies, to demonstrate the NSW Government requirements will be met. To ensure the driveway access to the site avoids being located from Mountain Street due to flood risk, a control in the draft DCP has been included. A control has also been included in the draft DCP for future development on the site to be in accordance with the updated water and flood management amendment to Sydney DCP 2012 as adopted by Council on 23 June 2025, so the most up-to-date requirements are met.

Draft site specific Development Control Plan

A draft Development Control Plan has been prepared and will be exhibited alongside this planning proposal and provides site specific controls to be inserted into Section 6 of the Sydney DCP 2012. It includes objectives and provisions to ensure a high quality built form is delivered.

The draft DCP amendment includes provisions to ensure the delivery of future development is undertaken in a manner that is consistent with the objectives and intended outcomes of this planning proposal. The draft DCP amendments address the following considerations:

- maximum building envelope dimensions including setbacks and heights
- heritage considerations including materials and finishes
- vehicular access, loading and servicing
- ground floor level and street activation
- public pedestrian through-site link including minimum unencumbered width
- residential amenity requirements
- landscaping
- sustainability
- flooding.

Has the planning proposal adequately addressed any social and economic effects?

Economic impact

This planning proposal provides an opportunity for the redevelopment of the subject site, which is located within the Camperdown-Ultimo Health and Education Precinct. Future development facilitated by this planning proposal will comprise around 107 dwellings, operated primarily as build-to-rent housing with approximately 15 of these dwellings to be affordable housing units in perpetuity delivered through a VPA. It will provide for around 115 construction jobs and around 10 equivalent full time operational jobs.

By providing for more diverse housing close to health, education and research jobs, this has can help grow a stronger, more competitive city. It also aligns with the key moves of the City's local strategic planning statement and the Eastern City District Plan.

Social impact

The project will deliver considerable social benefits to Central Sydney, by providing more diverse housing, activating Mountain and Smail Streets to create more lively and safe streets, as well as the delivery of a new pedestrian connection through the site, and protection of important heritage values.

5.4 Infrastructure (Local, State and Commonwealth)

Is there adequate public infrastructure for the planning proposal?

There is adequate public infrastructure to support this planning proposal. The site is located in Ultimo within close proximity to bus services along Parramatta Road and is situated approximately 900m from Central Station that provides rail, light rail, metro and bus connections. The site is within walking distance of key public infrastructure including Victoria Park, Wentworth Park, Central Park,

Broadway shopping centre, University of Technology Sydney campus and University of Sydney campus.

The site is already serviced by public utilities including water, sewer and stormwater, electricity and telecommunications. Any development application for the site will be subject to section 7.11 development contributions under the City of Sydney Development Contributions Plan 2015, to ensure that the additional demand for infrastructure generated by the proposal can be met through the provision of new or improved infrastructure.

5.5 State and Commonwealth interests

What are the views of state and federal public authorities and government agencies consulted in order to inform the Gateway determination?

The gateway determination will advise the public authorities to be consulted as part of this planning proposal process. Any issues raised will be incorporated into this planning proposal following consultation in the public exhibition period.

6. Mapping

This planning proposal does not include any amendments to maps.

Instead, new site specific provisions relating to height and FSR will be inserted into Part 6, Division 5 of Sydney LEP 2012.

The draft DCP that accompanies this planning proposal includes detailed figures and diagrams to reflect the proposed future development concept as discussed in this planning proposal.

7. Community consultation

This planning proposal is to be exhibited in accordance with a Gateway Determination issued by the Department of Planning, Housing and Infrastructure.

Notification of the public exhibition will be consistent with the Gateway Determination and the City's Community Engagement Strategy and Participation Plan and include publication on the City of Sydney website and notification to surrounding owners and occupiers.

Consultation with relevant NSW agencies, authorities and other relevant organisations will be undertaken in accordance with the Gateway Determination.

8. Project timeline

This planning proposal is categorised as a Principal planning proposal as per the Local Environmental Plan Making Guidelines dated August 2023.

It is noted that this planning proposal is being considered as a trial project following a request by the proponent for the planning proposal and development application to be exhibited concurrently. This approach is permitted under the Environmental Planning and Assessment Act 1979. This approach means the design competition is brought forward and carried out prior to the planning controls being finalised.

There is risk for the proponent of completing the design competition and lodging a development application before the planning proposal has been finalised, however the proponent has advised that they understand this and is willing to take on this risk. A review will inform whether this approach could be used for other sites in the future, and in which circumstances.

Due to this trial process, extra time has been included to allow for the exhibition of the planning proposal, design excellence strategy, VPA and development application concurrently. It is noted that the inclusion of the development application in the exhibition can only be accommodated if it meets the timeframe set out in the Department's Guideline for the LEP amendment.

The anticipated timeframe for the completion of the planning proposal is as follows:

Stage	Timeframe
Commencement / gateway determination	April 2026
Government agency consultation	June 2026
Public exhibition	June 2026
Review of issues raised in submissions	July / August 2026
Post-exhibition reporting	October 2026
LEP drafting	November 2026
LEP made	January 2027
LEP notification	January 2027

Appendix 1

Example provisions

The final version of the site specific provisions to be inserted into the LEP are subject to drafting and agreement with NSW Parliamentary Counsel's Office, but may be as follows:

Part 6 Local provisions – height and floor space

Division 5 Site specific provisions

6.XX 41-49 Mountain Street, Ultimo

(1) The objectives of this clause are to provide additional height and floor space to encourage:

- **(a)** build-to-rent housing in accordance with the Housing SEPP and affordable housing
- **(b)** respectful and adaptive reuse of the State heritage item on the site
- **(c)** provision of a pedestrian link through the site
- **(d)** on-site servicing of the development

(2) This clause applies to Lot 21 DP 5567 and Lot 1 DP 191928, 41-49 Mountain Street, Ultimo

(3) The maximum height for a building on the land to which this clause applies is RL 58.85 metres.

(4) The maximum floor space ratio for a building on the land to which this clause applies is 5.35:1, which is inclusive of:

- **(a)** the floor space ratio shown for the land on the Floor Space Ratio Map;
- **(b)** additional site-specific floor space; and
- **(c)** if the building demonstrates design excellence through a competitive design process – the gross floor area, determined by the consent authority, of up to 10% of the sum of (a) and (b).

(5) Subclauses (3) and (4) do not apply unless the consent authority is satisfied that the development:

- **(a)** is only for the purposes of shop-top housing used for build-to-rent housing under Chapter 3 Part 4 of the Housing SEPP and affordable housing in accordance with Council's affordable housing program;
- **(b)** provides on-site loading to service the site; and
- **(c)** includes a pedestrian link through the site connecting Mountain Street and Smail Street.

(6) Clauses 6.21D(3) does not apply to a building on the land to which this clause applies.

Attachment A1

Planning Proposal Report – Prepared by Proponent

Planning Proposal Report

41 & 43-49 Mountain Street, Ultimo

October 2025

Prepared for: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

Urbis staff responsible for this report were:

Director	Andrew Harvey
Associate Director	Stewart Doran
Consultant	Harley Lockhart
Project Code	P0057496
Report Number	Final

Acknowledgment of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.
We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.
We pay our respects to First Nations Elders, past and present.

Urbis is committed to incorporating our respect for First Nations cultures, peoples and storytelling in our work across the Country. We are proud to have partnered with Darug Nation artist, **Hayley Pigram**, and to profile her artwork - **Sacred River Dreaming**.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

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Executive Summary

Overview

This Proponent-Initiated Planning Proposal (**Planning Proposal**) has been prepared by Urbis Ltd (**Urbis**) on behalf of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 (**the proponent**) to initiate an amendment to the *Sydney Local Environmental Plan 2012* (**SLEP 2012**) as it relates to the land at 41 & 43-49 Mountain Street, Ultimo (**the site**).

The Planning Proposal has arisen from the opportunity to develop the existing vacant site to deliver high-quality build-to-rent (**BTR**) housing including ground floor retail in a well-located infill location, which has historically been underutilised and underdeveloped.

The proponent envisages a renewed street block aimed towards rental living opportunities for a diverse range of residents, delivering a revitalised public domain and activated streetscape, which also includes adaptive re-use of the State heritage listed substation contained within the site. The proponent's vision for the site includes construction of a new 15-storey tower, that is designed to integrate with the site's heritage context and adjoining development. The north-east aspect of the proposed envelope presents a 7-storey frontage to Mountain Street, which aligns with the immediately adjoining development at 51-55 Mountain Street. The integration of the proposal within the existing Mountain Street interface is assisted by an increased setback of 8m for levels 8-15. With respect to the Small Street interface, the proposed envelope facilitates a 3m setback. Accordingly, the proposed envelope has been designed with respect to the existing streetscape context and built form. The new development will breathe life into the area with an additional 7,712m² of GFA to provide for residential dwellings, vibrant retail spaces at the ground level, and the provision of affordable housing.

The Planning Proposal seeks to amend the SLEP 2012 by inserting a new site-specific clause under Division 5 of the SLEP 2012, which will permit a maximum building height of RL58.450 and an additional gross floor area of 7,844m² or a total FSR across the site of 5.40:1.

The Planning Proposal is accompanied by a draft site-specific Development Control Plan (**DCP**) that provides site specific design guidance, to be inserted into Section 6 of the Sydney DCP 2012. The site specific DCP will guide any future development outcome on the site to ensure it is delivered with strong regard for the local development context, the surrounding public domain, as well as matters of ecological sustainability and design excellence.

Background

Notwithstanding the at grade, unmarked carparking and small site sheds ancillary to Ausgrid's Depot; the site currently comprises a vacant and cleared site. The site also comprises a single storey State and local heritage listed substation at the corner of Mountain Street and Small Street. The site has been subject to DAs since 2005. These approvals have progressively enabled the site's redevelopment. The original consent in 2005 approved demolition and the construction of a 5-8 storey commercial building with basement parking, together with the retention and conservation of the State heritage-listed substation at 41 Mountain Street. This would have resulted in a maximum building height of 27.7m and an FSR of 4.34:1. Subsequent modifications allowed for time extensions and design refinements, including reconfiguration of internal layouts and adjustments to building elements. Ultimately, the approved development was not constructed and following demolition, the site has remained vacant, primarily used as storage by the previous owner Ausgrid.

Building upon the site's history, the aims and intended outcomes of the Planning Proposal seek to deliver a new mixed-use residential development, featuring active ground-level uses and BTR apartments above, along with rooftop communal open space.

Planning Context

Under the existing SLEP 2012 controls, the site is zoned MU1 Mixed use, has a maximum building height of 18m and a maximum permissible FSR of 2:1. The site contains State and local heritage items and is within the Mountain Street Local Heritage Conservation Area.

These planning controls are generally inconsistent with the surrounding built form context, and this Planning Proposal is a key opportunity to realise development over the site, seamlessly integrating with the surrounding streetscape, from both a function and design perspective, to ultimately realise this Mountain Street, Smail Street block.

Indicative Reference Scheme

A concept design for an indicative reference scheme has been prepared by Bates Smart to guide the Planning Proposal. The design demonstrates that the proposed planning envelope can deliver a feasible mixed-use development on the site, supporting the amendments to the SLEP 2012 and controls proposed in the site specific DCP.

The indicative development scheme will provide the following:

- Built form up to 15-storeys, with a mix of 107 rental apartments and resident-focused amenities, ground floor activation and retail with a total GFA of 7,712m² and building height of 53m.
- Communal open space with a total area of 292m².
- 1 level of basement including plant, storage and parking.
- Laneway from Smail Street providing vehicular access to the site.
- Conservation and adaptive reuse of the State Heritage listed substation.

Planning Outcomes

The Planning Proposal is found to respond appropriately to relevant strategic planning framework, which supports development outcomes that contribute to housing supply, housing affordability and envisaged growth, by providing high-quality and innovative design that complements existing character and proximate heritage setting of the site, whilst supporting growth in the Camperdown-Ultimo Collaboration Area and Harbour CBD.

The Planning Proposal would achieve the following key planning outcomes and benefits:

Provision of 7,712m² of residential floor space including a significant affordable rental housing component of 20% and 758m² active ground-level retail uses. The proposal will transform an underutilised and undeveloped site within a key urban area of Ultimo.

Positively respond the recently endorsed City of Sydney Affordable Housing Programme Updates by providing the dedication of 20% of the total floor space uplift for affordable housing as purpose built affordable housing BTR apartments managed by a Registered CHP in perpetuity.

Provides site specific uplift provisions on a site that is located to make efficient use of transport infrastructure including the Central Station metro, light rail and bus services, as well as maximising active transport opportunities in the area.

Targeted sustainability outcomes that are consistent with the City of Sydney's Net Zero targets.

The Planning Proposal and associated draft site-specific DCP support a development outcome, that will deliver contemporary residential and retail spaces that prioritise sustainability and design excellence, while integrating with the site's heritage setting and broader urban context.

It is demonstrated that there is clear strategic and site-specific merit in progressing the Planning Proposal, the intended outcomes are appropriate and should be forwarded to the Department of Planning, Housing and Infrastructure (DPHI) for Gateway Determination.

1 Introduction

1.1 Overview

This Proponent-Initiated Planning Proposal (**Planning Proposal**) has been prepared by Urbis Ltd (**Urbis**) on behalf of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 (**the proponent**) to initiate an amendment to the *Sydney Local Environmental Plan 2012* (**SLEP 2012**) as it relates to the land at 41 & 43-49 Mountain Street, Ultimo (**the site**).

The planning proposal has arisen from the opportunity to develop the existing vacant site to deliver high-quality build-to-rent housing and retail in a well-located infill location, which has historically been underutilised and underdeveloped.

The Planning Proposal seeks the following amendments to SLEP 2012:

- Propose a site-specific clause that enables the site's maximum permissible building height to increase from 18m to 53m and the maximum permissible FSR from 2:1 to 5.4:1. The clause will also remove the potential for any additional design excellence bonuses.
- A site-specific DCP amendment is also provided to provide guidance on the built form envelope, heritage, public domain, and design excellence.

1.2 Project Vision

The Planning Proposal represents the redevelopment of a key site at the intersection of Mountain Street and Smail Street, in Ultimo. Through this proposal, the proponent seeks to revitalise this prominent site through development of high-quality build-to-rent housing while retaining and renewing the existing State heritage listed substation.

The proponent's vision for the site includes construction of a new 15-storey tower, that is designed to integrate with the site's heritage context and adjoining development. The new development will breathe life into the area with an additional 7,712m² of GFA to provide for residential dwellings, vibrant retail spaces at the ground level, and the provision of affordable housing.

In the context of Ultimo, the project envisages a renewed street block aimed towards rental living opportunities for a diverse range of residents, delivering a revitalised public domain and activated streetscape, which also includes the State heritage listed substation.

The development of the site aims to deliver high-quality built-to-rent housing and retail in a well-located infill location, which has historically been underutilised and underdeveloped. It will deliver long-term institutionally owned and managed rental housing, focused on quality and equality via a suitable apartment mix for the area, with excellent in-house amenity and customer-focused management on site. The contribution of additional housing supply, affordable housing, contextual design complementing the Mountain Street HCA, and an activated public domain are key objectives of the project.

The project will deliver a sustainable, community-focused development that meets the needs of renters while respecting the area's heritage and contributing positively to the local urban fabric. It will act as the missing piece to realise the renewal of the Mountain and Smail Street block in coordination with the redevelopment of 1 Smail Street for co-living housing (D/2024/984), approved by the City of Sydney Planning Committee on 10 April 2025, as well as the redevelopment of 66 Bay Street from an existing warehouse into a new, contemporary private residence for Judith Neilson (D/2022/385).

1.3 Report Structure

The Planning Proposal has been prepared in accordance with Section 3.33 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and the Department of Planning, Housing and Infrastructure (**DPHI**) guideline '*Local Environmental Plan Making Guideline*' dated August 2023.

The relevant sections of the Planning Proposal are listed below:

- **Section 2:** Detailed description of the site, the existing development and local and regional context.
- **Section 3:** Project background including pre-lodgement and scoping proposal advice.
- **Section 4:** Current statutory planning framework relevant to the site, including State and local planning controls.
- **Section 5:** Key features of the indicative development outcome, which is intended to be delivered as an outcome of the Planning Proposal.
- **Section 6:** Comprehensive description and assessment of the Planning Proposal in accordance with the DPHI Guideline.
- **Section 7:** Conclusion and justification.

1.4 Technical and Supporting Studies

This Planning Proposal has been prepared through significant collaboration with the project team and is supported by a range of technical inputs as shown in **Table 1** below.

Figure 1 Planning Proposal Project Team

Technical Input	Consultant	Appendix
Draft Site Specific DCP	Urbis	Appendix A
Urban Design Report	Bates Smart	Appendix B
Arboricultural Impact Assessment	Arbor Express	Appendix C
Aboriginal Objects Due Diligence Assessment	Urbis	Appendix D
Heritage Impact Statement	Urbis	Appendix E
Historical Archaeological Assessment	Urbis	Appendix F
Traffic Impact Assessment	PDC	Appendix G
Report on Detailed Site (Contamination) Investigation	Douglas Partners	Appendix H
ESD Strategies	Flux	Appendix I
Flood Impact Risk Assessment	ADP	Appendix J
Landscape Report	Subtropic Design	Appendix K
Design Excellence Strategy	Urbis	Appendix L
Letter of Offer	Mills Oakley	Appendix M
Owner's Consent	Apt.	Appendix N
Architectural Plans	Bates Smart	Appendix O
Report on Dewatering Management Plan	Douglas Partners	Appendix P
Water Cycle and Stormwater Management Report	ADP	Appendix Q
Site Survey	Geosurv	Appendix R

2 Site Context

2.1 Site Description

The land to which this Planning Proposal relates to is 41 & 43-49 Mountain Street, Ultimo (refer to **Figure 2**). The site is legally described as Lot 1 in DP191928 and Lot 21 in DP5567. The site has an area of 1,452.6m² and is a rectangular shaped landholding comprising two lots. It occupies a street frontage to Smail Street to the north and Mountain Street to the east.

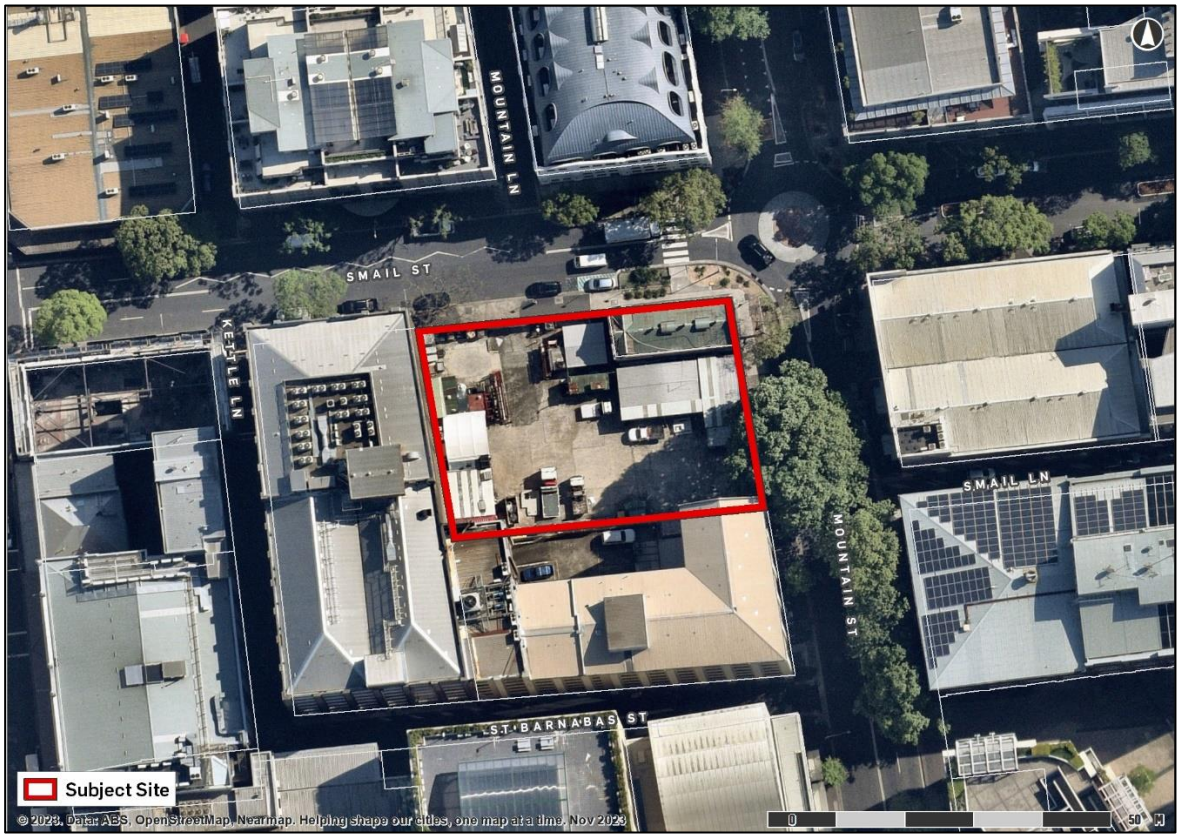
The site is located within the City of Syndey Local Government Area (**LGA**).

2.2 Existing Development

The site currently comprises a predominately vacant and cleared site with the exception of a single storey State and local heritage listed substation at the corner of Mountain Street and Smail Street. Vehicular access is currently provided from Smail Street.

There is limited vegetation on the site with existing street trees located on Mountain and Smail Street outside of the property boundaries. The site is located within the Mountain Street Heritage Conservation Area (**HCA**) and is well-located to public transport infrastructure including the Central Station Metro Station.

Figure 2 Site Aerial Photograph (cadastral boundaries in red)



Source: Urbis

The site does not present significant environmental planning constraints that cannot be reasonably mitigated, ensuring the site suitability of the proposal. Specifically:

- The site does not contain any areas of outstanding biodiversity value, riparian corridors or the like and is not within a foreshore area or coastal hazard area. There are no scenic protection overlays that apply to the site.
- The site is not subject to significant flooding risk and is not identified as bushfire prone.
- The site is not a sloping site or subject to landslide risk.
- The existing Mountain Street Plane Street Tree, which extends over the eastern property boundary of the site is identified as having multiple defects resulting from cockatoo damage to create breeding hollows. As such, damage and decay to this tree will progress and will be subject to removal and replacement as part of the future DA for the site. This is further discussed in **Section 7.3.3.7** of this report.

Photographs of the existing site are contained in **Figure 3.**

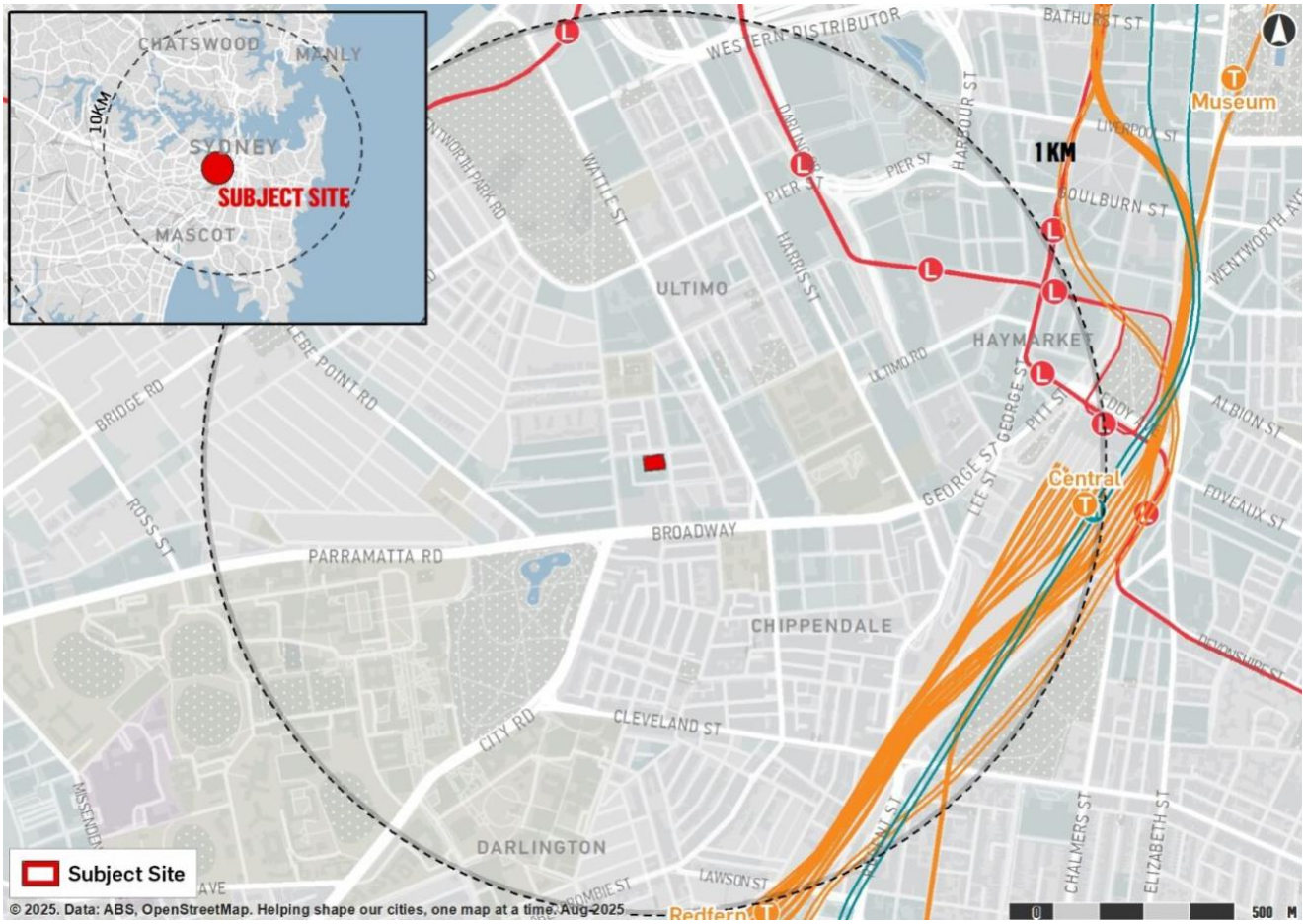
Figure 3 Site Photographs

Source: Bates Smart

2.3 Surrounding Development and Locality Context

The site is located on the fringe of the Sydney CBD, benefiting from excellent public transport, existing infrastructure and proximity to tourist, business and retail centres, as well as key open space including Wentworth Park and Victoria Park.

Figure 4 Site Context



Source: Urbis

The surrounding physical context reflects the site's highly urbanised setting, characterised by a mix of historic and modern structures. Built form in the immediate context is defined by buildings of 4-8 storeys (22.8m to 41.7m) that have floor space ratios (**FSR**) of between 4:1 and 6:1.

The immediate context is described in **Table 2.**

Table 2 – Immediate Context Description

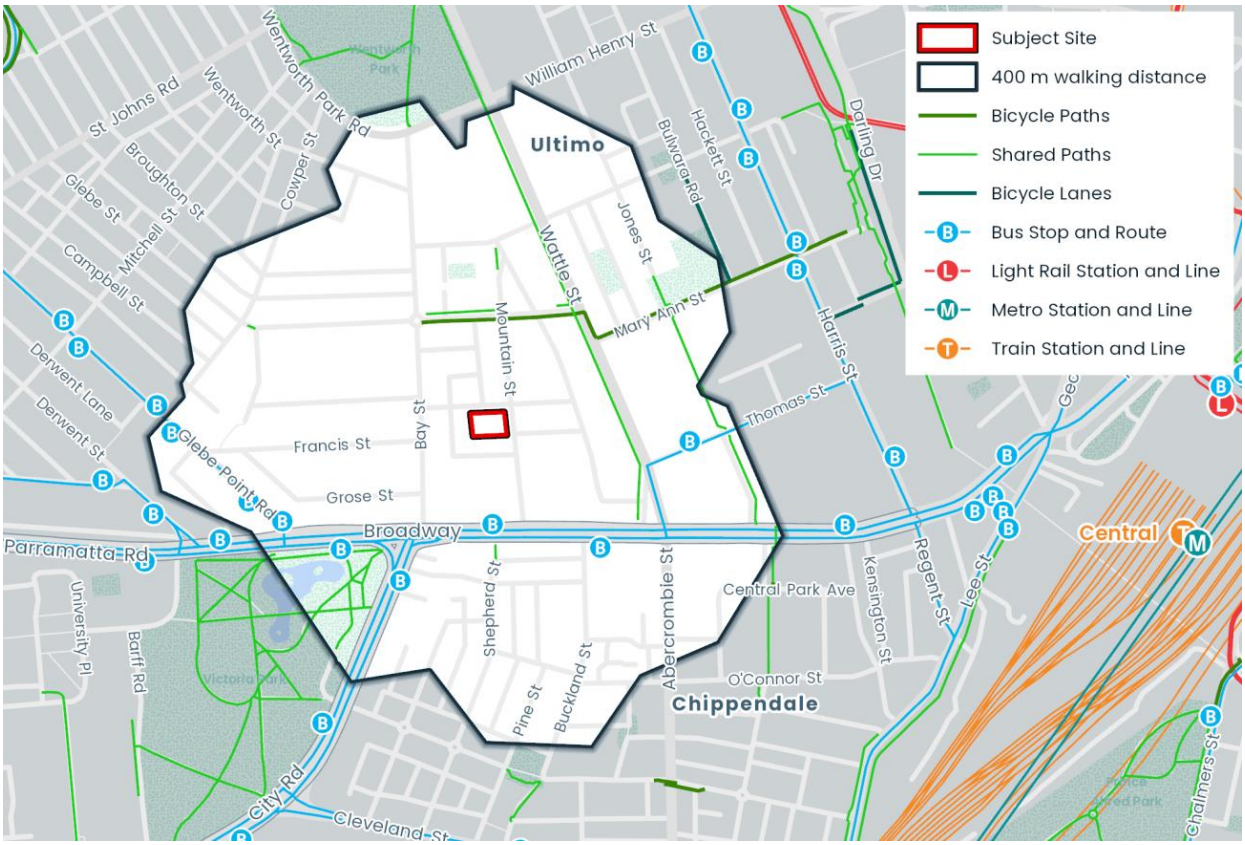
Location	Description
North	The immediate north of the site at 35- 39 Mountain Street is a four-storey hotel accommodation. The land uses directly to the north of the site consist of mixed-use developments, including shop top housing and residential flat buildings. The International Grammar School is 150m to the north of the site.
South	A six-storey mixed-use building located at 51-55 Mountain Street adjoining the southern boundary of the site. This building comprises of retail premises on the ground level and office premises above. The south of the site consists of mixed-use developments, including residential flat buildings and commercial and retail

	development adjoining Broadway. St Barnabas' Anglican Church is situated across the road from the south boundary of the site. Broadway is located 100m south of the site and is a classified road and a major artery of the Sydney road network.
East	To the east of the site is a four-storey commercial development located at 22-36 Mountain Street. Land uses directly to the east of the site include mixed use developments, including shop top housing and residential flat buildings. Developments range between 2 and 7 storeys. The site is approx. 200m away from Wattle Street, a classified road. Further east includes significant tertiary education facilities, including both Tafe NSW Ultimo and the University of Technology Sydney, Ultimo campus.
West	The site at 1-3 Small Street, directly adjoining the site, is the subject of a development application (D/2024/984) approved by the Central Sydney Planning Committee on 5 November, 2024. The DA granted approval for alterations and additions to a commercial warehouse building to provide co-living rooms, a rooftop addition for communal open space and communal facilities, ground floor retail tenancies, end of trip facilities and waste storage areas. The development comprises a maximum building height of 35.22m and an FSR of 5.90:1. The land uses to the west of the site include an E1 – Local Centre zone which encompasses the Broadway Shopping Centre and local neighbourhood shops along Broadway and Glebe Point Road. Further south-west includes Victoria Park and the University of Sydney, a significant tertiary education facility.

2.4 Transport Context

The site is strategically located within a highly accessible precinct, benefiting from proximity to multi-modal public transport infrastructure, active transport routes and links to key road corridors.

Figure 5 Transport Context



Source: Urbis

- **Bus Services:** The site is within a 200m walking catchment of public transport (bus services) located along Broadway, with direct services to the CBD and Inner West suburbs.
- **Active Transport:** The site is also proximate to a network of shared paths and bicycle lanes, extending along Wattle Street and Mary Ann St, providing active transportation linkages between the site and broader Sydney.
- **Road Network:** Mountain Street links directly with Broadway, which provides a direct connection to the A22. Mountain Street also links with Wattle Street, via Kelly Street. As such, the site is afforded essential north-south and east-west access to various parts of the city and beyond.
- **Rail, Light Rail and Metro:** The site is located approximately a 14 minute or 1km walk to Central Station which provides significant connectivity rail, light rail and metro services traversing Greater Sydney and beyond.

3 Background and Pre-Lodgement

3.1 Planning History

The site has been subject to several Development Applications (DAs) since 2005 which are relevant to this Planning Proposal, as detailed in **Table 3** below.

These approvals have progressively enabled the site's redevelopment. The original consent in 2005 approved demolition and the construction of a 5-8 storey commercial building with basement parking, together with the retention and conservation of the State heritage-listed substation at 41 Mountain Street. This would have resulted in a maximum building height of 27.7m and an FSR of 4.34:1.

Subsequent modifications allowed for time extensions and design refinements, including reconfiguration of internal layouts and adjustments to building elements. Ultimately, the approved development was not constructed and following demolition, the site has remained vacant, primarily used as storage by the previous owner Ausgrid.

Table 3 Previous Development Applications

Application No.	Description	Decision
D/2005/1562	Demolition of existing buildings at 43–49 Mountain Street and construction of a 5–8 storey commercial building with 4 basement levels (64 parking spaces); retention and conservation works to the State heritage listed substation at 41 Mountain Street.	Deferred Commencement (08/09/2006)
D/2005/1562/A	Extension of time to satisfy conditions of the Deferred Commencement Consent from 12 months to 2 years.	Approved (30/01/2007)
D/2005/1562/B	Further amendment to timeframe in Part A of the consent.	Approved (27/03/2008)
DU/2001/833/A	Modification to approved 5–8 storey retail/commercial building: inclusion of additional lift, minor internal reconfiguration (Levels 2–7), removal of Level 4 basement, escalator, and balconies; minor decrease in building height and floor-to-ceiling heights.	Approved (29/01/2009)
D/2007/1318	Integrated DA for fit-out and ancillary works to the substation building and ground floor of approved building for use as a hotel with Place of Public Entertainment (PoPE), with proposed 24-hour trading. Heritage Office approval required.	Refused (17/07/2008)
D/2009/37	Strata subdivision of building into 64 lots and common property.	Approved (11/02/2009)
D/2009/228	Strata subdivision of Levels 1–4 into 32 lots and common property.	Approved (27/02/2009)

3.2 Pre-Lodgement

Between October 2024 – August 2025, the project team met with the City of Sydney on a number of occasions. These meetings informed the proposed approach for the project and are summarised below:

- **10 October 2024** - the proponent and project team including Bates Smart Architects and Urbis, met with Council to discuss potential development opportunities for redevelopment of the site to deliver built-to-rent housing and revitalise the existing State Heritage Listed Mountain Street Substation and what is presently an underdeveloped lot.

  The subject of discussion related to the existing development consent which contemplated development up to 8 storeys and an FSR of 4:1 over the site. It was advised that this consent was no longer valid, and a site-specific planning proposal would be the appropriate planning pathway.
- **18 December 2024** - following this, Bates Smart prepared a preliminary development scheme, and a further meeting was held with Council. A number of planning and design matters were raised during this meeting, including the opportunity to further refine the scheme and review the density proposed to support the delivery of additional housing within the site. It was agreed that the development scheme would be submitted to the City of Sydney's Design Advisory Panel (DAP) for review in February 2025.
- **13 February 2025** – Design Advisory Panel (DAP) meeting. See Section 3.3 below for a summary of the meeting.
- **9 April 2025** – Following a detailed tree assessment by the project Arborist, an on-site meeting was undertaken with representatives of the Applicant and Council's Technical Tree Officers to discuss tree removal, replacement and retention on and proximate to the site.
- **14 May 2025** – Council confirmed that it had conducted a detailed inspection of the plane tree in Mountain Street and have found that the tree has *"multiple defects resulting from cockatoo damage to create breeding hollows. We expect that the damage and decay to this tree will progress, and reduce the future safe useful life of the tree."* As a result of this investigation, Council did not object to the removal and replacement of the tree.
- **May – August 2025** – Ongoing amendments to the preliminary design package which removes and replaces the street tree, and in response to feedback from the DAP. Further ongoing discussions between the proponent on the need to align with the City of Sydney's Affordable Housing Programme (as amended) and refinement to the design. Ongoing discussions related to the planning approval pathway and in particular support for a concurrent Planning Proposal/Development Application process to ensure delivery of affordable housing in an expedited manner.

3.3 DAP Meetings

The DAP considered the preliminary concept scheme options for the proposed Planning Proposal at 41 & 43-49 Mountain Street, Ultimo at its meeting on 13 February 2025.

The following key recommendations and responses were made:

Table 4 Previous Development Applications

Design Matter	Response
Retention of existing plane tree on Mountain Street is strongly preferred. The scheme is to be modified to ensure its protection	Council's Tree Officer has supported removal of the existing plane tree on Mountain Street, due to multiple defects – and adequate replacement. This has been shown on the amended indicative reference scheme.

Southern courtyard fronting Mountain Street (as shown in Study 1, DAP package dated 28 January 2025) should be included in the proposal to support tree retention, ventilation, and amenity.	As the tree removal has been supported by Council Officers, the southern courtyard has been removed with an activated frontage provided in the proposed amendments.
Building heights and setbacks should better respond to surrounding built form:	
Southern wing street wall height to align with 55 Mountain Street.	A southern wing streetwall of 23.5m has been provided to align with 55 Mountain Street.
Two wings should be expressed at different heights for contextual fit.	Bates Smart have explored precedent studies, and explored a reference design sketch to indicate a potential approach to how the facade might be expressed. A design excellence competition will provide further opportunity for this to be explored and refined in more detail. An opportunity exists to unify the street wall expression through a single material treatment that reinforces the vertical hierarchy of base, middle, and crown. This tripartite composition responds directly to the established datum lines of the surrounding context, offering a respectful yet contemporary dialogue with neighbouring buildings. Base — Anchored by the adjacent heritage building, the lower portion grounds the development in its historical setting. Middle — Aligns with the scale and rhythm of neighbouring structures, maintaining continuity along the streetscape. Crown — Articulates the upper extent of the street wall, subtly distinguishing the new intervention while completing the urban profile. This approach allows the massing to read as both contextual and cohesive, while offering a clear architectural language that supports the overall design narrative.
Upper levels above street wall height to be set back ~3m with change in materiality to relate to adjoining buildings.	An upper-level setback of 3m above the street-wall at Mountain Street has been provided.
Western wing street wall height to align with 1–5 Smail Street, with masonry element increased by two storeys.	The western wing street wall is proposed at a height of 43.5m (with an upper setback of 3m) to respond to the height of 1-5 Smail Street.
Proposal must demonstrate compliance with draft DCP controls (tree planting, deep soil, green roof provision), including showing green roof/canopy in the reference scheme.	25% of the site area is provided as Communal Open Space. This is proposed to be provided on both the southern wing roof (217sqm) and western wing (134qsm). These areas receive high levels of solar access, views and amenity for future occupants.
The pedestrian laneway around the heritage substation should be retained with details of public access provided	A pedestrian laneway around the heritage substation will be provided.

The scheme should address the adjoining development at 1–5 Smail Street, particularly in relation to communal open space	The proposed upper level of the western wing (i.e. Level 13) provides communal open space which will be adjacent to the communal open space area of 1-5 Smail Street.
The DAP and Council requested that affordable housing be considered in light of the uplift sought, noting that Council's draft Affordable Housing Program proposes a contribution of 20 per cent of additional residential floor space.	The Proponent has sought to provide affordable housing aligned with the draft Affordable Housing Program.

In response to feedback from the DAP and Council, the project team further developed the indicative reference scheme to be reconsidered by the DAP.

A summary of this design evolution and key numerics related to affordable housing are detailed in Table 2.

Table 5 – Design Evolution

	DAP scheme (Study 3)	**COS meeting**	**Post COS Meeting**	**Scenario 1 (2 x levels on Smail)**	**Scenario 2 (1 x level on Smail & Mountain)**
Date	January 2025	7 July 2025	July 2025	August 2025	August 2025
GFA (sqm)	7,060	7,404	7,059	7,745	7,873
DA Programmes	Aug-26	Aug-26	Aug-26	Feb-27	Feb-27
Units	103	98	94	102	105
Affordable Share	20%	16%	7%	16%	20%
Affordable Rents	Federal Government caps (higher rents)	Federal Government caps (higher rents)	Federal Government caps (higher rents)	City of Sydney caps (lower rents)	City of Sydney caps (lower rents)
Affordable Cohorts (*Household Income Bands*)	Moderate 80% Low Income 20%	Moderate 80% Low Income 20%	Moderate 80% Low Income 20%	Moderate 55% Low Income 35% Very Low Income 10%	Moderate 50% Low Income 43% Very Low Income 7%

Importantly, the evolution of the preliminary concept design scheme has been driven to respond to the recently endorsed Affordable Housing Programme Updates by providing the dedication of 20% of the total floor space uplift for affordable housing.

The proposed Scenario 2 scheme was reconsidered by the DAP at its meeting on 4 September 2025. Following feedback, the below design changes were made as part of the reference scheme in this Planning Proposal:

- Smail street building height increased to 15 storeys, whilst Mountain Street building height remains 7 storeys.

- Apartments added to atop the Mountain Street block, with generous setbacks from the street.
- Increased southern setback to 10m from level 01 through to the roof.
- Improvement of courtyard space between proposal and 55 Mountain Street.
- Replacement of roof terrace with additional residential level.
- Removal of balconies from the two south-facing apartments on Levels 1 to 14.

4 Statutory Planning Context

The *Sydney Local Environmental Plan 2012* (**SLEP 2012**) is the principal Environmental Planning Instrument applying to the site.

4.1 Land Use Zoning

The site is zoned MU1: Mixed Use in accordance with the SLEP 2012. The relevant zone objectives include:

- *To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.*
- *To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.*
- *To integrate suitable business, office, residential, retail and other land uses in accessible locations that maximise public transport patronage and encourage walking and cycling.*

In the MU1 Zone, development for the purpose of a residential flat building, shop top housing and commercial premises is permissible with development consent.

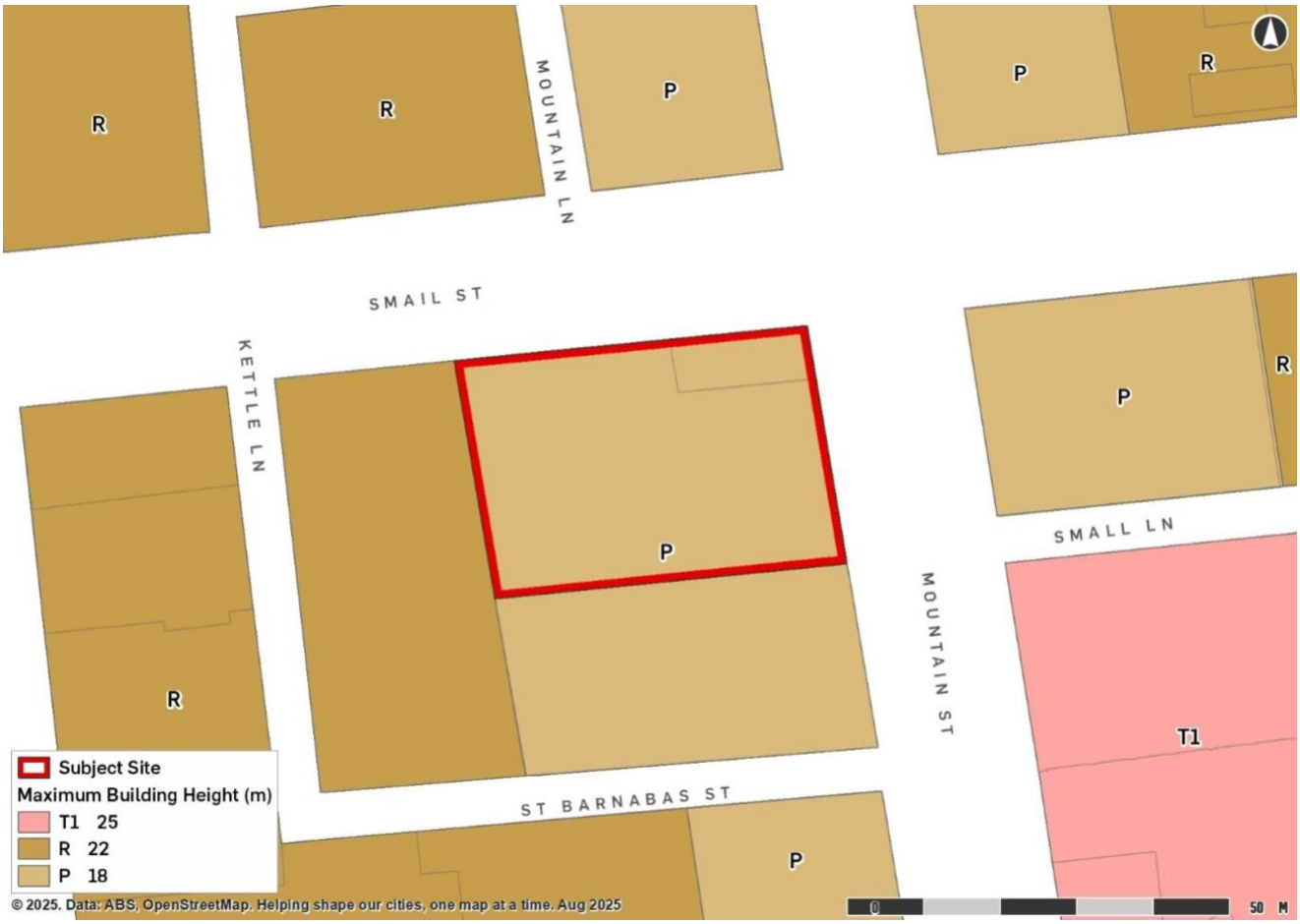
Figure 6 Zoning Map

Source: Urbis

4.2 Maximum Building Height

The site is subject to a maximum building height of 18m.

Figure 7 Building Height Map



Source: Urbis

4.3 Floor Space Ratio

The site is subject to a maximum permissible floor space ratio (**FSR**) of 2:1.

Figure 8 Floor Space Ratio Map

Source: Urbis

4.4 Heritage

The following heritage listings apply to the site:

Table 6 - Statutory Heritage Items

Heritage List	Item Name	Item Number
NSW State Heritage Register under the *Heritage Act 1977*	Electrical Substation No.5	SHR 00934
Sydney Local Environmental Plan 2012	Mountain Street Heritage Conservation Area	C68
Sydney Local Environmental Plan 2012, Schedule 5	Electrical Substation	Item No. I2053
NSW State Agency Section 170 Heritage and Conservation Register under *the Heritage Act 1977*	Electrical Substation No. 5	3430486

The site is within the Mountain Street Conservation Area (C68) and is identified as a contributing item at 41 Mountain Street and as a Detracting item at 43-49 Mountain Street within Sydney DCP 2012.

The site is also located within the vicinity of the following heritage items:

- I2018 – 185-211 Broadway, Ultimo. Former "Grace Bros Homewares" including interior – local significance.
- I2052 – 16-20 Mountain Street - Former Sydney Technical College School of Rural Studies Including Interior – local significance.
- I2054 – Warehouse "Wilcox Mofflin" Ltd. - local significance.
- I2055 – 57-61 Mountain Street - St Barnabas Anglican Church Site Remnant Building Components and Grounds – local significance.

Figure 9 Heritage Map

Source: Sydney LEP 2012, HER_009.

4.5 Other LEP Clauses

A number of other LEP clauses apply to the site, including:

Table 6 - Statutory Heritage Items

LEP Map	Site Features
Acid Sulfate Soils Map	The site is identified as part Class 5 and part Class 2 Acid Sulfate Soils.
Locality and Site Identification Map	The site is identified as residual lands.
Public Transport and Accessibility Map	The site is identified as Category D.
Design Excellence	The proposal is subject to design excellence and a competitive design process under Clause 6.21D of the SLEP 2012.

4.6 Sydney Development Control Plan 2012

The Sydney Development Control Plan 2012 (**SDCP 2012**) is the relevant development control plan which applies to the site. A site specific DCP is contained under separate cover (**Appendix A**).

5 Strategic Planning Context

The Planning Proposal is consistent with and supports a range of strategic planning outcomes established by Council and the NSW Government.

This section provides a brief overview of the strategic planning policies relevant to the Planning Proposal and how the vision and intended outcomes for the site will implement or otherwise be consistent with the relevant plans and policies.

Detailed consistency of the proposal with the relevant State and local strategic planning documents is demonstrated in **Section 7** of this report.

Table 71 - Strategic Context

Document	Description
A Metropolis of Three Cities: Greater Sydney Region Plan	A Metropolis of Three Cities: Greater Sydney Region Plan (**Region Plan**), finalised by the Greater Sydney Commission (**GSC**) in March 2018, provides a 40-year vision to (2056) and establishes a 20-year plan to manage growth and change for the Greater Sydney region. The Region Plan is built on a vision of three cities, "where most residents live within 30 minutes of their jobs, education and health facilities, services and great places". It identifies four themes: infrastructure and collaboration, liveability, productivity, and sustainability. Within these four themes, a set of planning priorities and actions are identified to achieve the Region Plan's vision. The Region Plan includes a high-level structure plan identifying key centres, employment areas, and important infrastructure contributions. The site is located within the Eastern Harbour City, which is characterised as being well-established, well-serviced and highly accessible by its radial rail network, it has half a million jobs and the largest office market in the region. The Eastern Harbour City is identified to grow in population from 2.4 million people in 2016 to 3.3 million people by 2036. The Eastern Harbour City is a mature mix of well-established communities, from traditional suburban neighbourhoods to Australia's most highly urban areas. Growth will bring urban renewal with increased infrastructure and services, open spaces and public places. Sympathetic infill development will focus on improved local connections. This Planning Proposal contributes to the 30-minute city vision and response to key themes of the Region Plan as detailed in Section 7 of this report.
Eastern City District Plan	The Eastern City District Plan (**District Plan**) was finalised by the GSC in conjunction with the Region Plan in March 2018 and fulfils the directions and objectives of the Region Plan at a district level. The District Plan sets out planning priorities and actions for improving the quality of life for residents. The District Plan's objective is to improve the District's social, economic and environmental assets. Growth in the Eastern City will be supported by previously unparalleled levels of city-scale infrastructure investment including transport, public realm and sporting and cultural institutions, which will attract and retain new and existing businesses in the Harbour City. Creating more housing in the right locations is an important requirement set out by the District Plan. Unlocking housing capacity in the right locations is pivotal, ensuring homes for the next generation is to be linked to local

	infrastructure. This will achieve both the optimisation of existing infrastructure use and also maximise investment in new infrastructure. The Planning Proposal is consistent with the District Plan as it aligns with the identified Planning Priorities as discussed in Section 7 of this report.
Sustainable Sydney 2030 – 2050	Sustainable Sydney 2030-2050: Continuing the Vision (**Sustainable Sydney**) was finalised in April 2023 to guide Sydney's development towards a sustainable, inclusive and resilient future. The document envisions a Green, Global and Connected City, focusing on environmental sustainability, economic growth and social cohesion. Sustainable Sydney emphasises climate action, aiming for net zero emissions by 2035 and a 50% increase in tree canopy cover by 2030. It supports Sydney's role as a global city, fostering innovation and creativity, with a goal of creating 200,000 new jobs by 2036. Social inclusivity is also key, with targets for affordable and social housing. For Ultimo, the plan highlights the Pyrmont and Ultimo innovation and design precinct, connecting education, museums, media and start-ups. This precinct is set to be a hub of creative thinking and technology, enhancing Sydney's global competitiveness and cultural vibrancy. The Planning Proposal contributes to Sustainable Sydney as outlined in Section 7 of this report.
City Plan 2036	City Plan 2036: Local Strategic Planning Statement (**LSPS**) was finalised in March 2020 to guide Sydney's growth and development over the next two decades. The LSPS outlines a vision for a Green, Global and Connected City, focusing on infrastructure, liveability, productivity and sustainability. The LSPS aims to accommodate a growing population, with 56,000 new dwellings and 200,000 additional jobs by 2036. The LSPS emphasises the importance of aligning development with infrastructure, enhancing public transport, and creating walkable neighbourhoods. The LSPS also prioritises affordable housing, aiming to increase the supply of social and affordable rental housing. For Ultimo, the LSPS highlights the Camperdown-Ultimo Health and Education Precinct within the Innovation Corridor. This area is set to become a hub for knowledge-intensive industries, leveraging its proximity to major educational institutions and fostering collaboration between business and academia. The Planning Proposal aligns with the LSPS as discussed in Section 7.
Housing for All: City of Sydney Local Housing Strategy	Housing for All: Local Housing Strategy (**LHS**) was finalised in June 2020 to guide Sydney's housing development over the next 20 years. The LSPS outlines a vision for a diverse, connected and resilient city, focusing on housing supply, affordability and quality. The LSPS aims to deliver 56,000 new dwellings by 2036, ensuring a mix of housing types to support a diverse community. The LSPS emphasises the importance of affordable and social housing, targeting 7.5% of all housing to be affordable rental and 7.5% to be social housing. The LSPS also highlights the need for high-quality urban design and sustainable development to enhance liveability. For Ultimo, the LSPS underscores the importance of the Camperdown-Ultimo Health and Education Precinct. This area is set to become a hub for

diverse housing options, leveraging its proximity to major educational institutions and fostering a vibrant, inclusive community.

The Planning Proposal aligns with the LHS as discussed in Section 7.

6 Indicative Development Outcome

6.1 Vision

The Planning Proposal aims to deliver a new mixed-use residential BTR development, featuring active ground-floor uses and BTR apartments above, along with rooftop communal open space. The proposal will facilitate these aims in a well-located infill location, which has historically been underutilised and underdeveloped. The proposal also includes the adaptive reuse of the heritage-listed substation located on the corner of Mountain and Smail Street.

The indicative development outcome will provide for the following:

- Built form up to part 7 storeys, part 15 storeys with a mix of 107 rental apartments and resident-focused amenities, ground floor activation and retail with a total GFA of 7,712m² and a maximum height of 53m.
- Communal open space with a total area of 292m².
- 1 level of basement including plant, storage and parking.
- Laneway from Smail Street providing vehicular access to the site.
- Conservation and adaptative reuse of the State Heritage listed substation.

6.2 Design Principles and Reference Scheme

Responding directly to the site opportunities and constraints, the indicative development outcome has been informed by and includes provision for:

- Integration of an active ground floor plane along Mountain and Smail Street.
- Adaptive reuse of the heritage listed substation and setbacks and building separation that respect the heritage curtilage of the site.
- Leveraging the sites orientation to achieve suitable solar access outcomes.
- Enhanced urban greening, visual separation and screening in coordination with the existing mature street trees along Mountain Street.

A reference scheme for the indicative development outcome has been prepared by Bates Smart which provides an illustrative outcome of a potential future development. The design demonstrates that the proposed planning envelope can deliver a feasible mixed-use development on the site, supporting the amendments to the SLEP 2012 and controls proposed in the site specific DCP.

Further details of the development outcome capable of being supported through the Planning Proposal is provided in the following sections, along with the reference scheme prepared by Bates Smart.

6.2.1 Built Form

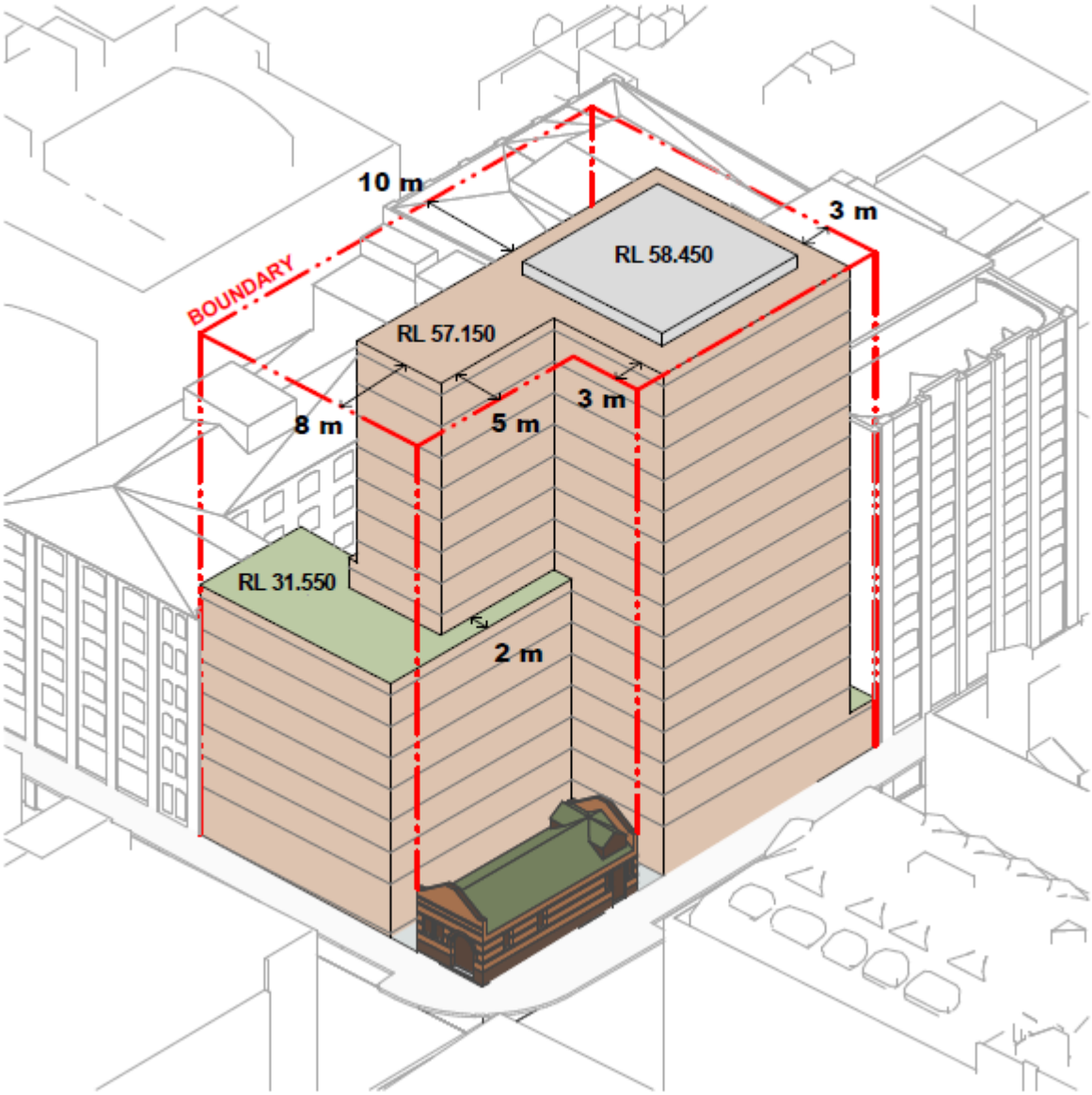
Building Height and Massing

The proposal adopts a sensitive approach to height, form and setbacks to respect its heritage context and surrounding built form. A 3m setback is provided around the heritage building to allow for a new public laneway at ground level, along with a 3m setback from the western boundary, 9m from the southern boundary, and a further 10m setback to the upper levels.

The built form is arranged into two separate blocks to respond to the varied scale of the immediate context. The western block, adjoining 1–3 Smail Street, aligns in height with the tops of the adjacent piers, while the eastern block reduces in storeys and adopts a distinct material change to transition more sensitively to 55 Mountain Street to the south. This arrangement addresses the approximate 10m variation in height across neighbouring buildings and provides a considered scale transition at the corner site.

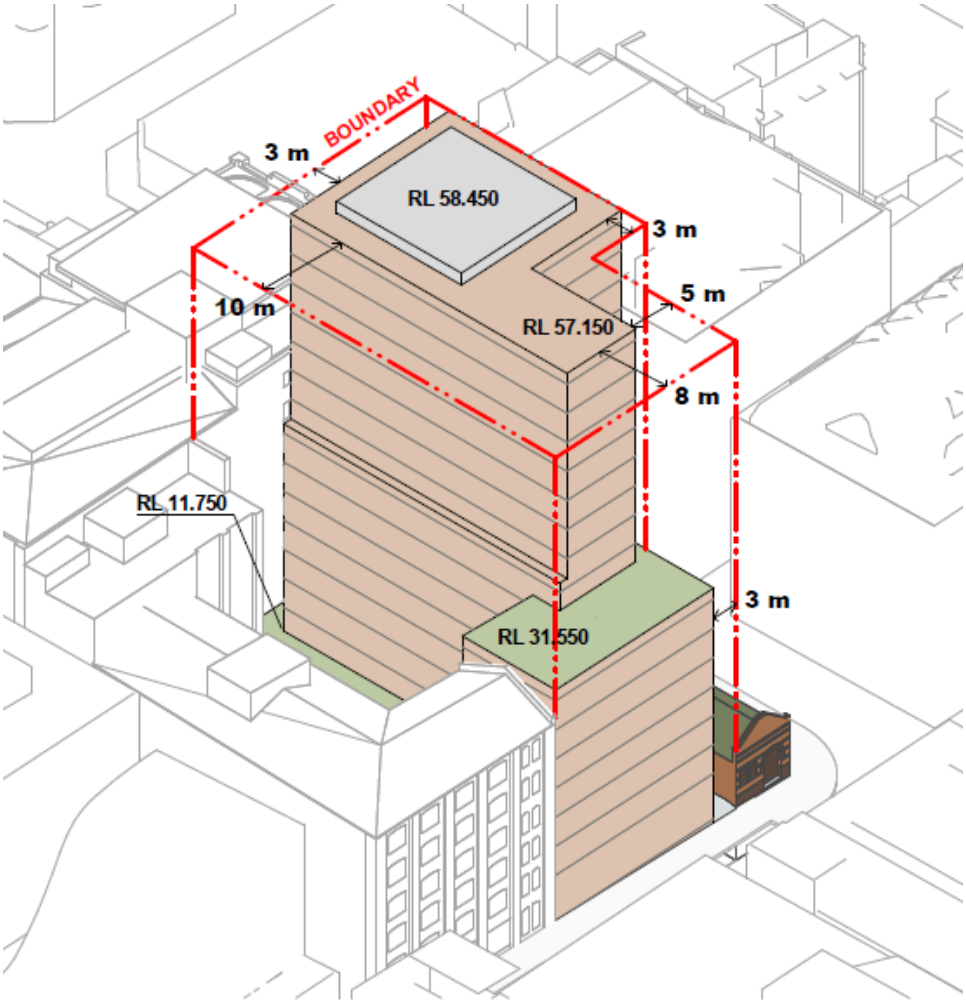
Massing is designed to complement adjacent buildings, with facades aligned and street walls reinforced. A solid, masonry architectural language establishes continuity with the surrounding context, while an uplift crown element above the base introduces visual interest and a clear architectural hierarchy. Floor levels are set to respond to established datum heights, ensuring integration with the wider streetscape.

Figure 10 North East Aspect Height and Setbacks



Source: Bates Smart

Figure 11 South East Aspect Height and Massing

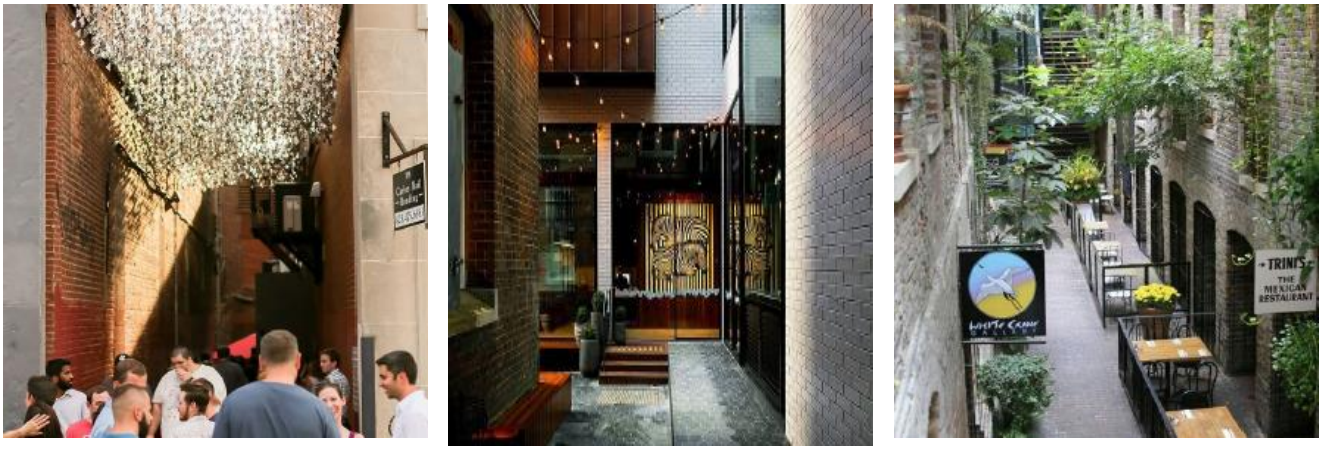


Source: Bates Smart

Laneway

The proposal includes a new public laneway between the building and the existing substation, improving pedestrian permeability and connectivity within the precinct. The laneway has capacity to accommodate active uses such as cafés and small-scale retail, supporting passive surveillance and contributing to an activated public domain. By providing a high-quality, pedestrian-friendly environment, the laneway enhances local walkability, establishes a stronger sense of place, and integrates with the broader neighbourhood movement network.

Figure 12 Reference Scheme Laneway



Source: Bates Smart

6.2.2 Sustainability

The Planning Proposal will facilitate development as detailed in the reference scheme and will achieve:

- Independent ESD certification equivalent to a 5-Star Green Star Rating.
- Minimum 5 Star WELS rating for all taps, toilets, showers and urinals.
- Full compliance with NCC Section J energy efficiency provisions.
- BASIX or equivalent certification for residential components.
- Alignment with the project's environmentally sustainable design brief.

6.2.3 Building Elements, Land Uses and Distribution

The indicative reference scheme envisages the following 'key moves' for each proposed building element:

Table 8 Reference Scheme Key Moves

Building Element	Key Moves	Land Use	GFA
Ground Level	▪ Substation with 3m wide lane way. ▪ Central Lobby and Retail accessed via Lane way. ▪ Secure access to car park and loading dock. ▪ Double sided retail laneway. ▪ Predominant retail activation to the perimeter of Smail and Mountain Street.	Retail / Lobby / Loading	753m^2
Level 01	▪ Generous terraces in landscaped courtyard. ▪ 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B. ▪ Apartments with >2H solar access: 8/10 (80%). ▪ Apartments with cross ventilation: 7/10 (70%)	Residential	715m^2

	▪ 10m to South facade.		
Level 02-06 (Typical)	▪ 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B. ▪ Apartments with >2H solar access: 8/10 (80%). ▪ Apartments with cross ventilation: 7/10 (70%). ▪ 10m to South facade.	Residential	715m² per floor
Level 07 – Communal	▪ Communal open space with communal room. ▪ 5 apartments per floor: 4 x 1B, 1 x 2B ▪ Apartments with >2h solar access: 3/5 (60%) ▪ Apartments with cross ventilation: 3/5 (60%) ▪ 10m setback to South facade. ▪ Eastern wall of courtyard aligns with neighbour.	Residential / Communal Open Space	415m²
Level 08-14	▪ 3m Setbacks to Mountain Street Block. ▪ 6 apartments per floor: 4 x 1B, 2 x 2B ▪ Apartments with >2H solar access: 4/6(67%). ▪ Apartments with cross ventilation: 4/6 (67%). ▪ 10m to South facade.	Residential	560m² per floor
Roof Level	▪ Generous setback to plant enclosure to minimise visibility. ▪ Lift overrun concealed by plant enclosure.	Plant/Lift Overrun /Residential	Nil
Basement Level	▪ Single level proposed to minimise excavation. ▪ No excavation proposed below substation. ▪ Ramp in south west corner to minimise impact on prime usable spaces above. ▪ Provision for bicycle parking. ▪ Motorcycle parking is achieved.	Ancillary to residential / carparking	Nil

6.3 Draft Development Control Plan

A draft site specific DCP has been prepared in support of the Planning Proposal. The draft DCP provides specific controls relating to:

- Maximum building envelope
- Heritage

- Public domain
- Heritage
- Sustainability

7 The Planning Proposal

This Planning Proposal has been prepared in accordance with Section 3.33 of the EP&A Act and the DPHI guideline 'Local Environmental Plan Making Guideline' dated August 2023.

This section addresses each of the matters to be addressed as outlined in the guidelines, including:

- Objectives and intended outcomes.
- Explanation of provisions.
- Justification including need for proposal, relationship to strategic planning framework, environmental, social and economic impacts, and State and Commonwealth interests.
- Draft LEP maps which articulate the proposed changes.
- Likely future community consultation.

7.1 Part 1: Objectives and Intended Outcomes

7.1.1 Objective

To amend the SLEP 2012 to include site-specific provisions under Division 5 which will enable the renewal of the site for a BTR housing and retail development.

7.1.2 Intended Outcomes

The intended outcomes include:

- Revitalise this vacant and underutilised site to facilitate a high quality BTR residential development.
- Establish a building envelope that responds to the environmental and built form considerations of the immediate site context.
- Establish overall height datums that respect the scale and form of adjacent buildings and one that will facilitate exemplar design excellence in response to the existing heritage item on site.
- Unlock greater housing affordability and diversity to meet the needs of the LGA.
- Strengthen and activate the site through improved pedestrian legibility and public domain upgrades.
- Enable a built form outcome that capitalises on existing infrastructure and promotes sustainability outcomes.
- Support Ultimo's role as a key inner city education, innovation and employment hub by delivering housing in close proximity to universities, cultural institutions, and major transport connections.

7.2 Part 2: Explanation of Provisions

7.2.1 Intended Provisions

The objectives and intended outcomes of the Planning Proposal will be achieved by amending the SLEP 2012, as follows:

- Insert a new site-specific provision for 41 & 43-49 Mountain Street, Ultimo, under Division 5 as follows:

  (1) The objective of this clause is to encourage the redevelopment of 41 & 43-49 Mountain Street, Ultimo to create an integrated residential tower form on the site.

  (2) This clause applies to 41 & 43-49 Mountain Street, Ultimo, being Lot 1 in DP 191928 and Lot 21 in DP 5567.

  (3) Despite any other provision of this Plan, the consent authority may grant development consent to development on the land to which this clause applies that will result in a building –

  (a) with a maximum building height of RL 58.450, and

(b) with a maximum gross floor area of 7,844m², or a total FSR across the site of 5.4:1.

(4) Development pursuant to this clause is not eligible for an amount of additional height or floor space under clause 6.21D(3).

The proposed amendment includes written instrument changes only. The Planning Proposal is supported by a draft site-specific DCP that includes key built form controls.

7.2.1.1 Rationale for Proposed LEP Amendments

Height of Buildings

The Planning Proposal is seeking to introduce a maximum building height of 53m (RL 58.450) to the site.

The maximum height of building amendments will ensure that future development on the site provides for a positive contribution to the locality, that respects existing built form, the heritage curtilage of the site and the proximate HCA whilst providing significant residential amenity and a public realm comprising retail offerings. From an environmental planning perspective, the maximum height of buildings control has been selected to establish positive outcomes including respecting residential amenity and limiting overshadowing to adjoining development. The maximum height of buildings control provides a stepped transition from the height of adjoining development, and will ensure the provision of 20% affordable housing can be delivered on site.

Floor Space Ratio

The Planning Proposal is seeking to introduce a maximum floor space ratio of 5.4:1 to the site.

The maximum floor space ratio control will ensure that future development is appropriately configured on the site, respecting existing setbacks, building separation and sight lines on the corner allotment setting. The maximum floor space ratio control will ensure that compliant landscaping, private open space as well as retail and affordable housing provision can comfortably be accommodated on the site.

Design Excellence Bonus

Whilst future development will be required to demonstrate design excellence, including the completion of a competitive design excellence process pursuant to clause 6.21D, the site constraints limit the maximum building height for this portion of the site. The additional gross floor area identified for the site represents a maximum potential GFA based on the potential built form outcome and therefore, any potential bonus available under 6.21D(3) or otherwise has been absorbed into the overall GFA allowance.

7.3 Part 3: Justification of Strategic and Site-Specific Merit

The LEP Making Guideline identifies that the Minister (or delegate) must be satisfied that the proposal has strategic and site-specific merit and that identified potential impacts can be readily addressed during the subsequent LEP making stages.

Consistent with the assessment criteria outlined in the LEP Making Guidelines, **Table 9** outlines an assessment against the criteria for strategic and site-specific merit.

Table 9 Strategic and site-specific merit assessment

Assessment Criteria	Response	Consistency
Does the proposal have strategic merit? Does the proposal:		
Give effect to the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, and/or corridor/precinct plans applying to the site	**Yes.** The proposal will give effect to the Eastern City District Plan. Through the delivery of affordable housing and facilitating the delivery of new housing supply. The proposal will deliver long-term institutionally owned and managed rental housing, focused on	**Consistent**

	quality and equality via a suitable apartment mix for the area, with excellent in-house amenity and customer-focused managed of the site. The site is located on the southern edge of the CBD and is highly accessible to public transport and jobs. Detailed consideration has been given to the compatibility of the proposal with the character, setting and heritage of the Mountain Street Conservation Area. The Planning Proposal gives effect to the relevant Planning Priorities of the District Plan as detailed in **Table 10.**	
Demonstrate consistency with the relevant LSPS or strategy that has been endorsed by the Department or required as part of a regional or district plan.	**Yes.** The planning proposal is consistent with City Plan 2036, the City of Sydney's endorsed LSPS. The proposal provides for increased density in a strategically appropriate location, while balancing clear design excellence criteria with targeted sustainability outcomes. The Planning Proposal demonstrates consistency with the relevant LSPS as detailed in **Table 10.**	**Consistent**
Respond to a change in circumstances that has not been recognised by the existing planning framework.	**Yes.** The Planning Proposal will facilitate a significant BTR development comprising retail activation that could not be achieved under the current planning controls applying to the site.	**Consistent**
Does the proposal have site-specific merit? Does it have regard and assess impacts to:		
The natural environment on the site to which the proposal relates and other affected land (including known significant environmental areas, resources or hazards)	**Yes.** The Planning Proposal carefully considers the natural environment of the site and surrounds. An indicative development outcome has been prepared, confirming no significantly adverse environmental impacts. The proposal also establishes parameters to ensure future development aligns with the City of Sydney's Net Zero targets and incorporates an integrated landscape strategy to enhance the natural environment both on site and within the immediate proximity. This reflects a strong commitment to environmental sustainability alongside appropriate development.	**Consistent**
Existing uses, approved uses, and likely future uses of land in the vicinity of the land to which the proposal relates.	**Yes.** The Planning Proposal considers the existing and future land uses of the site and surrounding context, as well as the envisaged growth in the locality. It will deliver a BTR development that comprises a significant affordable housing public benefit. The revitalisation of the site will enhance public domain activation and local amenity, and heritage conservation generating positive flow-on effects for the diverse range of current and anticipated land uses within Ultimo.	**Consistent**

Services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision.	**Yes.** The Planning Proposal has been prepared with consideration for the required services and infrastructure. Any future development, at the intensity proposed, is capable of being adequately serviced by public infrastructure. Any necessary modifications and upgrades will be coordinated with relevant authorities to ensure the required utilities are provided.	**Consistent**

7.3.1 Section A – Need for the Planning Proposal

Q1. Is the Planning Proposal a result of an endorsed local strategic planning statement, strategic study or report?

Yes. The Planning Proposal has been prepared to give effect to the priorities and actions of:

- *City Plan 2036*, the City of Sydney's endorsed local strategic planning statement, which sets the land use vision and priorities to guide future development and manage change.
- A detailed review of the consistency of the proposal against the CSPS and LSPS is provided in response to Q4. below.

The strategic planning framework applying to the site recognises the need for additional housing supply within this inner-city context. The renewal opportunity the proposal offers is of strategic significance within a district context. Its proximity to major existing transport infrastructure means the site is well positioned to deliver an outcome that improves the built environment in Ultimo, in particular through deliver of greater housing choice and civic amenity.

Q2. Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. The Planning Proposal is the best means of achieving the objectives and intended outcomes. The amendments to the SLEP 2012, as outlined in **Section 6** are required to facilitate the proposed development outcome.

The introduction of the site-specific provisions detailed in **Section 7** is the best way to realise the objectives and intended outcomes of the Planning Proposal. Specifically:

- A site-specific clause is required to be inserted into Division 5 of the LEP to achieve the objectives and intended outcomes of the planning proposal. This can only be achieved by amending the LEP.
- A Planning Proposal is the only realistic pathway to enable the development. This has been confirmed in collaboration with Council. Other statutory measures to implement the objectives and intended outcome of the planning proposal were considered however were not pursued as the best means to achieve the intended outcome.
- The Planning Proposal includes a site-specific DCP, which specifies tailored building envelope controls to guide a future competitive design process. This provides certainty for the landowner, Council and the community around the development outcomes expected for the site.

The Planning Proposal provides a proactive, strategic and balanced response to the land use opportunities and constraints of the site. The Planning Proposal is the most efficient and appropriate mechanism to deliver aligned planning outcomes in support of local and State strategic objectives.

7.3.2 Section B – Relationship to Strategic Planning Framework

Q3. Will the Planning Proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

Yes. The Planning Proposal will give effect to the objectives and actions of the applicable regional and district planning strategies as described in detail below:

Table 10 Relationship to Strategic Planning Framework

Objective	Consistency
Greater Sydney Region Plan: A Metropolis of Three Cities	
A Metropolis of Three Cities – The Greater Sydney Region Plan is the NSW Government's long-term strategy to manage growth across Sydney by creating the Western Parkland City, Central River City, and Eastern Harbour City. It responds to challenges of a projected 1.7 million increase in population by 2036, with a target to deliver 725,000 new homes and 1 million jobs.	
This Planning Proposal aligns with and gives effect to the Plan's vision and objectives, as outlined below:	
Infrastructure	**Consistent** The proposal supports the delivery of increased development in a location that is aligned with recent infrastructure investment, including the Sydney Metro.
Liveability	**Consistent** The proposal facilitates greater housing supply in a mixed-use area to support Greater Sydney's growing population. Objective 10 calls for an increase in supply of all types of housing, to which the proposal directly responds through the provision of a mix of BTR apartment sizes, including affordable housing. The site is underutilised and undeveloped land within a mixed-use context. The site is also highly accessible from a transportation perspective with linkages to key multi-modal public transport infrastructure, active transport routes and key road corridors. The site is also proximate to key open spaces and proximate to key social infrastructure a variety of commercial and retail offerings.
Productivity	**Consistent** The Planning Proposal will facilitate active ground level retail uses, which will contribute to local employment within the area and align with the objectives of the mixed-use zone.
Sustainability	**Consistent** The planning proposal enables the development of a new building that achieves sustainability outcomes that align with the City of Sydney's Net Zero targets.
Eastern City District Plan	
The Eastern City District Plan sets a 20-year vision for sustainable growth in the Eastern District, including the City of Sydney, focusing on liveability, productivity, and sustainability. Under the Plan, the site is strategically positioned within the Eastern City CBD and the Eastern Economic Corridor.	
This Planning Proposal supports the following priorities of the Plan:	
Planning Priority E1. Planning for a city supported by infrastructure	**Consistent** The Planning Proposal supports the delivery of increased housing supply and commercial premises proximate to the CBD, making efficient use of

	the site's highly accessible transportation options (Such as Central Metro and Railway Station) to maximise existing infrastructure assets.
Planning Priority E5. Providing housing supply, choice and affordability, with access to jobs, services and public transport.	**Consistent** The proposal will significantly contribute to delivering on housing targets within the Eastern City District and the City of Sydney LGA. Through the provision of affordable housing, the proposal will aid in alleviating housing affordability issues. This will enable housing for critical key workers in the LGA and enable people the crucial opportunity to enter the housing market in an establish LGA.
Planning Priority E6 **Creating and renewing great places and local centres, respecting the District's heritage**	**Consistent** The proposal will contribute to creating a great place through the adaptive re-use of the existing heritage substation and introduction of pedestrian permeability through the proposed laneway and active retail frontages. Improved public domain elements such as planting and tree canopy will add vibrancy and vitality to a renewed street form along Smail Street.
Planning Priority E8 **Growing and investing in health and education precincts and the Innovation Corridor**	**Consistent** The Planning Proposal will facilitate an affordable, diverse and multi-purpose development to support the growth of the Camperdown-Ultimo Collaboration Area.
Planning Priority E10 Delivering integrated land use and transport planning for a 30-minute city	**Consistent** The District Plan aims for a 30-minute city by setting locations for new housing, jobs, education, health and other facilities close to new transport facilities. The transport initiatives relevant to the site include the Sydney Metro City & Southwest which provide improved services between the Harbour CBD, Greater Parramatta and North Sydney. The Planning Proposal will facilitate the 30-minute city vision as the site is located within a highly accessible transport context, including key amenities and services within a comfortable 5-minute walk from the site.
Planning Priority E19 Reducing carbon emissions and managing energy, water and waste efficiently	**Consistent** The proposal enables the development of a new building that provides for design initiatives to achieve sustainability outcomes that align with the City of Sydney's Net Zero targets.

Q4. Is the Planning Proposal consistent with a Council LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?

Yes. The Planning Proposal is consistent with the following relevant local strategy and planning studies as detailed below.

Table 11 - Local Strategy Consistency

Objective	Consistency
Sustainable Sydney 2030 – 2050 Sustainable Sydney 2030 is the City's vision for a "green, global and connected city" and includes 10 strategic directions which provide a framework to achieve this vision.	

This Planning Proposal demonstrates alignment with the following strategic directions of Sustainable Sydney:	
Direction 2: A leading environmental performer	**Consistent** The Planning Proposal enables the development of a new building that achieves sustainability outcomes that align with the City of Sydney's Net Zero targets, including targeting: ▪ Independent ESD certification equivalent to a 5-Star Green Star Rating. ▪ NABERS Energy Rating of 5 Stars for base building performance. ▪ Minimum 5 Star WELS rating for all taps, toilets, showers and urinals. ▪ Full compliance with NCC Section J energy efficiency provisions. ▪ BASIX or equivalent certification for residential components.
Direction 3: Public places for all	**Consistent** The Planning Proposal ensures future development provides for activation of the public realm.
Direction 4: Design excellence and sustainable development	**Consistent** Future development of the site will be the subject of a competitive architectural design process. It includes a site-specific DCP and Design Excellence Strategy that will ensure sustainability requirements are met.
Direction 5: A city for walking, cycling and public transport	**Consistent** The Planning Proposal is in a location that benefits from proximity to existing public transport infrastructure.
Direction 6: An equitable and inclusive city	**Consistent** The Planning Proposal allows for the redevelopment of an underutilised and undeveloped site for the provision of high-quality affordable housing.
Direction 8: A thriving cultural and creative life	**Consistent** The proposal provides ground level activation, enhancing street level activity that can provide opportunities for cultural activation and public engagement.
Direction 10: Housing for all	**Consistent** The proposal facilitates a significant affordable housing contribution consistent with the City of Sydney's affordable housing program.

City Plan 2036 – Local Strategic Planning Statement

The City of Sydney's endorsed local strategic planning statement, City Plan 2036, sets the land use vision and priorities to guide future development and management change.

This Planning Proposal aligns with the following priorities of the statement:	
Infrastructure	**Consistent** The Planning Proposal locates additional residential and commercial floor space in a strategically appropriate location, which is highly walkable and benefits from direct access to a number of public transport options, supporting efficient use of existing infrastructure.

Liveability	**Consistent** The Planning Proposal will delivery new housing supply in a key inner-city location. It includes a design excellence process, which ensures future development enhances the public realm, encouraging an inclusive and lively streetscape.
Productivity	**Consistent** The Planning Proposal will deliver additional commercial space in Ultimo, providing for employment growth and contributing to Sydney's role as a globally competitive economic hub.
Sustainability	**Consistent** The sustainability strategy accompanying the Planning Proposal sets out design initiatives to achieve sustainability outcomes that align with the City of Sydney's Net Zero targets.
Housing for All: City of Sydney local housing strategy The City of Sydney's endorsed Local Housing Strategy (**LHS**) links the City's vision for housing with the housing objectives and targets of the region and eastern city district plans.	
Priority H1 **Facilitating more homes in the right locations**	**Consistent** The Planning Proposal allows for more housing, creating opportunities for the delivery of public benefits including an activated ground plane retail offering and affordable rental housing. The site is proximate to the Harbour CBD and the Camperdown-Ultimo Collaboration Area. As such, the proposal facilitates homes in the right locations to support envisaged growth. The Planning Proposal is consistent with the 'Principles for Growth' in the LSPS.
Priority H2 **Coordinating housing growth with the delivery of infrastructure**	**Consistent** The Planning Proposal will deliver affordable housing on a site with significant utility and access to transport, open spaces, key social infrastructure and commercial premises.
Priority H3 **Increasing diversity and choice in housing**	**Consistent** The Planning Proposal will increase housing supply through delivery of a BTR product, facilitated across a mix of one, two- and three-bedroom apartments. The proposal will include affordable housing, ensuring the delivery of a diverse range of housing within a core inner-city area in Ultimo. The Planning Proposal contributes to the aspiration for a strong supply of rental accommodation in the City.
Priority H4 **Increasing the diversity and number of homes available for lower-income households**	**Consistent** The Planning Proposal will facilitate delivery of 7,712m² of GFA comprising 20% affordable housing. The affordable component will comprise a mix of offerings for moderate, low income and very low-income households.
Priority H7 **Increasing liveability, sustainability and accessibility through high-quality residential design**	**Consistent** Future development of the site will be the subject of a competitive architectural design process, as set through the Design Excellence Strategy accompanying this Planning Proposal that will ensure sustainability requirements are met.

Q5. Is the Planning Proposal Consistent with applicable State and regional studies or strategies?

Yes. The Planning Proposal is consistent with the following State and regional studies, as summarised in the **Table 12.**

Table 12 - State and Regional studies

State and Regional Studies	Consistency
Net Zero Plan Stage 1: 2020-2030	**Consistent** The Net Zero Plan Stage 1: 2020-2030 outlines the NSW Government's action on climate change and goal to reach net zero emissions by 2050. The proposal will facilitate opportunity for a future detailed development application to be submitted to Council for assessment that will be subject to the relevant ecologically sustainable design-built form controls. Effectively, this future reporting and design considerations will facilitate an outcome that details sustainability initiatives to be implemented and assist future built form in meeting Net Zero targets.
Future Transport Strategy: Our Vision for Transport in NSW (2022)	**Consistent** The Future Transport Strategy sets out the direction for improving every part of the State's transport system. The plan seeks to improve neighbourhoods, increase resilience, champion environmental sustainability and promote smart planning and a net zero transport network. The site is highly accessible from a transportation perspective, benefiting from proximity to multi-modal public transport infrastructure, active transport routes and links to key road corridors. As such, the proposal will contribute to the vision to support growth and connectivity across NSW.

Q6. Is the Planning Proposal consistent with applicable State Environmental Planning Policies?

Yes. The Planning Proposal is consistent with the relevant State Environmental Planning Policies (**SEPP**) as identified and discussed in **Table 13.**

Table 13 SEPP Consistency

SEPP	Consistency	Comment
SEPP (Housing) 2021	Consistent	The Planning Proposal aligns with the key principles of the Housing SEPP by offering a diverse range housing through apartment mix and addressing the needs of vulnerable groups through the delivery of affordable housing. It will deliver high quality housing supported by significant local amenity, and through leveraging existing infrastructure and minimising potential environmental impacts.
SEPP (Transport and Infrastructure) 2021	Consistent	The Planning Proposal is consistent with the provisions outlined in the T&I SEPP. Any matters relevant under the T&I SEPP will be assessed as part of the development application process.

SEPP (Biodiversity and Conservation) 2021	Consistent	The site is within a highly urbanised area and the site is currently vacant and cleared of majority of vegetation. Any matters relevant under the Biodiversity and Conservation SEPP will be assessed as part of the development application process.
SEPP (Resilience and Hazards) 2021	Consistent	The site is a historical operational site. Future works required to facilitate the development will require structural works and excavation for the basement level. Detailed geotechnical investigations will be undertaken as part of the development application process. A Detailed Site Investigation (**DSI**) has been prepared by Douglas Partners and is enclosed in **Appendix H.** The DSI concludes that the site can be made suitable for the proposed mixed-use development, subject to the implementation of a remediation action plan (**RAP**) and a data gap investigation which will be addressed at a future development application stage. Further details are contained in **Section 7.3.3.5** of this report.
SEPP (Sustainable Buildings) 2022	Consistent	The Planning Proposal is supported by a sustainable strategy which outlines the recommended approach to ensuring that any future development is capable of complying the Sustainable Buildings SEPP.

The following SEPPS are not applicable to the Planning Proposal –SEPP (Exempt and Complying Development Codes) 2008; SEPP (Industry and Employment) 2021; SEPP (Planning Systems) 2021; SEPP (Precincts – Central River City) 2021; SEPP (Precincts – Eastern Harbour City) 2021; SEPP (Precincts – Regional) 2021; SEPP (Precincts – Western Parkland City) 2021; SEPP (Primary Production) 2021; SEPP (Resource and Energy) 2021.

Q7. Is the Planning Proposal consistent with applicable Ministerial Directions (s. 9.1 directions)?

Yes. The Planning Proposal is consistent with relevant Ministerial Directions under Section 9.1 of the EP&A Act as identified and summarised in **Table 14.**

Table 14 Ministerial Direction Consistency

Ministerial Direction	Consistency	Comment
Focus Area 1: Planning Systems		
1.1 Implementation of Regional Plans	Consistent	The proposal gives effect to the Greater Sydney Region Plan, as detailed above.
1.3 Approval and Referral Requirements	Consistent	The Planning Proposal does not include specific provisions that require the concurrence, consultation or referral of development applications to the Minster or public authority. The Planning Proposal is not identified as designated development.

1.4 Site Specific Provisions	Consistent	The proposed site-specific LEP provisions are consistent with the standard approach for sites within the Sydney LGA. The provisions follow a consistent format to other clauses within Division 5 of the SLEP 2012 and enable the required height and floor space to be unlocked.
Focus Area 3: Biodiversity and Conservation		
3.2 Heritage Conservation	Consistent	The Planning Proposal will ensure the conservation and adaptive re-use of the existing State Heritage listed substation on the site. Design guidance has been incorporated into the draft site-specific DCP to ensure that any future development application is designed with regard to the heritage buildings within the immediate vicinity of the site.
3.10 Water Catchment Protection	Consistent	The Planning Proposal does not give rise to any inconsistences with this direction.
Focus Area 4: Resilience and Hazards		
4.1 Flooding	Consistent	The site is within the flood planning area (1% AEP flood level + 500mm) and is subject to flood related development controls. A flood assessment has been undertaken which confirms that the proposal is capable of complying with the relevant flood planning controls. Refer to **Section 7.3.3.8.**
4.4 Remediation of Contaminated Land	Consistent	Given the historic use of the land and its existing zoning for MU1 Mixed Use, it is not anticipated that the site will contain contamination requiring remediation. A Detailed Site Investigation (**DSI**) has been prepared by Douglas Partners and is enclosed in **Appendix H.** The DSI concludes that the site can be made suitable for the proposed mixed-use development, subject to the implementation of a remediation action plan (**RAP**) and a data gap investigation which can be addressed at a future development application stage. Further details are contained in **Section 7.3.3.5** of this report.
4.5 Acid Sulfate Soils	Consistent	The site is identified as both Class 5 and Class 2 on the Acid Sulfate Soils map. Future works will be accompanied by the relevant technical reports, including an Acid Sulfate Soils Management Plan, if required.
Focus Area 5: Transport and Infrastructure		

5.1 Integrating Land Use and Transport	Consistent	The site is located in proximity to light rail and heavy rail transit systems as well as frequent bus services.
Focus Area 6: Housing		
6.1 Residential Zones	Consistent	The planning proposal is seeking to broaden the range of housing choices provided in the LGA through the delivery of residential floor space that is capable of being developed with a mix of apartment typologies and layouts. The site is suitably located to accommodate a high-density residential development, as it is located within close proximity to major transport infrastructure and meets residential amenity and locational criteria. Residential development in this location would make efficient use of existing services and infrastructure. The MU1 Mixed Use zone creates the potential to provide housing and to help meet infill housing targets. Future residential accommodation can be provided on the site without significantly impacting the land or neighbouring development.

The following Directions are not applicable to this Planning Proposal:

- *1.2 Development of Aboriginal Land Council Land, 1.4A Exclusion of Development Standards from Variation; 1.5 Parramatta Road Corridor Urban Transformation Strategy; 1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan; 1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan; 1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan; 1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor; 1.10 Implementation of Western Sydney Aerotropolis Plan; 1.11 Implementation of Bayside West Precincts 2036 Plan; 1.12 Implementation of Planning Principles for the Cooks Cove Precinct; 1.13 Implementation of St Leonards and Crows Nest 2036 Plan; 1.14 Implementation of Greater Macarthur 2040; 1.15 Implementation of the Pyrmont Peninsula Place Strategy; 1.16 North West Rail Link Corridor Strategy; 1.17 Implementation of the Bays West Place Strategy; 1.18 Implementation of the Macquarie Park Innovation Precinct; 1.19 Implementation of the Westmead Place Strategy; Implementation of the Camellia-Rosehill Place Strategy; Implementation of South West Growth Area Structure Plan; Implementation of the Cherrybrook Station Place Strategy 3.1 Conservation Zones; 3.3 Sydney Drinking Water Catchments; 3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs; 3.5 Recreation Vehicle Areas; 3.6 Strategic Conservation Planning; 3.7 Public Bushland; 3.8 Willandra Lakes Region; 3.9 Sydney Harbour Foreshores and Waterways Area; 4.2 Coastal Management; 4.3 Planning for Bushfire Protection; 4.6 Mine Subsidence and Unstable Land; 5.2 Reserving Land for Public Purposes; 5.3 Development Near Regulated Airports and Defence Airfields; 5.4 Shooting Ranges; 6.2 Caravan Parks and Manufactured Home Estates; 7.2 Reduction in non-hosted short-term rental accommodation period; 7.3 Commercial and Retail Development along the Pacific Highway, North Coast; 8.1 Mining, Petroleum Production and Extractive Industries; 9.1 Rural Zones; 9.2 Rural Lands; 9.3 Oyster Aquaculture; 9.4 Farmland of State and Regional Significance on the NSW Far North Coast*

7.3.3 Section C – Environmental, Social and Economic Impact

Q8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

No. There are no critical or threatened species on the site that would be adversely affected by the proposal.

Q9. Are there any other likely environmental effects as a result of the Planning Proposal and how are they proposed to be managed?

No. The site is free of major constraints. There are not likely to be any environmental impacts associated with the future development of the land that cannot be suitably mitigated through further design development.

Preliminary investigations have been undertaken as outlined below.

7.3.3.1 Built Form and Context

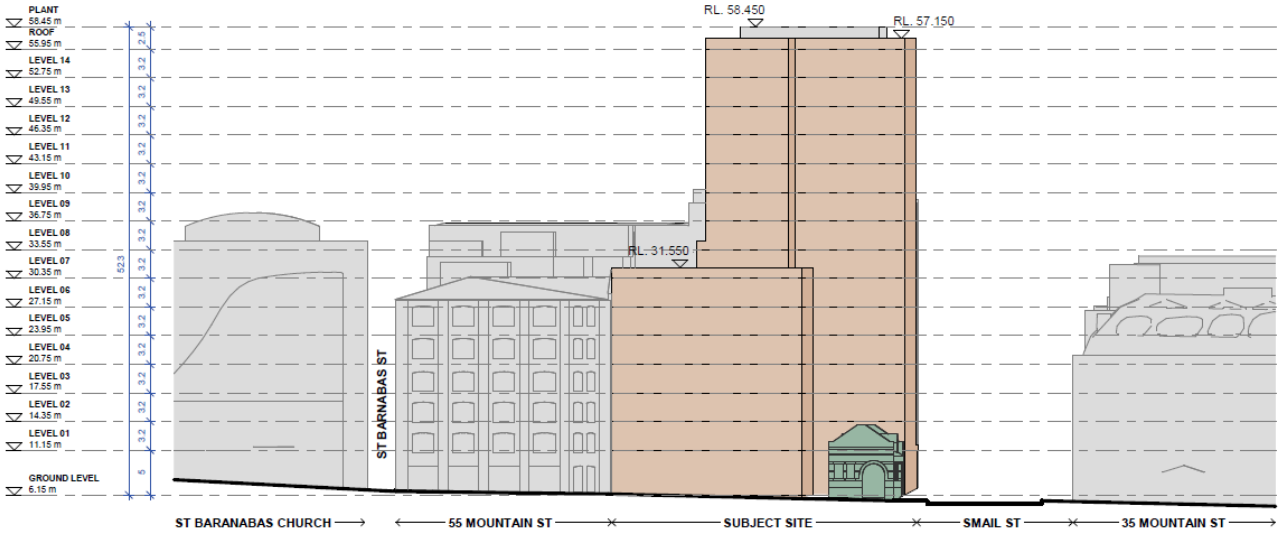
The reference scheme provides a defined and cohesive built form that responds to the varied scale of Mountain and Smail Streets, while respecting the State heritage listed substation on site. The scheme is arranged as two separate blocks to address the 10m difference in height between adjoining properties at 1-3 Smail Street and 55 Mountain Street. The western block aligns with the tops of the piers of 1–3 Smail Street, establishing a strong datum line, while the eastern block incorporates a reduction in storeys, a setback and a material change to transition sensitively to the scale of 55 Mountain Street.

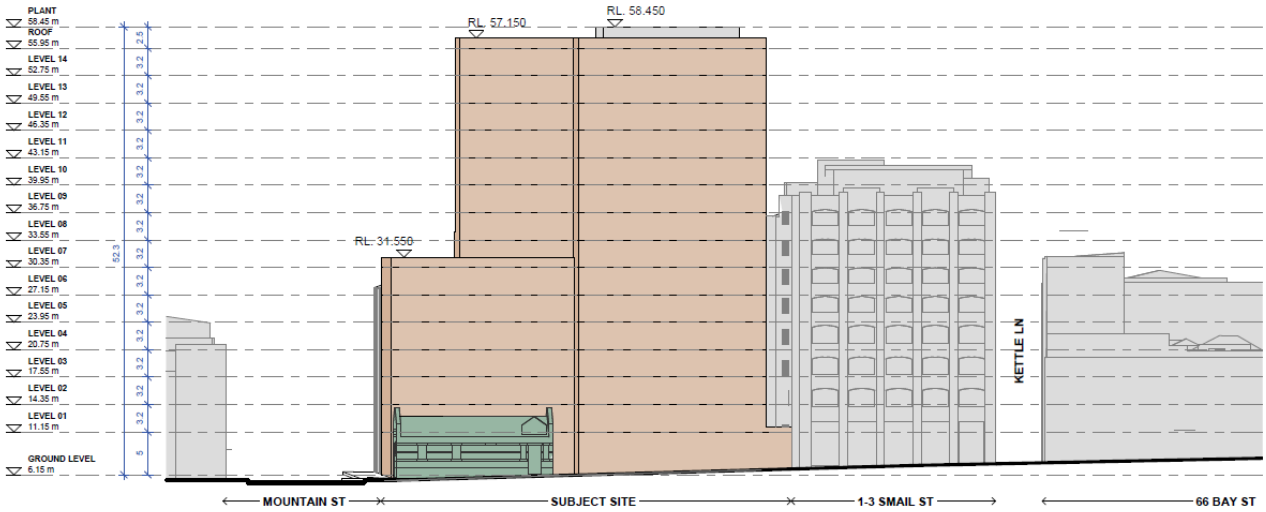
The reference scheme includes a building form extending to a maximum height of 53 metres, equivalent to approximately 15 storeys, holding the corner of Smail and Mountain Streets. A key feature of the design is the introduction of a 8 metre upper-level setback at level 8 towards Mountain Street, establishing a clear spatial relationship to the crown portion of the development and the upper edge of the street wall, subtly distinguishing the new form while complementing the urban profile.

The proposal is located within an area of Ultimo that is characterised by warehouse style buildings of 4-8 storeys, which is not accurately reflected in the current development controls that apply to the site. It is considered that a building height of RL 58.450 in the context of the surrounding area is entirely appropriate and complements the built form scale and urban structure of this part of the City of Sydney LGA. The proposed height provides a key transition from adjoining developments to a corner site reinforcing the vertical hierarchy of the Mountain Street, Smail Street block.

Elevations of the reference scheme are extracted in **Figure 13.**

Figure 13 Elevations





Source: Bates Smart

7.3.3.2 View Analysis

A Preliminary View Analysis has been undertaken by Bates Smart within the Urban Design Report (**Appendix B**). The analysis notes that the immediate surrounds include a mix of warehouse conversions, educational institutions, and commercial tenancies, with limited residential presence.

The nearest residential buildings are located to the south and east and are notably lower in height than the proposed development. However, given their orientation and existing view corridors, these dwellings are not expected to experience any significant loss of visual amenity or access to key outlooks. The proposal has been designed to respect surrounding view lines while contributing positively to the evolving urban fabric of Ultimo.

The siting of the concept within the broader context is detailed in **Figure 14** below.

Figure 14 View Analysis

Source: Bates Smart

7.3.3.3 Solar Access and Overshadowing

Preliminary solar access modelling (heatmaps) has been prepared by Bates Smart within the Urban Design Report (**Appendix B**), illustrating the extent of sunlight penetration between 9am and 3pm on 21 June. The layout of living rooms, private balconies and communal open space has been informed by this analysis to maximise exposure to daylight.

In accordance with the Apartment Design Guide (ADG) solar access criteria:

- 74% of proposed dwellings receive at least 2 hours of direct sunlight between 9am and 3pm on 21 June.
- 20% of dwellings receive no direct solar access during this period.

Through this analysis, overshadowing to surrounding properties has been assessed. The proposal does not result in significant overshadowing to residential properties, communal open spaces, or private outdoor areas.

A minor additional impact is noted on the rooftop terrace of 1–3 Smail Street; however, more than 50% of this space remains unaffected and continues to receive at least 2 hours of sunlight. The most pronounced reduction in solar access occurs to the commercial property at 55 Mountain Street, located immediately south of the site. Most importantly, it is noted that there are no planning controls subject to the site which require solar access be maintained to this commercial building.

Figure 15 Shadow Diagrams

Source: Bates Smart

7.3.3.4 ESD

An Environmentally Sustainable Development Strategy (**ESD Strategy**) has been developed by Flux and is enclosed in **Appendix I.** The ESD Strategy has been prepared in accordance with the following key controls:

- Clause 3.6 of the Sydney DCP 2012
- SEPP (Sustainable Buildings)
- NABERS, Green Star Buildings and other relevant tools to measure environmental performance.

The key ESD components of the proposal include:

- All-electric buildings
- Onsite renewable energy
- HFC-free refrigerants
- Passive design relating to new buildings and the heritage listed substation
- Adaptive reuse

The proposal will exceed the Sustainable Buildings SEPP 2022 BASIX minimum targets of Energy (≥60) and Water (≥40) for residential development. The development will target a minimum of 5-star Green Star Buildings rating. The design approach seeks to leverage the inherent qualities of the development to maximise credit achievement, while minimising reliance on measures that fall outside the project's core sustainability commitments.

These measures will continue to be incorporated into detailed and ongoing design development and future development application stages.

7.3.3.5 Detailed Site Investigation

A Detailed Site Investigation (**DSI**) has been prepared by Douglas Partners and is enclosed in **Appendix H.** The DSI investigated and assessed the suitability of the site from a contamination perspective for the proposal and makes recommendations further investigation and management to be undertaken through subsequent DA and construction stages.

The DIS concludes that the site can be made suitable for the proposed mixed-use development, subject to implementation of the following:

- Preparation of a remediation action plan (**RAP**) to outline the process for data gap investigation (if not conducted prior to RAP preparation, refer to next dot point), remediation and validation of the site as required to render the site suitable for the proposed development. The RAP should also include an unexpected finds protocol and contingency plan;
- A data gap investigation to address the data gaps in the current investigation. This should include testing in the footprints of existing demountable buildings, metal containers, storage areas and the former substation, further groundwater assessment and characterisation of asbestos (as required for waste classification and to meet remediation objectives). The data gap investigation may need to occur when the site is unoccupied / following removal of current structures; and
- Implementation and validation of the works under the RAP.

All soils to be removed from the site will need to be classified and managed in accordance with the *Protection of the Environment Operations Act 1997.*

7.3.3.6 Heritage

Aboriginal Objects

An Aboriginal Objects Due Diligence Assessment (**ADD**) has been prepared and accompanies this Planning Proposal, enclosed at **Appendix D.** The ADD was undertaken to determine whether any Aboriginal objects or Aboriginal places are likely to be harmed by future proposed developments of the subject area. The ADD concludes:

- The proposed activity is not a 'low impact activity'.
- There are no known Aboriginal objects or Aboriginal places within the curtilage of the subject area.
- Previous studies in the vicinity of the subject area have identified Aboriginal objects within similar developed locations.
- The subject area is in proximity to historical aquatic resources of Blackwattle Creek and associated swamps.
- The subject area has been impacted by historical phases of construction and demolition.
- Due to the possibility that Aboriginal objects may be encountered during historical archaeological investigations an Aboriginal Cultural Heritage Assessment (**ACHA**) is recommended to mitigate risk. The ACHA should incorporate an Archaeological Research Design outlining a management strategy for Aboriginal objects should they be encountered. This would avoid delays to the project as an ACHA has a minimum timeframe of approximately 4 months due to statutory consultation periods.

The above recommendations can be addressed at the DA stage for the future development of the site.

Built Heritage

A Heritage Impact Statement (**HIS**) has been prepared and accompanies this Planning Proposal, enclosed at **Appendix E.** The HIS has been prepared to determine the potential heritage impacts of the Planning Proposal on the heritage significance of the listed item on the subject site, the Mountain Street Heritage Conservation area in which the site is located, and the heritage items in the vicinity of the site.

It is noted that no physical works are proposed as part of this Planning Proposal. Key aspects of the HIS assessment are extracted below:

- The Planning Proposal has been subject to review by the City of Sydney Design Advisory Panel, with further consultation with the City of Sydney to further refine the concept envelope. The concept envelope for the Planning Proposal has responded appropriately to feedback provided by the City of Sydney.
- In conjunction with a future detailed design, the Planning Proposal provides an opportunity to reinvigorate the subject site, which has been largely vacant since 2005 and the majority of which is currently identified as a 'detracting' site in the Sydney DCP 2012.
- The Planning Proposal provides for built form development to the street boundaries of both Mountain and Smail Streets, which is characteristic of development in the Mountain Street HCA and would provide for framed open views along the street.
- The proposed building envelope facilitates a response to the broad heritage context through setbacks and two distinct primary built form envelopes that are subject to future architectural resolution.
- The proposed building envelope facilitates future development of a bulk and scale that is appropriate to the large lot and urban form of the surrounding context.
- The proposed development presents an opportunity for future works to stimulate redevelopment of the site, in turn providing for the conservation and maintenance of the heritage listed electricity substation, which is a 'contributing' item in the Sydney DCP 2012.
- The Planning Proposal provide the opportunity for future building designs to achieve a sympathetic response to the heritage items in the vicinity through a detailed examination of heritage context, scale

and form. It provides a volume in which future development can respond to the scale, character and materiality of the area through a design excellence approach.

Overall, the proposal provides an opportunity to redevelop a site currently identified as detracting within the HCA. Through sympathetic design, future development can enhance the setting of the substation and make a positive contribution to the character of the conservation area. On this basis, the proposed amendments to height and FSR are considered acceptable from a heritage perspective.

Historical Archaeological Assessment

A Historical Archaeological Impact Assessment (**HAIA**) has been prepared and accompanies this Planning Proposal, enclosed at **Appendix F.** The HAIA has been undertaken to evaluate potential impacts of the proposed development on historical archaeological material within the subject site and to establish appropriate heritage management measures.. The HAIA concludes that:

Historical Context

- The historical development of the site is broadly categorised into three phases:
  - Phase 1 – 19th Century Colonial Development (1789–1905): Early settlement and associated infrastructure.
  - Phase 2 – Land Resumption (1905–1909): Reorganisation of land parcels and early urbanisation.
  - Phase 3 – Industrial Use (1909–Present): Industrial occupation and later demolition of structures.

Archaeological Potential

- No items listed on the State Heritage Register have been identified within the site.
- Moderate to high potential exists for locally significant relics associated with mid-19th century development, including road materials, postholes, sandstone or brick foundations, ceramic or brick piping, wells, cisterns, residential pipes, rubbish pits, and cesspits containing artefact-bearing deposits.
- The proposed works, involving demolition of existing structures and construction of a new mixed-use development with a basement, are likely to impact these locally significant relics.
- No relics of State significance or relics requiring retention through redesign were identified. Accordingly, there are no archaeological impediments to the Planning Proposal or future Development Application.

The HAIA contains a suite of recommendations for consideration during detailed design development, including future archaeological investigation under an s140 Excavation Permit. Overall, it is concluded that with appropriate archaeological investigation and mitigation measures, any impacts can be managed, allowing the Planning Proposal and future development to proceed without adverse heritage outcomes.

7.3.3.7 Aboricultural Impact Assessment

An Arboricultural Impact Assessment (**AIA**) has been prepared and accompanies this Planning Proposal, enclosed at **Appendix C.** The AIA assesses four (4) trees located on or adjoining the site. The AIA assesses potential impacts of the proposal on these trees and recommends strategies for their management in relation to future development on the site.

Details of the assessment undertaken in the AIA, including tree retention values and key metrics such as height and health are contained in **Figure 16.** A Tree Protection Plan is also extracted below.

Figure 16 AIA Extracts

Tree #	*Botanical Name*	Height (m)	Canopy (m)	DBH (mm)	TPZ (m)	SRZ (m)	TPZ Encroachment	SULE	Retention Value	Action	Notes
1	*Platanus x acerifolia*	33	25	950	11.40	3.35	26.5%	2A	High	Remove	• Canopy in good condition with minimal dieback or deadwood. Parts of the canopy extend into the site of 43-49 Mountain Street that have not been pruned back. • Lopsided canopy towards the road. • 1x cavity on a second order branch (refer to photo 3). • Damaged footpath and potential damage to underground services. It is likely that the roots cannot be pruned back to stop the damage as it would destabilise the tree. Refer to ADP report "SYD3482". • Impact to vehicles parking on the street next to the tree due to the lean of the trunk. Refer to PDC Consultants (Aust) report "24.173r02v02"
2	*Jacaranda mimosifolia*	11	5	190	2.30	1.82	0.0%	2A	Moderate	Retain	• Poor canopy structure. • Fair condition.
3	*Jacaranda mimosifolia*	11	10	380	4.60	2.40	0.0%	2A	Moderate	Retain	• Fair condition no major defects identified.
4	*Celtis australis*	4	2	40	2.00	1.50	100.0%	3A	Low	Remove	• In very poor condition with dieback throughout the canopy.

Source: Arbor Express

The AIA concludes:

- Tree 1 has been approved for removal due to the future safe useful life of the tree.
- Tree 2 remains structurally stable and the proposal does not encroach into its TPZ. With appropriate protection measures in place, Tree 2 can be retained.
- Tree 3 has no significant encroachment into the TPZ and the tree is in good health. Tree 3 should be retained and protected.
- Tree 4 will be directly impacted by the proposed vehicle entry and exit. Given the extent of disturbance, Tree 4 cannot be retained and should be removed.

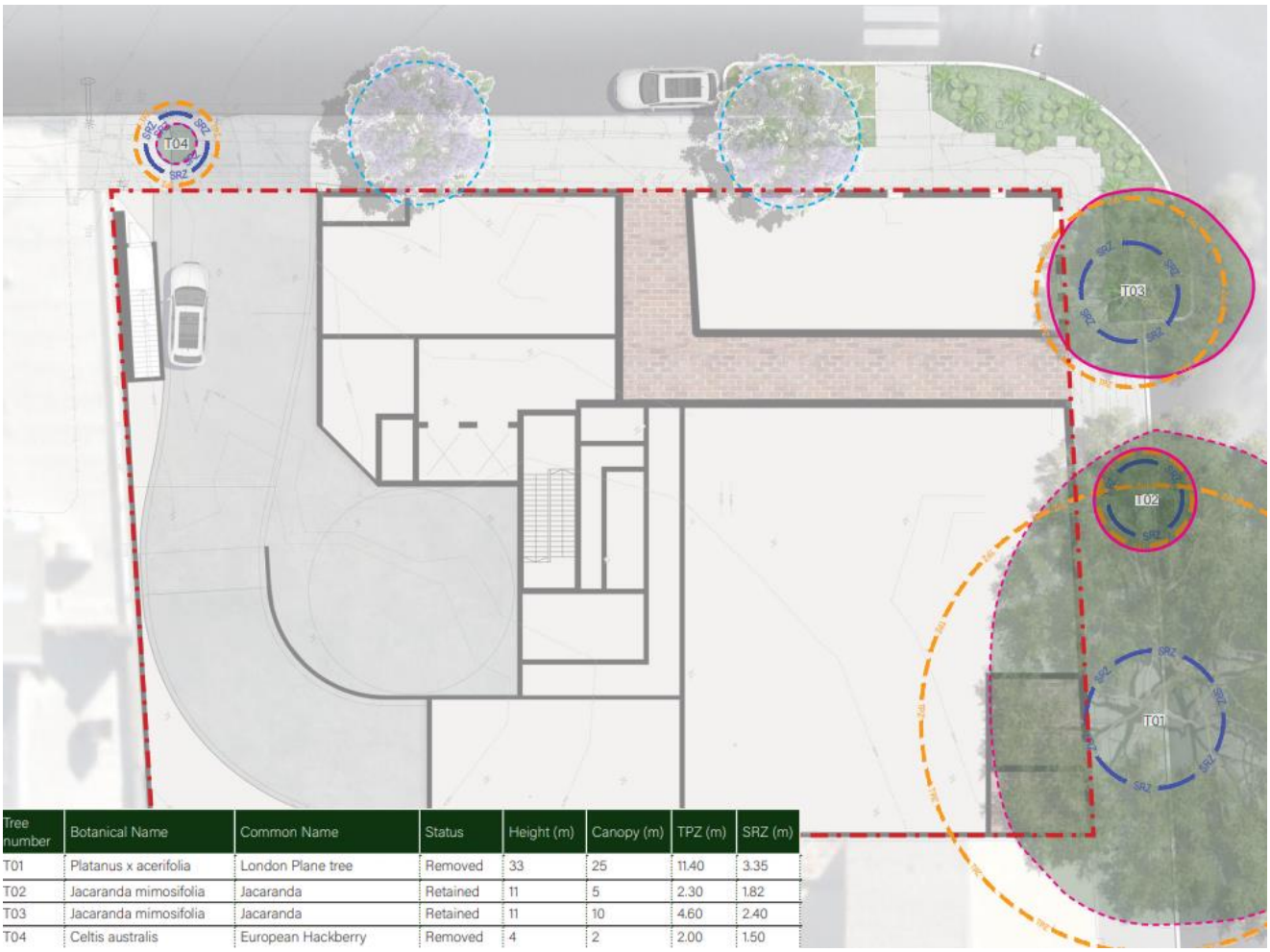
7.3.3.8 Landscaping

A Landscape Design Concept has been prepared and accompanies this Planning Proposal, enclosed at **Appendix K.** The landscaping strategy is informed by the following design principles:

- Responsive landscape design
- Promote sustainability
- Create beautiful and comfortable places for people
- Contribute to and enhance the natural environment and urban ecology
- Promote and improve water quality

The Landscape Design Concept comprises a vegetation management plan inclusive of sensitive treatments to street trees proximate to the site. The proposal incorporates retention of existing street trees and street tree planting as detailed in **Figure 17.**

Figure 17 Vegetation Management Plan



Tree number	Botanical Name	Common Name	Status	Height (m)	Canopy (m)	TPZ (m)	SRZ (m)
T01	Platanus x acerifolia	London Plane tree	Removed	33	25	11.40	3.35
T02	Jacaranda mimosifolia	Jacaranda	Retained	11	5	2.30	1.82
T03	Jacaranda mimosifolia	Jacaranda	Retained	11	10	4.60	2.40
T04	Celtis australis	European Hackberry	Removed	4	2	2.00	1.50

Source: Subtropic Design

The landscaping strategy comprises upper-level planting to foster spaces for relaxation and social connection, with communal rooftop open space to active the north and eastern edge of the site. The landscaping strategy includes a mixture of native and endemic planting species. The landscaping strategy will also contribute to water sensitive urban design through refurbished bio-basins and capture and reuse of stormwater for irrigation.

The landscape strategy indicates an area of 175m^2 of planting areas. Deep soil area, planting, and canopy is to be further addressed at the DA stage. It is noted given the constrained nature of the site that strict compliance with the City of Sydney Development Control Plan 2012 may be challenging to achieve.

7.3.3.6 Traffic and Transport

A Traffic Impact Assessment (**TIA**) has been prepared and accompanies this Planning Proposal, enclosed at **Appendix G.** The TIA has assessed the potential traffic and parking impacts of the proposal, including parking requirements, potential traffic impacts and the proposed access and internal design arrangements..

The below details the key outcomes of the assessment:.

Parking Requirements

Table 15 Parking Requirements

Component	Proposed
Build-to-rent	The proposed build-to-rent development requires 17 car parking spaces based on the Housing SEPP's rate of 0.2 spaces per dwelling for accessible areas. The site qualifies as an accessible area due to its proximity to public transport. The proposal includes 19 car parking spaces, exceeding the minimum requirement and will ensure compliance with the relevant standards.
Retail	The proposal provides 2 retail car spaces in accordance with the formula contained in Clause 7.7(d) of the SLEP 2012 which is satisfactory.
Car Share	Clause 3.11.2 of the SDCP 2012 requires a minimum car share scheme parking rate based on the number of car spaces provided in the proposed development. According to the Land Use and Transport Integration Map, the site falls under Category 'A', which mandates 1 car share space per 50 car spaces. Given this, the assessment concludes that the site is not required to provide any car share parking spaces.
Accessible Parking	Clause 7.8.5 of the SDCP 2012 mandates one accessible space for every 20 car spaces or part thereof. With 22 car spaces proposed, the development includes one accessible car parking space, meeting the requirement satisfactorily.
Motorcycle Parking	Clause 7.8.4 of the SDCP 2012 requires one motorcycle space for every 12 car spaces. With 22 car spaces proposed, the proposal includes two motorcycle parking spaces, meeting the requirement satisfactorily.
Bicycle Parking	Clause 69 (1)(h) of the Housing SEPP requires that "the build-to-rent housing will include adequate bicycle and motorcycle parking spaces". SDCP 2012 in turn states a bicycle parking rate of "1 per dwelling" for residential accommodation plus "1 per 10 dwellings" for visitors and "1 per 250m² area" for shops.

	As 107 apartments and 479m² GFA are proposed at the development, the site should target 119 bicycle parking spaces.
Service and Waste Collection	Neither SLEP 2012 nor SDCP 2012 specify service vehicle parking rates for build-to-rent housing, but SDCP 2012 requires three service bays based on residential and shop use. The development will provide one ground-level loading dock for medium rigid vehicles (**MRV**), equipped with a turntable for efficient entry and exit. A Loading Dock Management Plan (**LDMP**) will ensure safe and efficient use, coordinating service and waste collection vehicles. Swept path analysis confirms satisfactory vehicle circulation.

Potential Traffic Impacts

The proposal is expected to generate a net increase of 15 vehicle trips per hour during the AM peak and 18 vehicle trips per hour during the PM peak. This equates to roughly one additional vehicle every three to four minutes. Given this modest increase, there will be no significant traffic impacts on nearby local streets, and no external improvements are necessary.

Design Elements

The TIA confirms:

- The proposed vehicular access complies with AS2890 guidelines, featuring a suitable combined entry and exit driveway. Swept path analysis confirms safe and efficient operation.
- Internal parking meets AS 2890 standards for dimensions, grades, aisle widths, and clearances. Swept path analysis supports the design, with minor adjustments possible before the Construction Certificate.
- Servicing and loading facilities are designed for an 8.8-metre MRV, meeting AS 2890.2 standards. Swept path analysis confirms these arrangements are satisfactory.

The TIA concludes that:

- Car parking at the site has been assessed in accordance with the Housing SEPP and Council's planning controls to determine a suitable level of provision. In response, 22 car parking spaces are proposed at the site which is considered acceptable.
- The development provides a total of 92 bicycle and two motorcycle parking spaces. The proposed bicycle and motorcycle parking provisions are considered adequate and acceptable.
- The traffic generation assessment confirms that the development will have a negligible impact on the performance of the external road network and is therefore considered acceptable.
- The proposed access and internal parking arrangements comply with the relevant requirements of AS 2890.1, AS 2890.2, AS 2890.3 and AS 2890.6. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

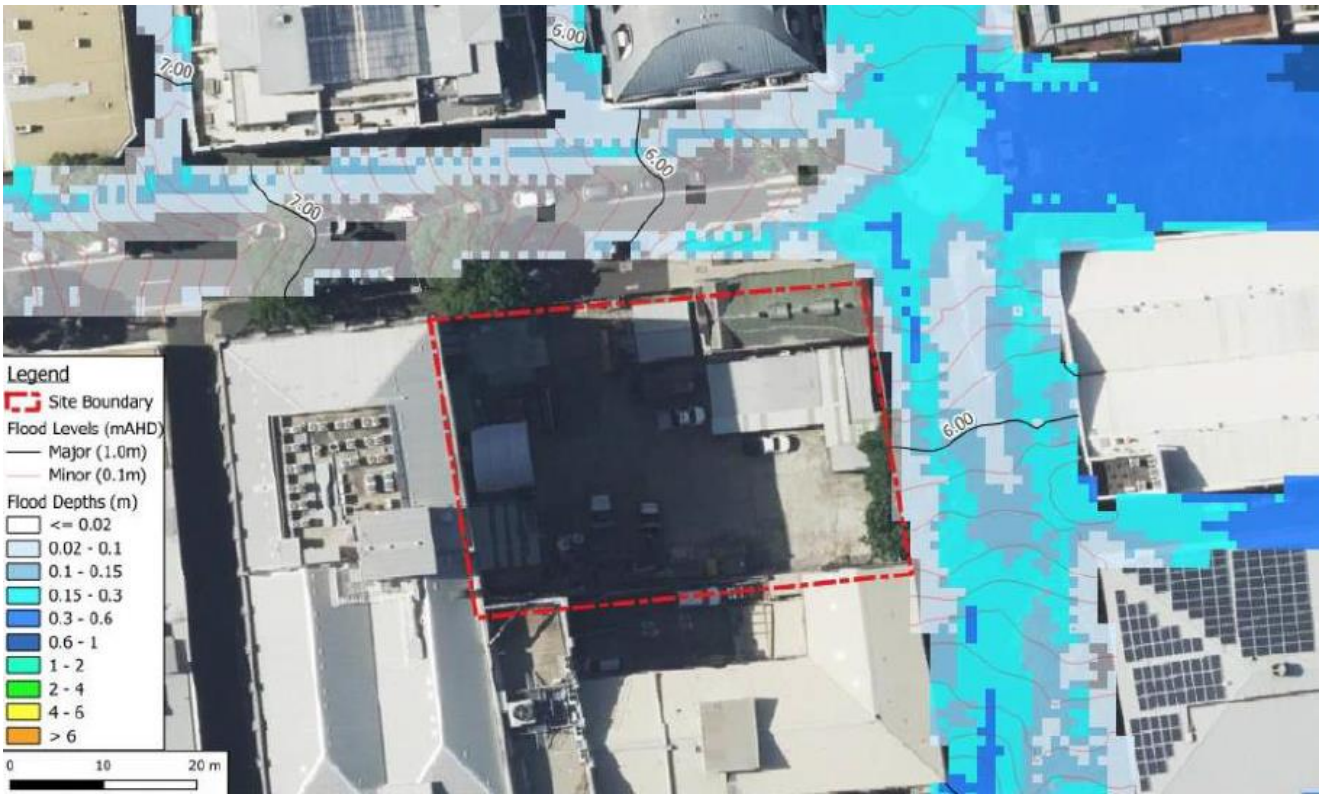
The proposal is supportable on traffic planning grounds.

7.3.3.9 Flooding

A Flood Impact Risk Assessment has been prepared and accompanies this Planning Proposal, enclosed at **Appendix J.** The report provides an overview of flooding affectation status of the site and surrounding context and details any potential implications for future development of the site.

The report confirms that the site is within the flood planning area (1% AEP flood level + 500mm) (Refer **Figure 18**). As such, the site is subject to flood related development controls.

Figure 18 1% AEP Existing Flood Event



Source: ADP

The applicable flood planning levels (**FPLs**) applying to the site and future development are as follows:

- Non-habitable FFL = 1% AEP
- Habitable FFL = 1% AEP + 500mm freeboard
- Basement entry = 1% AEP + 500mm freeboard or PMF (within floodplain) or 300mm above surrounding ground levels (outside floodplain).

The report concludes that the proposal complies with the relevant flooding provisions of the SDCP 2012 and will have no impacts on adjoining properties. Further, a flood evacuation response strategy has been developed for the development.

Q10. Has the Planning Proposal adequately addressed any social and economic effects?

This planning proposal provides opportunity for the revitalisation of an underutilised site in a strategically appropriate location, that will enhance the public realm and contribute through both use and design to the site's wider context.

The proposal provides for 7,712m^2 of additional residential and commercial floor space on the site, contributing to housing supply in a core inner-city location. Further, the proposal provides for the delivery of affordable housing addressing product diversity, rental accommodation needs and rising demand for housing.

The redevelopment of the site, like all new development acts as a market catalyst boosting employment and value add during construction boosting the local economy and momentum in revitalising Ultimo. This could

potentially help unlock further investment in mixed-use projects in the areas, specifically following the delivery of 1-3 Smail Street for co-living.

The proposal will also positively contribute to maximising investment within existing infrastructure. The payment of the relevant infrastructure contributions, in addition to the significant public benefit offer, at future development stages, will contribute to the provision of public interest and benefits.

The Planning Proposal will therefore have positive social and economic benefits for the broader community. It is considered that the proposal has addressed social and economic impacts and is in the public interest.

7.3.4 Section D – Infrastructure (Local, State and Commonwealth)

Q11. Is there adequate public infrastructure for the Planning Proposal?

Yes. There is adequate public infrastructure to support the Planning Proposal and future development application. The site is within an existing highly urbanised mixed-use area, readily able to be augmented and connected to existing essential services and public infrastructure, including electrical, telecommunications, effluent, stormwater and drainage.

The history of approved development on the site indicates that it is envisaged by the consent authority and development on the site is capable of being connected to essential services.

As such, the proposal can be accommodated based on the capacity of existing utility services infrastructure.

1.1.5 Section E – State and Commonwealth Interests

Q12. What are the reviews of state and federal public authorities and government agencies consulted in order to inform the Gateway determination?

The Gateway Determination will advise the public authorities to be consulted as part of the Planning Proposal process. Any issues raised will be incorporated into this Planning Proposal following consultation in the public exhibition period.

There has been ongoing consultation with the City of Sydney in preparation of this Planning Proposal.

7.4 Part 4: Maps

The Planning Proposal seeks written instrument changes only.

No change will be made to any maps contained in the LEP, instead alternative controls relating to gross floor area and building height are proposed through new site-specific provisions under Division 5 site specific provision of the LEP.

The draft DCP that accompanies this Planning Proposal includes detailed diagrams to reflect the proposed future building envelope, as sought by this Planning Proposal.

7.5 Part 5: Community Consultation

Section 3.34 of the EP&A Act requires the relevant Planning Proposal Authority to consult with the community in accordance with the Gateway Determination.

In accordance with the requirements of the LEP Making Guideline, it is expected that the Planning Proposal will be publicly exhibited for at least 28 days. As part of the Gateway Determination, consultation will be undertaken with any relevant agencies and stakeholders.

7.6 Project Timeline

The following table sets out the anticipated project timeline in accordance with the LEP Making Guideline. The key milestones and overall timeframe are indicative and will be subject to further detailed discussions with

Council and DPHI. The timeline allows for a concurrent DA process to progress in parallel with the Planning Proposal.

Table 16 Project Timeline

Process	Indicative Timeframe
Planning Proposal submitted to Council	September 2025
Gateway Determination	December 2025
Post Gateway	December 2025 – January 2026
Public exhibition and review of submissions	January 2026 – February 2026
Assessment of submissions and report to Council	March 2026
Finalisation of Planning Proposal and LEP made	May 2026

8 Conclusion

The Planning Proposal seeks to amend the SLEP 2012 by inserting a new site-specific clause in Division 5 of the SLEP, which will permit a maximum building height of RL 58.450 and an additional gross floor area of 7,844m² or a total FSR across the site of 5.4:1.

The new site-specific provisions within the SLEP 2012 unlock the site's development potential through the delivery of a mixed-use development comprising affordable rental housing and ground plane public realm activation.

The Planning Proposal is found to respond appropriately to relevant strategic planning framework, which supports development outcomes that contribute to housing supply, housing affordability and envisaged growth, by providing high-quality and innovative design that complements existing character and proximate heritage setting of the site, whilst supporting growth objectives within Ultimo.

The Planning Proposal sets out the justification for the proposed LEP amendment. It is supported by an indicative reference scheme that includes a detailed site and context analysis and demonstrates that the proposal is sound and suitable for its locality.

It is considered that the proposed amendments to SLEP 2012 would result in an improved development outcome and would generate significant economic and community benefit, including:

- **Local context:** The Planning Proposal is considered to have site-specific merit, as it facilitates future development with a height and massing strategy that is contextual to the built environment of the site and seeks to integrate with the surrounding street wall height and built form. Ultimately, the development will be responsive to the locality and deliver a positive development outcome in the context of Ultimo.
- **Strategic context:** The planning proposal has strategic planning merit, as it would positively contribute to the achievement of State and local government strategic planning goals and see the development of a key area of zoned MU1 Mixed Use land in the City of Sydney LGA.
- **Community benefits:** The planning proposal has the potential to generate a range of benefits for the community, including:
  - Enabling new housing to be accommodated within Ultimo, which increase housing choice, diversity, and affordability in close proximity to major public transport interchanges. The proposal includes a significant amount of affordable housing that aligns with the City's Affordable Housing Program.
  - Conservation and adaptive re-use of the State heritage listed substation on the site.
  - Direct economic benefits and the creation of additional employment, during the construction stage and ongoing operations.
- **Environmental impacts:** The reference scheme has been developed to minimise adverse environmental impacts on the locality and has considered key requirements of the ADG. The planning proposal has assessed shadow impact to nearby residents and has demonstrated that the proposed density will not create an unreasonable amount of overshadowing on nearby residential dwellings and the public domain.

Accordingly, it is **recommended** the Planning Proposal is endorsed by Council and referred to DPHI for Gateway Determination.

Disclaimer

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Appendix A – Draft Site Specific DCP

Appendix B – Urban Design Report

Appendix C – Arboricultural Impact Assessment

Appendix D – Aboriginal Objects Due Diligence Assessment

Appendix E – Heritage Impact Statement

Appendix F – Historical Archaeological Assessment

Appendix G – Traffic Impact Assessment

Appendix H – Report on Detailed Site (Contamination) Investigation

Appendix I – ESD Strategies

Appendix J – Flood Impact Assessment

Appendix K – Landscape Report

Appendix L – Design Excellence Strategy

Appendix M – Letter of Offer

Appendix N – Owner's Consent

Appendix O – Architectural Plans

Appendix P – Report on Dewatering Management Plan

Appendix Q – Water Cycle and Stormwater Management Report

Appendix R – Site Survey

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Attachment A2

Draft Site-specific DCP – Prepared by Proponent

Draft Site Specific DCP

41 & 43-49 Mountain Street, Ultimo

October 2025

Prepared for: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Andrew Harvey
Associate Director	Stewart Doran
Consultant	Harley Lockhart
Project Code	P0057496
Report Number	Final

Acknowledgement of Country

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We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working

Title: Sacred River Dreaming
Artist Hayley Pigram

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Purpose of this Development Control Plan

The purpose of this Site-Specific Development Control Plan (DCP) is to amend the Sydney Development Control Plan 2012, which was adopted by Council on 14 May 2012 and came into effect on 14 December 2012.

The amendment provides objectives and provisions to inform future development at 41 & 43-49 Mountain Street, Ultimo.

Citation

This amendment may be referred to as Sydney Development Control Plan 2012 – 41 & 43-49 Mountain Street, Ultimo.

Land covered by this Plan

This plan applies to the land identified as 41 & 43-49 Mountain Street, Ultimo – otherwise referred to as Lot 1 in DP 191928 and Lot 21 DP 5567.

Relationship of this plan to Sydney Development Control Plan 2012

This plan amends the Sydney Development Control Plan 2012 in the manner set out below.

Amendments to the Sydney Development Control Plan 2012

This plan amends Sydney Development Control Plan 2012 by:

1. Amending Figure 6.1 Specific sites map to include 41 & 43-49 Mountain Street, Ultimo.
2. Inserting a new section 6.3.X 41 & 43-49 Mountain Street, Ultimo, as shown at Schedule 1.
3. Updating figure numbers as required.

Schedule 1 – Amendment to Sydney Development Control Plan 2012

6.3.X 41 & 43-49 Mountain Street, Ultimo

The following objectives and provisions apply to 41 & 43-49 Mountain Street, Ultimo as shown in Figure 6.1 Specific Sites Maps, where relevant site-specific provisions of the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) are implemented.

If development at 41 & 43-49 Mountain Street, Ultimo is developed utilising the additional floor space permitted under clause 6.XX of the Sydney LEP 2012, then the provisions of this section apply to the assessment of that development application.

This site specific DCP does not apply to minor building works or minor increases in gross floor area.

Where there is a discrepancy between the provisions in this chapter of the DCP and another part of the DCP, this section will prevail.

Objectives

a) To deliver a high-quality built form and design outcome that:

i. Respects the sites existing State heritage listed substation (SHR# 00934) and responds to the streetscape character.
ii. Accentuates the corner and becomes a prominent landmark building
iii. Is of a scale and form that suitably integrates with the neighbouring 55 Mountain Street and 1-3 Small Street buildings.
iv. Celebrates the site's cultural, historical, and spatial significance while enhancing public engagement throughout the design
v. Provides increased public amenity and improve pedestrian permeability and connectivity within the precinct.
vi. Ensures development is consistent with Australian best practice performance benchmarks for ecologically sustainable development.

Provisions

6.3.XX.1 Maximum building envelope

1) Building massing, height, footprint and minimum setbacks are to be consistent with the following:
    a. 'Figure 6.22#: 41 & 43-49 Mountain Street, Ultimo – Elevation envelope layout'; and
    b. 'Figure 6.22#: 41 & 43-49 Mountain Street, Ultimo – Envelope setback plan'.

2) A 3m setback should be provided to the State heritage listed substation. The substation is to be retained and adapted.

Figure 6.22# 41 & 43-49 Mountain Street, Ultimo – Elevation envelope layout

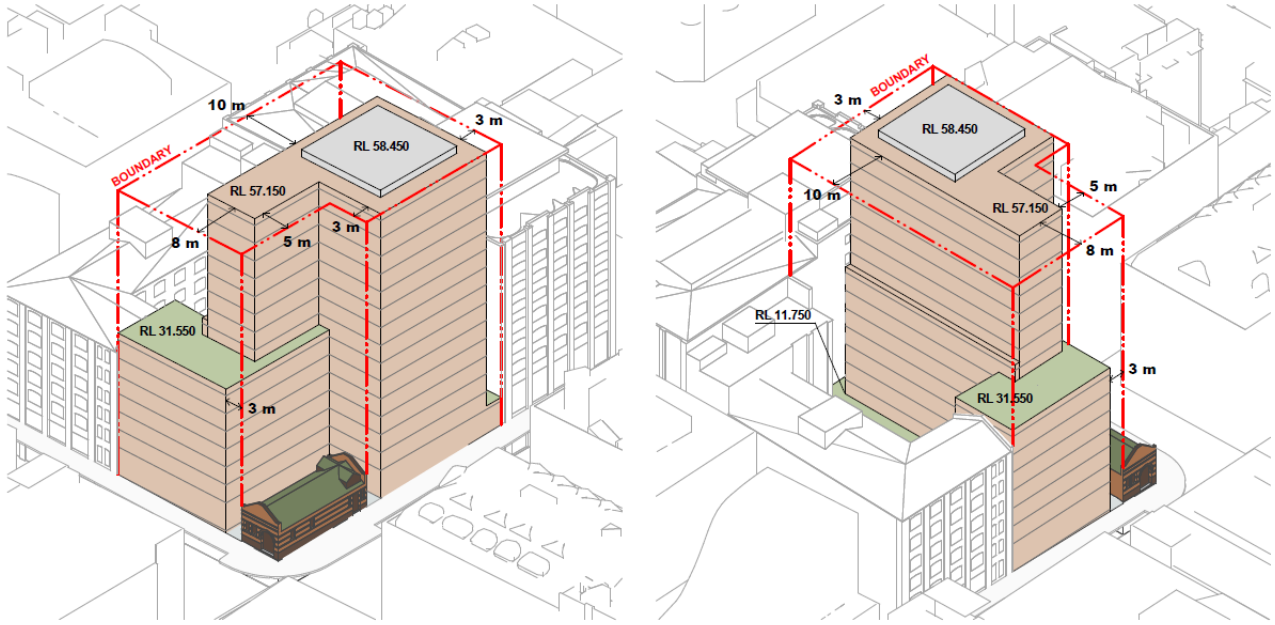

Figure 6.22# 41 & 43-49 Mountain Street, Ultimo –Envelope setback plan

6.3.XX.2 Public domain

1) Section 3.2.3 Active Frontages is to apply to the Smail Street frontage.
2) An active laneway between proposed built form and the existing substation to facilitate provision retail spaces.
3) Incorporate high quality public art in publicly accessible areas on site to contribute to the identity and amenity of the place.
4) The laneway is to act as a connective corridor between development and the State heritage listed substation. The laneway is to include provision for public art.
5) Clear pedestrian entrance points, that are legible and visible from the public domain.

6.3.XX.4 Heritage

1) The form, scale, materiality, articulation and façade treatments of development must respond to adjacent development, the State heritage listed substation, and proximate heritage items.
2) Development must demonstrate that there would be direct conservation benefits for the existing State heritage substation.

6.3.XX.5 Sustainability

Provisions:

1) The development must be designed to optimise energy efficiency and, where appropriate, the use of renewable energy generated on-site.

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Attachment A3

Urban Design Report

41-49 Mountain St, Ultimo

Planning Proposal

Apt Residential

Planning Proposal

December 2025

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APT. Residential

Design Team

Architecture + Urban Bates Smart

Landscape Subtropic

Traffic PDC

Civil ADP

Flood ADP

Heritage Urbis

Archeology Urbis

ESD Flux

Arborist Arbor Express

Project Number S12603.A

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Acknowledgement of Country

We acknowledge the Gadigal people of the Eora Nation as the Traditional Owners of Country, and recognize their continuing connection to land, waters and culture. We pay our respects to their Elders past, present and emerging.

Artwork
Within by Jasmine Miikika Craciun

Introduction

This document is part of a planning proposal prepared by Bates Smart on behalf of APT Residential for the site at 5 Smail Street / 41-49 Mountain Street. It outlines a planning and massing strategy for a new mixed-use residential development, featuring active ground-level uses and build-to-rent apartments above, along with a rooftop communal open space. The proposal also includes the adaptive reuse of a heritage-listed substation at the corner of Mountain Street and Smail Street.

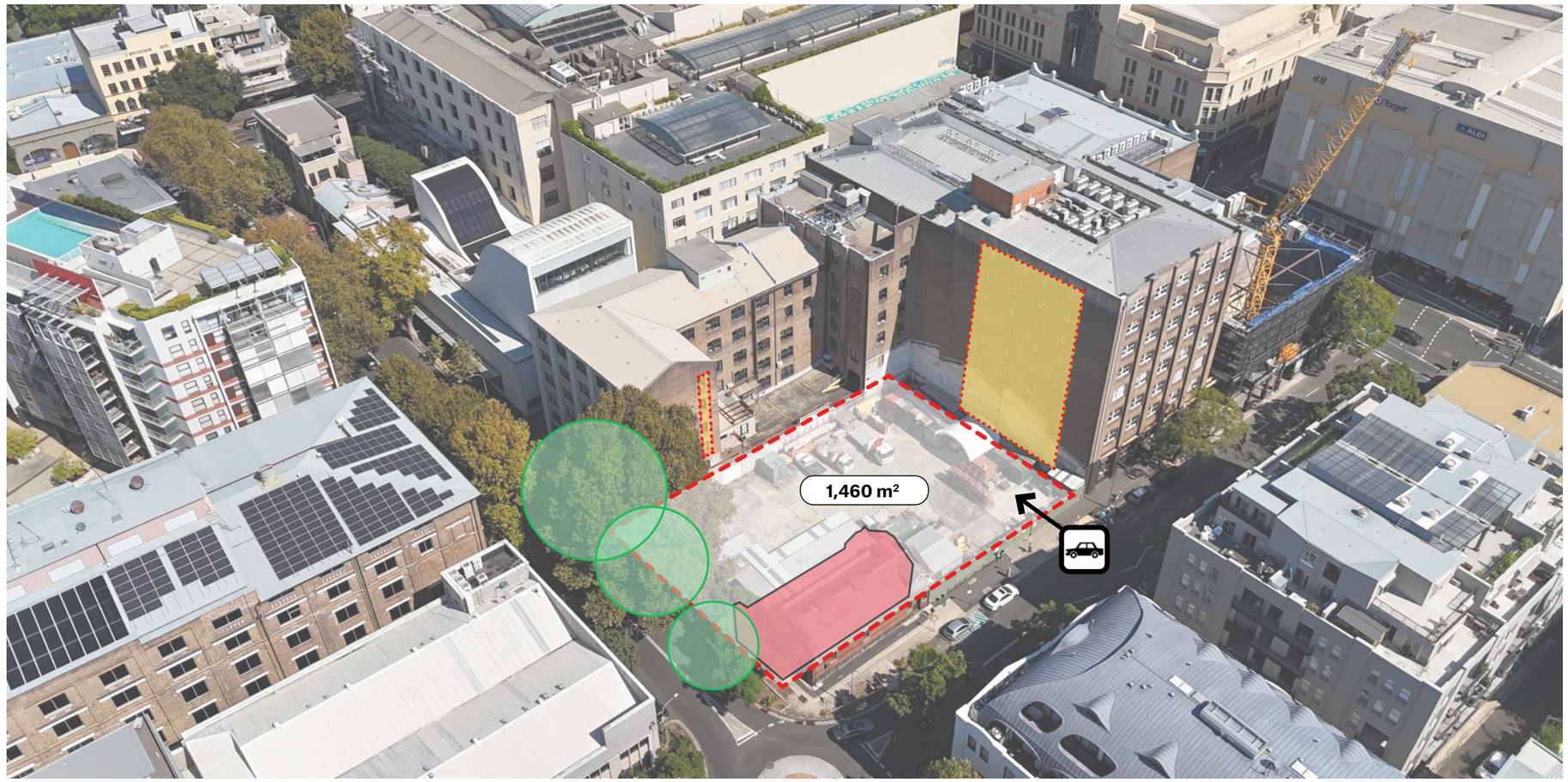
The site is prominently located at the corner of Smail and Mountain Street, just one block east of the Broadway Shopping Centre. It is situated in a mixed-use area that includes residential, commercial, and hotel developments. The site is conveniently close to several tertiary campuses and is within 200 meters of public transport that provides access to the CBD and Western Suburbs. Additionally, it is located within the heritage conservation area known as 'Mountain Street' under the LEP.

Key

1. Subject Site
2. Broadway Shopping Centre
3. University of Technology Sydney
4. Notre Dame University
5. Torrens University
6. TAFE NSW, Ultimo Campus
7. Glebe Point Road
8. Victoria Park

Site Location

The site, known as 5 Smail Street, Ultimo, is legally described as Lot 2 DP191928 and Lot 21 DP5567. It covers an area of approximately 1,460 square meters, comprising two lots. Currently, the site features a single-storey substation at the corner, along with associated sheds, structures, and parking space for service vehicles. Vehicular access is available off Smail Street. Additionally, significant street trees are located along Mountain Street.



Key

- Site Boundary
- Existing Heritage Listed Substation
- Neighbouring Windows on Boundary
- Existing Street Tree
- Vehicle Access to Site

Opportunities:

— Street frontage to both Smail and Mountain Street.

— North-east aspect well suited to residential development

— Potential for adaptive re-use of existing sub-station.

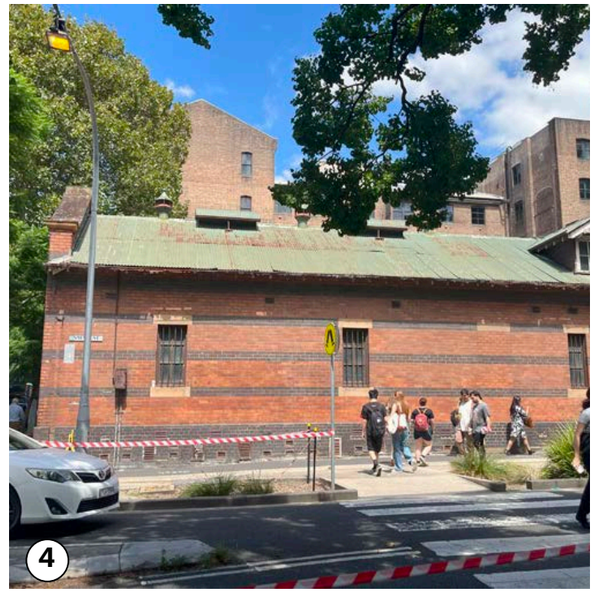
Constraints:

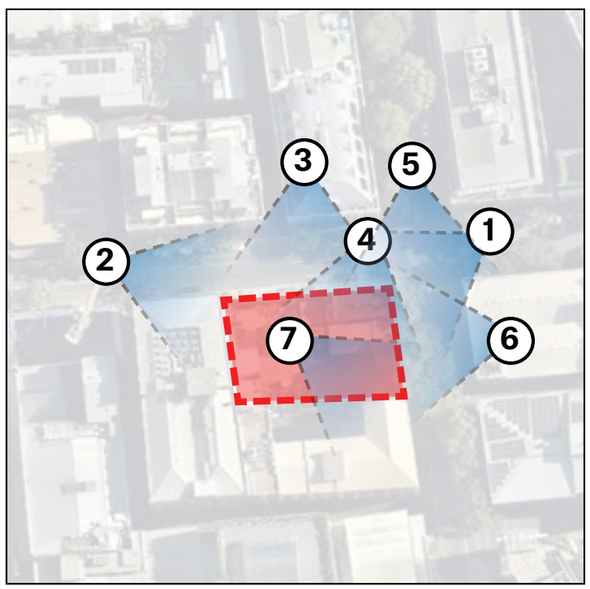
— Existing heritage sub-station to the north-east corner of the site to be retained

— Location of mature trees

— Neighbouring site has windows onto the boundary.

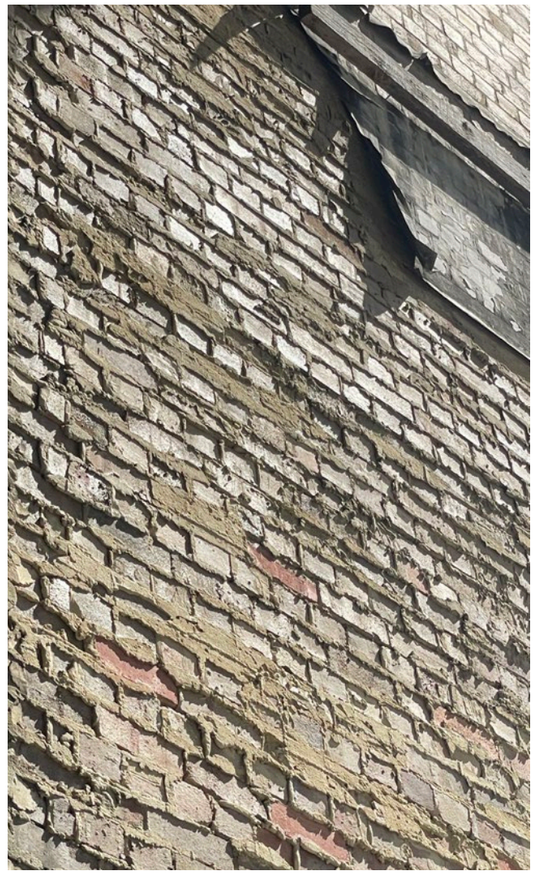
Site Photos

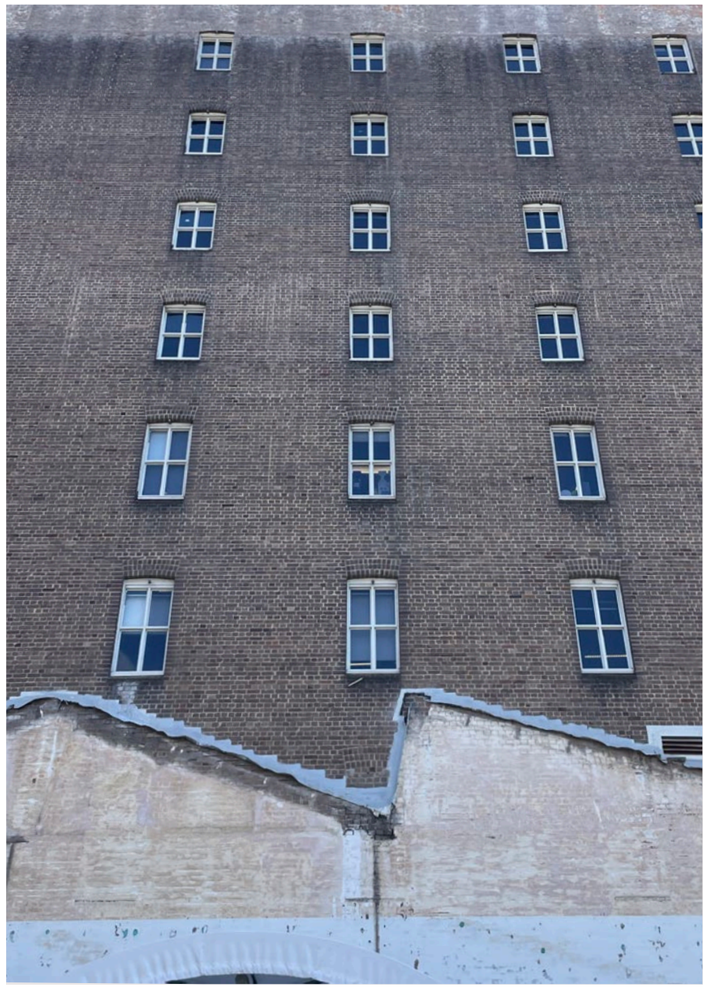




Site Character

The site is flanked by a series of historic masonry warehouses with rich architectural character. These buildings, with their robust construction and intricate detailing, tell the story of the area's industrial past. Many of these structures bear the visible marks of previous adjoining developments, adding a layer of historical depth and authenticity to the streetscape. This unique blend of aged masonry and the scars of past modifications creates a visually compelling and contextually rich environment that the new design could integrate with.





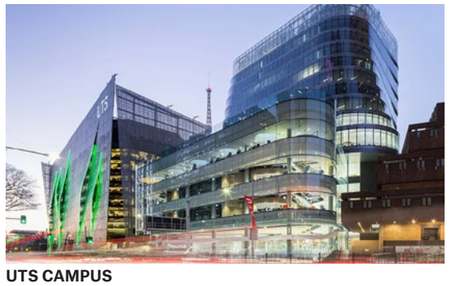
Surrounding Context

The site is surrounded by low and medium density buildings with a variety of uses. One block to the west is the large, multi-storey Broadway Shopping Centre Complex, which connects to smaller retail and restaurant venues along Glebe Point Road. To the southwest, the University of Sydney and Victoria Park Pool are accessible through Victoria Park. Multiple educational institutions, including the University of Technology Sydney, University of Notre Dame, Torrens University, TAFE NSW, and the International Grammar School, are located to the east and southeast, across Parramatta Road. Additionally, a few religious buildings, such as St Barnabas' Church and St Benedict's Catholic Church, are situated between these institutions.

VICTORIA PARK

BROADWAY SHOPPING CENTER

ST BARNABAS' CHURCH



UTS CAMPUS

1.0 Site Analysis

Current Planning Controls

Based on Sydney Local Environmental Plan 2012

Land Zoning

Mixed Use (MU1)

FSR

2:1 (T1)

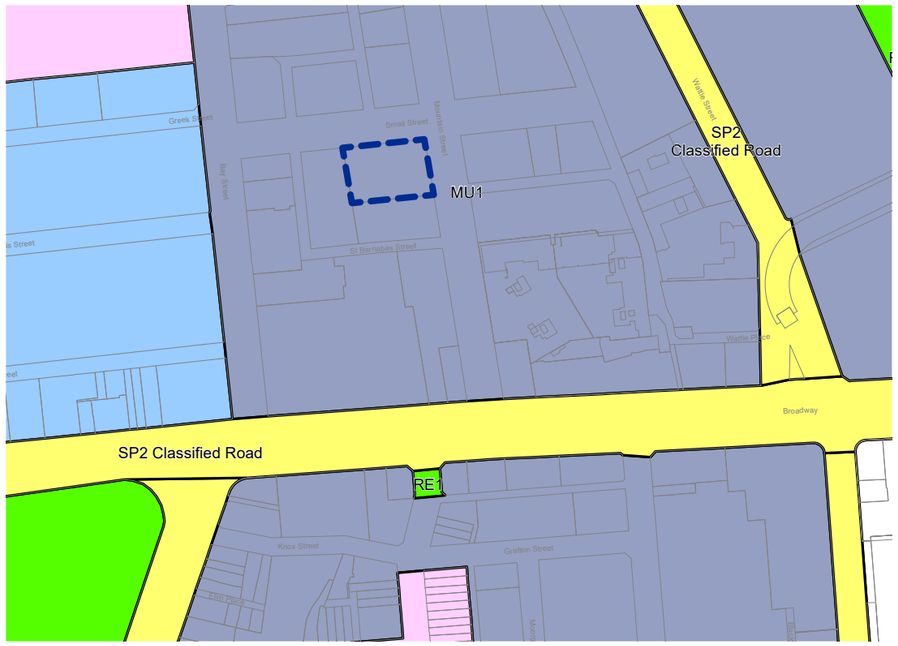
Maximum Building Height

18m (P)

Heritage

The site falls in a general conservation area with the Substation on the North East corner being a heritage listed item.

Notwithstanding the current planning controls, there has been an existing development consent for a height of 31.15m and FSR of 4.34:1 (this has since lapsed).



LAND ZONING - MIXED USE (MU1)

SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

FSR - 2:1 (T1)

SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

MAX BUILDING HEIGHT - 18M (P)

SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

HERITAGE - SUBSTATION & GENERAL CONSERVATION AREA

SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

Land Use

The surrounding area features a mix of commercial and retail hotspots, as well as medium-density residential developments, all situated close to several educational institutions. The site is near multiple parks and open spaces, particularly Victoria Park, which stretches along the main roads of Princes Highway and Parramatta Road. Retail and commercial venues line Parramatta Road, leading to Broadway Shopping Centre and along Glebe Point Road. The following diagram illustrates the diverse land uses in the area.

Key

- Site Boundary
- Commercial & Retail
- Sports & Recreation
- Education
- Religious/Community Buildings
- Industrial

Transport Connections

The site is located along Smail Street and Mountain Street, amidst low to medium density buildings. It is surrounded by one-lane roads, which can lead to a build-up of vehicular traffic. The site is well-connected to major road links, including Parramatta Road, Princes Highway, Wattle Street, and Abercrombie Street. Its close proximity to major attractors and the main Parramatta Road ensures good access to reliable public transport.

Key

- Major Roads
- Minor Streets

Built Form Context

The immediate context is defined by buildings of 4-8 storeys (22.8M to 41.7m) that have FSR's of between 4:1 and 6:1.

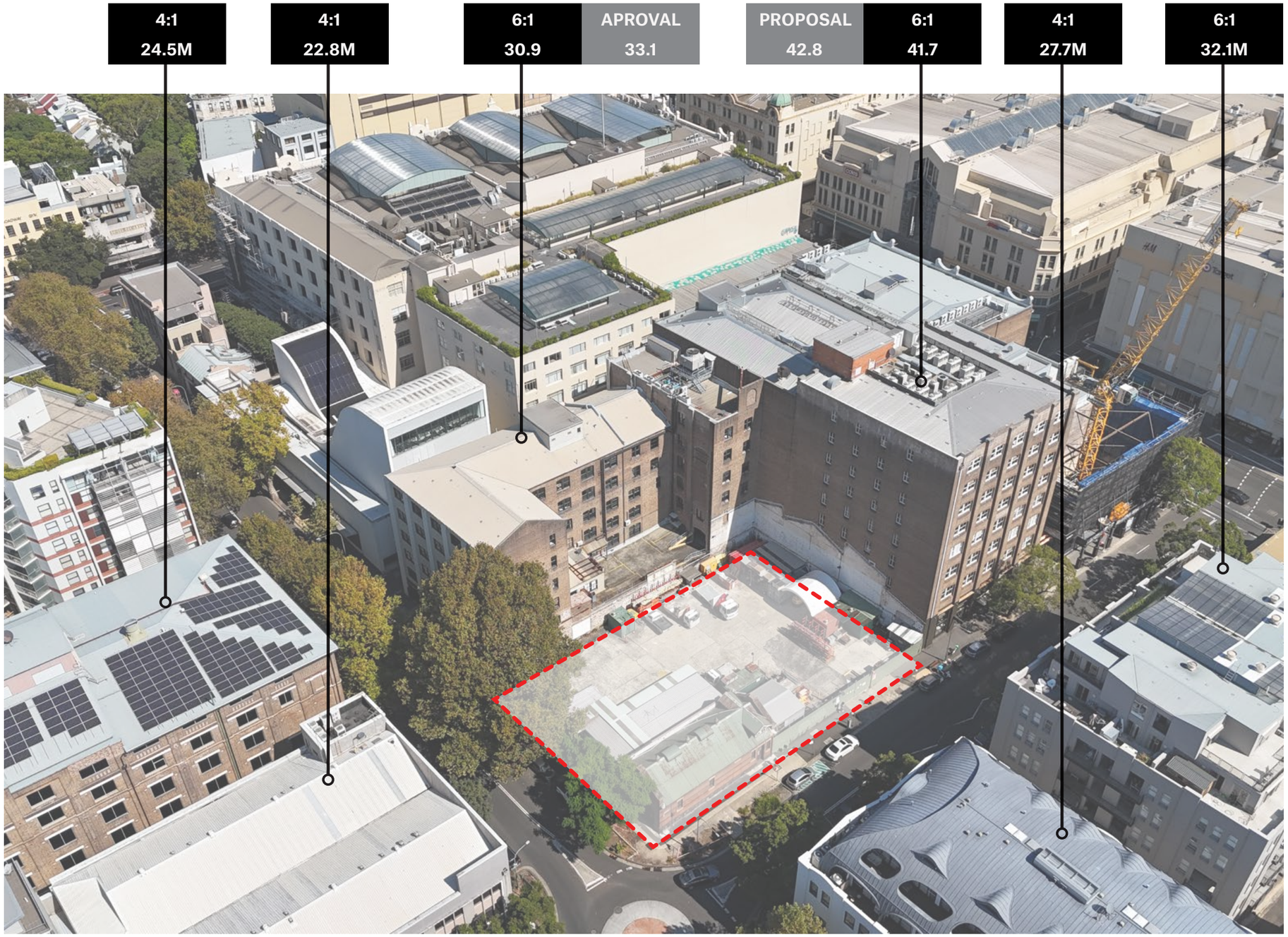
North: The immediate north of the site at 35-39 Mountain Street is a four-storey hotel accommodation.

East: To the east of the site is a four-storey commercial development located at 22-36 Mountain Street.

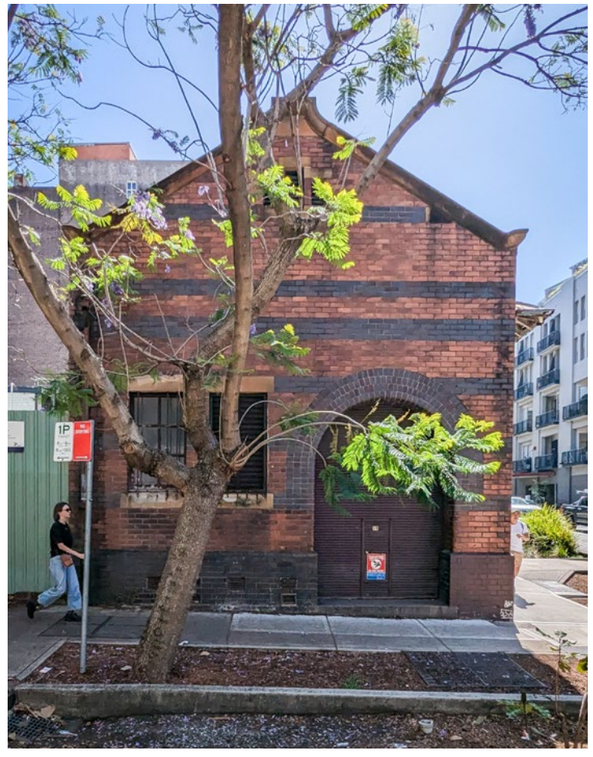
South: A six-storey mixed-use building located at 51-55 Mountain Street adjoining the southern boundary of the site. This building comprises of retail premises on the ground level and office premises above.

West: An eight-storey mixed-use commercial building is located at 51-55 Mountain Street adjoining the site. Apt are currently preparing a Development Application for the adaptive reuse of the building to co-living.

ADJACENT BUILDINGS - EXISTING FSR AND HEIGHT



Heritage
Mountain Street



Sub-station Constructed 1906

The Mountain Street substation is a rare and early example of an externally intact substation dating from the Federation period.

The Mountain Street substation is an unusual, tuck-pointed face brick structure on a corner site, designed in the Federation Free Style evidenced by the use of a sandstone window headers, sill detailing and gabled parapet with curvilinear elements and contrasting manganese banded brick parapet. Stylistic elements also include a large arched entrance flanked by a ventilator and a multi paned window in the gabled wall and a pitched roof with exposed rafters. It is located within the Pyrmont/Ultimo Urban Conservation Area.

The Mountain Street substation is constructed using load bearing face brick and sandstone block for the parapet. The main entrance incorporates a brick arch.

Heritage Act - State Heritage Register

Listing no 00934

Opportunities Analysis

1. Within a 200m walking catchment of public transport (bus services) located along Broadway, with direct services to the CBD and the Inner West suburbs.

2. Located 100m west of the subject site is Broadway Shopping Centre, with Glebe Point Road also within 400m/ 5-minute walking catchment.

3. The subject site is near various tertiary education campuses, including University of Technology, Notre Dame, Torrens University.

4. Potential to integrate an active ground plane along Mountain and Smail Street

5. Potential for the adaptive reuse of the heritage listed substation.

6. The orientation of the subject has good accessibility to northern daylight.

7. Surrounding context is predominantly 6 to 8 storey commercial buildings, with some residential and student housing. The opportunity for a mix of residential and retail will complement the surrounding land uses.

8. Significant existing mature street trees along Mountain Street provide a high-quality urban character that should be retained and enhanced, as well as provide visual separation and screening between the subject site and heritage conservation area. The large tree on Mountain Street is deciduous, providing shade in the summer months while allowing more sunlight to reach the facade in winter.

Key

- Site Boundary
- Heritage Substation
- Key attractors
- Walking Access to Key attractors
- Walking Route to Key Public Transport
- Mature Trees

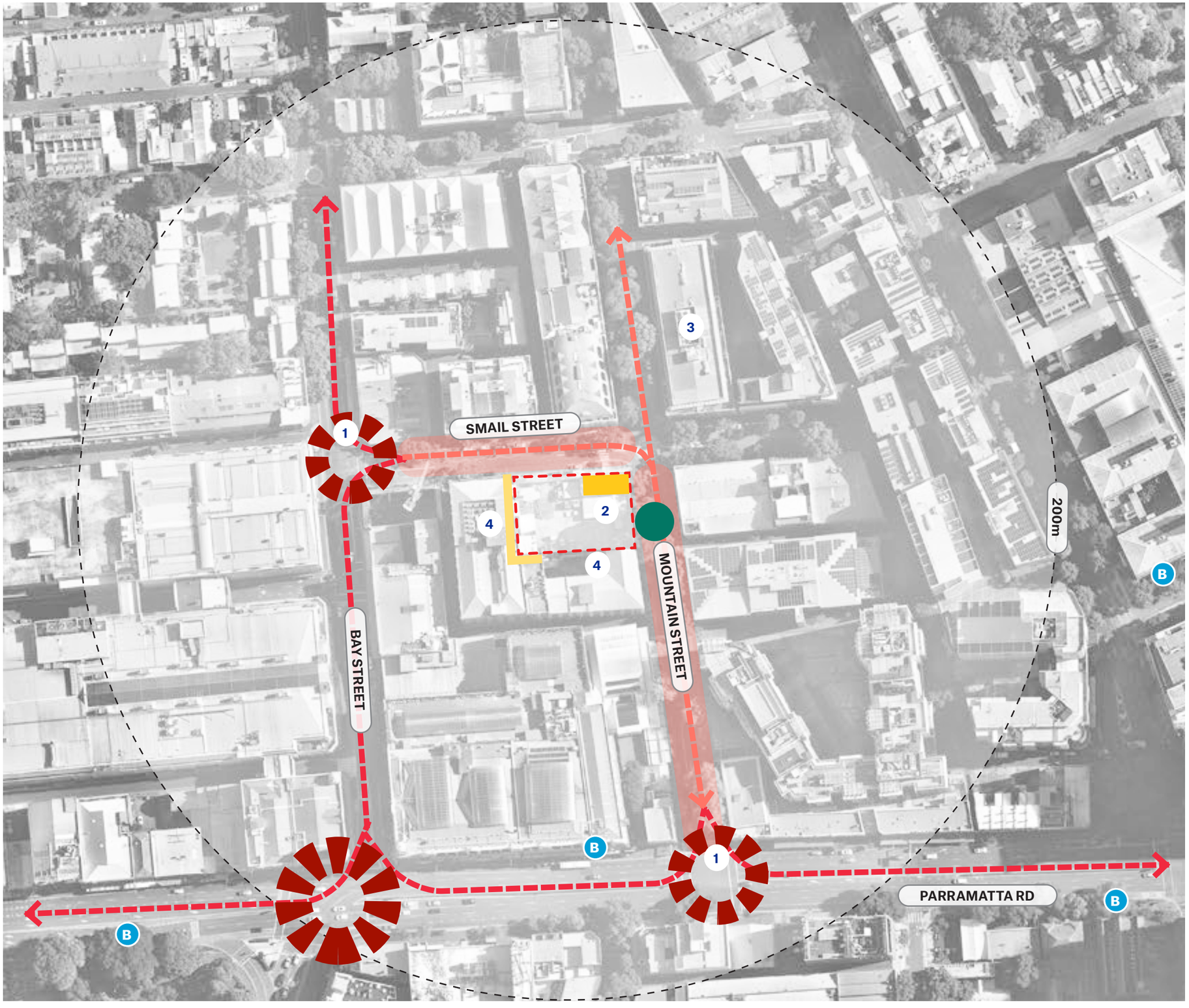
Constraints Analysis

1. There is heavy traffic along Smail Street and Mountain Street leading from the Broadway shopping mall. This is due to the positioning of traffic lights and access to and from the shopping center.

2. Located on the north-eastern corner of the site is a heritage substation which is to be retained. Pending detailed heritage advice, we have allowed a 3m setback around the heritage item to provide curtilage and access.

3. The site sits within a heritage conservation zone. Leading the area to have a sensitive street frontage, building height, and protection to the mature trees lining the adjacent streets.

4. The neighbouring building has windows which face the site. These buildings have a 0m to the boundary. Meaning that the proposal may need to include extra setbacks to allow adequate distance between the two.



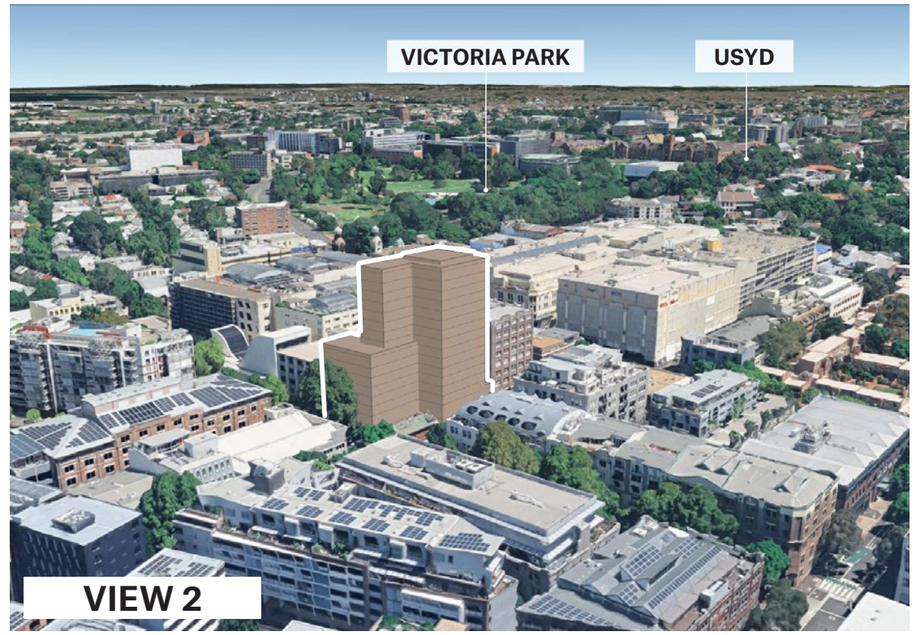
Key

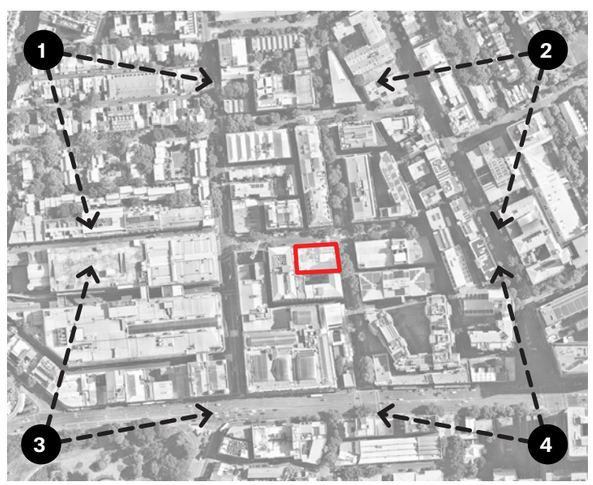
- Site Boundary
- Heritage Substation
- Neighbouring windows on buildings
- Heavy Traffic
- Mild Traffic
- Mature Tree
- Major Intersections

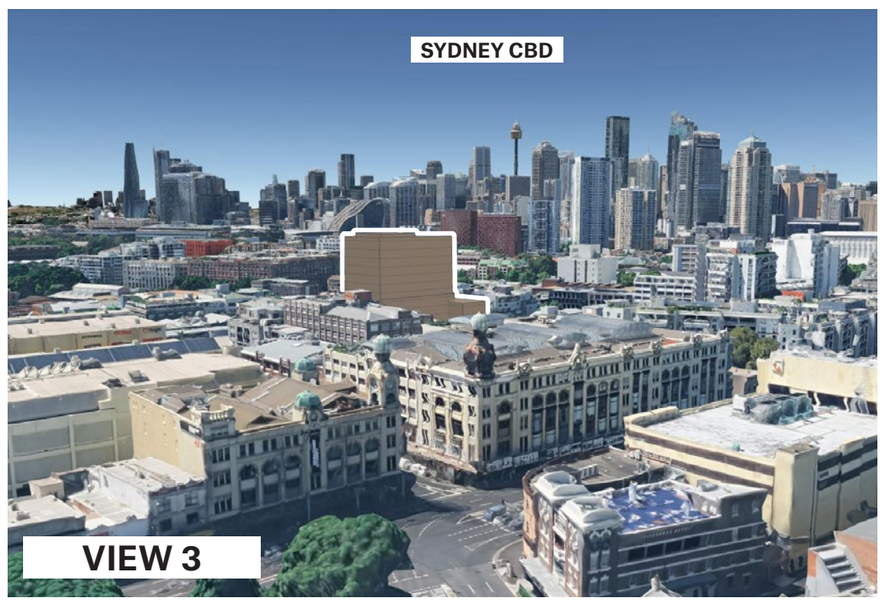
View Analysis
Of the Site

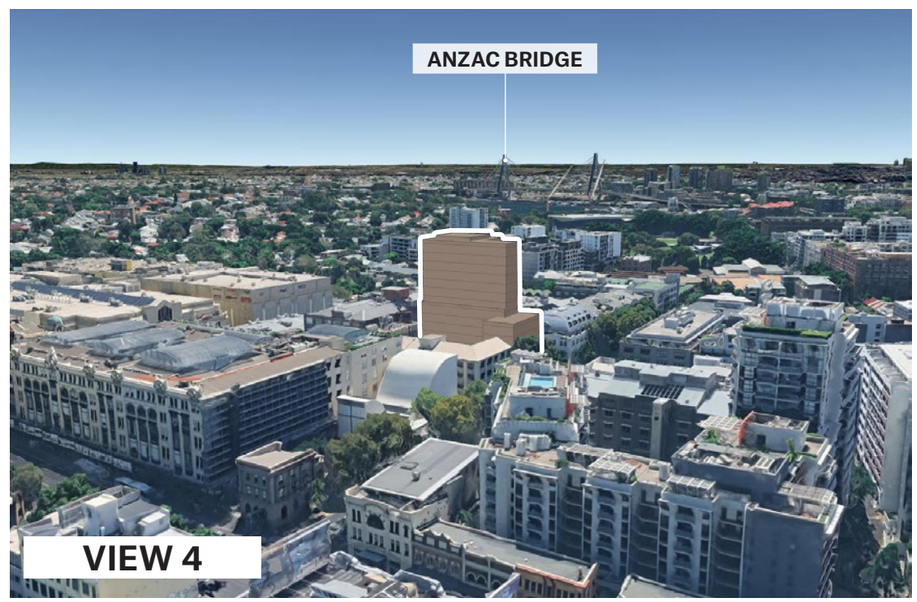
The subject site at 41–49 Mountain Street, Ultimo is situated within a predominantly retail and commercial precinct, characterized by mid-rise built form and active street frontages. The immediate surrounds include a mix of warehouse conversions, educational institutions, and commercial tenancies, with limited residential presence. The nearest residential buildings are located to the south and east and are notably lower in height than the proposed development.

Given their orientation and existing view corridors, these dwellings are not expected to experience any significant loss of visual amenity or access to key outlooks. The proposal has been designed to respect surrounding view lines while contributing positively to the evolving urban fabric of Ultimo.





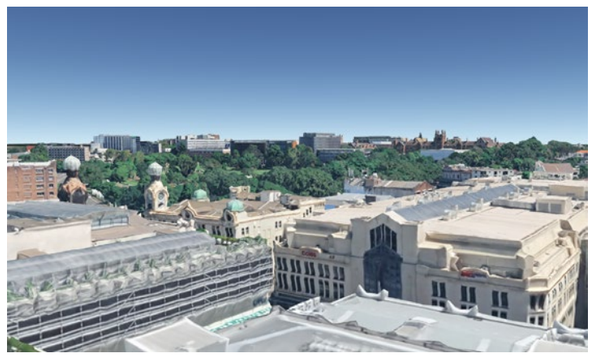




View Analysis
From the Site

Iconic City/CBD Views to the North East

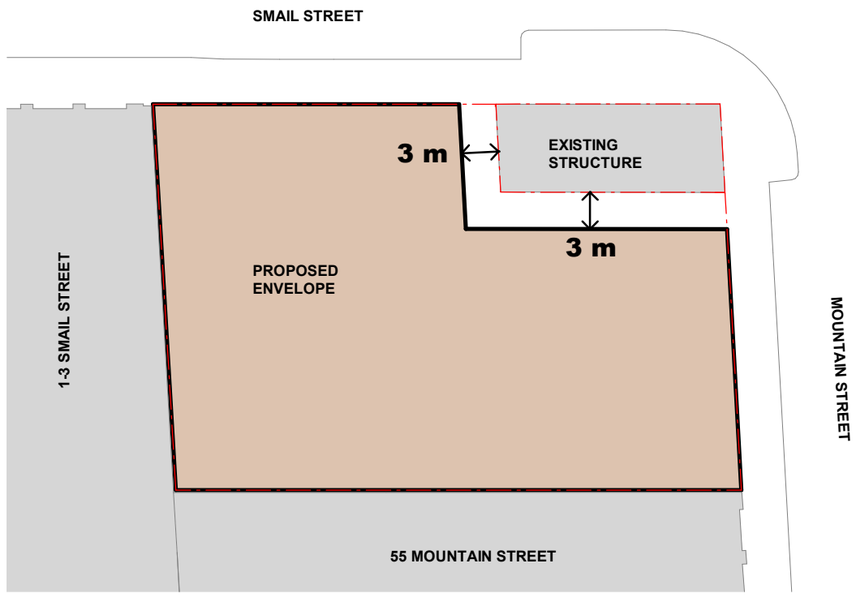
Anzac Bridge Views to the North



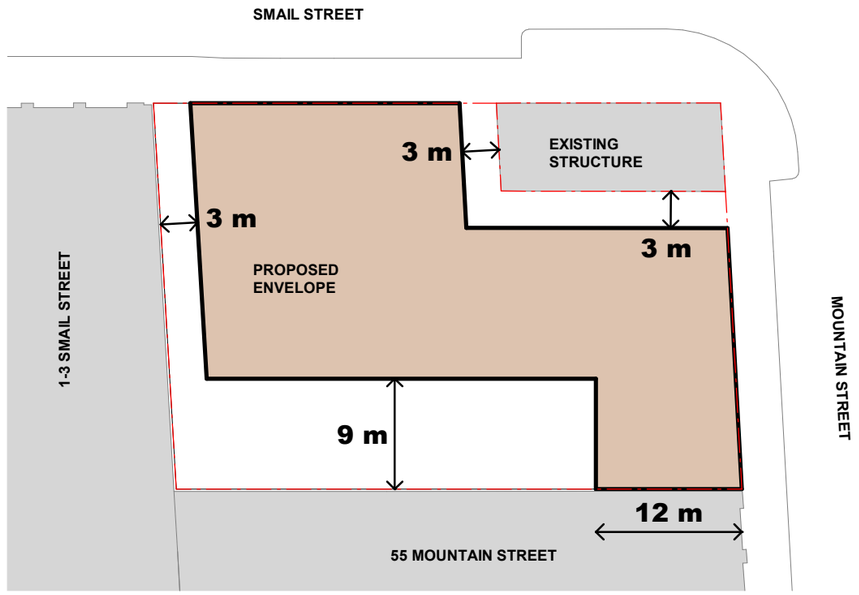
Parkland Views to the South West

2.0 Proposal

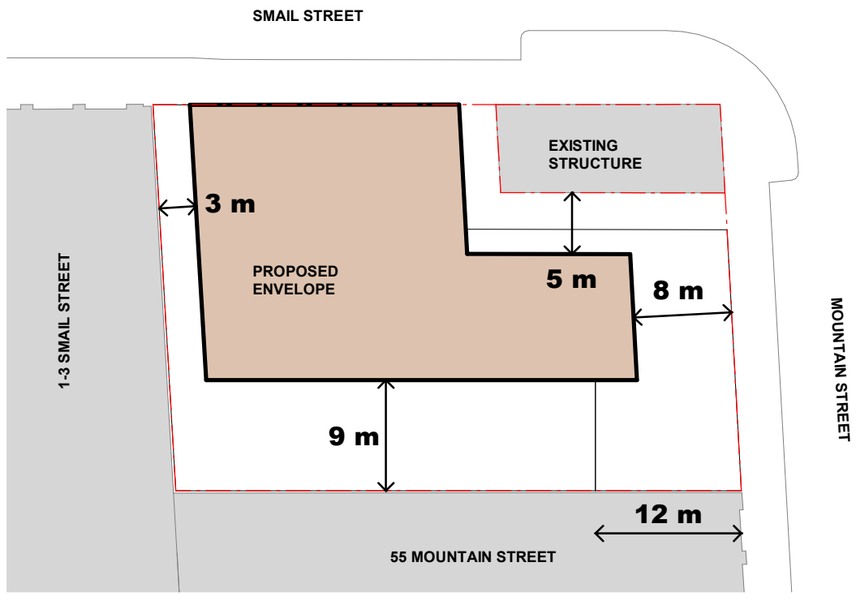
Proposed Envelope
Plans



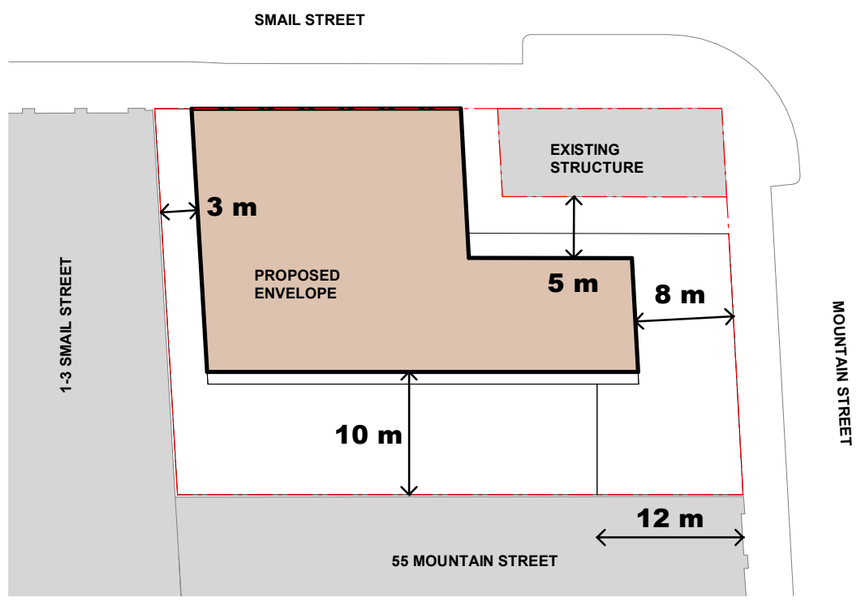
GROUND LEVEL



LEVELS 2 - 6

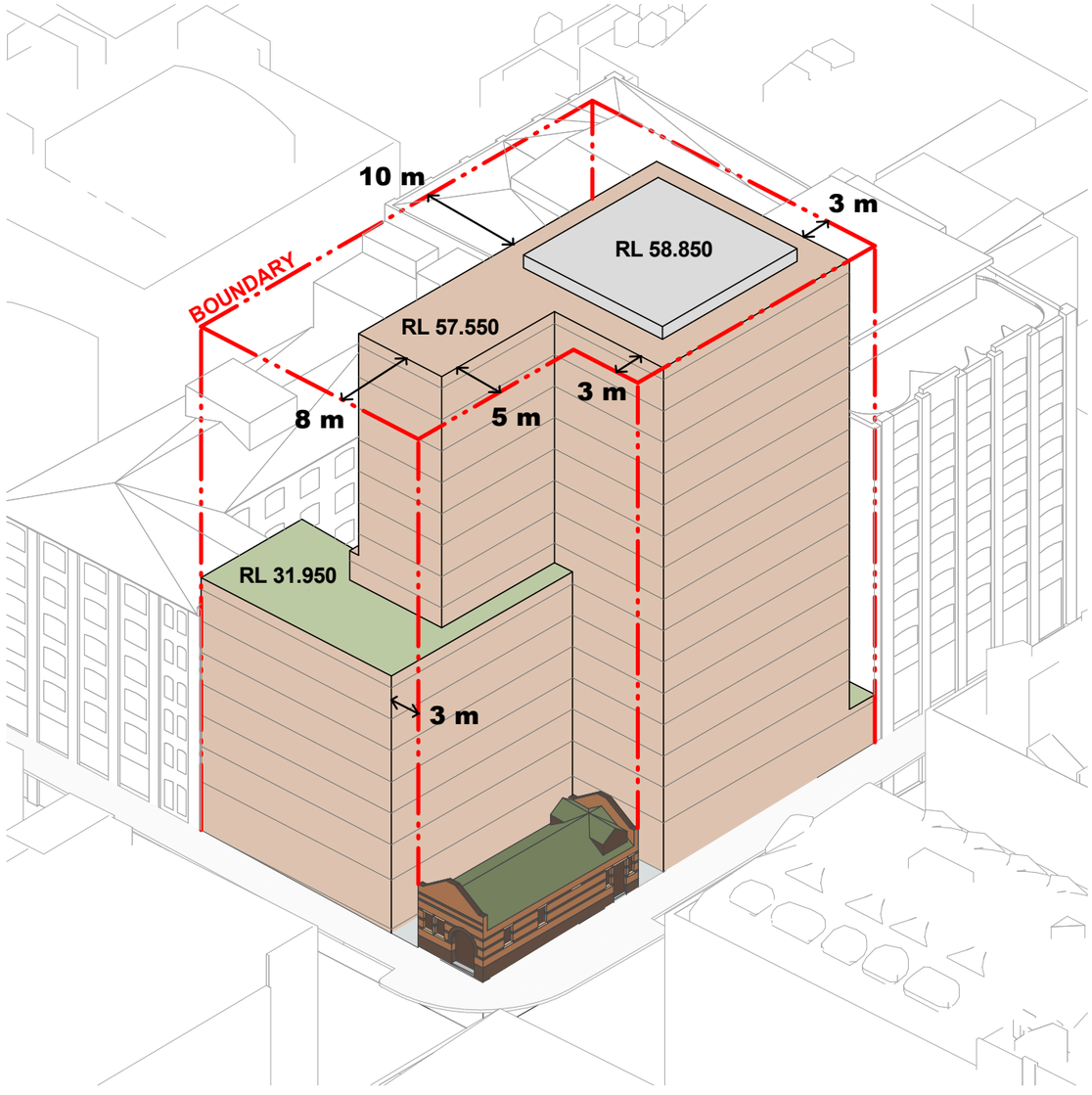


LEVEL 7

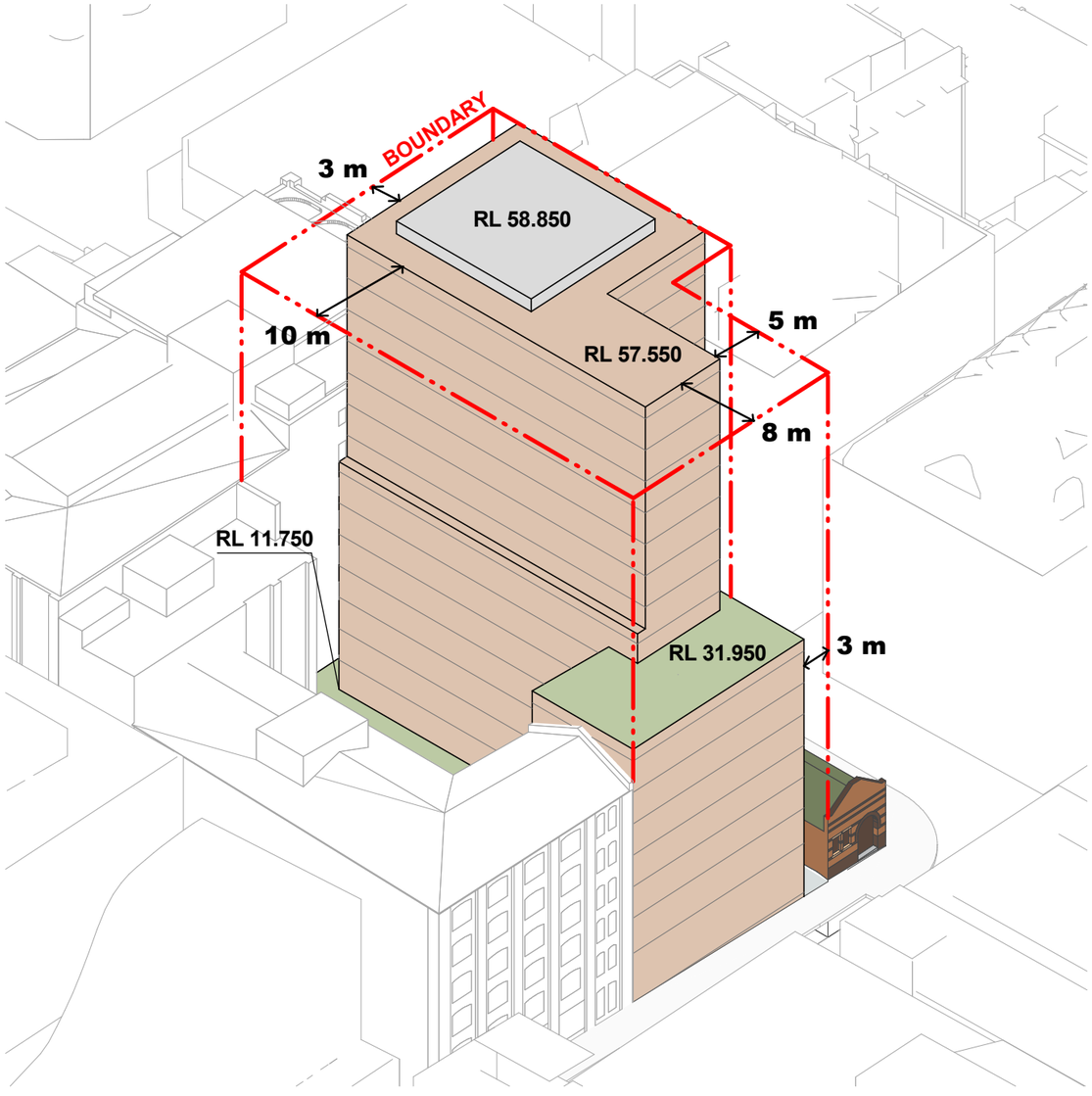


LEVELS 8 - 14

Proposed Envelope
Height and Setback Diagrams

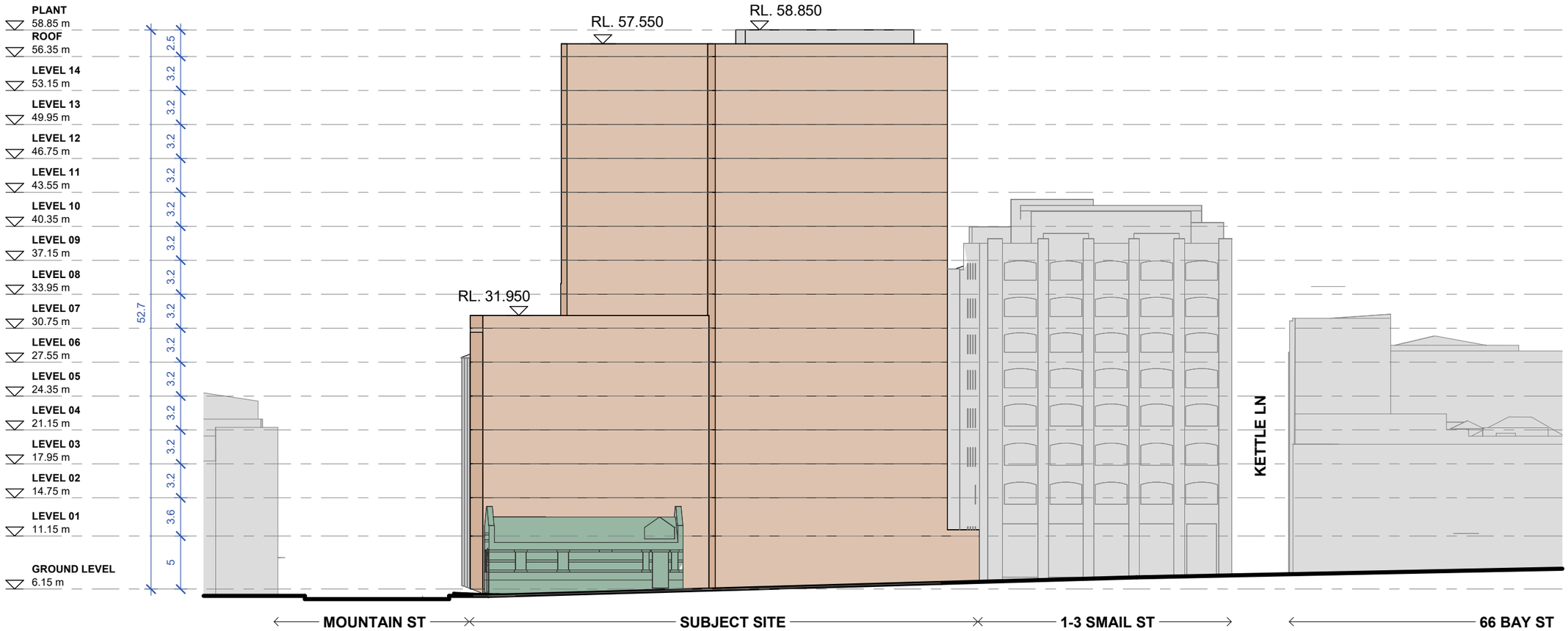


NORTH EAST ASPECT

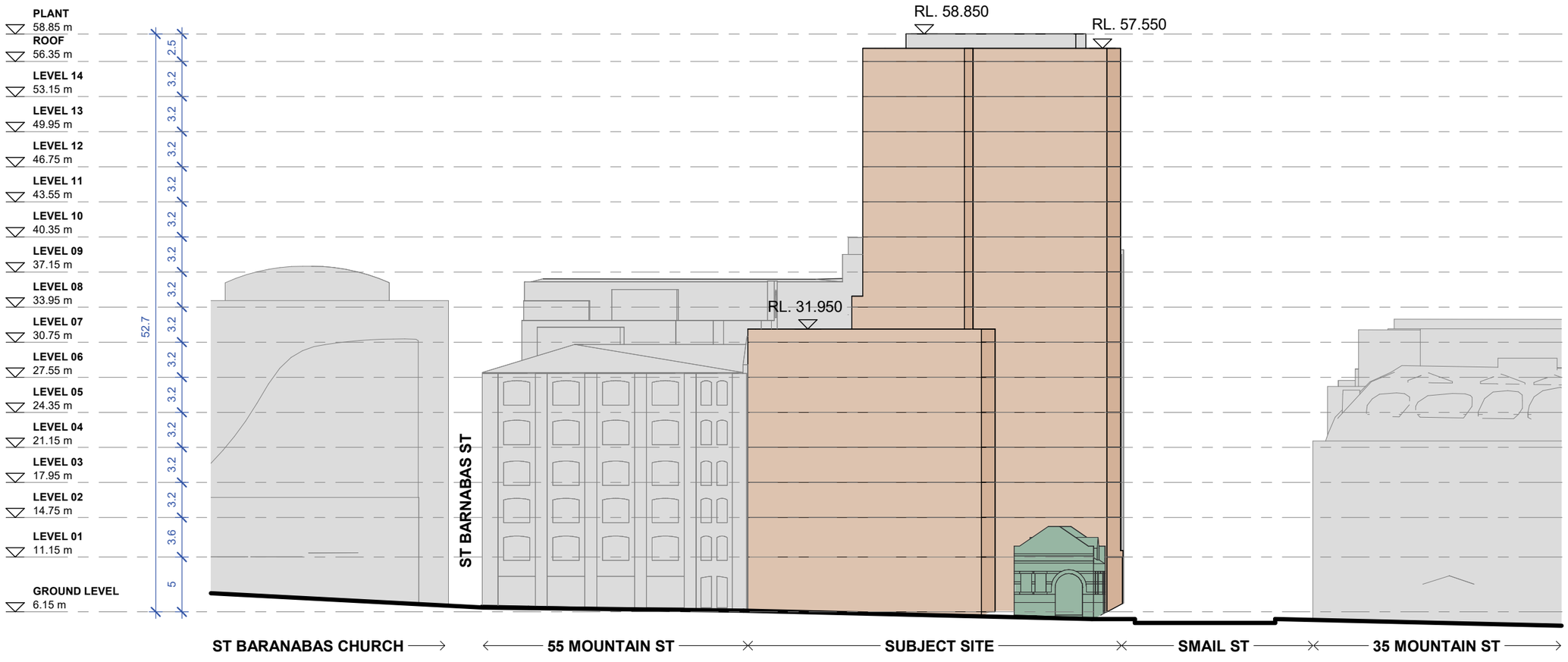


SOUTH EAST ASPECT

Proposed Envelope
North Elevation



Proposed Envelope
East Elevation



Solar Access

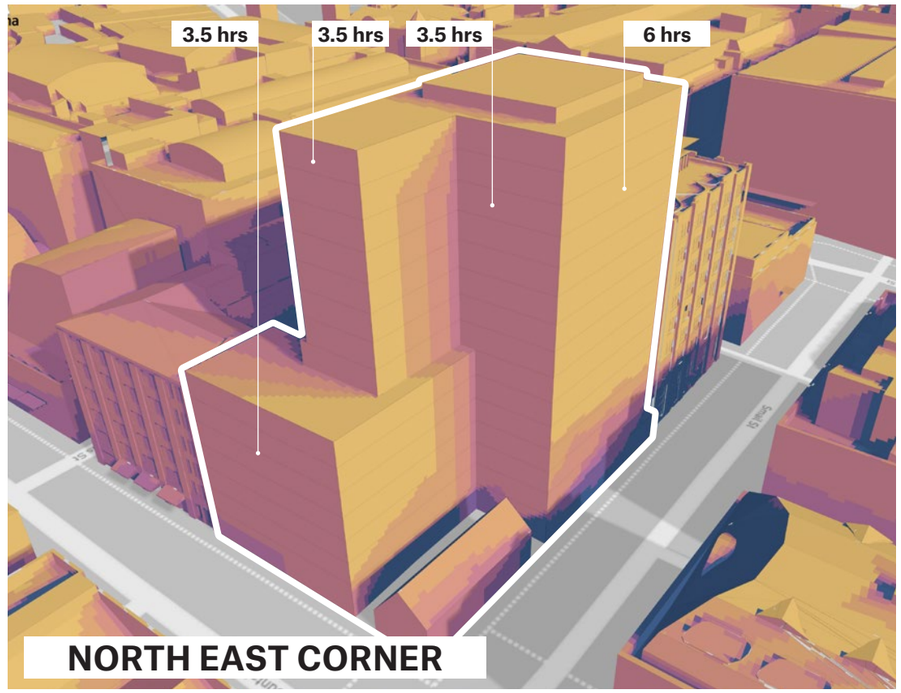
The following heatmap diagrams show solar access (in hours) between 9am and 3pm on 21 June.

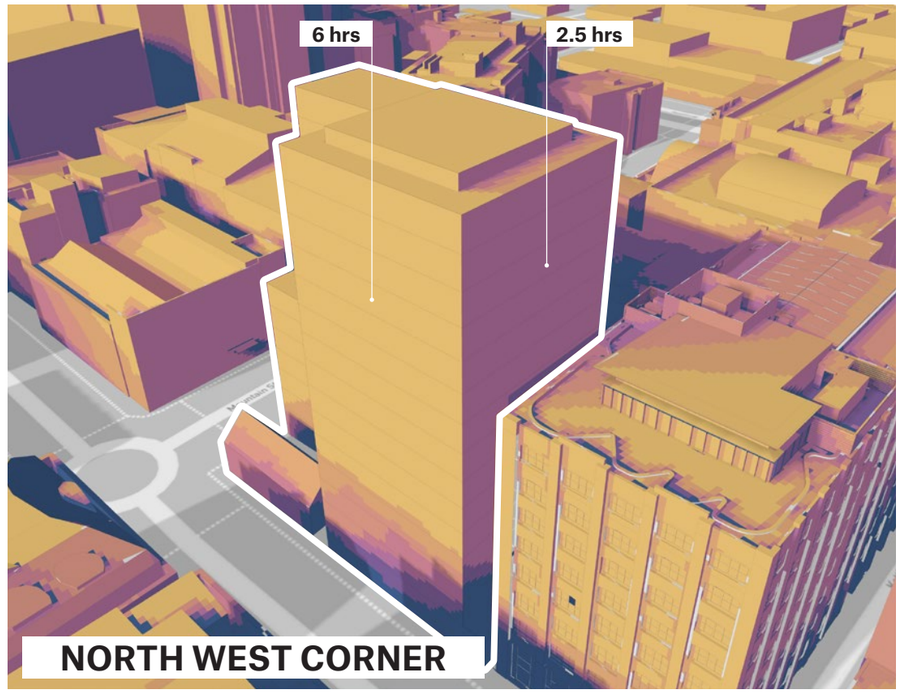
The living rooms, private balconies and communal open spaces have been positioned accordingly to take advantage of this.

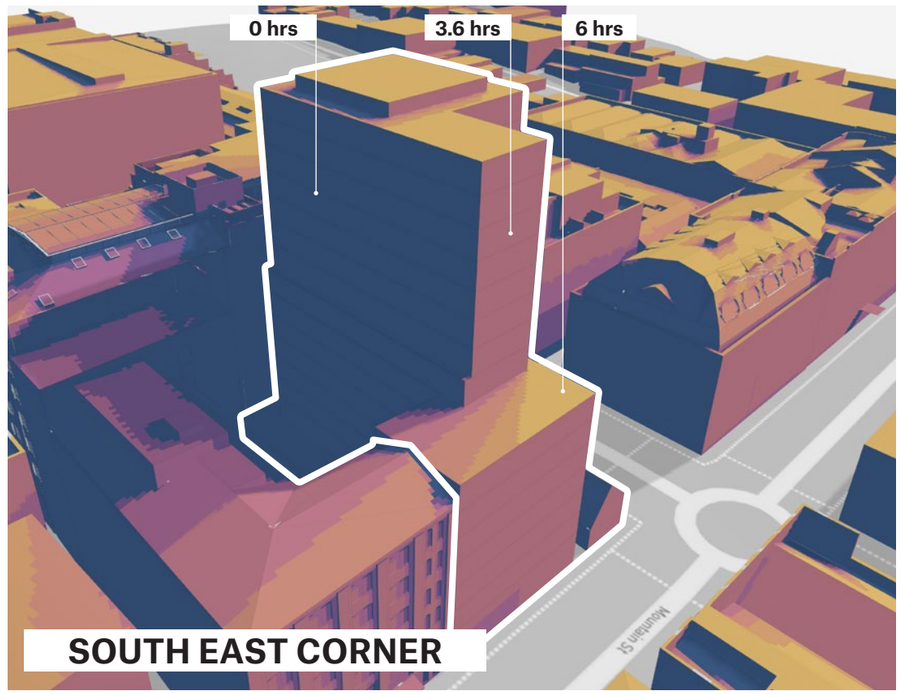
ADG Solar Metrics.

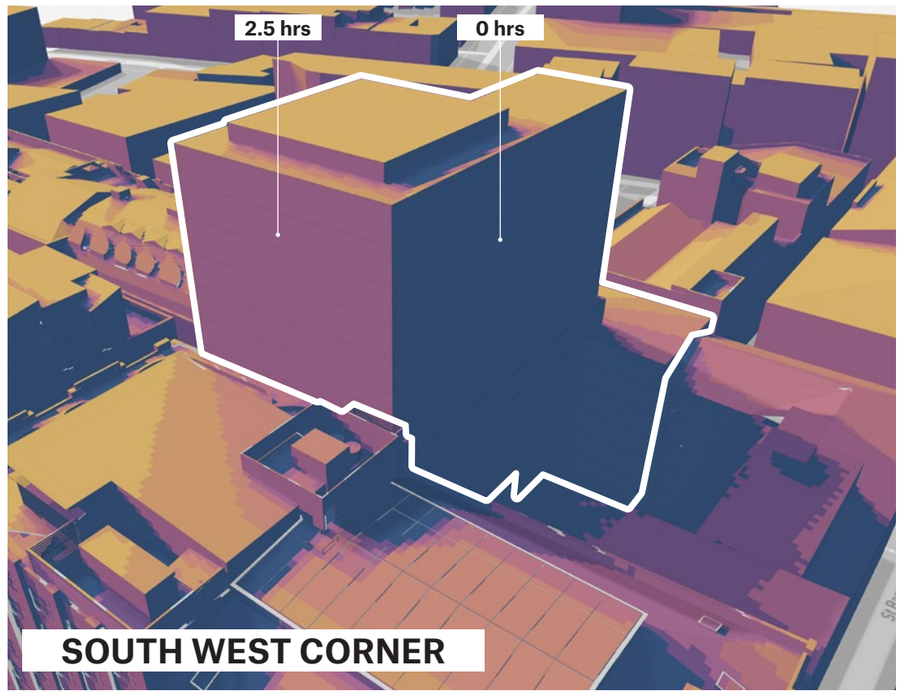
74% Of units in this proposal achieve a minimum of 2 hours of solar access between 9am and 3pm on June 21.

20% of units receive nil solar access due to their south-facing orientation. However, the adjacent southern courtyard provides valuable amenity through open space, daylight access, and visual relief, ensuring livability is maintained.

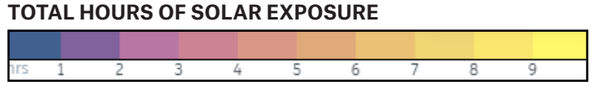






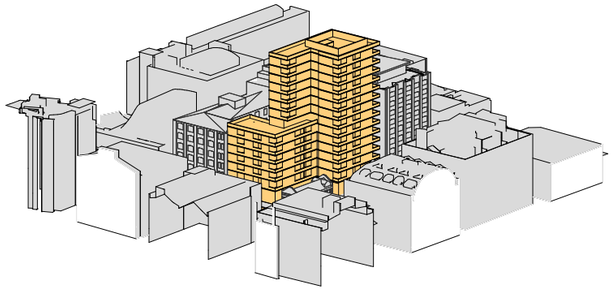


TOTAL HOURS OF SOLAR EXPOSURE

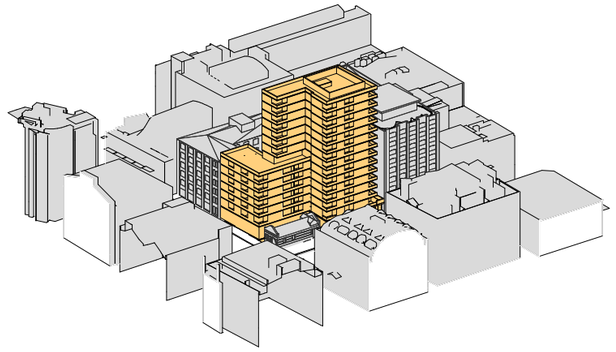


Solar Access
Sun-eye views

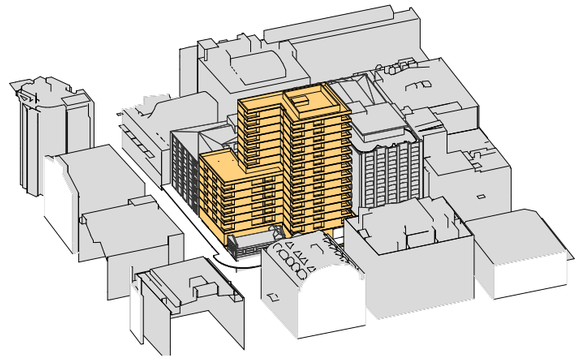
The following views illustrate sun-eye analyses conducted hourly on June 21—the winter solstice in the southern hemisphere—between 9:00am and 3:00pm.



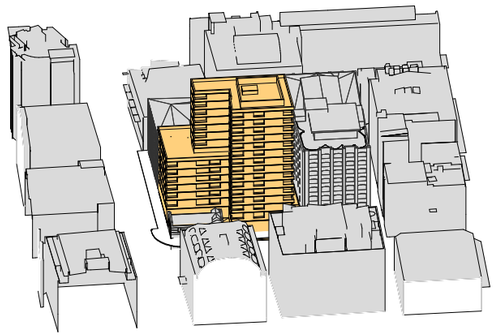
9am



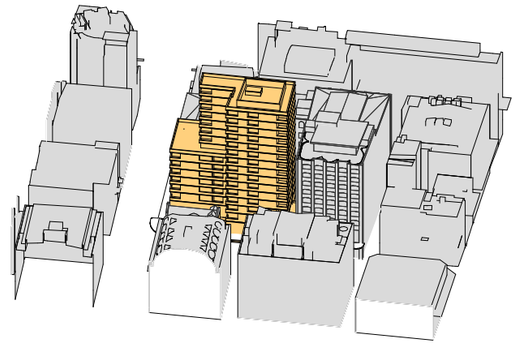
10am



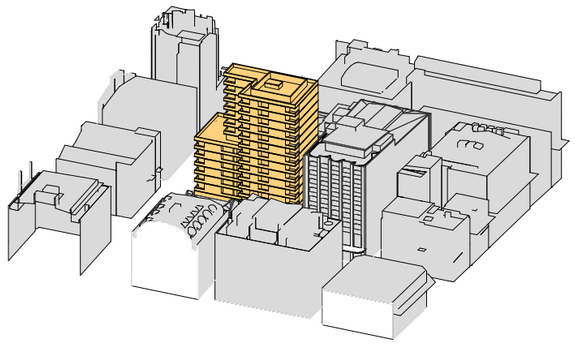
11am



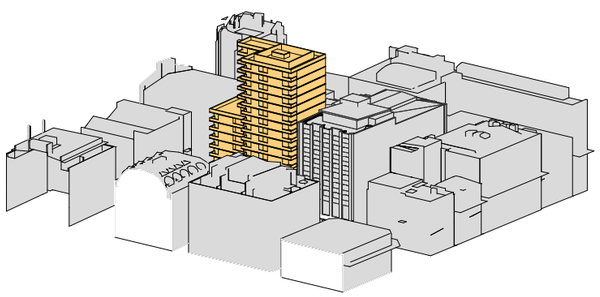
12pm



1pm



2pm



3pm

Overshadowing Impact

The following heatmap diagrams show solar access (in hours) between 9am and 3pm on 21 June. The left column reflects existing conditions; the right shows the proposed development.

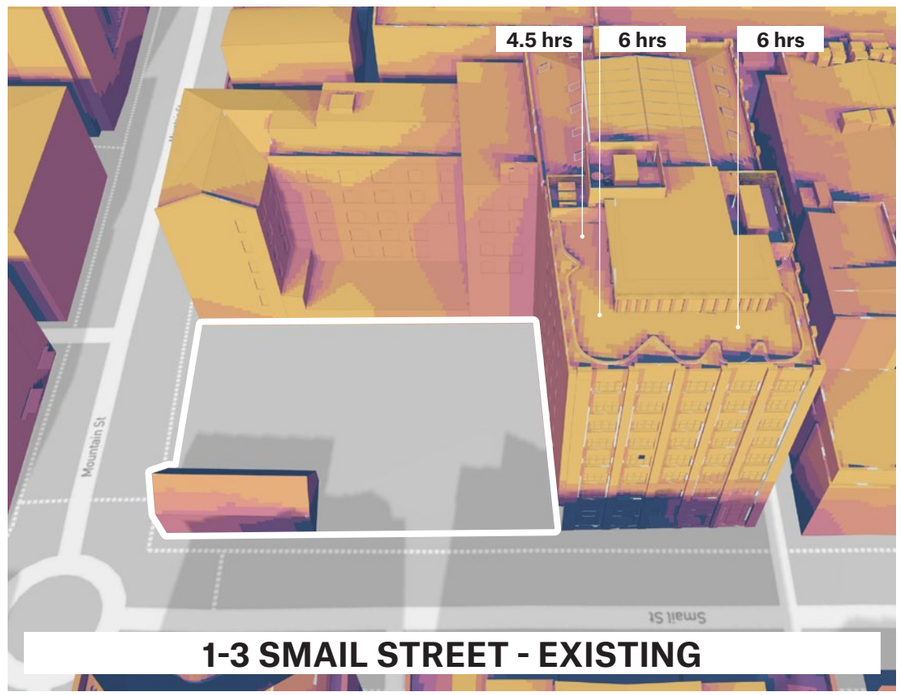
In line with the City of Sydney's Overshadowing Controls, the proposal does not result in significant shadow impacts to residential apartments, communal open spaces, or private outdoor areas.

There is minor overshadowing to the rooftop terrace at 1–3 Smail Street, but over 50% of the space remains largely unaffected and continues to receive at least two hours of sunlight.

The most notable reduction in solar access occurs at the commercial property at 55 Mountain Street, located directly south of the site.

55 MOUNTAIN STREET - EXISTING

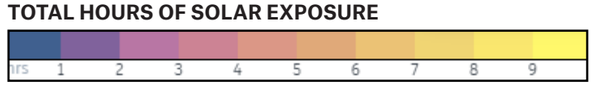
55 MOUNTAIN STREET - PROPOSED



1-3 SMAIL STREET - EXISTING

1-3 SMAIL STREET - PROPOSED

TOTAL HOURS OF SOLAR EXPOSURE

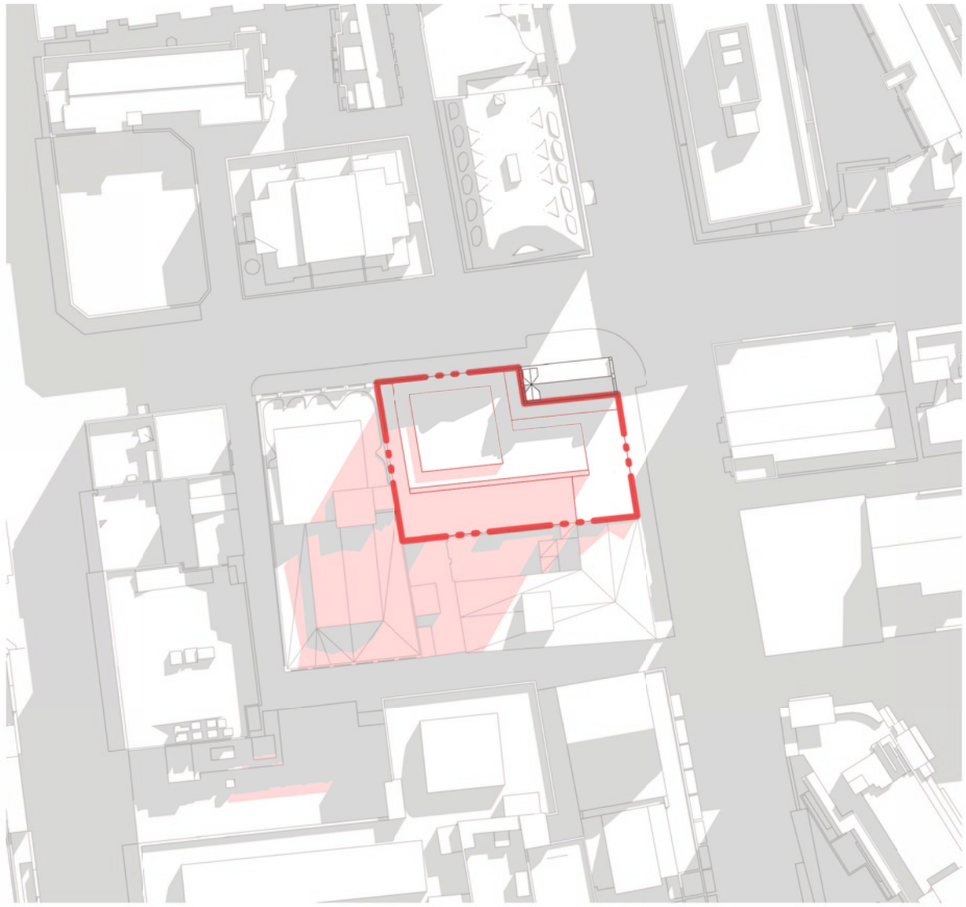


Overshadowing Diagrams

The following diagrams illustrate the extent of additional overshadowing created by the proposed development on June 21 between 9am and 3pm.

The additional shadows are highlighted light red.

9am

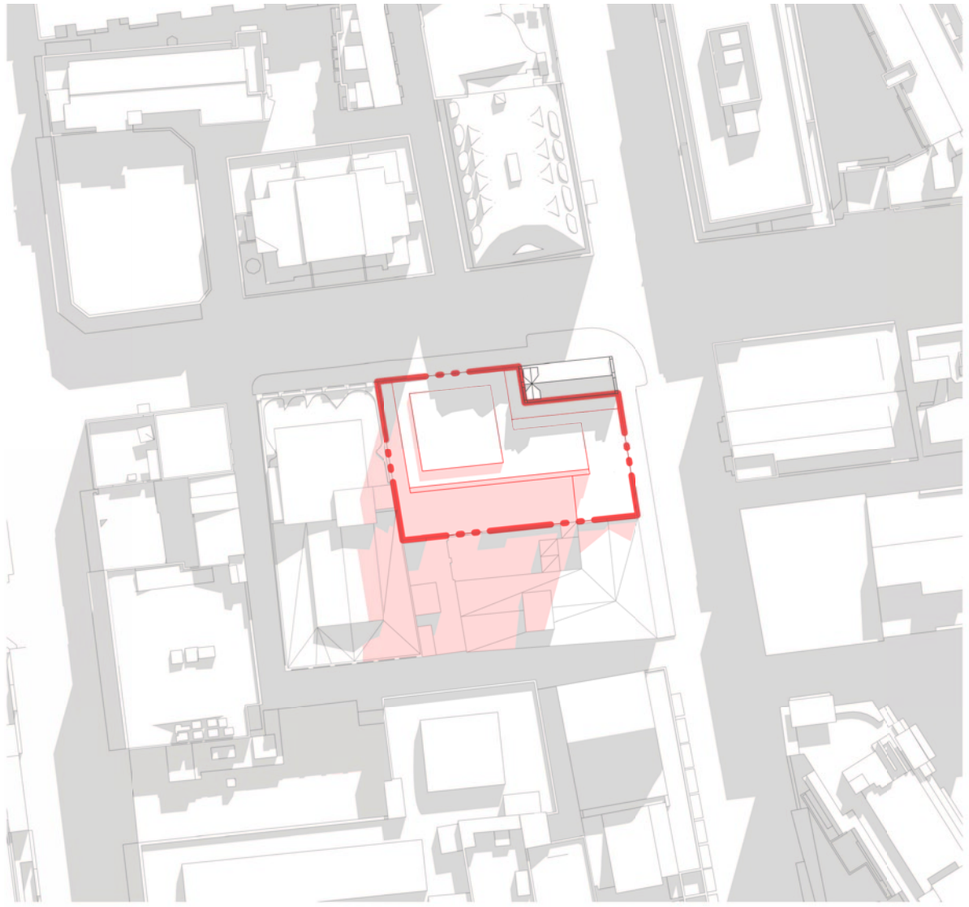


10am

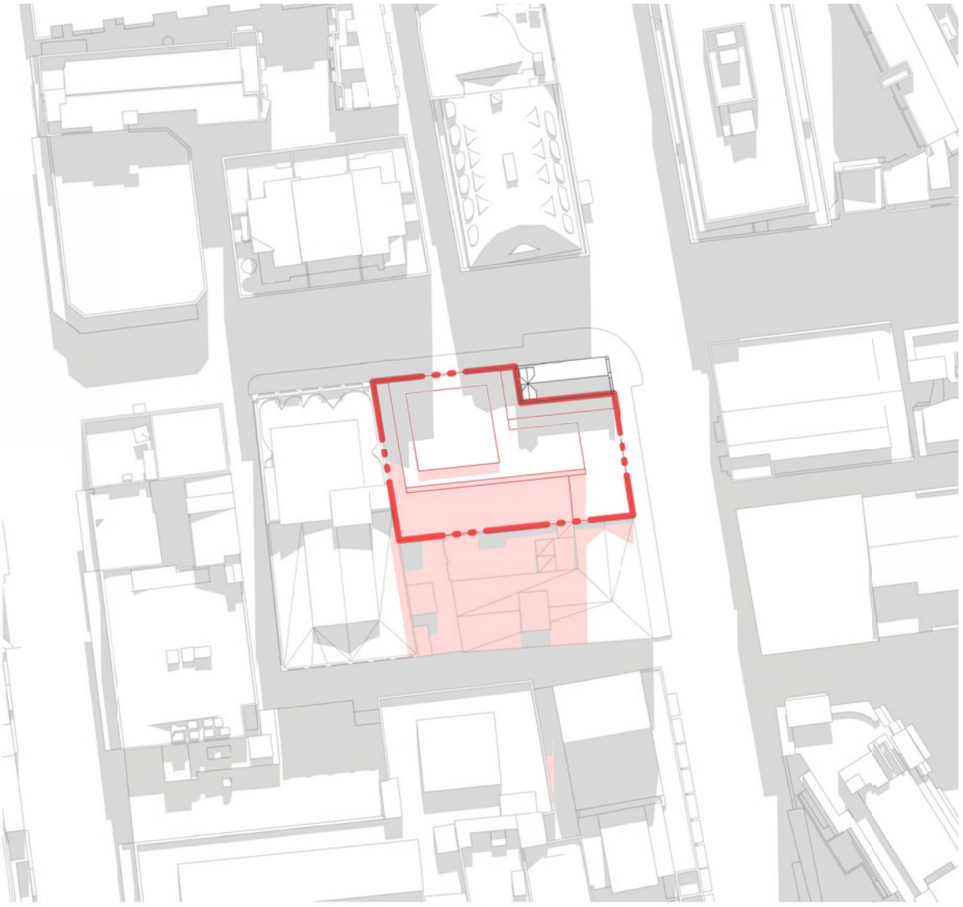
Overshadowing Diagrams

The following diagrams illustrate the extent of additional overshadowing created by the proposed development on June 21 between 9am and 3pm.

The additional shadows are highlighted light red.



11am



12pm

Overshadowing Diagrams

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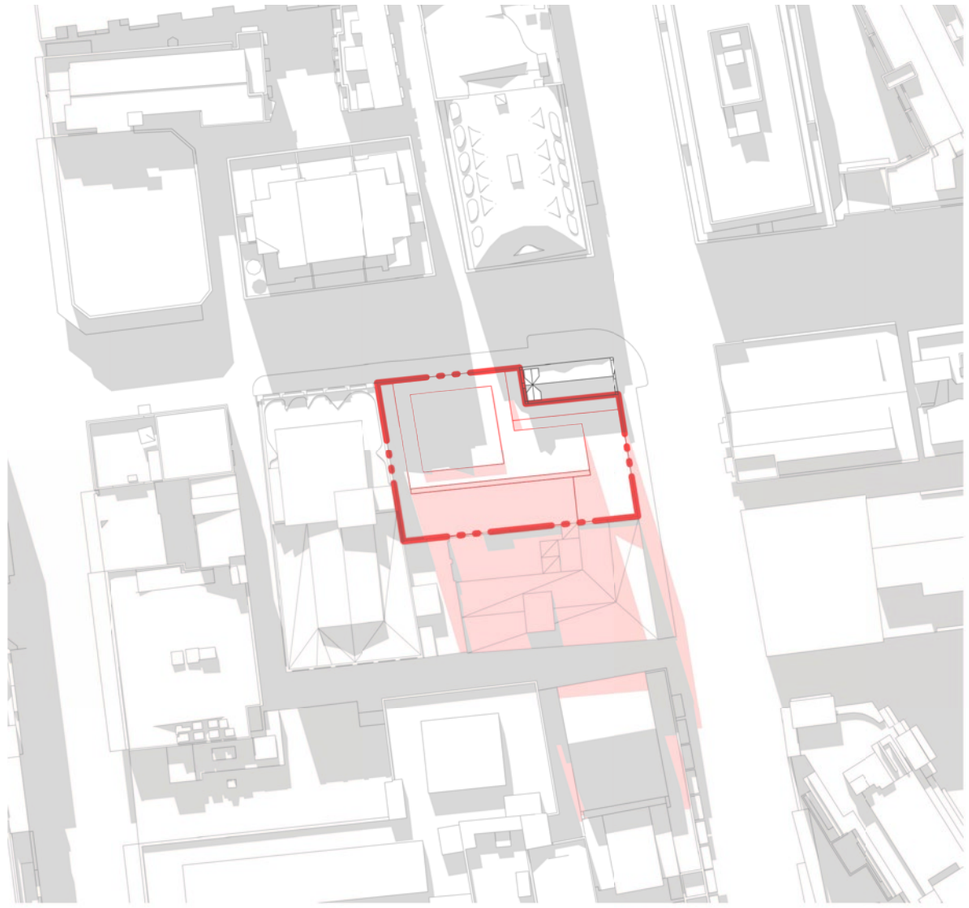
The additional shadows are highlighted light red.



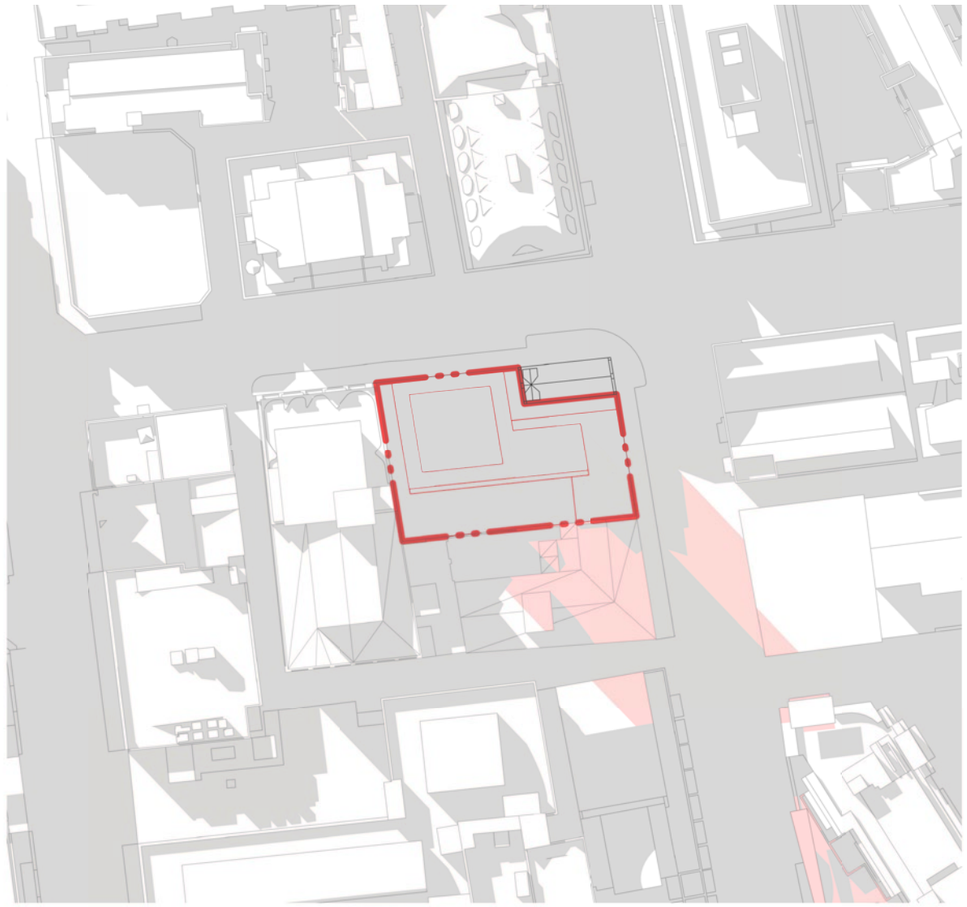
1pm

2pm

Overshadowing Diagrams

The following diagrams illustrate the extent of additional overshadowing created by the proposed development on June 21 between 9am and 3pm.

The additional shadows are highlighted light red.



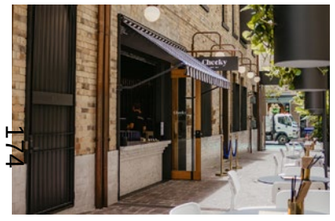
3pm

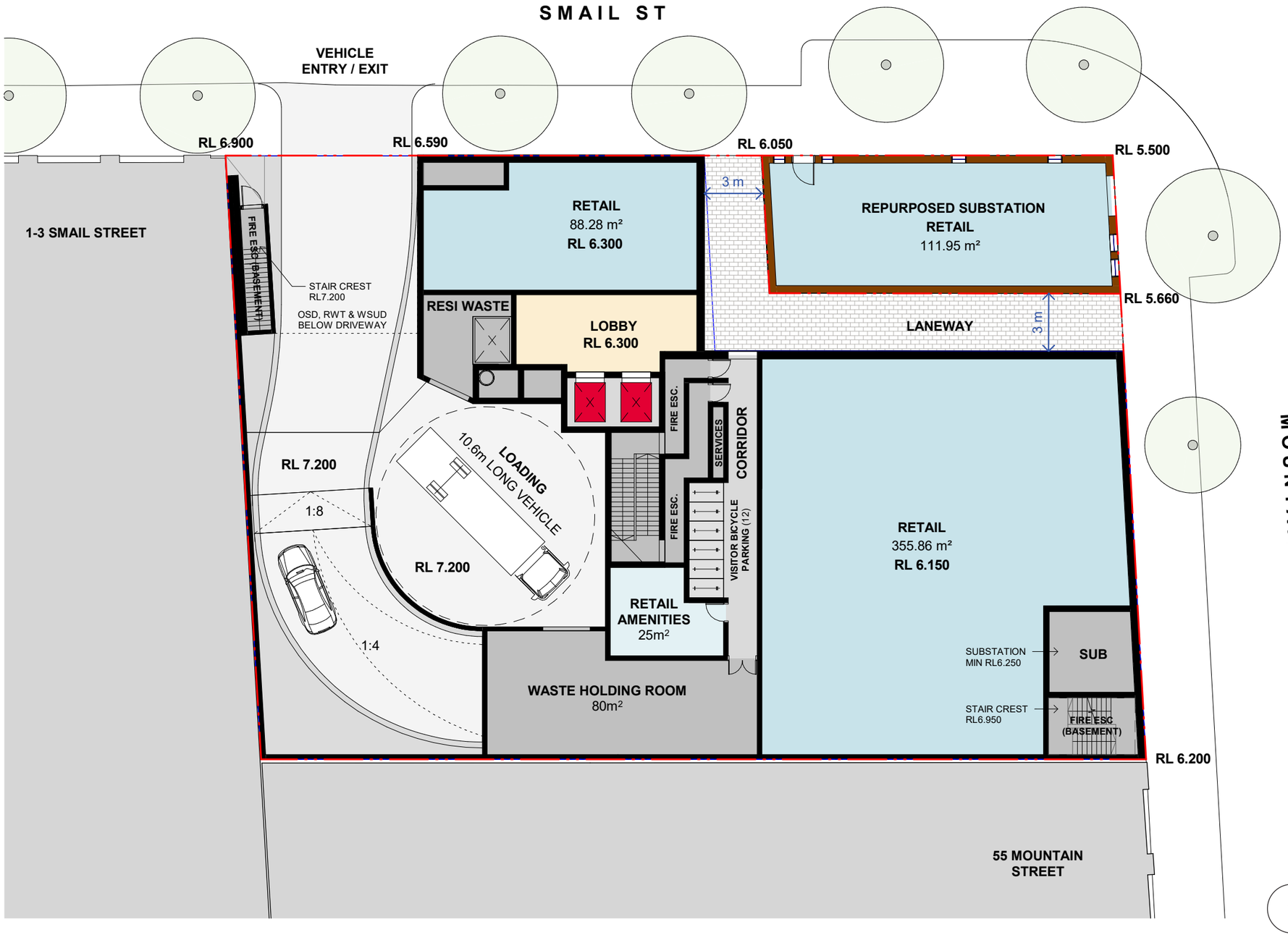
3.0 Reference Design

Reference Design
Ground Level Plan

Key Moves

- Substation with 3m Wide lane way.
- Central Lobby and Retail accessed via Lane way
- Secure access to car park and loading dock.
- Double sided retail laneway.
- Predominant Retail activation to perimeter of Smail + Mountain Street.

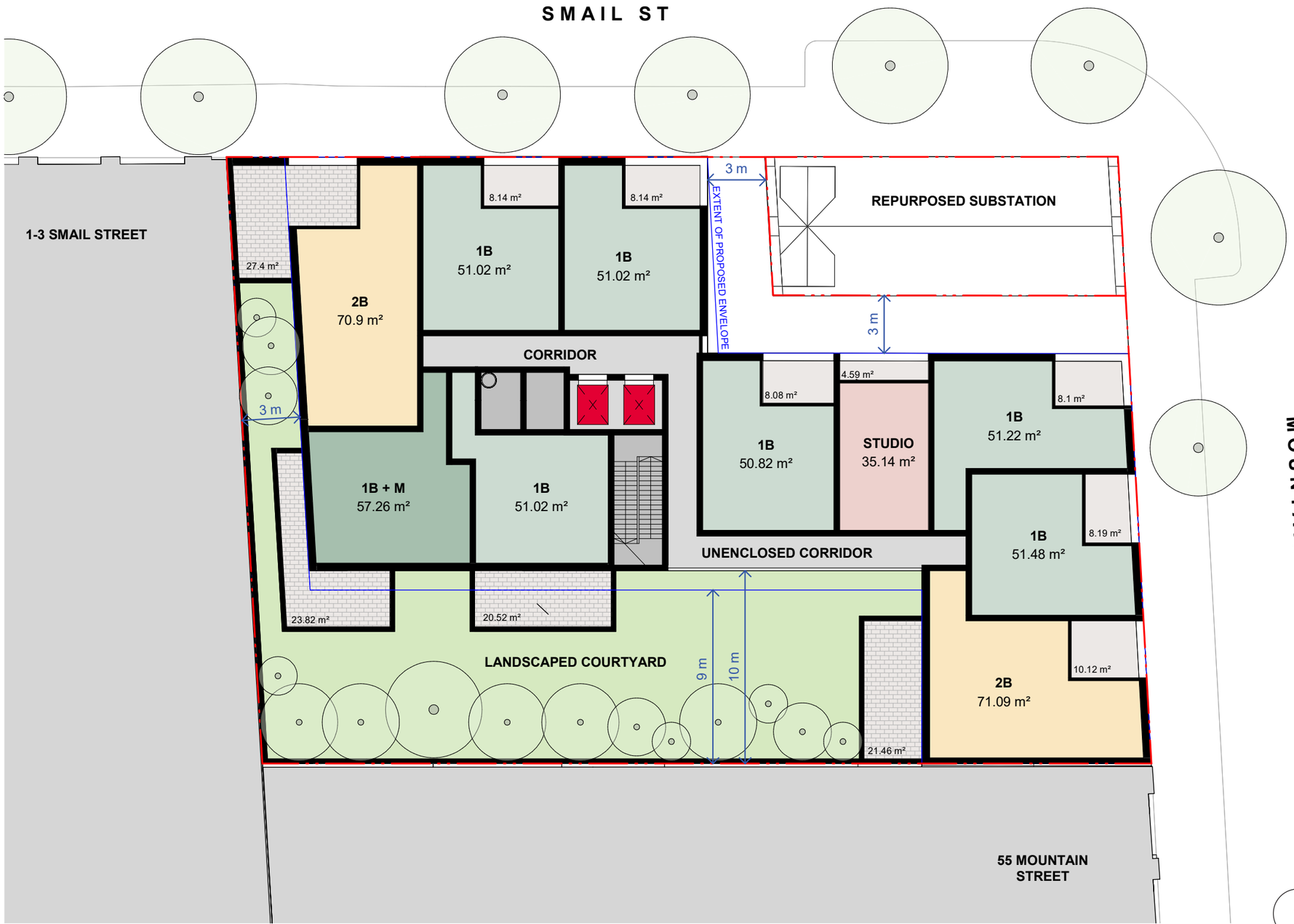




Reference Design
Level 01 Plan

Key Moves

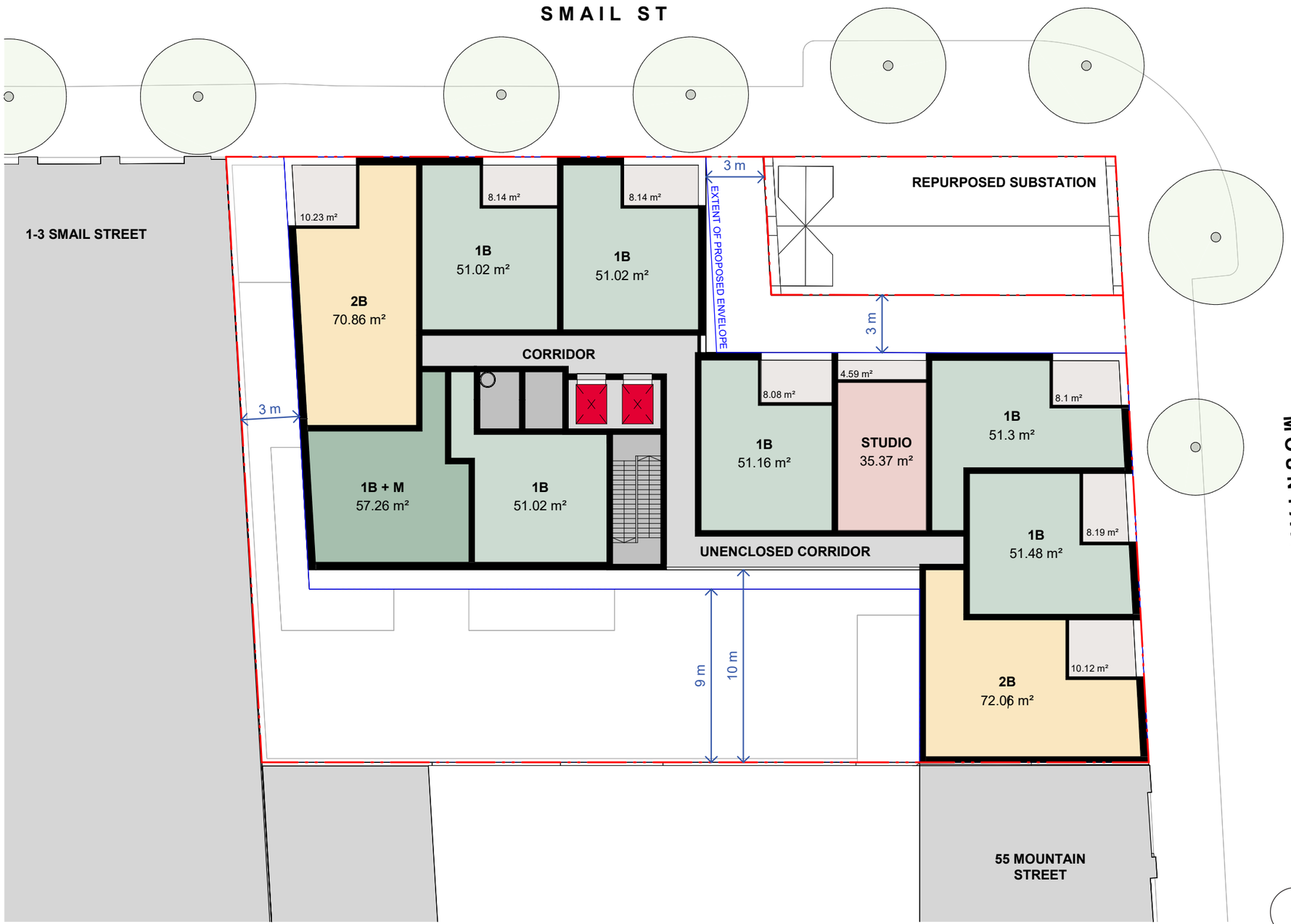
- Generous terraces in landscaped courtyard.
- 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B
- Apartments with >2H solar access: 8/10 (80%)
- Apartments with cross ventilation: 7/10(70%)
- 10m Setback to South facade



Reference Design
Level 02-06 Plan

Key Moves

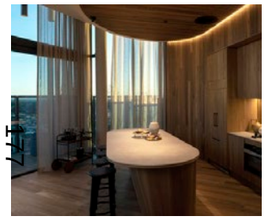
— 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B
— Apartments with >2H solar access: 8/10 (80%)
— Apartments with cross ventilation: 7/10(70%)
— 10m Setback to South facade

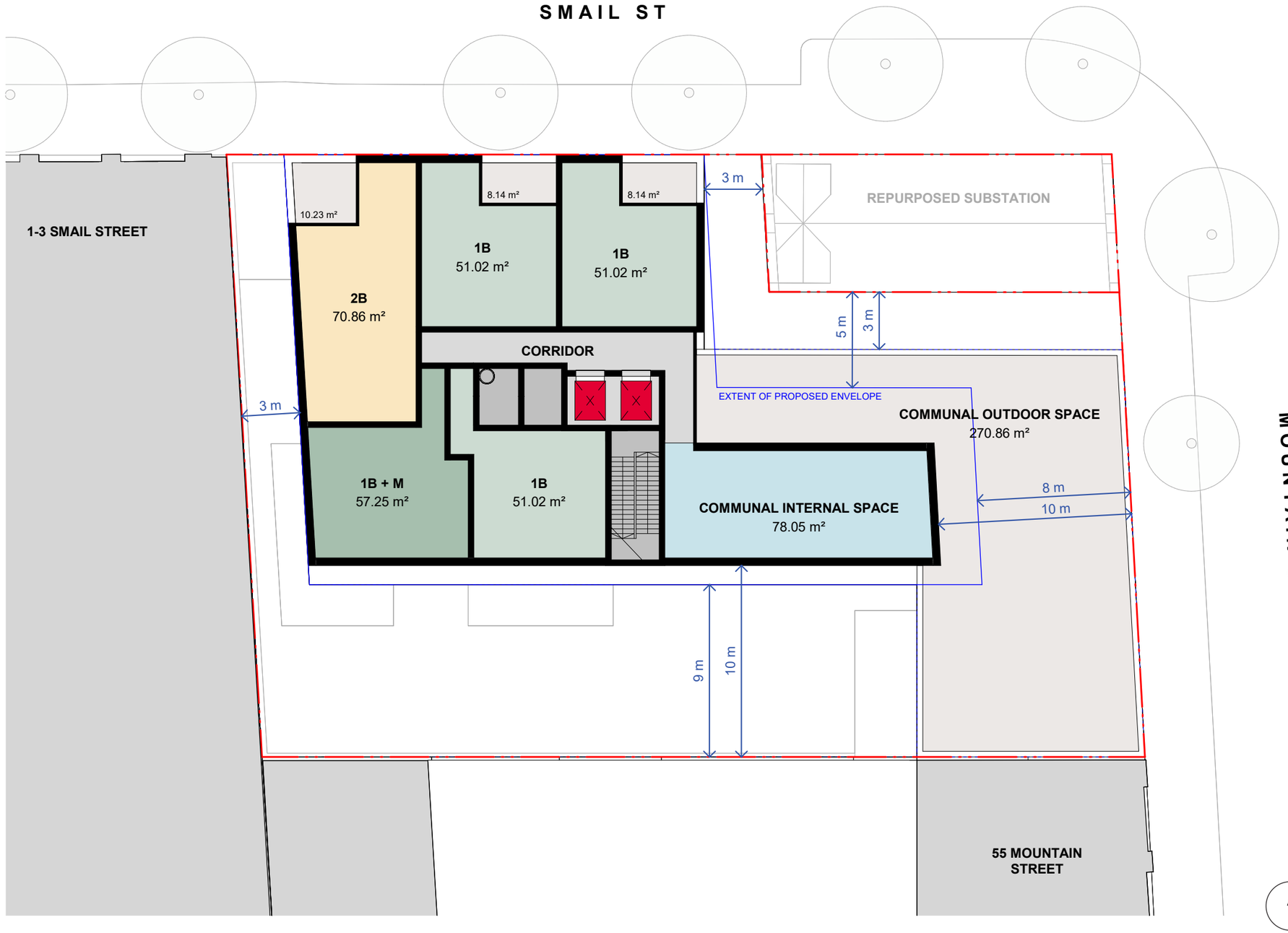


Reference Design
Level 07 - Communal Plan

Key Moves

- Communal open space with communal room.
- 5 apartments per floor: 4 x 1B, 1 x 2B
- Apartments with >2H solar access: 3/5 (60%)
- Apartments with cross ventilation: 3/5 (60%)
- 10m Setback to South facade.
- Eastern wall of courtyard aligns with neighbour.

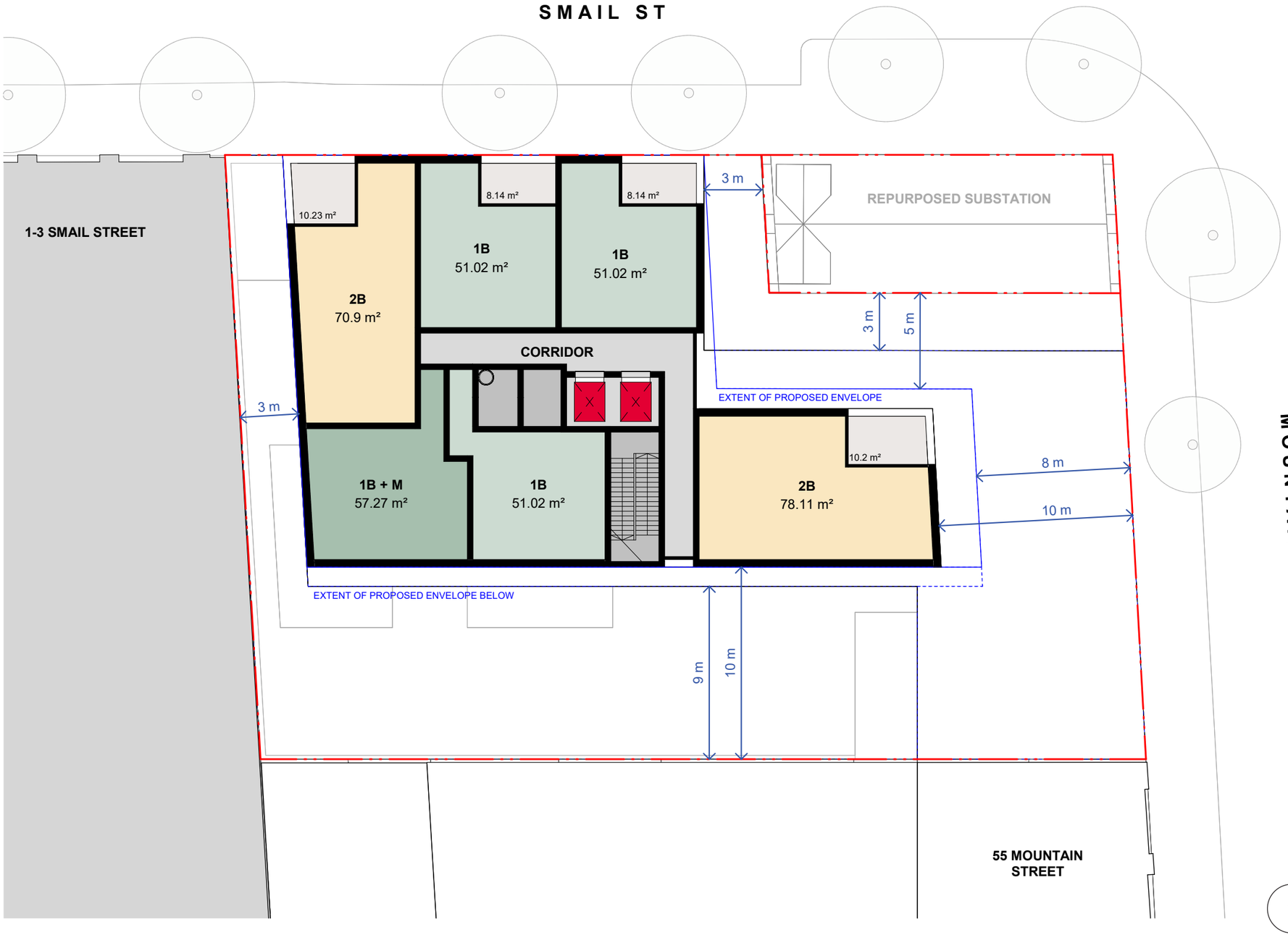




Reference Design
Level 08-14 Plan

Key Moves

- 3m Setbacks to Mountain Street Block
- 6 apartments per floor: 4 x 1B, 2 x 2B
- Apartments with >2H solar access: 4/6 (67%)
- Apartments with cross ventilation: 4/6 (67%)
- 10m Setback to South facade.

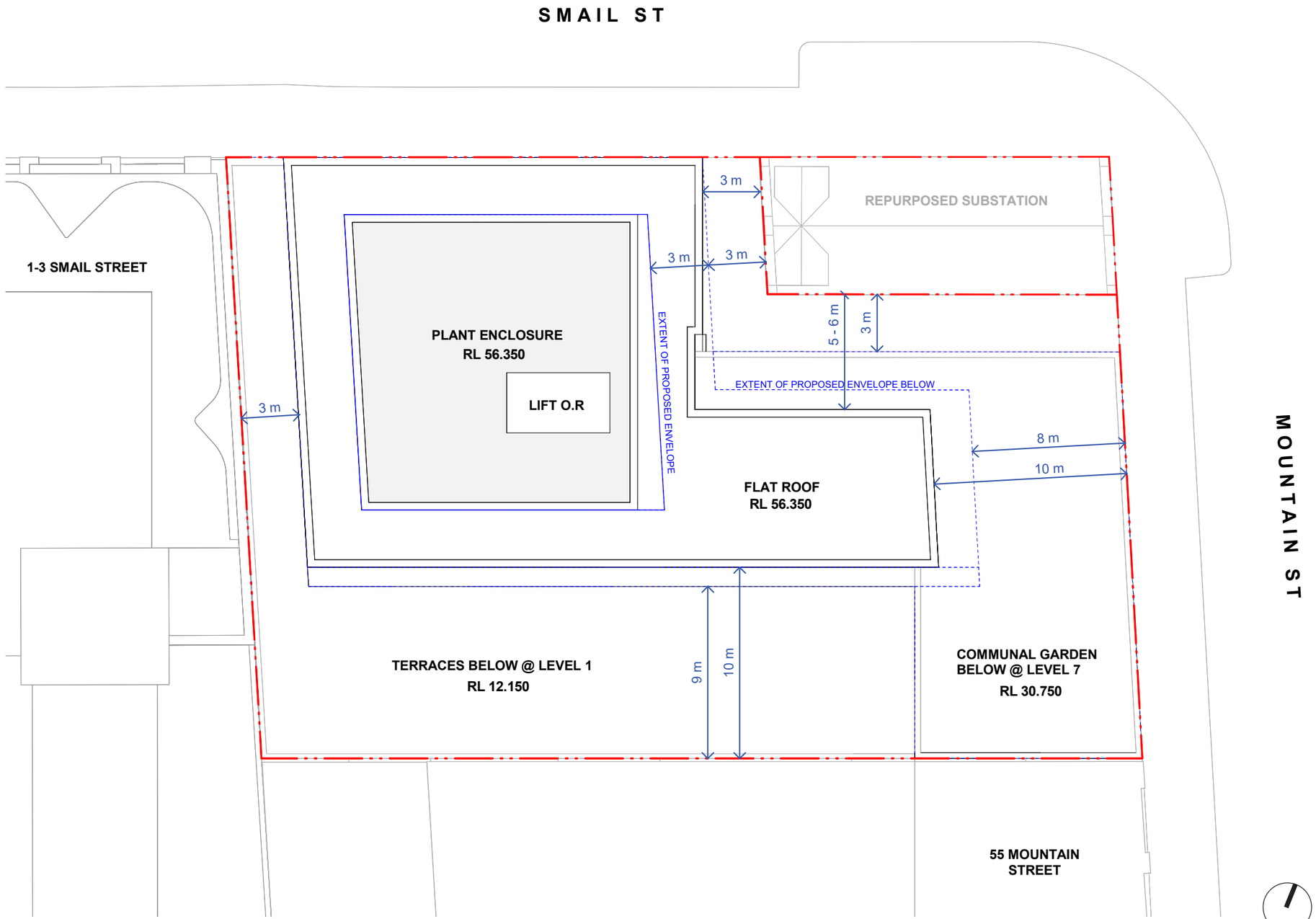


Reference Design
Roof Level Plan

Key Moves

— Generous setback to plant enclosure to minimise visibility.

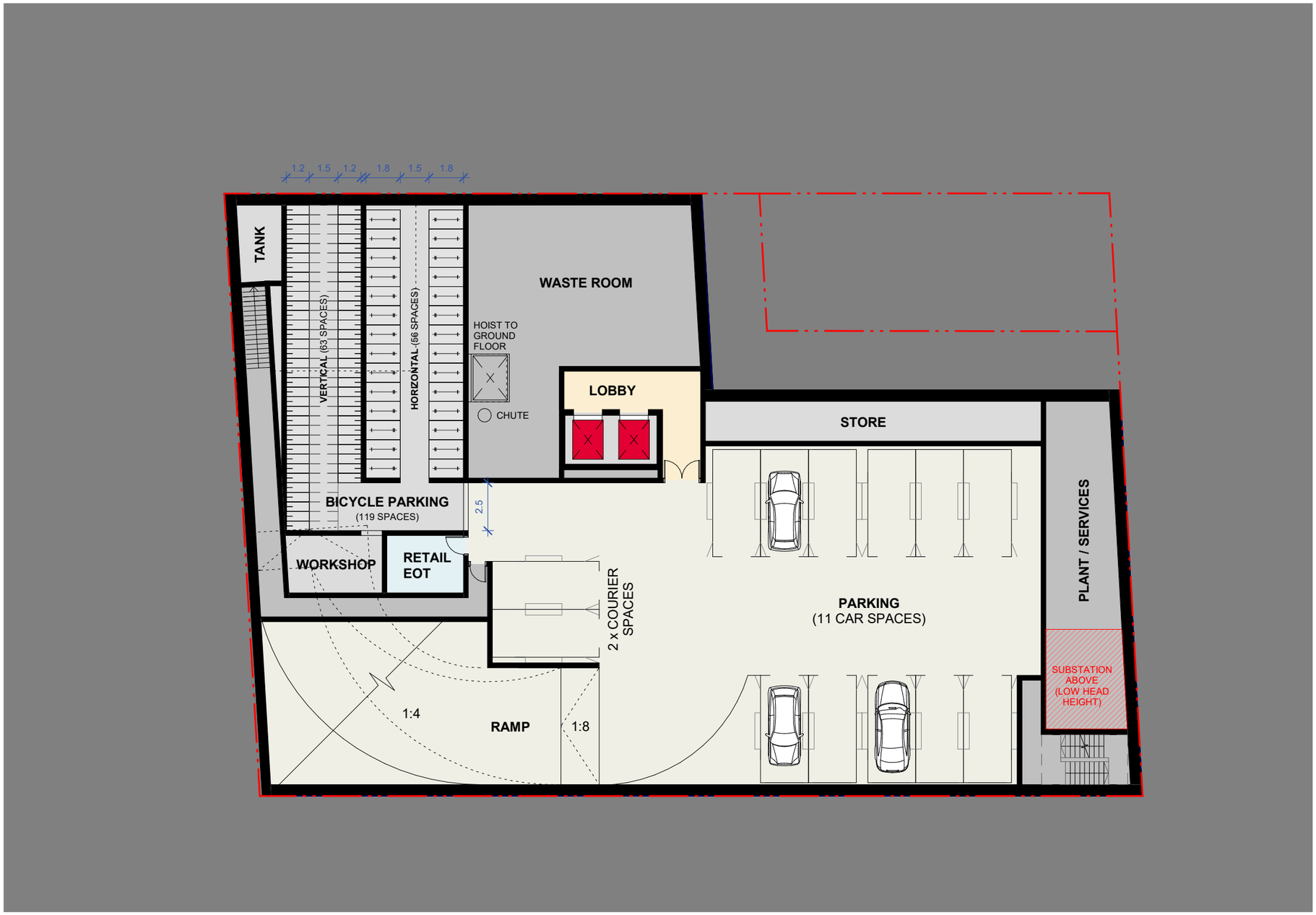
— Lift overrun consealed by plant enclosure.



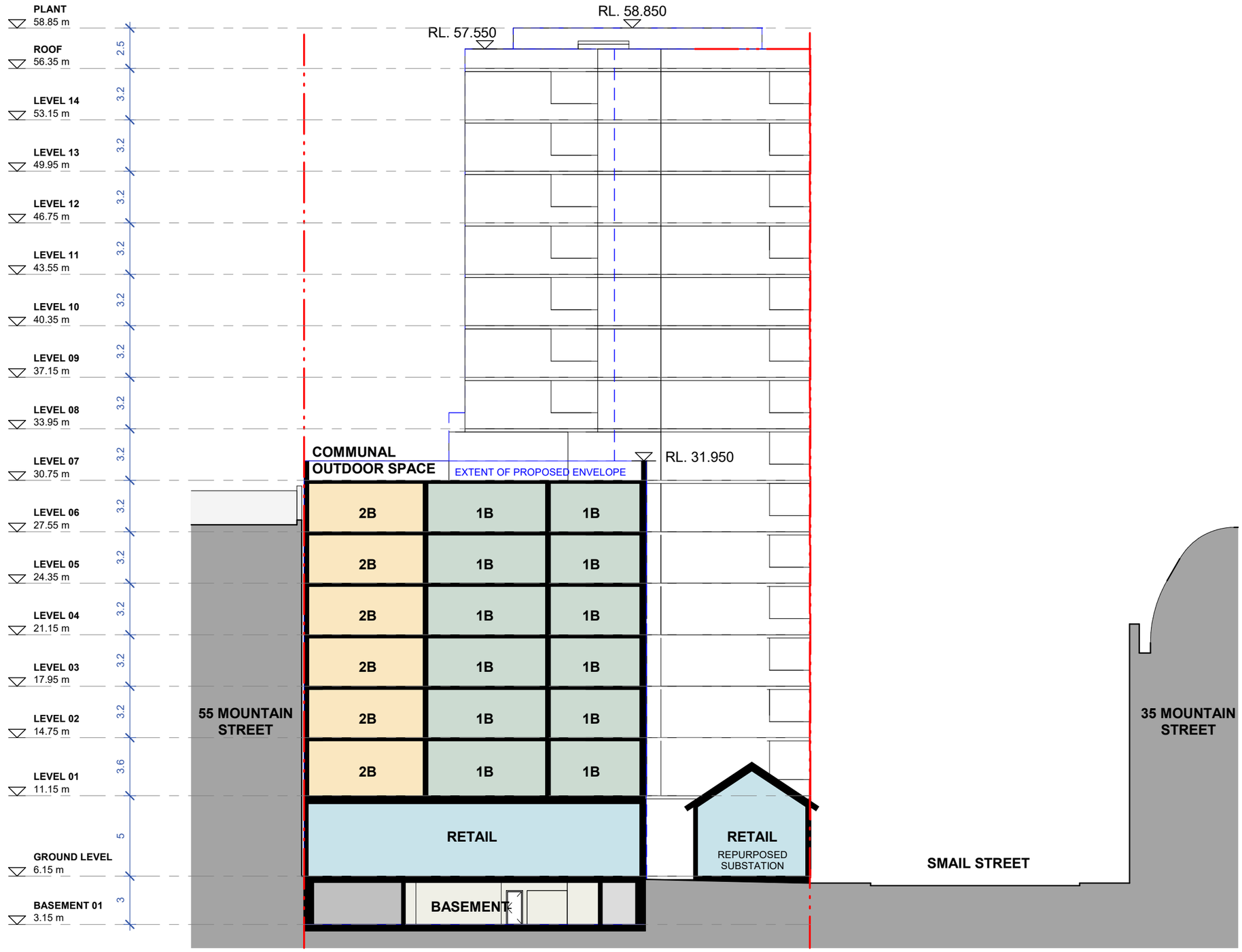
Reference Design
Basement Level Plan

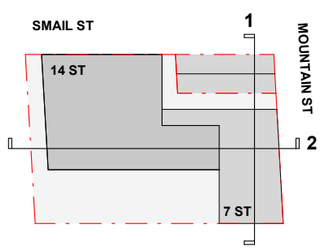
Key Moves

— Single level proposed to minimise excavation
— No excavation proposed below substation
— Ramp in south west corner to minimise impact on prime useable spaces above
— Provision for bicycle parking
— Motorcycle parking is achievable



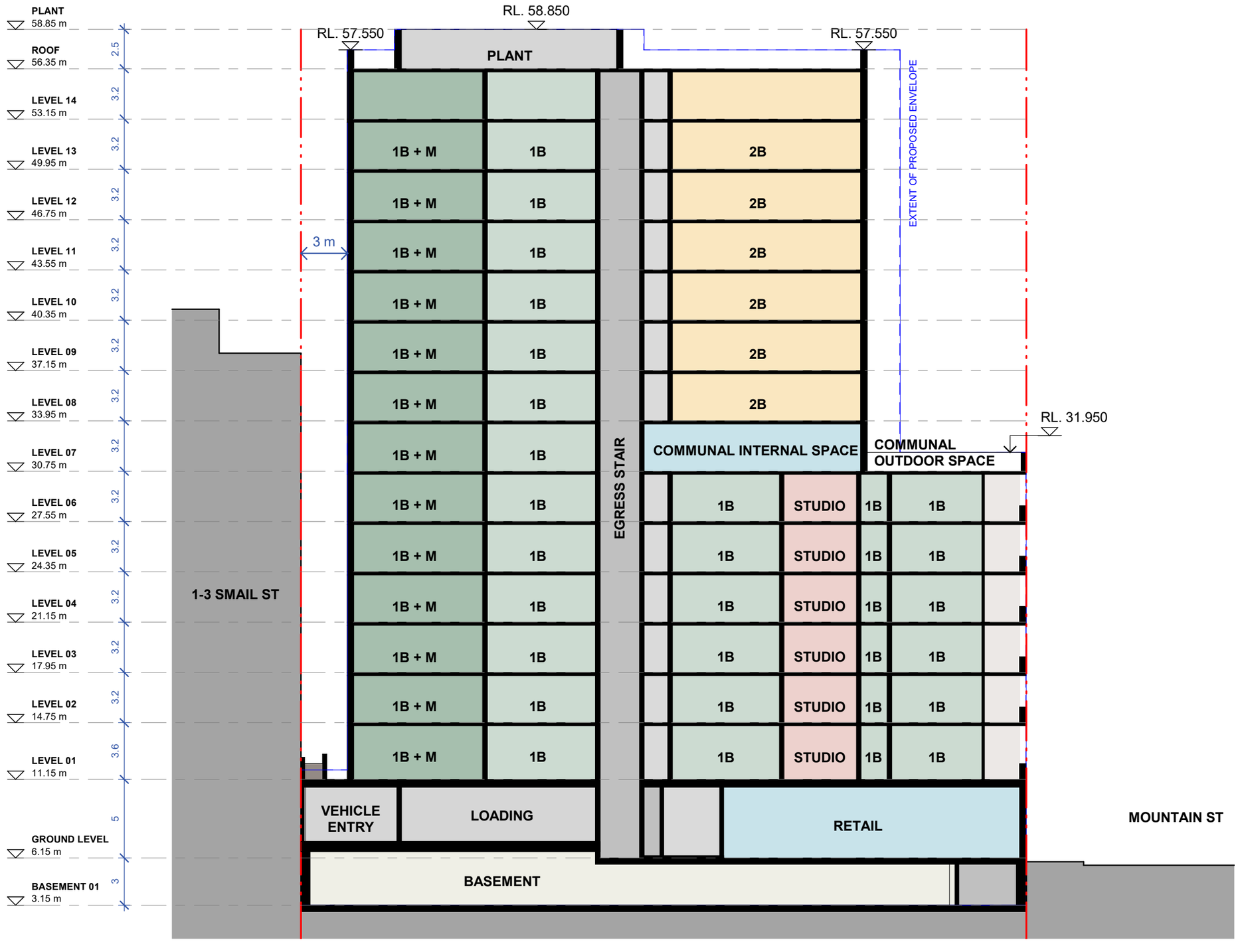
Reference Design
Section 1

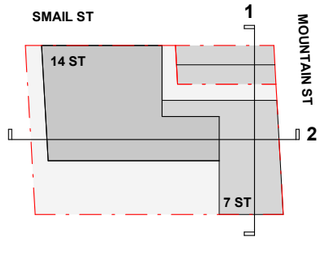




KEY PLAN

Reference Design
Section 2





KEY PLAN

Reference Design
Area Schedule

SITE AREA	1452.6 m²
FSR	5.32 : 1
GFA	7724 m²
COMMUNAL OPEN SPACE	364 m² (25% OF SITE AREA)

									GBA				ADG		
LEVEL	**TYPE**	**STUDIO**	**1 BED**	**1 BED + M**	**2 BED**	**TOTAL**	**GFA**	**NLA**	**FECA**	**UCA**	**GBA TOTAL**	**2H SOLAR**	**0H SOLAR**	**CROSS-VENT**
ROOF	PLANT													
LEVEL 14	RESIDENTIAL TYPE 2		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	1	
LEVEL 13	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	1	
LEVEL 12	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	1	
LEVEL 11	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	1	
LEVEL 10	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	1	
LEVEL 9	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	2	
LEVEL 8	RESIDENTIAL TYPE 3		3	1	2	6	417 m²	357 m²	512 m²	46 m²	558 m²	4	2	4
LEVEL 7	RESIDENTIAL TYPE 2 + COMMUNAL		3	1	1	5	405 m²	280 m²	525 m²	33 m²	558 m²	3	2	3
LEVEL 6	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
LEVEL 5	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
LEVEL 4	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
LEVEL 3	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
LEVEL 2	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
LEVEL 1	RESIDENTIAL TYPE 1	1	6	1	2	10	607 m²	542 m²	718 m²	109 m²	827 m²	8	2	7
GROUND FLOOR	RETAIL / LOBBY / LOADING						758 m²	557 m²	1364 m²		1364 m²			
BASEMENT 1	PARKING / STORAGE								1234 m²		1234 m²			
TOTALS		6	60	14	27	107	7724 m²	6588 m²	11015 m²	1009 m²	12024 m²	79	23	49
		5.6%	56.1%	13.1%	25.2%							**74%**	20%	**64%**

NOTE:

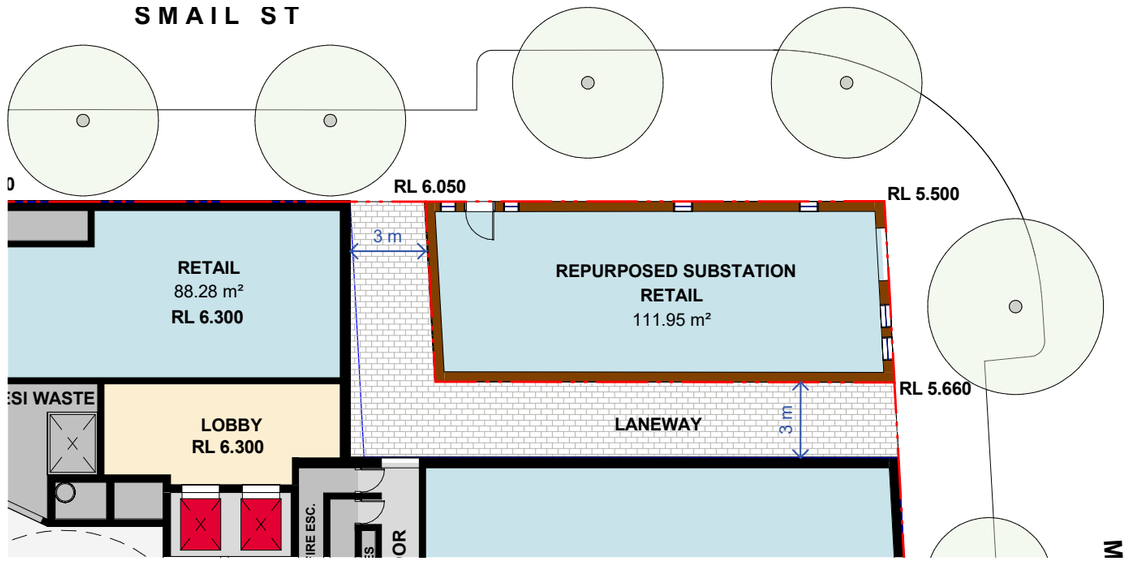
The reference design does not fully utilise the entire footprint of the proposed building envelope across all levels to provide a degree of design flexibility for future design proposals. As a result, there is residual floor space capacity within the approved envelope that has not been reflected in the above Gross Floor Area (GFA) calculations. We propose a slight increase in the GFA and corresponding Floor Space Ratio (FSR). Specifically, we recommend an uplift to a total FSR of 5.4:1 to account for some of the the underutilised area.

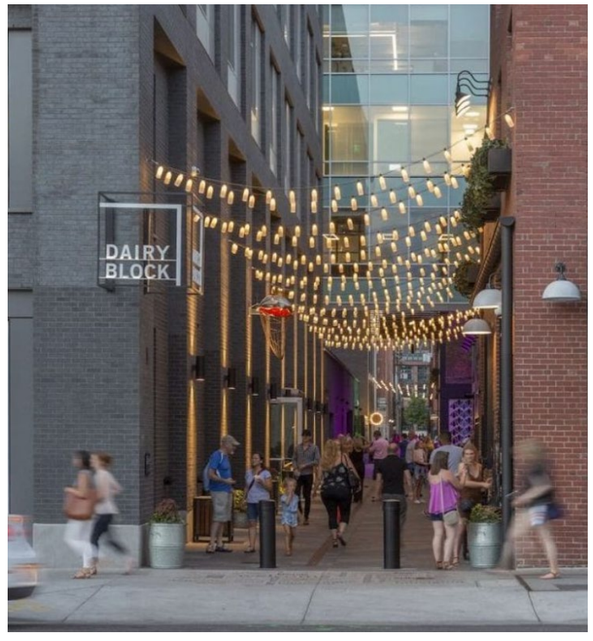
4.0 Appendix

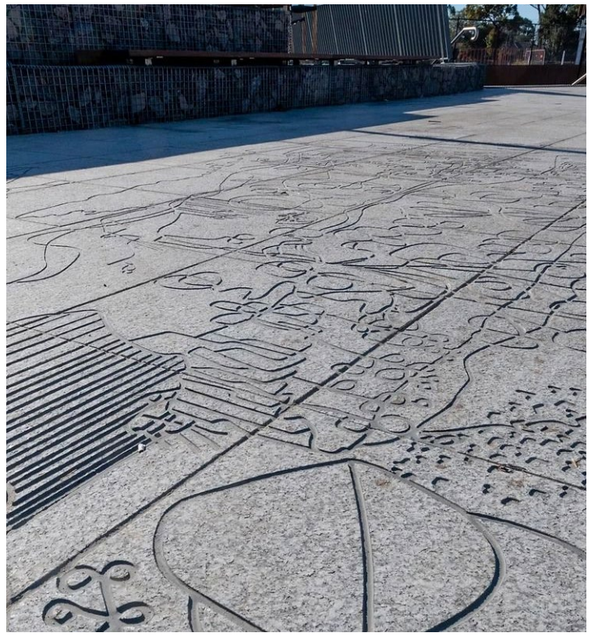
Appendix 1
Public Art Strategy

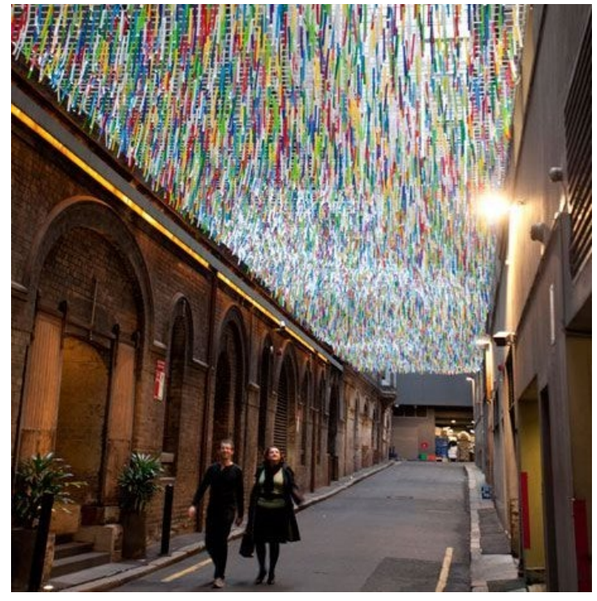
We propose an active public laneway between the new building and the existing substation, featuring cafés and retail to create a vibrant, pedestrian-friendly space. More than a thoroughfare, the laneway will become a social hub—fostering community interaction, enhancing urban life, and establishing a strong sense of place. Its design presents a compelling opportunity for public art that enriches both private and public experiences.

The public art strategy will provide a cohesive framework that celebrates the site's cultural, historical, and spatial identity while inviting public engagement through integrated design.









Appendix 1
Public Art Strategy

Appendix 2
High-level ADG Assessment

Objective	Design Criteria	Bates Smart Commentary	Compliance
Part 3 Siting the development			
3A Site Analysis			
Objective 3A-1: Site Analysis illustrates that design decisions have been based on opportunities & constraints of the site conditions & their relationship to the surrounding context.	-	The building envelope features a stepping back/reduction in massing at Level 7 to create communal space. The change in scale relates to the neighbouring building at 55 Moutain Street. The heritage-listed substation on the corner of Mountain and Smail streets is proposed to be maintained and repurposed.	Yes
3B Orientation			
Objective 3B-1: Building types & layouts respond to the streetscape & site while optimising solar access within the development	-		Yes
Objective 3B-2: Overshadowing of neighbouring properties is minimised during mid winter.	-		Yes
3D Communal and Open Space			
Objective 3D-1: An adequate area of communal open space is provided to enhance residential amenity & to provide opportunities for landscaping.	Communal open space has a minimum area equal to 25% of the site	292 m² is provided (20% of site area) on Level 7. This is combined with communal indoor facilities (refer to Level 7 Plan), and will be professionally managed under the BTR model. The high quality and amenity of this consolidated space supports the objective and justifies the quantitative shortfall.	Yes
	Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)		Yes

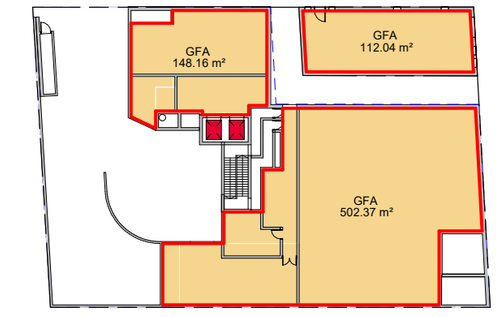
Objective	Design Criteria	Bates Smart Commentary	Compliance
3F Visual Privacy			
Objective 3F-1: Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external & internal visual privacy.	Separation between windows & balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side & rear boundaries are as follows: **Building Height (m)** / **Habitable Rooms & Balconies. (m)** / **Non-Habitable Rooms (m)** up to 12 (4 storeys) / 6 / 3 up to 25 (5-8 storeys) / 9 / 4.5 over 25 (9+ storeys) / 12 / 6 Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room. Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.	Setbacks have been provided to boundaries where windows are present. The western boundary, where several small windows are present has a setback of 3m. The reference design proposes no balconies or living rooms facing into this setback. After numerous discussions with the City of Sydney, an agreement was reached for a south setback of 9-10m to provide separation between the south-facing apartments and the larger windows on the north facade of 55 Mountain Street.	Yes
Part 4 Designing the Building			
4A Solar and Daylight Access			
Objective 4A-1: To optimise number of apartments receiving sunlight to habitable rooms, primary windows & private open space.	Living rooms & private open spaces of at least 70% of apartments in a building receive a minimum of 2 hrs direct sunlight between 9am - 3pm at mid winter in Sydney Metropolitan Area and in Newcastle and Wollongong local government areas	74% of Apartments achieve this criteria.	Yes
	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am - 3 pm at mid winter	20% of units receive nil solar access. This small variation above the maximum is unavoidable due to the site's urban context and orientation.	No
4B Natural Ventilation			
Objective 4B-1: All habitable rooms are naturally ventilated.	-		Yes
Objective 4B-3: Number of apartments with natural cross vent is maximised to create comfortable indoor environments for residents.	At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	64% of Apartments achieve this criteria.	Yes
	Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line		Yes

Objective	Design Criteria	Bates Smart Commentary	Compliance
4D Apartment Size and Layout			
Objective 4D-1: The layout of rooms within apartment is functional, well organised & provides a high standard of amenity.	Apartments have the following minimum internal areas: **Apartment Type** / **Minimum Internal Area (sqm)** Studio 35 1 Bedroom 50 2 Bedroom 70 3 Bedroom 90 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each. A fourth bedroom & further additional bedrooms increase the minimum internal area by 12sqm each		Yes
	Every habitable room has a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight & air is not borrowed from other rooms		Yes
Objective 4D-3: Apartment layouts are designed to accommodate a variety of household activities & needs.	Master bedrooms have a minimum area of 10sqm & other bedrooms 9sqm (excluding wardrobe space)		Yes
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)		Yes
	Living rooms or combined living/dining rooms have a minimum width of: — 3.6m for studio & 1 bedroom apartments — 4m for 2 & 3 bedroom apartments		Yes
	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts		Yes

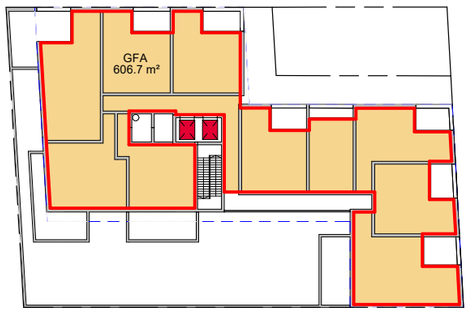
Appendix 3
GFA Plans

The reference design currently does not fully utilise the entire footprint of the proposed building envelope across all levels. As a result, there is residual floor space capacity within the approved envelope that has not been reflected in the Gross Floor Area (GFA) calculations.

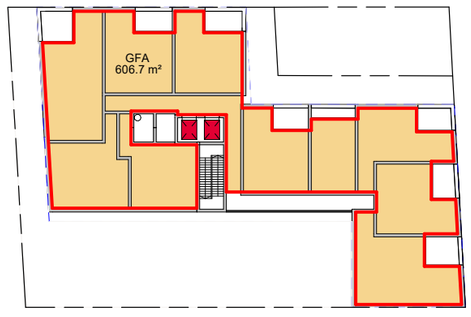
To ensure design proposals can make efficient use of the available development potential and align with the intended built form outcomes, we propose a slight increase in the GFA and corresponding Floor Space Ratio (FSR). Specifically, we recommend an uplift to a total **FSR of 5.4:1** to account for the underutilised areas and improve the envelope's capacity for architectural expression and articulation.



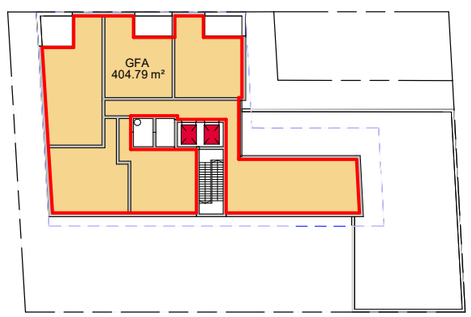
1 GROUND LEVEL
1 : 500



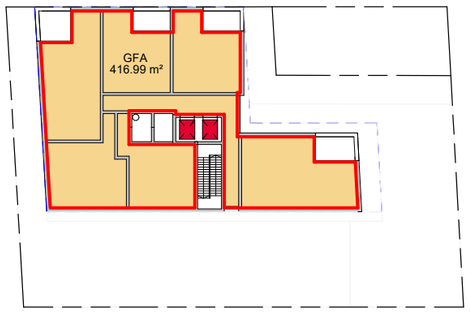
2 LEVEL 1
1 : 500



3 TYP LEVEL 2-6
1 : 500



4 LEVEL 7 - COMMUNAL
1 : 500



5 TYP LEVEL 8 - 14
1 : 500

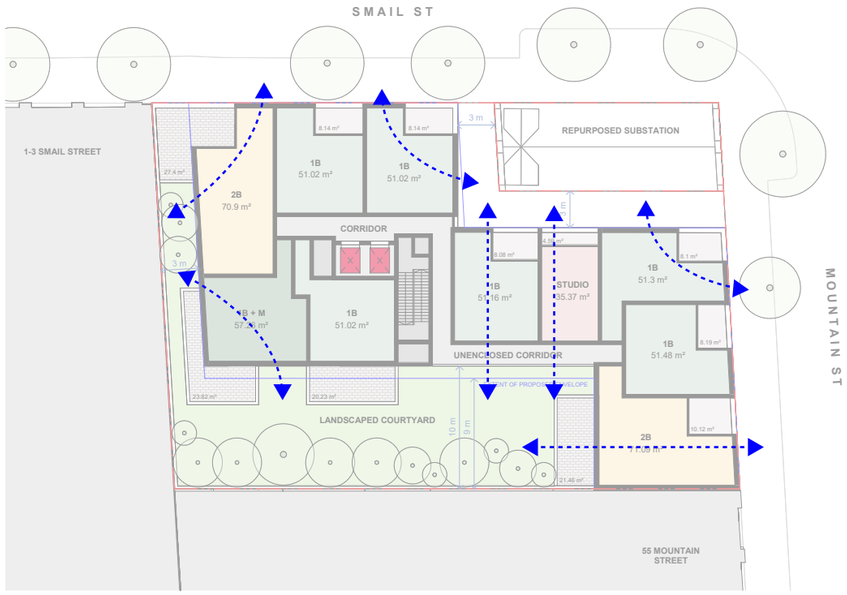
LEGEND

- GFA
- GFA BOUNDARY
- ENVELOPE BOUNDARY

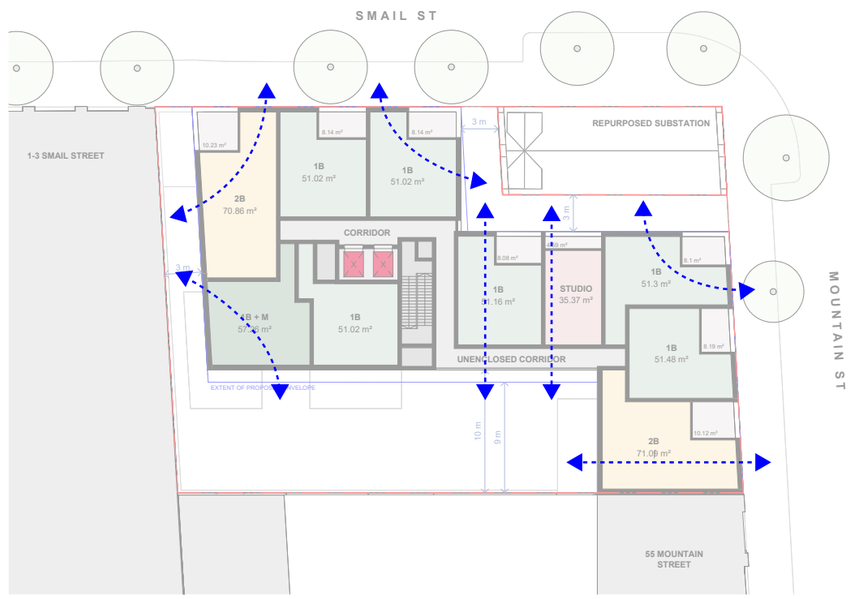
Appendix 4
Cross Ventilation Diagrams

The following plans highlight the apartments that can achieve natural cross-ventilation with a blue arrow.

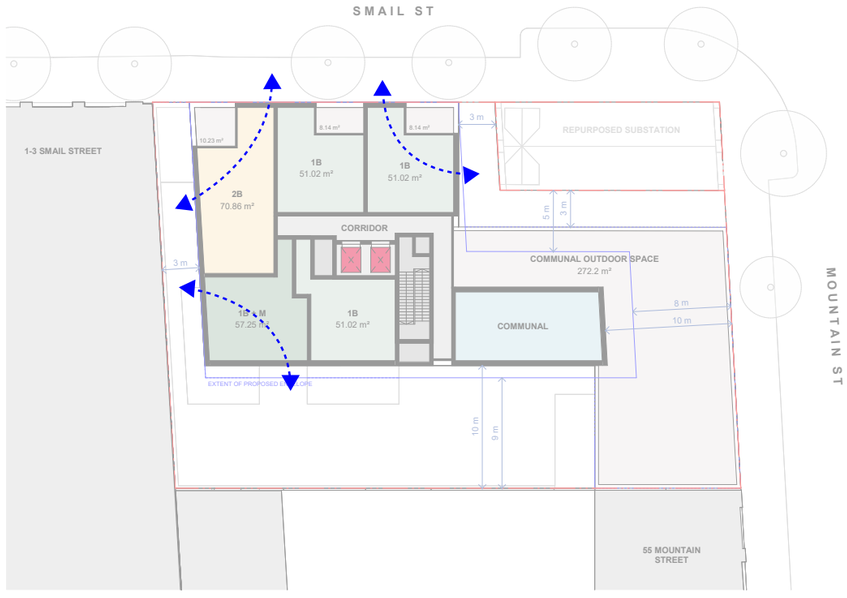
This is achieved by 49 of the 71 apartments from Levels 1 up to and including Level 8 or 64%.



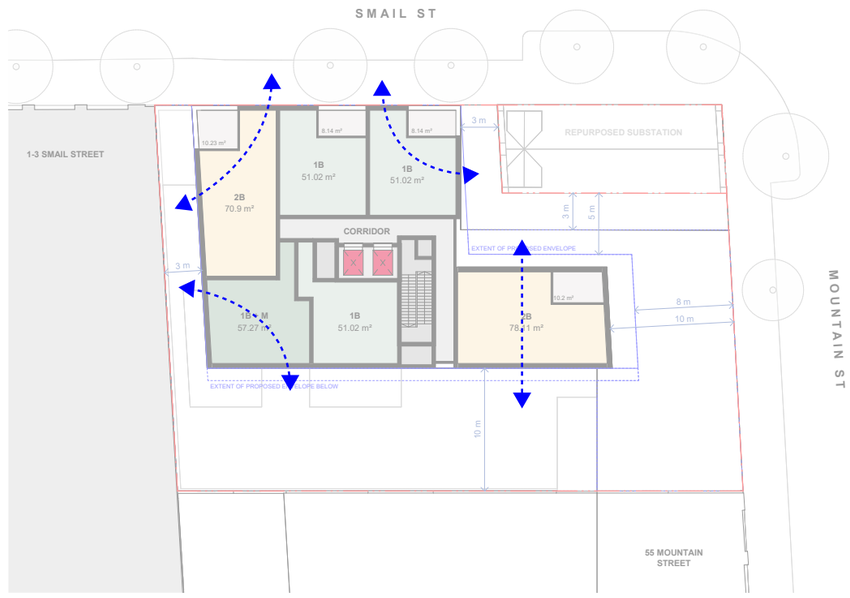
LEVEL 1
CROSS VENTILATED: 7/10 - 70%



TYPICAL LEVELS 2 - 6
CROSS VENTILATED: 7/10 - 70%



LEVEL 7
CROSS VENTILATED: 3/5 - 60%



TYPICAL LEVELS 8 - 14
CROSS VENTILATED: 3/5 - 60%

192

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Attachment A4

Arboricultural Impact Assessment

43-49 Mountain Street Ultimo
Arboricultural Impact Assessment

Prepared for Apt Residential

Arbor Express

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www.arbor-express.com.au

Document Tracking

Project Name	43-49 Mountain Street Ultimo Arboricultural Impact Assessment
Project Number	AIA2502175
Prepared by	Alex de Jong – AQF Level 5 Arborist
Status	Final
Version	v4
Last saved on	10 June 2025

This report should be cited as 'Arbor Express 43-49 Mountain Street Ultimo Arboricultural Impact Assessment prepared for Apt Residential'

ACKNOWLEDGEMENTS

This document has been prepared by Arbor Express Pty Ltd with support from Apt Residential

Disclaimer
I do not assume responsibility for liability associated with the tree on/or adjacent to this project site, the future demise and/or any damage which may result therefrom. They take care to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others. I cannot be held responsible for any consequences as result of work carried out outside specifications, not in compliance with Australian Standards or by inappropriately qualified staff. If further investigations such as, aerial, drill and root tests are recommended, the report shall not be considered final until all investigations have been completed as further defects may be found. I have made every effort to accurately identify the current tree health and hazards. Results may or may not correlate to actual tree structural integrity. There are many factors that may contribute to limb or total tree failure, not all these symptoms are visible. There can be hidden defects that may result in a failure even though it would seem that other, more obvious defects would be the likely cause of failure. All standing trees have an element of unpredictable risk. The inspection was limited to a visual ground examination of the tree, without aerial inspections and below ground excavations. The assessments are limited and do not include specialized analysis. No internal diagnostics, aerial inspection and pathology test were conducted. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale.

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Abbreviations

Abbreviation	Description
AE	Arbor Express
AIA	Arboricultural Impact Assessment
AQF	Australian Qualifications Framework
AS	Australian Standards
C	Canopy
DAB	Diameter Above Buttress
DBH	Diameter at Breast Height
H	Height
m	Metre
mm	Millimetre
NDE	Non-Destructive Excavation
NO	Number
NSW	New South Wales
SRZ	Structural Root Zone
TPP	Tree Protection Plan
TPZ	Tree Protection Zone
VTA	Visual Tree Assessment

1. Introduction

This AIA has been prepared for Apt Residential in relation to a proposed development at 43-49 Mountain Street Ultimo. The address of the subject site is in Table 1 and mapped in Figure 1. The purpose of this report is to:

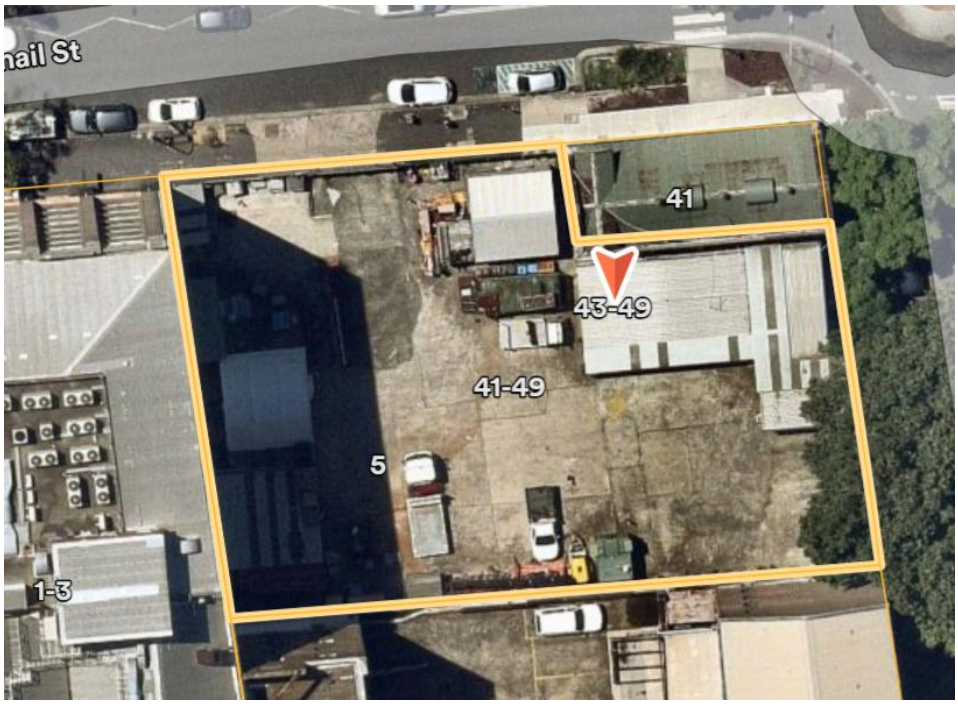
- Identify the trees within the site and adjacent surrounding area that are likely to be affected by the proposed development.
- Undertake a visual tree assessment of the subject trees.
- Assess the current overall health and condition of the subject trees.
- Evaluate the retention value of the subject trees.
- Identify trees to be removed, retained or transplanted.
- Determine the likely impacts of trees to be retained.
- Recommend tree protection measures to minimise the impacts to retained trees.
- Preparation of a tree protection plan for trees to be retained (if applicable).

Features of the subject site are tabulated below.

Table 1: Development site

Criteria	Description
Street address	43-49 Mountain Street Ultimo
Local government area	City of Sydney
Land zoning	MU1: Mixed Use
Biodiversity values map	The site is not in a high biodiversity area
10/50 entitlement	The site does not have a 10/50 entitlement

Figure 1: Location



2. Method

Visual Tree Assessment

The subject trees were assessed in accordance with a stage one visual tree assessment (VTA) as formulated by Mattheck and Breloer (1994)[1], and practices consistent with modern arboriculture.

A total of 4 subject trees were inspection on 1 February 2025.

The following limitations apply to this methodology:

- Trees were inspected from ground level.
- These assessments did not include aerial (climbing) inspections, soil sampling, or root excavations.
- The canopy spread was measured either by estimation or pacing, and the longest span was recorded.
- The height of each tree was estimated.
- Trees were inspected within limits of site access.
- No aerial inspections or root mapping was undertaken.
- Trees located on adjacent properties or in restricted areas were not fully visually inspected, so any defects or abnormalities may not have been documented.
- Tree identification relied on broad taxonomical features visible from ground level at the time of inspection.

Retention Values

The retention value is the value of retaining a tree or group of trees and is assessed based on a blend of environmental, cultural, physical, and social factors.

- **High:** These trees are deemed worthy of preservation, and their retention should be prioritized. Proposed site designs and the positioning of buildings and infrastructure should take into account the Tree Protection Zones (TPZs) to mitigate any negative effects. Additionally, the extent of the canopy, especially concerning high-rise development, should be taken into consideration. Significantly pruning the trees to accommodate building envelopes or temporary scaffolding is typically not acceptable.
- **Medium:** Retaining these trees is desirable. They should be preserved as part of any proposed development, if feasible. However, these trees are considered less crucial for retention. If their removal becomes necessary, replacement planting should be contemplated in alignment with the Council's Tree Replacement Policy to offset any loss of amenity.
- **Low:** These trees lack significant ecological, heritage, or amenity value, or such values are greatly diminished due to their Safe Useful Life Expectancy (SULE). Therefore, these trees should not be viewed as hindrances to the future development of the site.
- **Very Low:** These trees are regarded as potentially hazardous, very poor specimens, or may even qualify as environmental or noxious weeds. Consequently, their removal is recommended irrespective of any proposed development considerations.

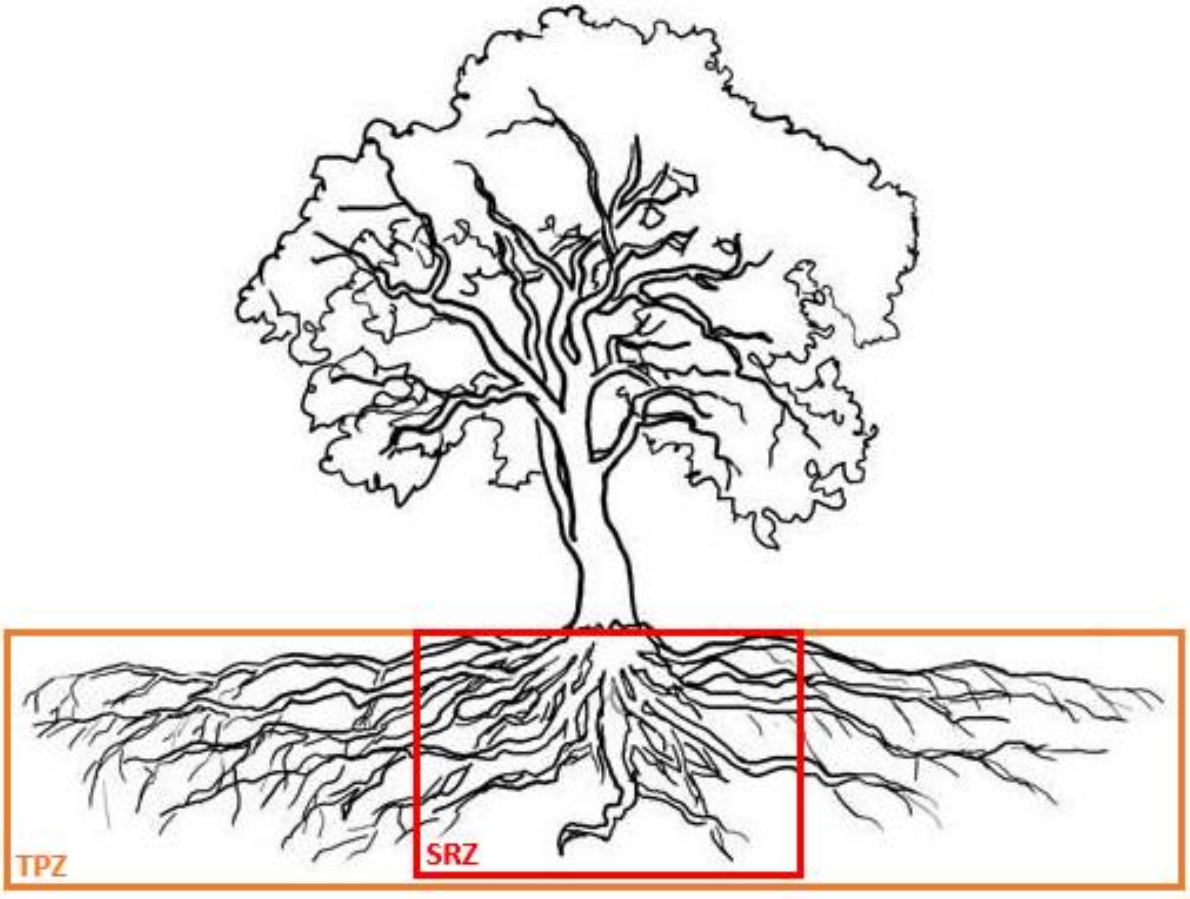
[1] Field Guide for Visual Tree Assessment (VTA) by Mattheck, C., and Breloer, H. Arboricultural Journa1, Vol 18 pp 1-23 (1994).

Protection Zones

Tree Protection Zone (TPZ): The Tree Protection Zone (TPZ) is fundamental for safeguarding trees on development sites. It encompasses both the root and crown spread, creating a protected space free from construction disturbances to preserve the tree's health and viability.

Structural Root Zone (SRZ): The Structural Root Zone (SRZ) defines the space essential for maintaining tree stability, often requiring a larger area to sustain the tree's health. Calculating the SRZ becomes necessary when substantial encroachment into a Tree Protection Zone (TPZ) is proposed. Further analysis through root investigations can provide valuable insights into the extent of these roots.

Figure 2: Tree Protection Zone and Structural Root Zone

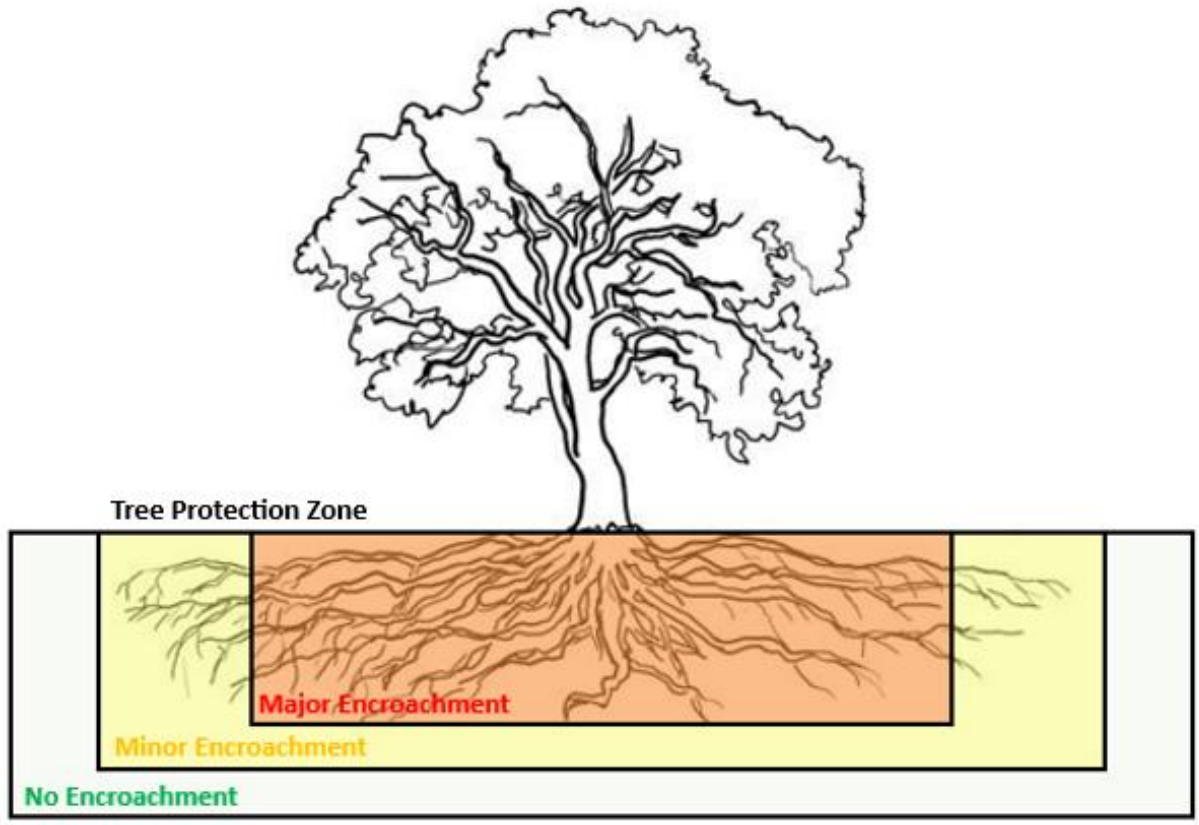


Impact Assessment

Development activities should be undertaken outside of Tree Protection Zones as much as possible. However, it's recognized that complete avoidance is not always feasible, and some encroachment within these zones may occur due to various reasons. Australian Standard AS 4970-2009, "*Protection of trees on development sites*," offers guidelines for managing such encroachments without necessitating extensive tree management and protection measures. Encroachment parameters are categorized as follows:

- **Minor encroachment**: Detailed root investigations should not be necessary if the proposed encroachment is less than 10% of the TPZ and outside of the SRZ. However, the area lost to this encroachment should be compensated for elsewhere, contiguous with the TPZ.
- **Major encroachment**: If the proposed encroachment exceeds 10% of the TPZ, it is imperative to show that the tree(s) can still thrive. The lost area due to this encroachment should be offset elsewhere, maintaining continuity with the TPZ. Non-destructive root investigations may be necessary for any planned works within this area.

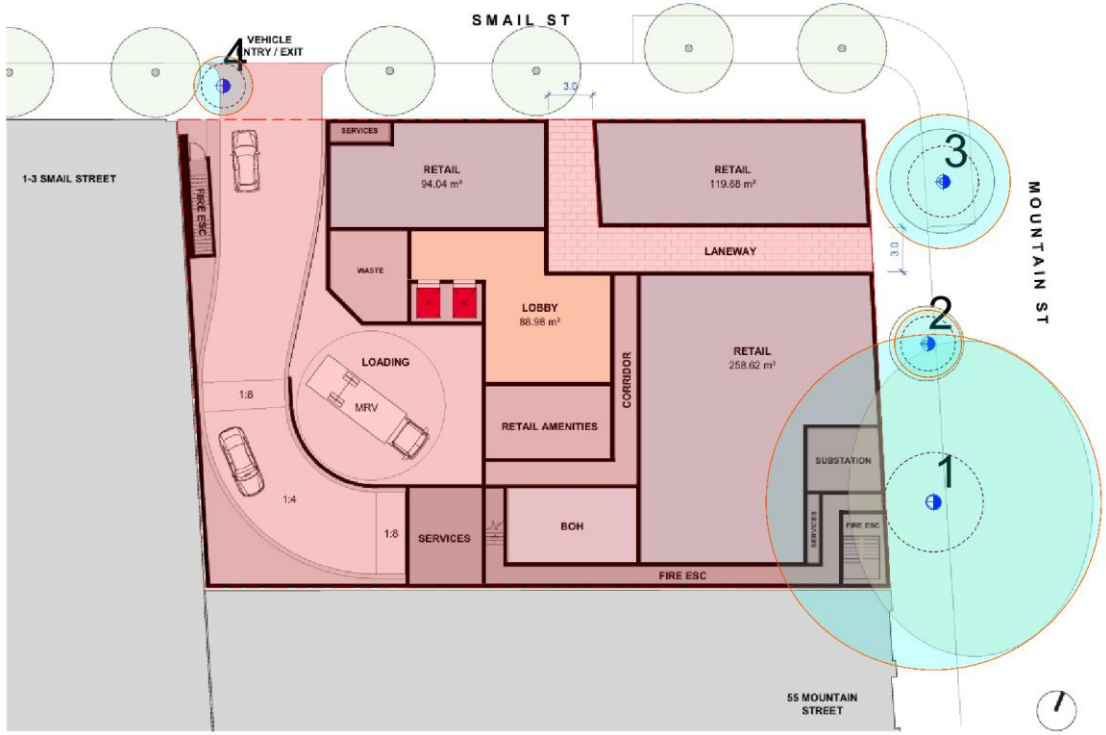
Figure 3: Tree Protection Zone Encroachments



3. Tree Schedule

Tree #	*Botanical Name*	Height (m)	Canopy (m)	DBH (mm)	TPZ (m)	SRZ (m)	TPZ Encroachment	SULE	Retention Value	Action	Notes
1	*Platanus x acerifolia*	33	25	950	11.40	3.35	26.5%	2A	High	Remove	• Canopy in good condition with minimal dieback or deadwood. Parts of the canopy extend into the site of 43-49 Mountain Street that have not been pruned back. • Lopsided canopy towards the road. • 1x cavity on a second order branch (refer to photo 3). • Damaged footpath and potential damage to underground services. It is likely that the roots cannot be pruned back to stop the damage as it would destabilise the tree. Refer to ADP report "SYD3482". • Impact to vehicles parking on the street next to the tree due to the lean of the trunk. Refer to PDC Consultants (Aust) report "24.173r02v02"
2	*Jacaranda mimosifolia*	11	5	190	2.30	1.82	0.0%	2A	Moderate	Retain	• Poor canopy structure. • Fair condition.
3	*Jacaranda mimosifolia*	11	10	380	4.60	2.40	0.0%	2A	Moderate	Retain	• Fair condition no major defects identified.
4	*Celtis australis*	4	2	40	2.00	1.50	100.0%	3A	Low	Remove	• In very poor condition with dieback throughout the canopy.

4. Arboricultural Impact Assessment



43-49 MOUNTAIN STREET ULTIMO

Legend

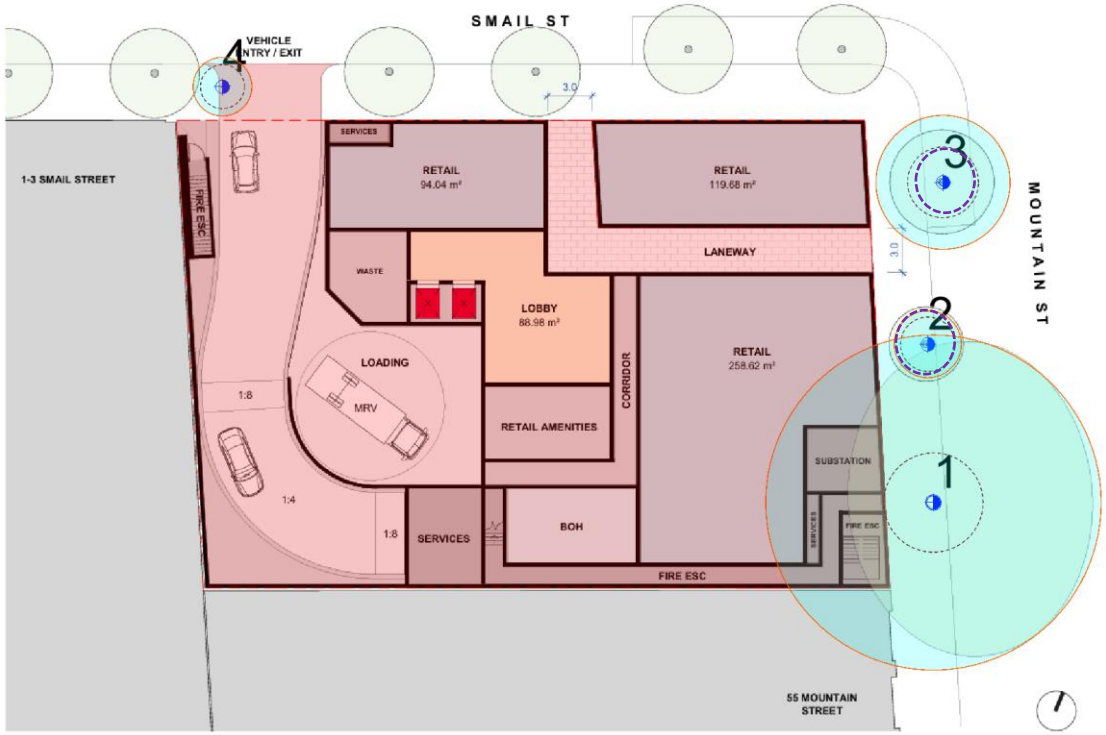
Tree Protection Zone

Tree Protection Zone Encroachment

Structural Root Zone

Arbor Express

5. Tree Protection Plan



Legend

Trunk Protection

Arbor Express

6. Site Photos

Photo 1: Tree 1

Photo 2: Tree 1 – Canopy Required for Pruning

Photo 3: Tree 1 - Cavity

Photo 4: Tree 2

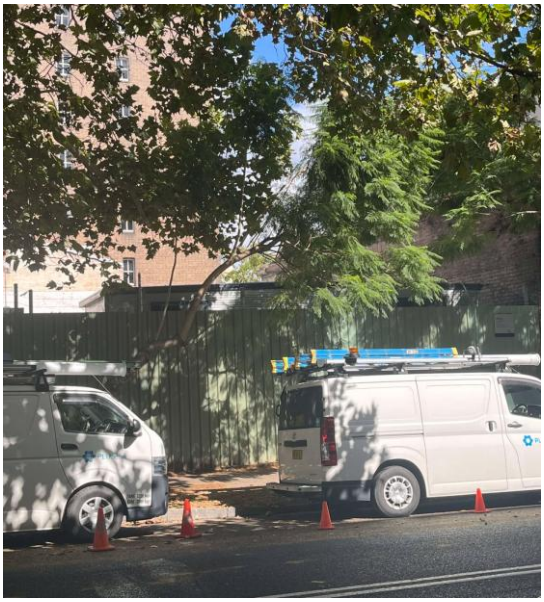


Photo 5: Tree 3

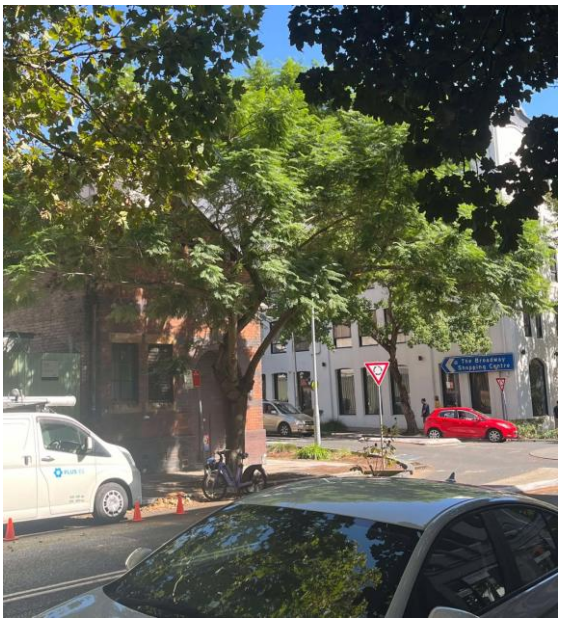


Photo 6: Tree 4

7. Recommendations

Following our assessment, the following tree management recommendations are proposed:

- **Tree 1 (*Platanus x acerifolia*)**: City of Sydney Council have agreed to approve the removal of Tree 1 due to the future safe useful life of the tree. Refer to the below email from Sally Peters (City of Sydney – Mgr Central Sydney Planning) regarding Tree 1.

From: Sally Peters <speters@cityofsydney.nsw.gov.au>
Date: Wednesday, 14 May 2025 at 1:51 pm
To: Guy Lake <glake@batessmart.com>
Cc: Matt Carolan <matt.carolan@aptresidential.au>, Juey Thanyakittikul <juey.thanyakittikul@aptresidential.au>, Michelle Cramsie <MCramsie@cityofsydney.nsw.gov.au>, Jesse McNicoll <jMcNicoll@cityofsydney.nsw.gov.au>, Andrew Harvey <aharvey@urbis.com.au>
Subject: 41-49 Mountain Street, Ultimo

Hi Guy,

Further to our brief discussion late last week.

The City has conducted a detailed inspection of the plane tree in Mountain Street, and have found that the tree has multiple defects resulting from cockatoo damage to create breeding hollows. We expect that the damage and decay to this tree will progress, and reduce the future safe useful life of the tree.

As a result of this investigation, we do not object to the removal and replacement of the tree.

If you would like to meet to discuss design options in light of this outcome, please let us know.

Regards,

Sally

Sally Peters
Mgr Central Sydney Planning
Strategic Planning & Urban Design

CITY OF SYDNEY

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cityofsydney.nsw.gov.au

The City of Sydney acknowledges the Gadigal of the Eora nation as the Traditional Custodians of our local area.

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- **Tree 2 (*Jacaranda mimosifolia*)**: This tree remains structurally stable, and the proposed development does not encroach into its TPZ. With appropriate protection measures in place, Tree 2 can be retained.
- **Tree 3 (*Jacaranda mimosifolia*)**: Similar to Tree 2, there is no significant encroachment into the TPZ, and the tree is in good health. Tree 3 should be retained and protected.
- **Tree 4 (*Celtis australis*)**: As a recently planted juvenile tree, Tree 4 will be directly impacted by the proposed vehicle entry and exit. Given the extent of disturbance, Tree 4 cannot be retained and should be removed.

To safeguard the retained trees (Trees 2 and 3), all excavation within their TPZs must be carried out using non-destructive techniques, such as Air Spade or vacuum excavation (below 1000 PSI), under the supervision of the Project Arborist. Any structural roots exceeding 25mm in diameter must be preserved. If pavement works are required in proximity to these trees, design adjustments should be made to prevent damage to the existing root system.

Implementing these measures will help mitigate construction-related impacts while ensuring the stability of trees that are suitable for retention.

8. Construction Hold Points for Tree Protection

Project Arborist

Below is a sequence of hold points requiring project arborist certification throughout the development process. It provides a list of hold points that must be checked and certified. All certifications must be provided in written format upon completion of the development. The final certification must include details of any instructions for remediation undertaken during the development. The principle contractor should be responsible for implementation of all tree protection requirements.

Hold Point	Stage	Date Completed and Signature of Project Arborist Responsible
Project Arborist to hold pre construction site meeting with principle contractor to discuss methods and importance of tree protection measures and resolve any issues in relation to feasibility of tree protection requirements that may arise. Project Arborist to mark all trees approved for removal under DA consent.	Prior to development work commencing	
Project Arborist to assess and certify that tree protection has been installed in accordance with AS 4970-2009 prior to works commencing at site.	Prior to development work commencing	
In accordance with AS 4970-2009 the Project Arborist should carryout regular site inspections to ensure works are carried out in accordance with the recommendations. Site inspections are recommended on a monthly frequency.	On-going through the development	
The removal of existing structures inside the TPZ of any tree to be retained, such as the existing buildings and hard surfaces must be supervised by the Project Arborist.	Demolition	
Project Arborist to supervise all manual excavations and root pruning inside the TPZ of any tree to be retained. Project Arborist to approve all pruning of roots greater than 30mm inside TPZ. All root pruning of roots greater than 30mm in diameter must be carried out by an AQF level 5 Arborist.	Construction	
Project Arborist to certify that all underground services including storm water inside TPZ of any tree to be retained have been installed in accordance with AS 4970-2009.	Construction	
Project Arborist to approve relocation of tree protection for landscaping. All landscaping works within the TPZ of trees to be retained are to be undertaken in consultation with the Project Arborist to minimise the impact to trees.	Construction / Landscape	
After all demolition, construction and landscaping works are complete the Project Arborist should assess that the subject trees have been retained in the same condition and vigour. If changes to condition are identified the project Arborist should provide recommendations for remediation.	Upon completion of the development	

9. References

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Standards Australia 2007. *Australian Standard: Pruning of amenity trees, AS 4373 (2007)*, Standards Australia, Sydney.

Standards Australia 2009. *Australian Standard: Protection of trees on development sites, AS 4970 (2009)*. Standards Australia, Sydney.

Appendix A: Glossary of Terms

Abiotic - Pertaining to non-living agents, e.g. environmental factors.

Anchorage - The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree.

Branch:
- Primary. A first order branch arising from a stem.
- Lateral. A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches.
- Sub-lateral. A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs.

Branch collar - A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base.

Cambium - Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally.

Canker - A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria.

Compartmentalisation - The confinement of disease, decay or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region.

Condition - An indication of the physiological condition of the tree. Where the term 'condition' is used in a report, it should not be taken as an indication of the stability of the tree.

Crown/Canopy - The main foliage bearing section of the tree.

Crown lifting - The removal of limbs and small branches to a specified height above ground level.

Crown reduction/shaping - A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape.

DAB (Diameter Above Buttress) - Trunk diameter measured above the root buttress.

Defect - In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Dieback - The death of parts of a woody plant, starting at shoot-tips or root-tips.

Disease - A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms.

DBH (Diameter at Breast Height) - Stem diameter measured at a height of 1.4 metres or the nearest measurable point. Where measurement at a height of 1.4 metres is not possible, another height may be specified.

Deadwood - Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard.

Epicormic shoot - A shoot having developed from a dormant or adventitious bud and not having developed from a first year shoot.

Heartwood/false-heartwood - The dead central wood that has become dysfunctional as part of the aging processes and being distinct from the sapwood.

Included bark (ingrown bark) - Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact.

Lions tailing - A term applied to a branch of a tree that has few if any side-branches except at its end and is thus liable to snap due to end- loading.

Occlusion - The process whereby a wound is progressively closed by the formation of new wood and bark around it.

Pruning - The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs.

Reactive Growth/Reaction Wood - Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth).

Ring-barking - The removal of a ring of bark and phloem around the circumference of a stem or branch, normally resulting in an inability to transport photosynthetic assimilates below the area of damage. Almost inevitably results in the eventual death of the affected stem or branch above the damage.

Stress - In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature.

SRZ (Structural Root Zone) - The area around the base of the tree required for the tree's stability in the ground.

Topping - In arboriculture, the removal of the crown of a tree, or of a major proportion of it.

TPZ (Tree Protection Zone) - A specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

Veteran tree - Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. These characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.

Vigour - The expression of carbohydrate expenditure to growth (in trees).

Appendix B: Retention Value

Evaluating Sustainability and Landscape Significance to Determine Retention Value	
Retention Value	**Criteria and Categories**
High	These trees are considered to be worthy of preservation. As such, careful consideration should be given to their retention as a priority. Proposed site design and placement of buildings and infrastructure should consider the TPZ to minimize any adverse impact. In addition to TPZs, the extent of the canopy should also be considered, particularly in relation to a high-rise development. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.
Moderate	The retention of these trees is desirable. These trees should be retained as part of any proposed development, if possible; however, these trees are considered to be less critical for retention. If these trees must be removed, replacement planting should be considered in accordance with Council's Tree Replacement Policy to compensate for loss of amenity.
Low	These trees are not considered to be worthy of any special measures to ensure their preservation, due to current health, condition or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their SULE. These trees should not be considered as a constraint to future development of the site.
Very Low	These trees are considered to be potentially hazardous or very poor specimens or may be environmental or noxious weeds. The removal of these trees is therefore recommended regardless of the implications of any proposed development.

Appendix C: Safe Useful Life Expectancy (SULE)

	1 LONG SULE	2 MEDIUM SULE	3 SHORT SULE	4 REMOVALS	5 MOVED OR REPLACED
	Long: appeared to be retainable at the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Medium: appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Short: appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance.	Removal: trees which should be removed within the next 5 years.	Moved or Replaced: Trees which can be readily moved or replaced.
A	Structurally sound trees located in positions that can accommodate future growth.	Trees that may only live between 15 and 40 more years.	Trees that may only live between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5 metres (m) in height.
B	Trees that could be made suitable for long-term retention by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through damage, structural defect, instability or recent toss of adjacent trees.	Young trees less than 1 5 years old but over 5m in height.
C	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	Trees that may live for more than 40 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Dangerous trees through structural detects including cavities, decay, included bark, wounds or poor form.	Trees that have been regularly pruned to artificially control growth'.
D		Trees that could be made suitable for retention in the medium term by remedial tree care.	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are' clearly not safe to retain.	
E				Trees that may live for more than 5 years but should be removed to prevent interference with more suitable individuals or to	

	1 LONG SULE	2 MEDIUM SULE	3 SHORT SULE	4 REMOVALS	5 MOVED OR REPLACED
				provide space for new planting.	
F				Trees that are damaging or may cause damage to existing structures within 5 years.	
G				Trees that will become dangerous after removal of other trees for the reasons given in A) to F).	

Appendix D: Tree Protection Guidelines

The following tree protection guidelines must be implemented during the construction period if no tree specific recommendations are detailed.

Tree Protection Zone Establishment

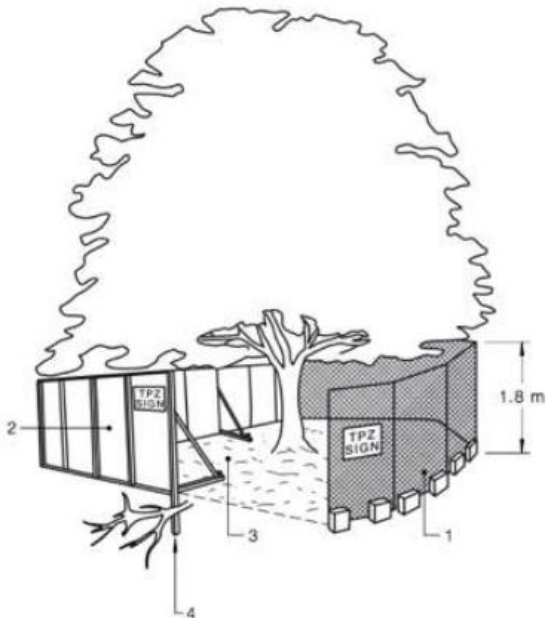
Prior to the introduction of any machinery or materials onto the site, and before initiating any works such as bulk earthworks, fencing should be installed. Once in place, any alterations or removal of protective fencing must receive approval from the project arborist. Access to the TPZ must be restricted by securing it appropriately. The establishment and management of the Tree Protection Zone should adhere to the following guidelines:

1) Specify the trees within and around the subject allotment that are slated for preservation and protection during the development process. This could involve trees on neighboring properties as well as street trees.

2) The Tree Protection Zone radius should align with the calculation specified in the Individual Tree Data and Imagery.

3) Please locate and mark the alignment of protective fencing. This alignment may differ from the actual TPZ radius, taking into account areas where acceptable encroachment is permitted (determined in consultation with the project arborist) and site access needs. Protective fencing is necessary only within the subject allotment, assuming appropriate boundary fencing is already installed.

4) Set up protective fencing as depicted in the accompanying image. Adhere to the relevant fencing requirements outlined in AS 4687 for temporary fencing and hoardings. Additionally, affix shade cloth or a similar material to mitigate the transfer of dust, particulate matter, and liquids into the protected area.



Legend:

1. Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2. Alternative plywood or wooden palling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3. Mulch installation across surface of TPZ (at the discretion of the Project Arborist). No excavation construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Protection when works within the tree protection zone is required

If the fencing has been reduced from the full TPZ radius to accommodate vehicle or machinery access, it's crucial to implement heavy-duty ground protection and trunk protection. This measure is essential to support the passage of vehicles like excavators, cranes, pier drilling machinery, hydro-excavation trucks, and other necessary equipment.

The heavy-duty ground protection includes:

1) A layer of geotextile fabric on top of the natural ground.

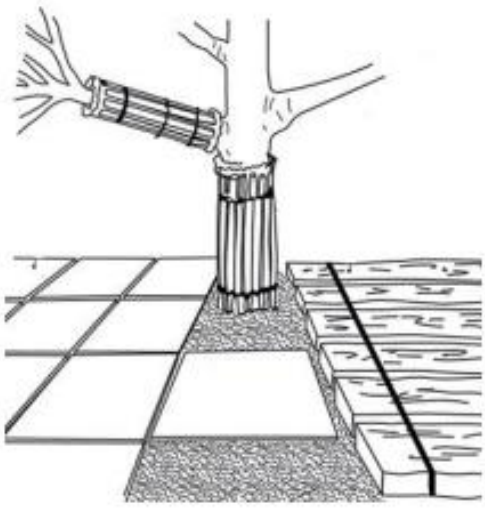
2) Cover the geotextile with a 100mm thick layer of organic mulch.

3) Install ground protection on top of the organic mulch (Bog mat or timber battens)

Trunk protection will include protection to the trunk and branches of trees as shown below. A minimum height of 2m is recommended.

1) Install breathable padding or hessian around the trunk of the tree.

2) Install closely spaced timber battens around the trunk, with the top edge protecting the trunk/bark by the padding/hessian. Secure with strapping

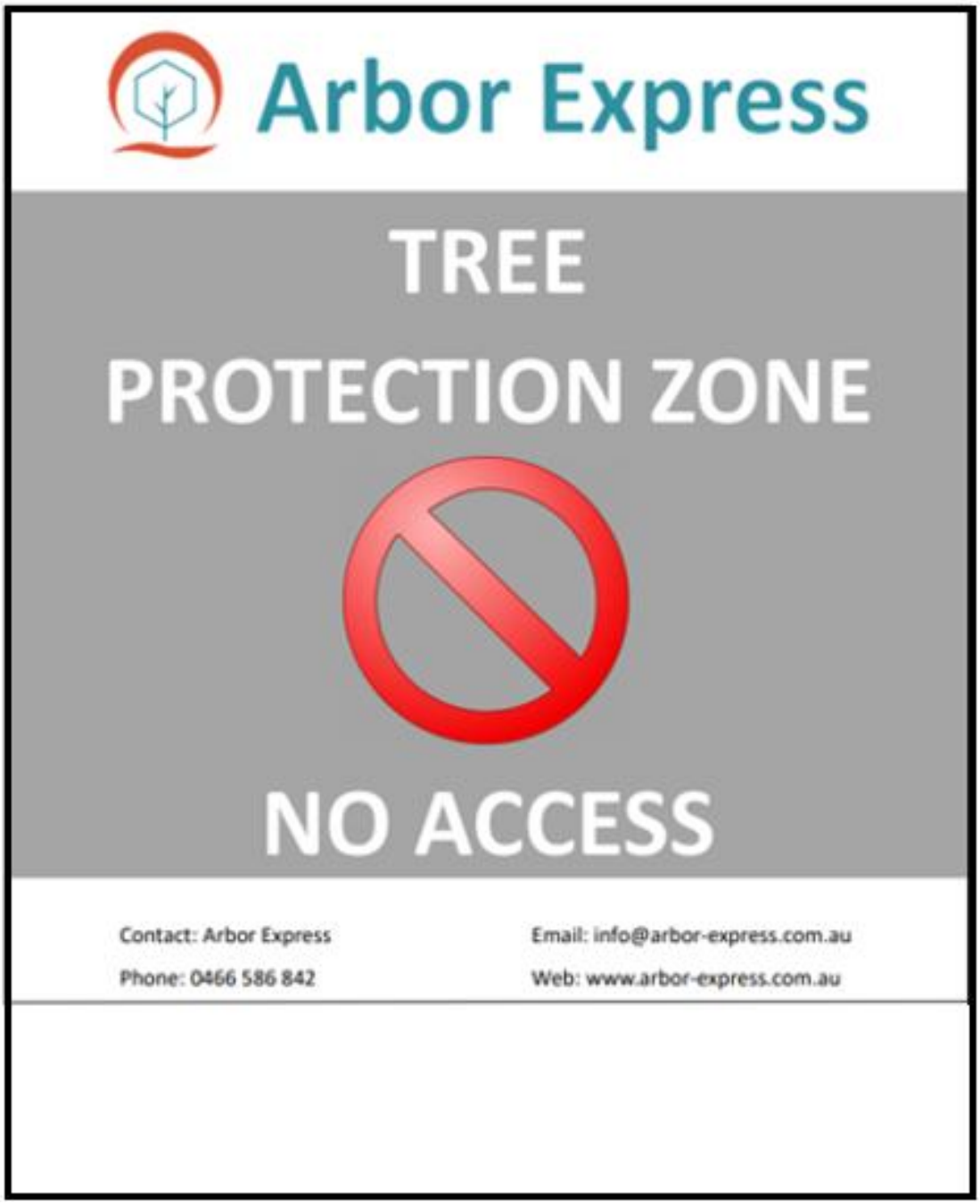


Notes:
1. For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
2. Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

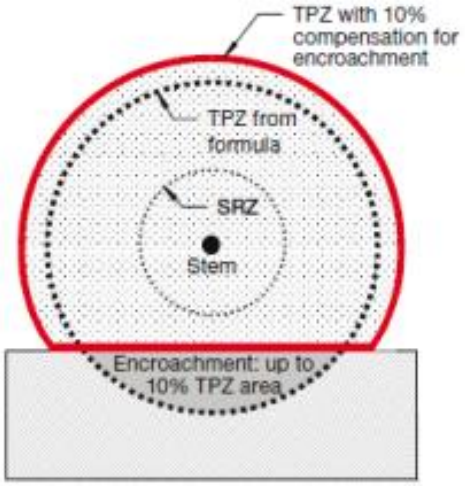
Underground Services

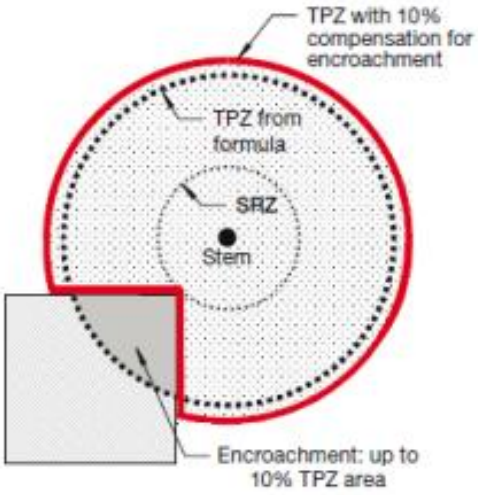
Whenever feasible, route all underground services away from the TPZ. If installing underground services within the TPZ becomes unavoidable, utilize non-intrusive methods such as horizontal directional drilling (HDD), non-destructive excavation (NDE) techniques like hydro-vacuum or Air Spade, or manually excavated trenches. Ensure that horizontal drilling or boring is carried out at a depth of at least 600 mm below grade. It's important to note that trenching for services is classified as "excavation." The project arborist should assess the potential impacts of drilling and bore pits on retained trees.

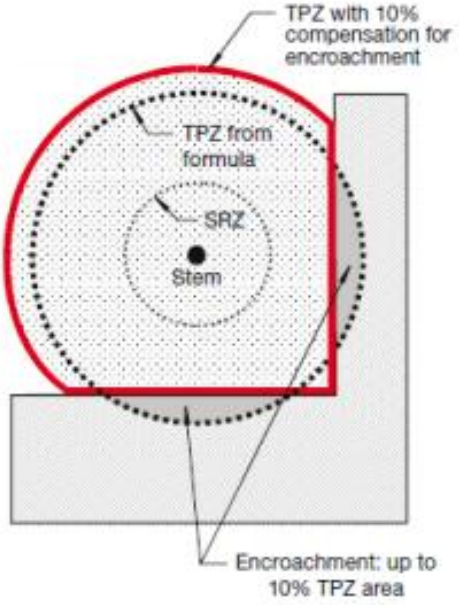
Example of a Tree Protection Sign

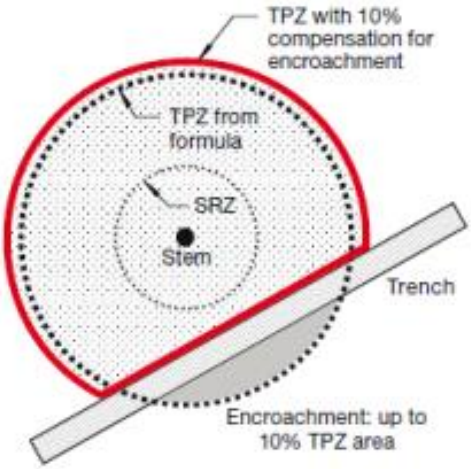


Appendix E: Encroachment into the Tree Protection Zones









Locations

- Sydney
- NSW South Coast (Wollongong to Bega)
- NSW Central Coast (Gosford to Newcastle)
- Southern Highlands
- Blue Mountains
- Canberra and Queanbeyan
- Regional NSW

Services

- Arborist Reports for Developments
- Tree Root Mapping
- Project Arborist
- Tree Health and Safety Assessments
- Tree Structural Testing (Resistograph)
- Flora & Fauna Assessments and Project Ecologist
- Vegetation Management Plans

Contact Us

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Attachment A5

Aboriginal Objects Due Diligence Assessment

URBIS

ABORIGINAL OBJECTS DUE DILIGENCE ASSESSMENT

41-49 Mountain Street Ultimo
Gadigal Land

Prepared for
APT RESIDENTIAL
September 2025

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Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices the Traditional Owners on whose land we stand.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

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GLOSSARY

Term	Definition
Aboriginal ceremony and dreaming site	Previously referred to as mythological sites, these are spiritual/story places where no physical evidence of previous use of the place may occur, e.g. natural unmodified landscape features, ceremonial or spiritual areas, men's/women's sites, dreaming (creation) tracks, marriage places etc. These are Aboriginal site features recordable on AHIMS.
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present-day Aboriginal communities.
Aboriginal object	As defined in the NPW Act, any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
Aboriginal place	As defined in the NPW Act, any place declared to be an Aboriginal place (under s.84 of the NPW Act) by the Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects.
Aboriginal resource and gathering sites	Related to everyday activities such as food gathering, hunting, or collection and manufacture of materials and goods for use or trade. These are Aboriginal site features recordable on AHIMS.
AHIMS	Aboriginal Heritage Information Management System. A register of previously reported Aboriginal objects and Aboriginal places in NSW, managed under Section 90 of the NPW Act.
AHIP	Aboriginal Heritage Impact Permit. A permit issued under Section 90, Division 2 of Part 6 of the NPW Act.
Archaeology	The scientific study of material remains of past human life, including artefacts, relics, ruins, buildings and their environment and context.
Art	Art is found in shelters, overhangs and across rock formations. Techniques include painting, drawing, scratching, carving engraving, pitting, conjoining, abrading and the use of a range of binding agents and the use of natural pigments obtained from clays, charcoal and plants. These are Aboriginal site features recordable on AHIMS.
Artefact	Objects such as stone tools, and associated flaked material, spears, manuports, grindstones, discarded stone flakes, modified glass or shell demonstrating evidence of use of the area by Aboriginal people. These are Aboriginal site features recordable on AHIMS.
Artefact scatter	Multiple artefacts associated with one another in the same context. These are recordable on AHIMS as ‘artefacts’.
Burial	A traditional or contemporary (post-contact) burial of an Aboriginal person, which may occur outside designated cemeteries and may not be marked, e.g. in caves, marked by stone cairns, in sand areas, along creek banks etc. These are Aboriginal site features recordable on AHIMS.

Term	Definition
Ceremonial ring	A Raised earth ring associated with ceremony. These are Aboriginal site features recordable on AHIMS.
Cliff	A steep rock face
Code of Practice	*Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b).
Conflict site	Previously referred to as massacre sites where confrontations occurred between Aboriginal and non-Aboriginal people, or between different Aboriginal groups. These are Aboriginal site features recordable on AHIMS.
DECCW	Department of Environment, Climate Change and Water NSW.
Due Diligence Code	*Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a)
Dune	As defined in the Due Diligence Code, a sand ridge or sand hill formed by the wind.
Earth mound	A mounded deposit of round to oval shape containing baked clay lumps, ash, charcoal and, usually, black or dark grey sediment. The deposit may be compacted or loose and ashy. Mounds may contain various economic remains such as mussel shell and bone as well as stone artefacts. Occasionally they contain burials. These are Aboriginal site features recordable on AHIMS.
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&BC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
Fish trap	A modified area on watercourses where fish were trapped for short-term storage and gathering. These are Aboriginal site features recordable on AHIMS.
Grinding grooves	A groove in a rock surface resulting from manufacture of stone tools such as ground edge hatchets and spears, or rounded depressions resulting from grinding of seeds and grains. These are Aboriginal site features recordable on AHIMS.
Harm	As defined in the NPW Act, to destroy, deface, damage or move an Aboriginal object or destroy, deface or damage a declared Aboriginal place. Harm may be direct or indirect (e.g. through increased visitation or erosion). Harm does not include something that is trivial or negligible.
Habitation structure	Structures constructed by Aboriginal people for short- or long-term shelter. Temporary structures are commonly preserved away from the coastline and may include historic camps of contemporary significance. Smaller structures may make use of natural materials such as branches, logs and bark sheets or manufactured materials such as corrugated iron to form shelters. Archaeological remains of a former structure such as chimney/fireplace, raised earth building platform, excavated pits, rubble mounds etc. These are Aboriginal site features recordable on AHIMS.
Headland	A narrow piece of coastal land that projects from a coastline into the sea or ocean
Hearth	Aboriginal site feature recordable on AHIMS. Cultural deposit sometimes marked by hearth stones, usually also contains charcoal and may also contain heat treated stone fragments.
Isolated find	A single artefact found in an isolated context. These are recordable on AHIMS as ‘artefacts’.

Term	Definition
Modified Trees	Trees which show the marks of modification as a result of cutting of bark from the trunk for use in the production of shields, canoes, boomerangs, burials shrouds, for medicinal purposes, foot holds etc, or alternately intentional carving of the heartwood of the tree to form a permanent marker to indicate ceremonial use/significance of a nearby area, again these carvings may also act as territorial or burial markers. These are Aboriginal site features recordable on AHIMS.
Non-human bone and organic material	Objects which can be found within cultural deposits as components of an Aboriginal site such as fish or mammal bones, ochres, cached objects which may otherwise have broken down such as resin, twine, dilly bags, nets etc. These are Aboriginal site features recordable on AHIMS.
NPW Act	*National Parks and Wildlife Act 1974*
NPW Regulation	*National Parks and Wildlife Regulation 2019*
Ochre quarry	A source of ochre used for ceremonial occasions, burials, trade and artwork. These are Aboriginal site features recordable on AHIMS.
PAD	A 'potential archaeological deposit'. An area where Aboriginal objects may occur below the ground surface. These are Aboriginal site features recordable on AHIMS.
Ridge	A compound landform element comprising a narrow crest that is longer than its width
Ridge top (or ridgeline)	The crest of a ridge that extends along its highest contours
Shell	An accumulation or deposit of shellfish from beach, estuarine, lacustrine or riverine species resulting from Aboriginal gathering and consumption. Usually found in deposits previously referred to as 'shell middens.' These are Aboriginal site features recordable on AHIMS.
SSDA	State Significant Development Application, under Division 4.7 of the EP&A Act
Stone arrangement	Human produced arrangements of stone usually associated with ceremonial activities, or used as markers for territorial limits or to mark/protect burials. These are Aboriginal site features recordable on AHIMS.
Stone quarry	A source of stone which was quarried and used for the production of stone tools by Aboriginal people. These are Aboriginal site features recordable on AHIMS.
Waterhole	A source of fresh water for Aboriginal groups which may have traditional ceremonial or dreaming significance and/or may also be used to the present day as a rich resource gathering area (e.g. waterbirds, eels, clays, reeds etc). These are Aboriginal site features recordable on AHIMS.
Waters	As defined in the Due Diligence Code, the whole or any part of any river, stream, lake, lagoon, swamp, wetlands, natural watercourse and tidal waters (including the sea), where the boundary of tidal waters is defined as the high-water mark.

EXECUTIVE SUMMARY

Urbis has been engaged by APT Residential ('the Proponent') to conduct an Aboriginal Objects Due Diligence Assessment ('ADD') of 41-49 Mountain Street, Ultimo, legally defined as 21/-/DP5567 and 1/-/DP191928 ('the subject area').

The proponent is seeking to lodge a planning proposal. The ADD was undertaken to determine whether any Aboriginal objects or Aboriginal places are likely to be harmed by future proposed developments of the subject area.

The ADD was undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010) ('Due Diligence Code') and included the following:

- Searches of the Australian Heritage Database ('AHD'), Aboriginal Heritage Information Management System ('AHIMS') and State Heritage Inventory ('SHI')
- Review of previous archaeological assessments relevant to the subject area
- Landscape analysis
- Analysis of historical land use and its impact on the subject area
- Visual inspection of the subject area

The due diligence assessment concluded that:

1) The proposed activity is not a 'low impact activity'.
2) There are no known Aboriginal objects or Aboriginal places within the curtilage of the subject area.
3) Previous studies in the vicinity of the subject area have identified Aboriginal objects within similar developed locations.
4) The subject area is in proximity to historical aquatic resources of Blackwattle Creek and associated swamps.
5) The subject area has been impacted by historical phases of construction and demolition.
6) Due to the possibility that Aboriginal objects may be encountered during historical archaeological investigations an Aboriginal Cultural Heritage Assessment (ACHA) is recommended to mitigate risk. The ACHA should incorporate an Archaeological Research Design outlining a management strategy for Aboriginal objects should they be encountered. This would avoid delays to the project as an ACHA has a minimum timeframe of approximately 4 months due to statutory consultation periods.

Based on the above conclusions, Urbis recommends the following:

- **Recommendation 1** – **Record Keeping**

  This ADD report should be kept as evidence of the Due Diligence Process having been applied to the subject area.

- **Recommendation 2** – **Further Investigation**

  Further investigation is required in the form of an Aboriginal Cultural Heritage Assessment ('ACHA'), including an assessment of the impacts of the proposed works and consultation with the Aboriginal community. The ACHA should incorporate an Archaeological Research Design outlining a management strategy for Aboriginal objects should they be encountered. The ACHA should be undertaken in accordance with the following:

  - *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants* (OEH 2011a)
  - *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010c)

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011b)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b)

The ACHA should be undertaken to further investigate whether or not Aboriginal objects are present within the subject area and, if required, to support an application for an AHIP or, if consent for the proposed works is to be sought via a State Significant Development Application ('SSDA'), under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (NSW), to inform and accompany the Environmental Impact Statement (EIS) for the SSDA.

1. INTRODUCTION

Urbis has been engaged by APT Residential ('the Proponent') to conduct an Aboriginal Objects Due Diligence Assessment ('ADD') of 41-49 Mountain Street, Ultimo, legally defined as 21/-/DP5567 and 1/-/DP191928 ('the subject area'). The regional location and boundary of the subject area are shown in Figure 1 and Figure 2, respectively. The Proponent is seeking to lodge a planning proposal for a multi-storey mixed-use development. Designs are currently in the concept phase.

The ADD has been prepared to meet the requirements for due diligence under the *National Parks and Wildlife Act 1974* (NSW). The ADD follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) ('the Due Diligence Code') and aims to establish whether any Aboriginal objects or Aboriginal places would be harmed, or would be likely to be harmed, by the proposed activity and to ascertain whether further investigation is required.

1.1. SUBJECT AREA

The subject area is located at 41-49 Mountain Street, Ultimo, and is comprised of lots 21/-/DP5567 and 1/-/DP191928. It is part of the Sydney Local Government Area (LGA) and is currently zoned as MU1 – Mixed Use. The subject area is approximately 0.15ha. It is bounded by Smail Street to the north, Mountain Street to the east and commercial properties to the west and south.

1.2. PROPOSED WORKS

The current ADD is to support a planning proposal. Concept designs consist of a multi-storey mixed-use development which would include the following:

- Demolition of all existing temporary structures.
- Removal of the existing concrete surface.
- Construction of a 15-storey apartment building inclusive of one underground basement fronting Smail Street and 7 storeys fronting Mountain Street.

The initial concept designs feature the proposed basement level extending down to 3.5 metres below the current ground level, occupying almost the full extent of the subject area (Figure 3 - Figure 4) with the exception of the extant State Heritage listed item - *Electrical Substation No.5'* (SHR 00934) which will be retained in-situ. Its below ground footprint will not be impacted upon.

1.3. STATUTORY CONTROLS

1.3.1. Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('the EPBC Act') provides protection for properties and places listed on the World Heritage List ('WHL'), the National Heritage List ('NHL') and the Commonwealth Heritage List ('CHL').

The WHL is a list of properties around the world considered to be of outstanding value to humanity, the NHL is a list of places of outstanding significance to the nation and the CHL is a list heritage places owned or controlled by the Australian Government. The WHL, NHL and CHL may include properties and places of Aboriginal heritage significance, in addition to places of natural and historical significance.

It is an offence under sections 15A, 15C, 27A and 27C of the EPBC Act to take any action that is likely to have a significant impact of the relevant heritage values of a place listed on the WHL, NHL or CHL. Approval from the Minister is required for controlled actions which will have a significant impact on items and places included on the WHL, NHL or CHL.

Properties and places listed on the WHL, NHL or CHL, are included in the Australian Heritage Database ('AHD'). The AHD also includes places under consideration, or that may have been considered, for any one of these lists. A search of the AHD was undertaken on 16 June 2025. The search did not identify any Aboriginal heritage properties or places within the curtilage of the subject area that are protected under the EPBC Act.

1.3.2. The National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NSW) ('the NPW Act') and *National Parks and Wildlife Regulation 2019* (NSW) ('the NPW Reg') protect 'Aboriginal objects' and 'Aboriginal places' in NSW.

The NPW Act defines 'Aboriginal objects' and 'Aboriginal places' as follows:

- **Aboriginal object** means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
- **Aboriginal place** means any place, which may or may not contain Aboriginal objects, that is declared to be an Aboriginal place under section 84 of the NPW Act because it is or was of special significance with respect to Aboriginal culture.

Under section 86 of the NPW Act, it is an offence to harm or desecrate an Aboriginal object or Aboriginal place. Section 87 of the NPW Act provides the following defences to prosecution under s. 86 of the NPW Act:

- The harm was to a previously unknown Aboriginal object, other than a modified tree, and was caused by a low impact activity as defined in reg. 58 of the NPW Reg.
- The harm was to a previously unknown Aboriginal object and due diligence was exercised by the Proponent to determine whether the activity would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed, per section 87(2) of the NPW Act.
- The harm or desecration was authorised by an Aboriginal Heritage Impact Permit ('AHIP'), per section 87(1) of the NPW Act.
- The harm or desecration was authorised by an approved State Significant Development Application, per section 4.41(1)(d) of the *Environmental Planning and Assessment Act 1979* (NSW).

Regulation 58 of the NPW Reg defines 'low impact' activities as:

- Maintenance of existing roads, fire and other trails and tracks and existing utilities and other similar services, on disturbed land.
- Farming and land management work for cropping and leaving paddocks fallow, the construction of water storage works, the construction of fences, the construction of irrigation infrastructure, ground water bores or flood mitigation works, or the construction of erosion control or soil conservation works (such as contour banks), on disturbed land.
- Farming and land management work that involved the maintenance of existing grain, fibre or fertiliser storage areas, existing water storage works, existing irrigation infrastructure, ground water bores or flood mitigation works, existing fences, or existing erosion control or soil conservation works.
- The grazing of animals.
- An activity on land that has been disturbed that comprises exempt development or was the subject of a complying development certificate issued under the *Environmental Planning and Assessment Act 1979.*
- Mining exploration work that involved costeaning, bulk sampling or drilling, on disturbed land.
- Geological mapping, surface geophysical surveys (excluding seismic surveys), sub-surface geophysical surveys that involve downhole logging and sampling and coring using hand-held equipment (except when carried out as part of an archaeological investigation).
- The removal of isolated, dead or dying vegetation, but only if there is minimal disturbance to the surrounding ground surface.
- Seismic surveying and the construction and maintenance of ground water monitoring bores on disturbed land.
- Environmental rehabilitation work (excluding erosion control or soil conservation works).

For the purposes of the above, land is 'disturbed' if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable (reg. 58(4)).

As no works are currently proposed it is unclear if future proposed works will be 'high impact' activities as defined in reg. 58 of the NPW Reg. Therefore, the present ADD was undertaken to exercise due diligence to determine whether any future proposed activity would harm an Aboriginal object or Aboriginal place.

1.4. METHODOLOGY

In accordance with section 87(3) of the NPW Act, due diligence may be exercised by compliance with the requirements set out in the NPW Regulation or a code of practice adopted or prescribed by the NPW Regulation.

The present ADD was undertaken in accordance with the generic due diligence process described in Section 8 of the Due Diligence Code. It is noted that there is an inconsistency between the due diligence process depicted in the flowchart on page 10 of the Due Diligence Code and the process described on pages 11 to 14. The latter was adopted in *Williams v Graham* [2016] NSWLEC 151 and has been applied for the present ADD.

The ADD included the following:

- Searches of the Australian Heritage Database ('AHD'), Aboriginal Heritage Information Management System ('AHIMS') and State Heritage Inventory ('SHI')
- Review of previous archaeological assessments relevant to the subject area
- Landscape analysis
- Analysis of historical land use and its impact on the subject area
- Visual inspection of the subject area

1.5. LIMITATIONS

The ADD is limited to consideration of Aboriginal objects and places. Historical heritage properties and places protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and historical heritage items and relics protected under the *Heritage Act 1977* (NSW) are not considered.

The ADD is limited to the due diligence process outlined in the Due Diligence Code. The ADD did not include consultation with the Aboriginal community or consideration of intangible cultural heritage.

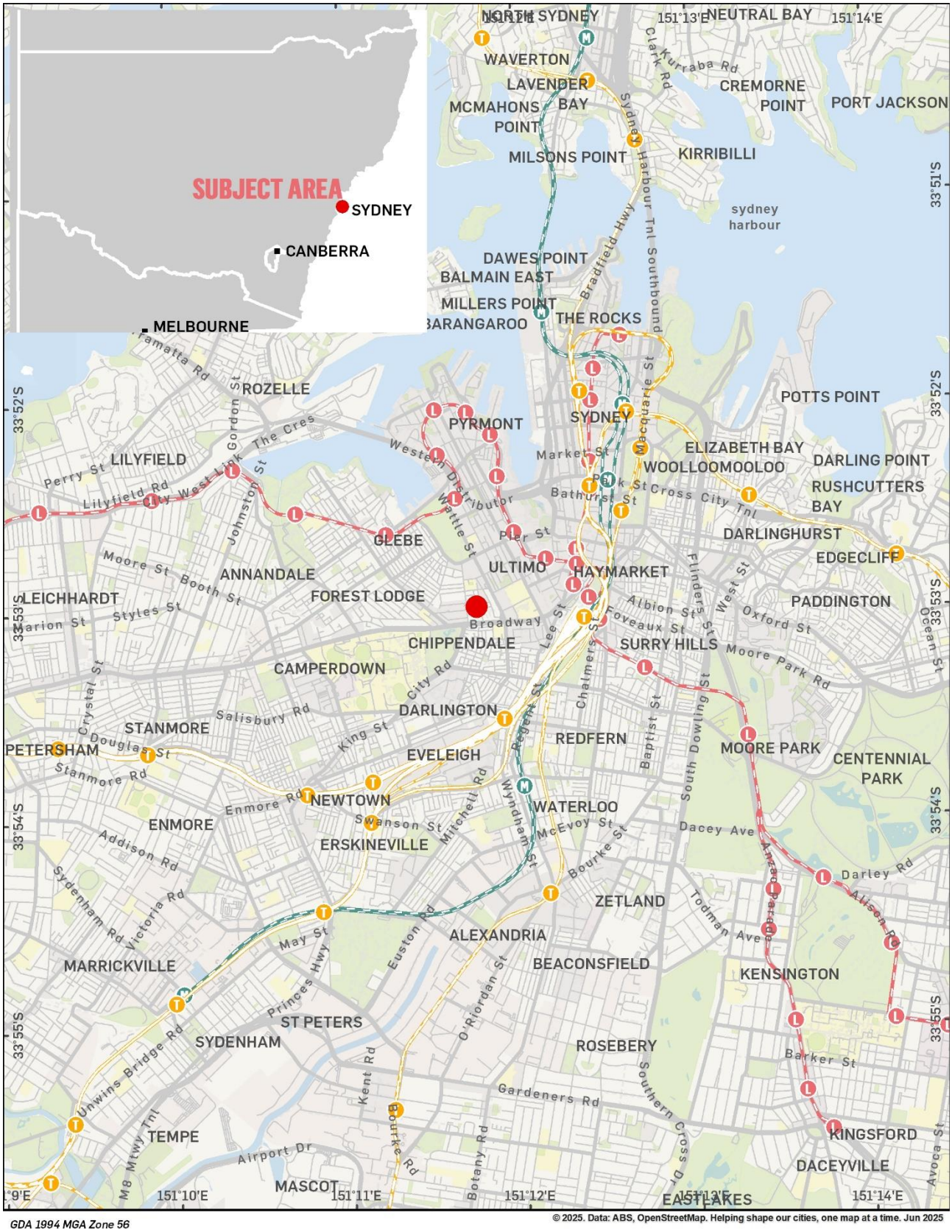

Figure 1 – Regional location of the subject area

Figure 2 – Location of subject area

Reference Design
Section 1

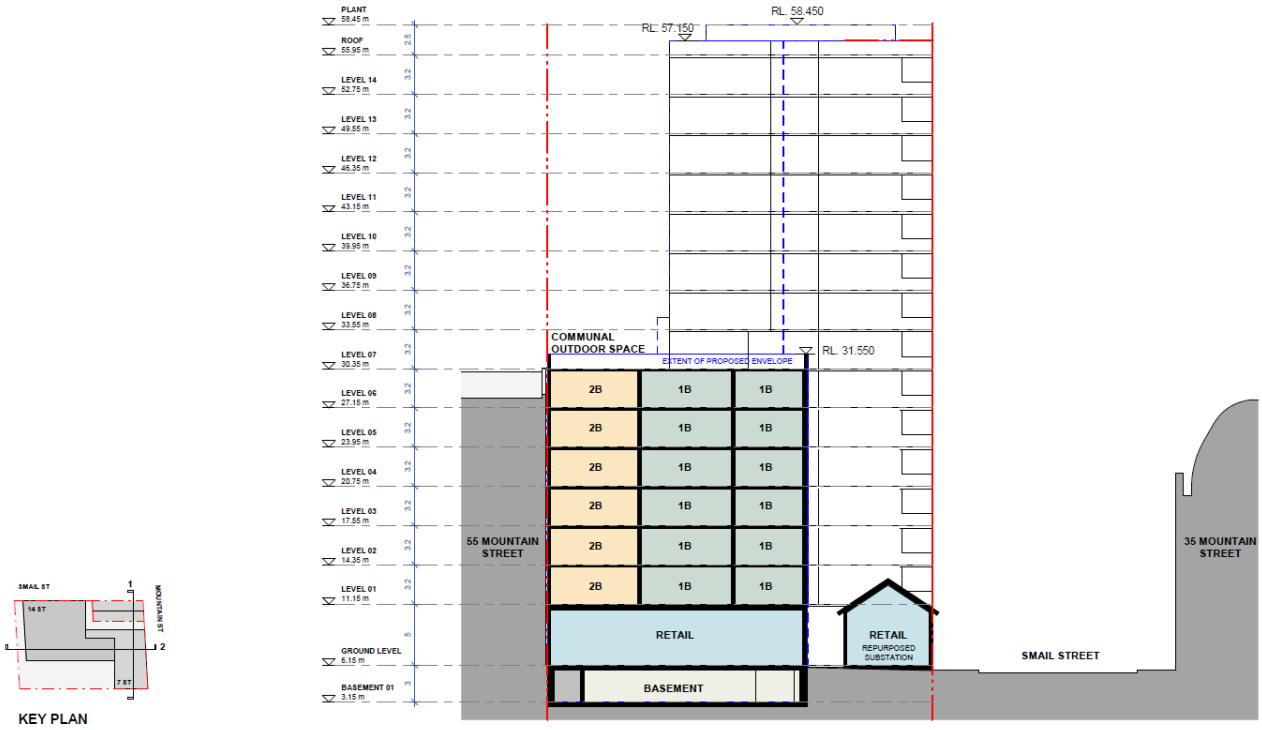

Figure 3 – Extract of concept section plan showing basement location and building from Mountain Street.

Source: Bates Smart 2025.

Reference Design
Section 2

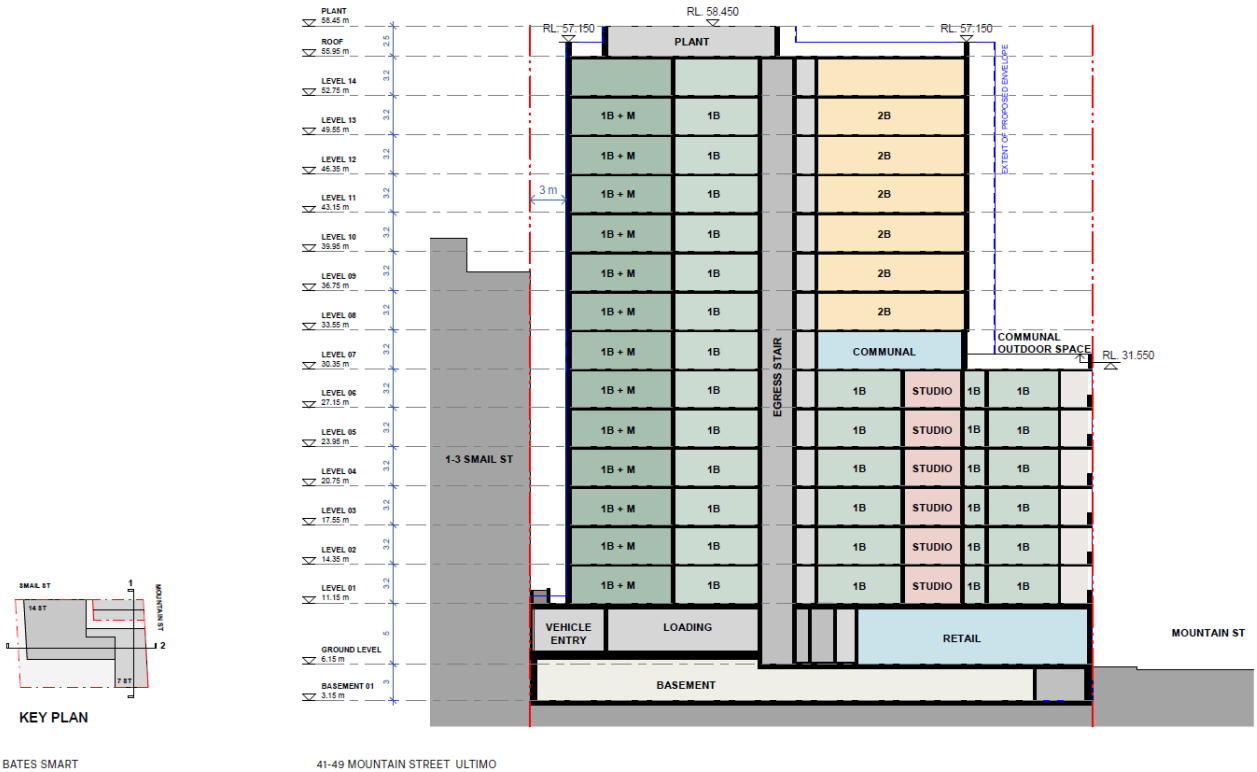

Figure 4 – Extract of concept section plan showing basement location and building from Smail Street.

Source: Bates Smart 2025.

2. ABORIGINAL CULTURAL HERITAGE

The following discussion of archaeological context, environmental context and the visual inspection of the subject area provides the relevant background information necessary for applying the due diligence process to the subject area.

2.1. ARCHAEOLOGICAL CONTEXT

2.1.1. Declared Aboriginal Places

The NSW State Heritage Inventory (SHI) includes all declared Aboriginal places within NSW, in addition to historic heritage items listed on the State Heritage Register (SHR), listed Interim Heritage Orders (IHOs) and items listed on Local Environment Plans (LEPs) and State Environmental Planning Policies (SEPPs).

A search of the SHI was undertaken on 30 June 2025. The subject area contains one heritage item that is the listed on the State Heritage Register. The item is listed as '*Electrical Substation No.5'* (SHR 00934). No items of Aboriginal heritage items were identified.

2.1.2. Registered Aboriginal Objects

The Aboriginal Heritage Information Management System (AHIMS) is a database of registered Aboriginal sites in NSW. Each registered Aboriginal site includes one or more site 'features', which may be considered an Aboriginal object under the NPW Act.

The *Guide to completing the AHIMS Site Recording Form* (OEH 2012) lists 20 different features that may be recorded on AHIMS. The most common site features registered in NSW are artefacts, modified trees, art, grinding grooves and shell deposits (see Glossary for definitions). However, the likelihood of any particular site feature being found will vary according to region and environment. Less common site features that are encountered are burials, ceremonial rings, earth mounds, fish traps, habitation structures, hearths, non-human bone and organic material, ochre quarries, stone arrangements and stone quarries (see Glossary for definitions).

Other Aboriginal site features that are recorded on AHIMS but are not necessarily 'Aboriginal objects' within the meaning of that term as it is defined in the NPW Act (i.e. are not a 'deposit, object or material evidence… relating to the Aboriginal habitation of the area') are potential archaeological deposits (PADs), Aboriginal ceremony and dreaming sites, Aboriginal resource and gathering sites, conflict sites and waterholes (see Glossary for definitions). These features are only considered to be 'Aboriginal objects' for the purpose of the NPW Act if accompanied by at least one of the other site types defined above.

The AHIMS database also provides information on the context of registered Aboriginal sites. Sites that are recorded as 'closed' context s are those that include a cave or rock overhang, while all other sites are recorded as 'open' context.

It should be noted that the AHIMS register does not represent a comprehensive list of all Aboriginal objects or places as it is limited to sites that have been previously identified and registered. Registration is typically the result of previous archaeological investigation, so the number of registered Aboriginal sites in area is dependent on the amount of such research previously undertaken.

A search of the Aboriginal Heritage Information Management System (AHIMS) was carried out on 23 June 2025 (AHIMS Client Service IDs: 1016569 and 1016583) for an area of approximately 3 km x 3 km centred on the subject area. A summary of all previously registered Aboriginal objects and Aboriginal places within the search area is provided in Table 1 and their spatial distribution is shown in Figure 5 and Figure 6. The Basic and Extensive AHIMS search results are included in Appendix A. The results of the search are discussed below.

No Aboriginal objects or Aboriginal Places were identified within the curtilage of the subject area.

Table 1 – Aboriginal features in AHIMS search area

Site Type	Number	% of Sites
PAD	12	55

Site Type	Number	% of Sites
Artefact	9	41
Shell	2	9
Aboriginal Resource & Gathering	2	9
Aboriginal Ceremony & Dreaming	1	5

The search of the broader region around the subject area was undertaken to determine if: (i) there are any registered Aboriginal sites near the subject area that might extend into it; and (ii) to determine if there is any association of Aboriginal sites certain landscape features within the broader region that may be instructive for determining the likelihood of Aboriginal sites within the subject area.

In the broader search area, a total of 22 Aboriginal objects and no Aboriginal places are registered. Three of the recorded Aboriginal objects were identified as 'not a site' in the search results, reducing the total number of identified Aboriginal objects to 19. The locations of the 19 identified Aboriginal sites are shown in Figure 5.

The search identified that Aboriginal objects have been identified in close proximity to the subject area in sites with a similar history of development. No reports could be obtained for these however the AHIMS site cards contain some pertinent information summarised as follows:

- AHIMS ID# 45-6-2629: Located immediately south of the current subject area. During combined historical and Aboriginal investigations an area 10m x 5m consisting of around 20cm of sandy loam over sterile clay was identified beneath modern fills. These soils contained 6 to 15 small lithic objects. These were interpreted as debitage from stone tool manufacture.
- AHIMS ID# 45-6-2663: Located at 22-36 Mountain Street and 16-20 Smail Street approximately 50m north-east of the current subject area. Three Aboriginal objects including a flake, a flaked piece and a flaked piece of bottle glass were identified in a disturbed context during historical archaeological excavations. A summary can be found in Section 2.1.3.

The AHIMS search also identified several PADs in the vicinity of the historical alignment of Blackwattle Creek. AHIMS ID# and 45-6-2666, 45-6-2680, 45-6-3064/45-6-3071 (duplicate site cards) all identify potential for remnant portions of alluvial soils despite modern development. Potential alluvial soils and the proximity to Blackwattle Creek are sensitive landscape features indicating potential for Aboriginal objects to be retained. However, it is generally noted that these are likely to be low-density distributions of lithic objects within disturbed contexts.

2.1.3. Previous Archaeological Investigations

Previous archaeological investigations may provide information on known or potential Aboriginal archaeological resources in a subject area. The following archaeological reports relating to the subject area have been identified.

Dana Mider 2001, *Historical Archaeological Assessment Broadway & Mountain St Development Site, Sydney*

In 2001, Dana Mider conducted a historical archaeological assessment of a site located at 40-60 Mountain Street directly east of the subject area. The assessment did not include any sub-surface investigations. It concluded that, due to the substantial fill introduced in the area post land resumption between 1906 and 1910 there was a high likelihood of physical evidence dating from the early colony. The report also acknowledges that the Blackwattle silts may retain Aboriginal objects.

This reports highlights the potential that natural soils can be preserved beneath modern fill layers.

Godden Mackay Logan 2005, 22-36 Mountain Street and 16-20 Smail Street, Ultimo NSW

Godden Mackay Logan undertook an archaeological investigation of 22- 36 Mountain Street and 16-20 Smail Street, Ultimo NSW in 2005. This is the registered site AHIMS ID# 45-6-2663 (Mountain Street Ultimo), which is an open site registered as Artefact and a Potential Archaeological Deposit (PAD). The site is located

approximately 50m north-east of the present subject site. Prior to the commencement of the excavation, the existing buildings were demolished and the fill beneath them removed by machine excavation to a depth of 2 metres. Of note, the site was located in low lying land with the excavated levels close to the water table. One area yielded soils that suggested that sandy soils formed historic fill intended to attempt to raise area to combat the wet, swampy nature of the landscape.

Three Aboriginal objects including a flake, a flaked piece and a flaked piece of bottle glass were identified in a disturbed context during historical archaeological excavations. The report stated that these would be the subject of a separate report and no further detail was provided. This report could not be located at time of writing.

This report highlights that Aboriginal objects may be retained in disturbed contexts.

AMAC Group 2023, 66 Bay Street, Ultimo

An historical archaeological investigation was undertaken by AMAC in 2023 of 66 Bay Street, Ultimo NSW. The site is located approximately 50m west of the present subject area with the archaeological investigation consisting of a salvage excavation. The excavation was undertaken ahead of bulk excavation works to establish a new basement level within the site. No Aboriginal objects were observed, however the excavation found that although the site was classified as being within a disturbed location, B or C horizon soils remained. Alluvial fills directly above the bedrock were consistent with dredged material of subsoils that naturally occur within a swampy landscape. Most pre-terrace phase fills recorded above the natural weathering sandstone bedrock formed variants of clayey sands.

This report highlights the significant disturbance the site had been subjected to since historical times. Natural or redeposited soils however may remain.

Dana Mider 2001, *Historical Archaeological Assessment Broadway & Mountain St Development Site, Sydney*

In 2001, Dana Mider conducted a historical archaeological assessment of a site located at 40-60 Mountain Street directly east of the subject area. The assessment did not include any sub-surface investigations. It concluded that, due to the substantial fill introduced in the area post land resumption between 1906 and 1910 there was a high likelihood of physical evidence dating from the early colony. The report also acknowledges that the Blackwattle silts may retain Aboriginal objects.

Figure 5 – Location of Aboriginal sites registered in AHIMS search area

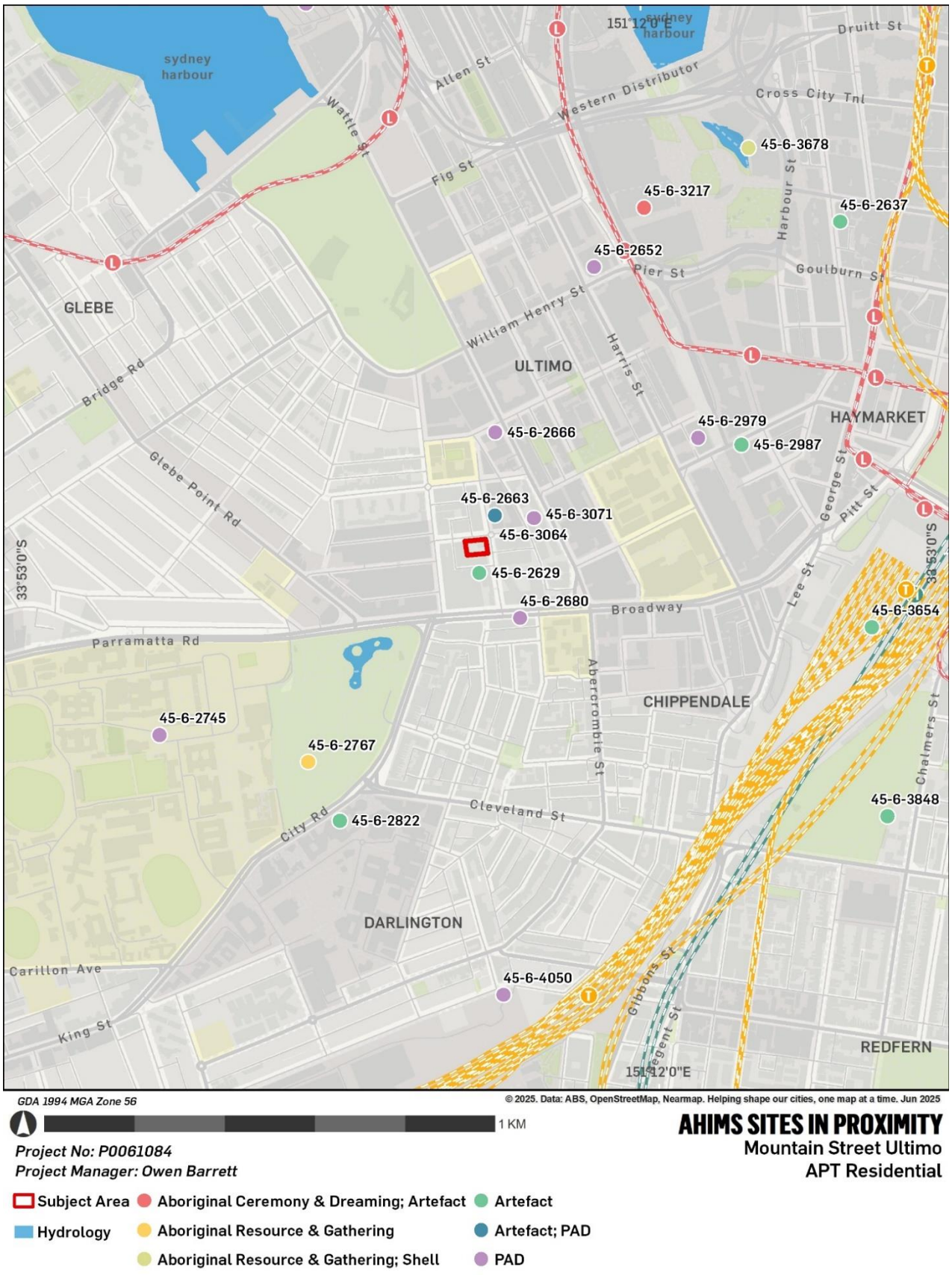

Figure 6 - Location of Aboriginal sites registered in AHIMS near the subject area

2.2. ENVIRONMENTAL CONTEXT

2.2.1. Landscape Features

Aboriginal objects may be associated with certain landscape features that played a part in the everyday lives and traditional cultural activities of Aboriginal people. The Due Diligence Code specifies the following landscape features are indicative of likely past Aboriginal land use:

- Areas within 200 m of waters including freshwater and the high tide mark of shorelines.
- Areas located within a sand dune system.
- Areas located on a ridge top, ridge line or headland.
- Areas located within 200 m below or above a cliff face.
- Areas within 20 m of or in a cave, rock shelter, or a cave mouth.

The above landscape features are defined in the Glossary of this report. Only the terms ‘waters’ and ‘dune’ are explicitly defined in the Due Diligence Code.

Hydrology: The nearest waterbody to the subject area is Sydney Harbour’s Blackwattle Bay, located approximately 1km northwest of the subject area. It should be noted that the current shoreline is not natural. The subject area is located in a region previously occupied by swamps and wetlands associated with Blackwattle Creek which fed into where Wentworth Park is currently located. Historical maps indicate that the subject area was on the margins of Blackwattle Creek prior to modern modification of the landscape (Figure 7 below).

Topography: The subject area and surrounding region comprise flat terrain with a low elevation above the previous location of Blackwattle Creek. The subject area has an elevation ranging from 17 to 22 metres (Figure 8) (World Topographic Map 2025).

Soils and Geology: The NSW Soil and Land Information System (SALIS) provides information on expected soil landscapes within NSW. The subject area is classified as part of the soil landscape ‘Disturbed Terrain’, which contains level plains and hummocky terrain. This landscape has been subject to disturbances including landfill, removal, and burial of soil (Figure 9). The soil in this landscape is generally comprised of transported fill or waste material and is commonly found in previous swamps, estuaries and wetlands. Soils in this landscape have been disturbed to an estimated depth of one metre, and original soil has been removed. No landscape features are present within the subject area that indicate past Aboriginal land use.

Figure 7 – An extract from the 1845 Shields City of Sydney map showing approximate location of subject area (indicated in red) in relation to Blackwattle Creek.

Source: City of Sydney Archives, call number: A-00880420

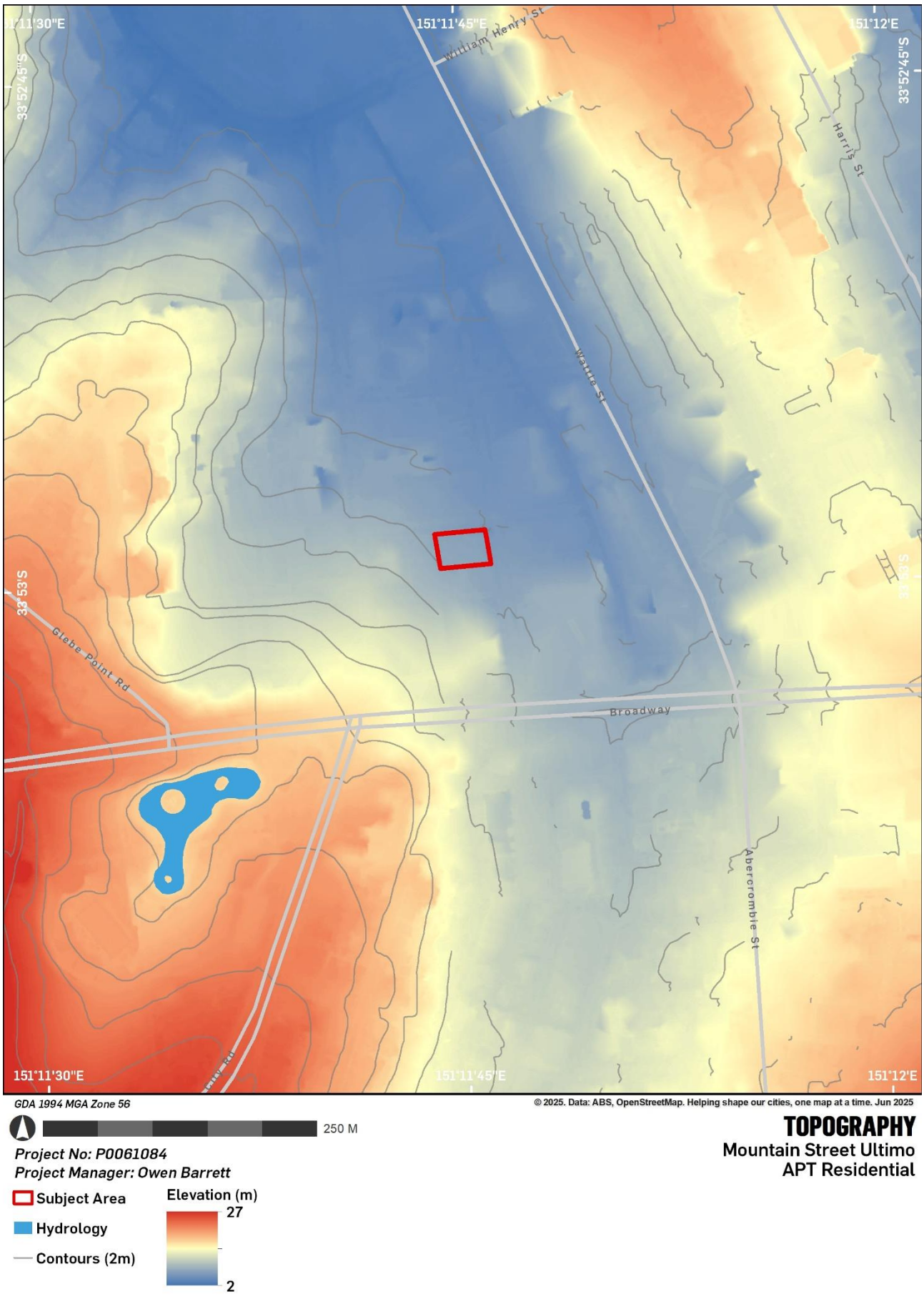

Figure 8 – Topography

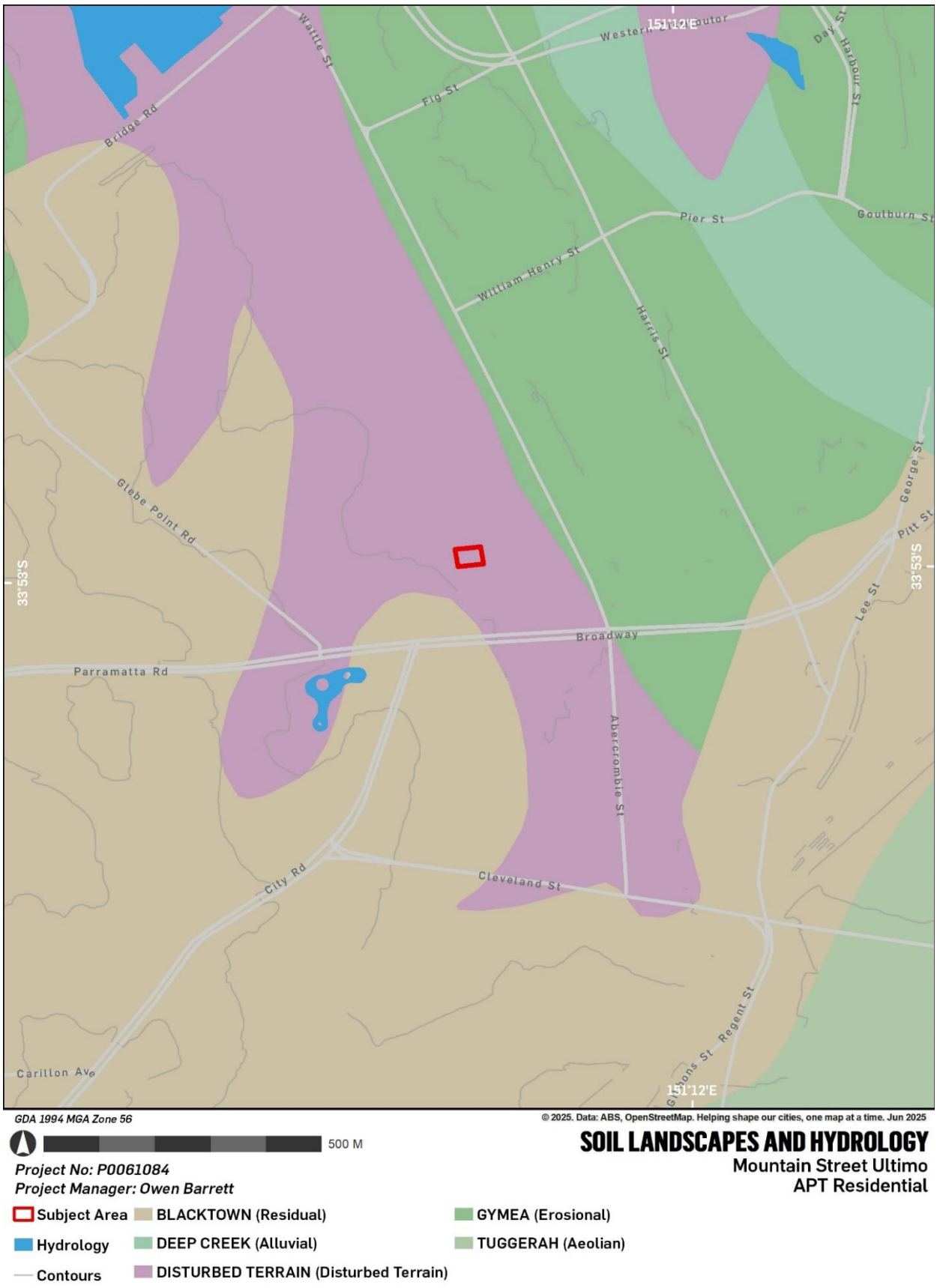

Figure 9 – Soil landscapes and hydrology

2.2.2. Historical Ground Disturbance

Disturbance to the landscape after Aboriginal use reduces the likelihood for Aboriginal objects being retained, either through destruction of the Aboriginal objects or their removal.

According to the Due Diligence Code, land is disturbed if it has been the subject of a human activity that has changed the surface of the land, being changes that remain clear and observable. The Due Diligence Code provides the following examples of activities that may have disturbed land:

- Ploughing
- Construction of rural infrastructure (such as dams and fences)
- Construction of roads, trails and tracks (including fire trails and tracks and walking tracks)
- Clearing vegetation
- Construction of buildings and the erection of other structures
- Construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure)
- Construction of earthworks

The following history of the area including the subject area is summarised from the Historical Archaeological Assessment prepared by Urbis for the subject area (Urbis 2025).

The Ultimo region is situated on the Traditional lands of the Gadigal people. Gadigal Country stretch from along the southern side of Port Jackson from South Head to present day Petersham. The southern boundary of Gadigal land forms the Alexandra canal and Cooks River.

The broader Ultimo area was part of the estate of the surgeon John Harris, who was originally granted 34 acres in 1803. Harris was granted further land on the peninsula, and by 1818, with additional land purchases, Harris owned a cumulative 233 acres, covering Ultimo, and much of the adjoining Pyrmont and parts of Haymarket regions (Matthews 1982).

By the mid-1800s part of the estate facing Parramatta Street was sold off, and commercial industry began appearing within the area. The low-lying and swampy region of the area behind Parramatta Street, from the head of Darling harbour to the head of the Black Wattle Swamp, was the only part of Ultimo that was developed.

Reverend Richard Johnson, a civil magistrate and chaplain of the first fleet, was first granted a 400-acre land allotment in Glebe, in which the subject area is located, by Lieutenant-Governor Philip Gidley King in August 1789 (Fitzgerald 2008). A keen farmer, Johnson considered his Glebe allotment of little use likely due to the low-lying and swampy nature that characterised the land in proximity to the Blackwattle River. It is likely that Johnson subjected the land to clearance throughout his tenure however the land remained largely unoccupied for the better part of 30 years. By 1828, the Clergy and School Lands Corporation had acquired the land and advertised portions of Johnson's original grant for lease (The Australian 1828).

By 1843, David Chambers and George Kenyon Holden had purchased a land portion of 3 acres and 3 roods in trust from within the Clergy land allotment (Figure 10). By all accounts, Chambers and Holden leased the land as residential dwellings and by 1855 several structures, likely cottages, had been erected across the entirety of the lot as well as a public water main along Athlone Street for common use. A public brick sewer line was present just outside the subject area along Athlone Place, present day Mountain Street (Figure 11) (The Sands Directory 1904).

In 1902, a brick and sandstone electricity substation was constructed on the corner of the former Athlone Street and Athlone Place (NSW State Heritage Inventory).

In the early twentieth century, Ultimo was selected for resumption by the Sydney Municipal Council under the *Sydney Corporation Amendment Act 1905* (Sydney Corporation Amendment Act 1905). Resumption commenced in 1905 by the purchasing of land by the Sydney Municipal Council. The resumption area stretched from the region extending from Kelly Street to the southeast, Bay Street to the northeast and to the eastern line of Blackwattle Lane, inclusive of the subject area. The subsequent clearing of buildings in favour of the drainage of low-lying land razed approximately 400 houses and displaced 1,779 acres in the Athlone Place vicinity (NSW Government Gazette 1905). The Athlone Place 'Substation No.3' on the corner of

Athelone Street (now part of the study site) and Athelone Place (now Mountain Street) was demolished in line with resumption efforts in 1905 in addition to the residential dwellings across the lot.

Subsequent calls to tender for works on a new electricity substation were initiated in 1905 with construction efforts occurring in 1909 (NSW State Heritage Inventory). The wider resumption works included filling and draining low lying land up to 3.1m above the original ground surface (Mider 2001).

James Connolly established a prominent window manufacturer in the early 19th century on the property, providing services to major development projects in the central township of Sydney. A 1917 fire plan map of the Glebe locality detailed the development that had occurred throughout Connolly's tenure of the property. An open-air yard was located to the rear of the property, surrounded by sheds housing a forge. To the southeast, a series of warehouses encompassed the lot, serving as a machinery engineers shed. It is unclear as to whether the existing substation was utilised within Connolly's property or utilised by another entity. The 1917 map details the location of the substation as being utilised as 'offices' (Figure 12) (The Sands Directory 1911).

By 1938, Connolly's leasehold had come to an end and the Sydney County Council had assumed the land. Aerial imagery dated to 1928 details that the subject area largely retained the spatial arrangement of the earlier 1917 layout save for the infill construction of a tin-roofed building in place of the former internal courtyard (Figure 13). Between 1975 and 1991 the subject area was used for warehousing and supply of multiple goods, including clothing, toy, homewares, flooring and machinery parts (Douglas Partners 2025:21-22).

Ownership of the subject site remains scarce throughout the majority of the 21st century, however it is likely that the land retained its industrial use. The arrangement of structures largely retained its formation until 2005, when electricity corporation Ausgrid assumed ownership of the land and removed the earlier structures entirely, with the exception of the existing electricity substation. Works for the preparation of the extant concrete surface took place in 2010 (Figure 14). In 2023, the substation was decommissioned.

Based on this historical overview, much of the subject site is likely to have been subject to ground disturbance due to construction and demolition of various structures. Additionally, the site has fill added to the original ground surface. It is unclear how much fill is present on the site, and there is a potential for undisturbed natural soils underlying the fill layers.

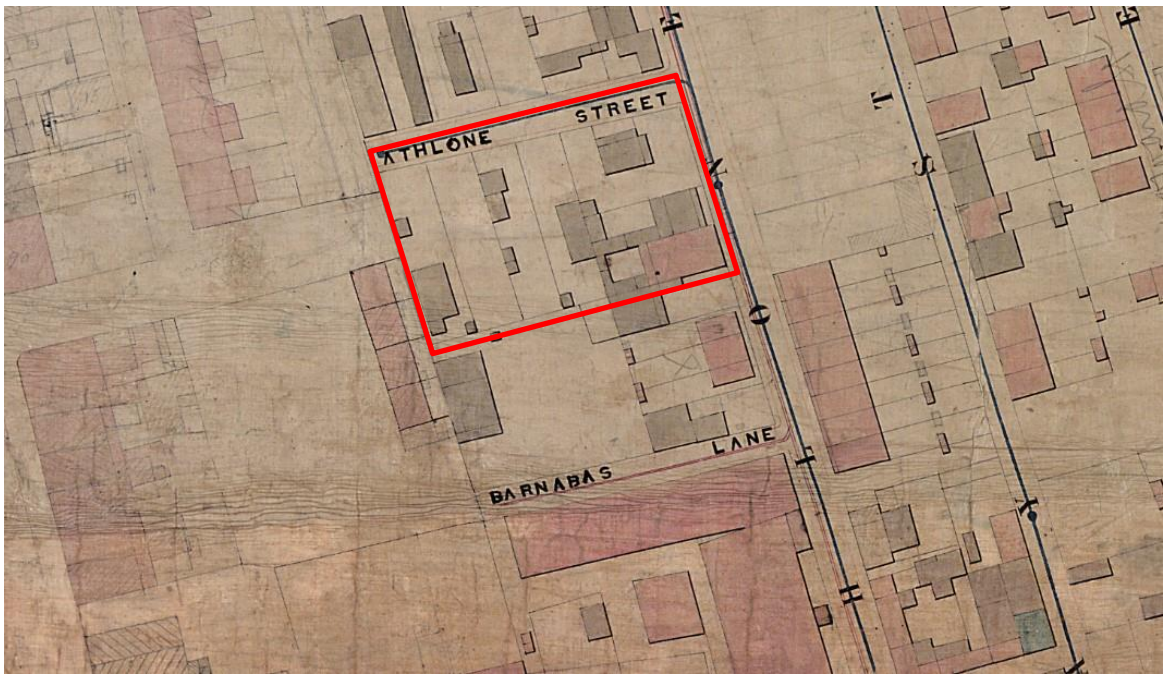

Figure 10 – An extract of an c.1855 City of Sydney Block U2 Trigonometry map. The subject area as indicated in red features several dwellings that has been developed on the property (grey shading indicates timber structures, pink shading indicates brick structures).

Source: City of Sydney, call number: A0088041

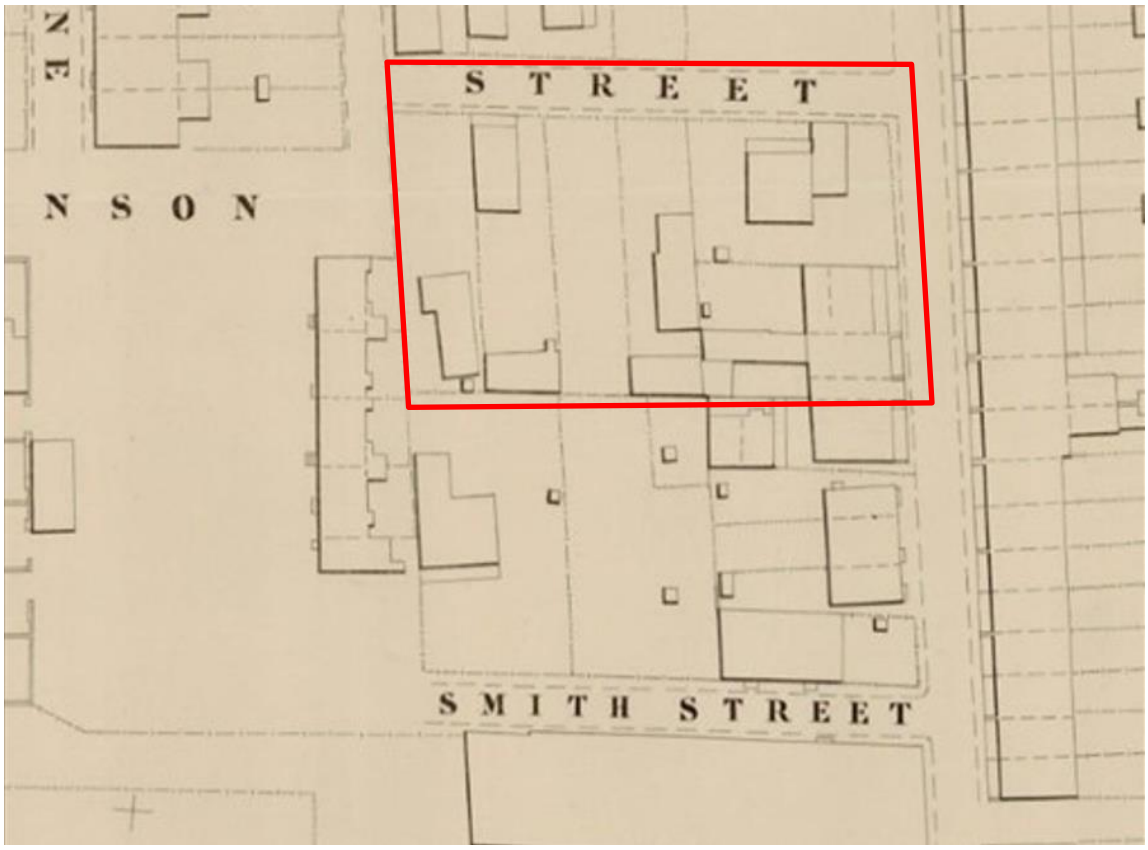

Figure 11 – An extract of a c.1888 City of Sydney Metropolitan detail sheet. The approximate location of the subject area as in red, detailing the residential dwellings and Athlone Street within the property boundaries.

Source: State Library of NSW, call number: M SER 811.17-1

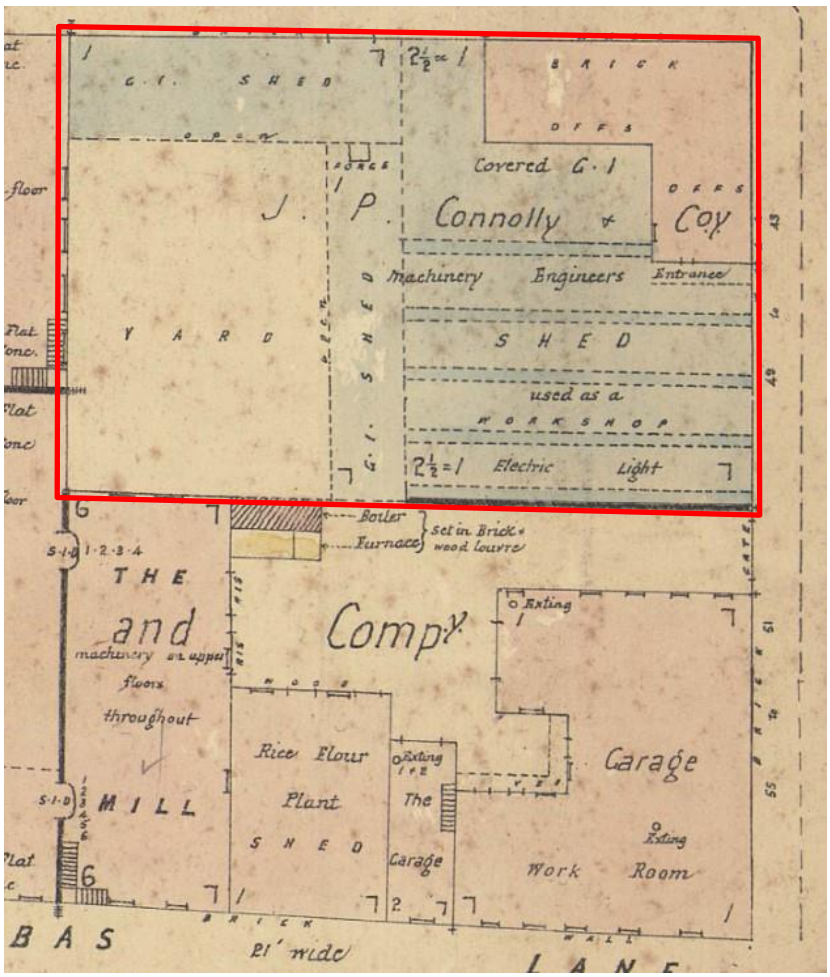

Figure 12 - Extract from Fire Insurance Underwriters Association of New South Wales Detail Survey Maps, Athlone Place Block No 205 Section 3, c.1917. The subject area is occupied by J.P Connolly and Coy.

Source: City of Sydney

Figure 13 – Aerial photograph dated to c.1928. Approximate location of the subject area as indicated in red.

Source: Australian Government Historical Imagery Viewer

Figure 14 - Aerial photograph 2010 following demolition of previous structures within the subject area and addition of fill layer.

Source: NearMap

2.3. VISUAL INSPECTION

A visual inspection of the subject area was undertaken to further investigate the environmental context of the subject area and to determine if any Aboriginal objects were present as surface expressions. The visual inspection of the subject area was undertaken by Hayley Campbell (Urbis Archaeology Assistant) on June 24, 2025.

The visual inspection was undertaken in clear weather conditions. Ground surface visibility (GSV) across the entirety of the subject area was assessed as low due to the presence of structures and hardstand concrete (Figure 15). No soils or vegetation were visible throughout the subject area. No major subsurface disturbance was observed in the 43-49 Mountain Street properties.

One extant single level electricity substation building occupies the northeastern corner portion of the subject area fronting Mountain Street. The interior of the electricity substation contained concrete flooring and is not believed to contain a basement level (Figure 16). The 43-49 Mountain Streets lots are wholly encompassed by hardstand concrete with one temporary demountable office structure located to the northeast and one electricity housing structure to the west. Groundwater monitoring wells are interspersed throughout the subject area, in addition to remnant drainage connections (Figure 18). Visible connections to in-ground services, specifically electricity and drainage were observable. Further, the shadow profile of prior structures was observable on neighbouring 1-3 Smail Street (Figure 17).

No surface Aboriginal objects were identified during the visual inspection.

Figure 15 – View southwest facing Mountain Street and Smail Street, towards the subject area.

Figure 16 – Interior of the substation facing northeast.

Figure 17 - View west detailing the shadow profile on neighbouring 1-3 Smail Street.

Figure 18 - View north detailing a ground monitoring well.

2.4. GEOTECHNICAL INVESTIGATIONS

Geotechnical investigations were undertaken by Douglas Partners at the subject site in early 2025. This investigation included the drilling of ten boreholes (101-110) and the installation of three groundwater monitoring wells across the site (Figure 19). The report (Douglas Partners 2025) also provides core logs for a previous investigation conducted in 2005 (BH1 – BH7) by Environmental Investigation Services prior to demolition of previous structures. A summary of the borehole logs is outlined below, and their locations shown in Figure 19.

Of the boreholes dating from 2005, 5 of the 7 terminated at bedrock at 2.0m below ground level. This is suggestive of site levelling in the past, likely prior to construction of earlier structures. Predominantly sandy fills are potentially redeposited natural alluvium, material perhaps dredged from nearby Blackwattle Bay, or introduced fills. These are described as overlying silty sand and clayey sand as summarised in Table 2 below.

Beneath current hardstand Douglas Partners reported fill layers 1.0m to 1.9m deep. At 3 locations the bore was refused at obstructions in fill. Fills generally consisted of silty sand, clay or clayey sand with modern inclusions of gravels, demolition rubble, asphalt, glass and ceramic for example. Predominantly sandy fills are potentially redeposited earlier soil deposits. Traces of asbestos were noted, and it was stated that building demolition rubble is an indicator of likely presence of asbestos.

Fills were underlain by what is described as alluvial or possibly alluvial soils ranging from very loose to dense (Douglas Partners 2025) consisting of silty sand, clayey sand, and sandy clay. The majority of test locations transitioned directly to bedrock, with four locations discontinued at a target depths of 1.5m to 2.4m without encountering bedrock. Depths were varied, currently with natural soils were observed from between 1m and 1.9m depth, extending to a maximum of 1.5m to 3.5m. Soils appeared to be layered, with stratigraphy not indicative of a natural soil profile, such as clayey sands over sand, and abrupt transitions to sandstone bedrock. It is not clear whether soils represent imported soils, or natural alluvial soils of the former Blackwattle Creek catchment area which have been redeposited during construction and demolition phases. Natural soil deposits if present, have potential to retain Aboriginal objects.

Table 2- Summary of geotechnical investigation results

Borehole #		**Hardstand/Fill depth (m)**	**Potential Natural depth (m) (to bedrock)**
2005	BH1	0.5	silty sand - 1.5 clayey sand - 2.0
	BH2	1.1	silty sand - 1.6 sandy clay - 2.0
	BH3	0.6	clayey sand - 1.2
	BH4	1.1 (possibly disturbed natural from 0.1)	silty sand - 2.7
	BH5	1.0 (possibly disturbed natural from 0.15)	clayey sand - 2.0
	BH6	1.4 (possibly disturbed natural from 0.15)	clayey sand - 2.0
	BH7	1.5 (possibly disturbed natural from 0.15)	silty sand - 2.0

Borehole #		Hardstand/Fill depth (m)	Potential Natural depth (m) (to bedrock)
2025	101	1.2	layered silty sand/sand - 2.4
	102	1.0	layered clayey sand and sand - 3.6
	103	1.5	sand - 2.5
	104	0.8	bore refused on sandstone cobbles
	104A	1.1	bore refused on sandstone cobbles in fill
	105	0.5	bore refused on sandstone cobbles and bricks in fill
	105A	1.2	silty sand - 1.7 (discontinued: target reached)
	106	1.1	clayey sand - 1.5 (discontinued: target reached)
	107	1.9	silty sand - 2.4 (discontinued: target reached)
	110	1.1	silty sand - 1.5 (discontinued: target reached)

Figure 19 Locations for geotechnical investigations

Source: Douglas Partners 2025 Appendix A

2.5. SUMMARY

The archaeological and environmental contexts of the subject area are summarised as follows:

- There are no known Aboriginal objects or Aboriginal places registered within the curtilage of the subject area.
- Aboriginal objects found during nearby archaeological investigations indicate the potential for Aboriginal objects to be present despite historical and modern phases of development.
- Historically the subject area was located on the margins of Blackwattle Creek prior to modern modification of the landscape which included the reclamation of low lying swampy areas with importation of fill.
- The desktop assessment and visual inspection confirm clear and observable ground disturbance.

3. DUE DILIGENCE ASSESSMENT

The due diligence process outlined in the Section 8 of the Due Diligence Code is applied to the subject area below.

Step 1 – Will the activity disturb the ground surface?

Yes.

The current planning proposal relates to potential high-rise construction and basement levels (Section 1.2).

Step 2a – Are there any relevant confirmed site records on AHIMS or any other sources of information of which a person is aware?

Yes.

While not addressing the subject area specifically, nearby AHIMS registered sites have identified Aboriginal objects in similar environments (Section 2.1.2). These may form part of a larger site including the subject area.

Other sources of information can include previous studies, reports or surveys that the Proponent has commissioned or is otherwise aware. No other sources of information have been identified.

Step 2b – Are there any landscape features that are likely to indicate the presence of Aboriginal objects?

Yes.

The subject area is in proximity to historical aquatic resources of Blackwattle Creek and associated swamps (Section 2.2.1).

The Due Diligence Code further specifies that the landscape features are of relevance only if the subject area has not been subjected to ground disturbance. While the subject area has been subjected to human activity that has changed the land's surface, being 'changes that remain clear and observable' (Section 2.2.2), there remains potential for natural soils despite modern impacts (Section 2.4).

Step 3 – Can you avoid harm to the object or disturbance of the landscape feature?

No.

The Due Diligence Code specifies that this step only applies if the proposed activity is on land that is not disturbed and does not contain known Aboriginal objects. While the subject area has been subjected to human activity that has changed the land's surface, being 'changes that remain clear and observable' (Section 2.2.2), there remains potential for natural soils and Aboriginal objects despite modern impacts (Section 2.4).

Step 4 – Does the Desktop Assessment and Visual Inspection Confirm that there are Aboriginal Objects or that they are Likely?

No.

The subject area has been subjected to human activity that has changed the land's surface, being 'changes that remain clear and observable' (Section 2.2.2), however, there remains potential for natural soils and Aboriginal objects despite modern impacts (Section 2.4). Nearby archaeological investigations have identified Aboriginal objects in similar disturbed environments (Section 2.2.2).

Step 5 – Outcome of Assessment

In accordance with the due diligence process described in the Due Diligence Code, the above assessment has determined that due to the possibility that Aboriginal objects may be encountered during historical archaeological investigations, an Aboriginal Cultural Heritage Assessment (ACHA) is recommended to mitigate risk. This will include an assessment of the impacts of the proposed works and consultation with the Aboriginal community. It is also recommended that an Archaeological Research Design be prepared outlining a management strategy for Aboriginal objects should they be encountered. This would avoid delays to the project as an ACHA has a minimum timeframe of approximately 4 months due to statutory consultation periods.

The ACHA should be undertaken in accordance with the following:

- *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants* (OEH 2011a)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Department of Environment, Climate Change and Water* (DECCW 2010c)
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b)

The ACHA should be undertaken to further investigate whether or not Aboriginal objects are present within the subject area and, if required, to support an application for an AHIP or, if consent for the proposed works is to be sought via a State Significant Development Application ('SSDA'), under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (NSW), to inform and accompany the Environmental Impact Statement (EIS) for the SSDA.

4. CONCLUSIONS & RECOMMENDATIONS

The present due diligence assessment concluded that:

7) The proposed activity is not a 'low impact activity'.

8) There are no known Aboriginal objects or Aboriginal places within the curtilage of the subject area.

9) Previous studies in the vicinity of the subject area have identified Aboriginal objects within similar developed locations.

10) The subject area is in proximity to historical aquatic resources of Blackwattle Creek and associated swamps.

11) The subject area has been impacted by historical phases of construction and demolition.

12) Due to the possibility that Aboriginal objects may be encountered during historical archaeological investigations an Aboriginal Cultural Heritage Assessment (ACHA) is recommended to mitigate risk. The ACHA should incorporate an Archaeological Research Design outlining a management strategy for Aboriginal objects should they be encountered. This would avoid delays to the project as an ACHA has a minimum timeframe of approximately 4 months due to statutory consultation periods.

Based on the above conclusions, Urbis recommends the following:

- **Recommendation 1** – **Record Keeping**

  This ADD report should be kept as evidence of the Due Diligence Process having been applied to the subject area.

- **Recommendation 2** – **Further Investigation**

  Further investigation is required in the form of an Aboriginal Cultural Heritage Assessment ('ACHA'), including an assessment of the impacts of the proposed works and consultation with the Aboriginal community. The ACHA should incorporate an Archaeological Research Design outlining a management strategy for Aboriginal objects should they be encountered. The ACHA should be undertaken in accordance with the following:

  - *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants* (OEH 2011a)
  - *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010c)
  - *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011b)
  - *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b)

  The ACHA should be undertaken to further investigate whether or not Aboriginal objects are present within the subject area and, if required, to support an application for an AHIP or, if consent for the proposed works is to be sought via a State Significant Development Application ('SSDA'), under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (NSW), to inform and accompany the Environmental Impact Statement (EIS) for the SSDA.

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World Topographic Map 2025 Sydney Topographic Map. Retrieved 16 June 2025 from < https://en-au.topographic-map.com/map-hhxnx/Sydney/?center=-33.87476%2C151.18166&zoom=14&popup=-33.87113%2C151.20921 >.

DISCLAIMER

This report is dated 16 September 2025 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of APT.Residential **(Instructing Party)** for the purpose of an Aboriginal Objects Due Diligence Assessment **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A AHIMS SEARCH RESULTS

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Ultimo
Client Service ID : 1016569

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 23 June 2025

Level 8 123 Angel Street
Sydney New South Wales 2000

Attention: Owen Barrett

Email: obarrett@urbis.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 331659.0 - 334659.0, Northings : 6247848.0 - 6250848.0 with a Buffer of 0 meters, conducted by Owen Barrett on 23 June 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

22	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

Attachment A6

Heritage Impact Statement

URBIS

HERITAGE IMPACT STATEMENT

Prepared for
APT. RESIDENTIAL
17 September 2025

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

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Project Code	P0061084
Report Number	D01 - Issued 18 July 2025
	02 Final – Issued 4 September 2025
	03 Update in response to revised design – Issued 17 September 2025

Acknowledgement of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.

We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

We pay our respects to First Nations Elders, past and present.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

Title: Sacred River Dreaming
Artist Hayley Pigram
Darug Nation
Sydney, NSW

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

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EXECUTIVE SUMMARY

Urbis has been engaged by Apt. Residential to prepare the Heritage Impact Statement (HIS) of the proposed amendment to *Sydney Local Environmental Plan 2012* (SLEP 2012) as it applies to the site at 41-49 Mountain Street, Ultimo. This report has been prepared to accompany a planning proposal to the City of Sydney. No physical works are proposed.

The subject site constitutes a corner site at the intersection of Smail Street and Mountain Street, Ultimo. The subject site is a consolidated allotment inclusive of a State heritage listed single-storey Federation period Substation building under the *NSW Heritage Act 1979* (*Substation*, SHR No. 00934). The Substation is also listed as a local heritage listed item (LEP I2053) under Schedule 5 of the *Sydney Local Environmental Plan (LEP) 2012*. Further, the Substation is identified under Section 170 of the Ausgrid Heritage Register of the *Heritage Act NSW 1977*, known as 'Electricity Substation No. 5' (3430486). Additionally, the subject site incorporates a large open area space comprising hardstand concrete. A demountable office building is located within the eastern portion, an electricity station to the western portion and temporary awning structures to the south. The street boundary is lined with fencing. The entire site is located within the Mountain Street Heritage Conservation Area (C68) under Schedule 5 of the *Sydney Local Environmental Plan (LEP) 2012*, which is characterised by Federation and Interwar warehouse buildings.

The subject site is void of any fabric or material remains that indicate the past use of the site for industrial purposes since demolition efforts in 2005. The heritage Substation was subsequently decommissioned in 2023 and the site has been wholly vacant since that time.

The planning proposal seeks consent for a mixed-use building envelope in two primary built form volumes comprising a height of seven (7) stories facing Mountain Street and fifteen (15) stories facing Smail Street on the subject site. It does not provide an articulated building envelope or provide site specific guidelines to achieve a sympathetic heritage response. The planning proposal provides a key opportunity in a key economic location to facilitate future use of the site.

A detailed impact assessment of the proposed works has been undertaken in Section 6 of this report. The planning proposal has been assessed to have an acceptable heritage impact on the impact on the Substation on the subject site, the Mountain Street Heritage Conservation Area and heritage items in the vicinity of the subject site. Key aspects of the proposal assessment are listed below:

- The planning proposal has been subject to review by the City of Sydney Design Advisory Panel, with further consultation with the City of Sydney to further refine the concept envelope. The concept envelope for the planning proposal has responded appropriately to feedback provided by the City of Sydney.
- In conjunction with a future detailed design, the planning proposal provides an opportunity to reinvigorate the subject site, which has been largely vacant since 2005 and the majority of which is currently identified as a 'detracting' site in Sydney DCP 2012.
- The planning proposal provides for built form development to the street boundaries of both Mountain and Smail Streets, which is characteristic of development in the Mountain Street HCA and would provide for framed open views along the street.
- The proposed building envelope facilitates a response to the broad heritage context through setbacks and two distinct primary built form envelopes that are subject to future architectural resolution.
- The proposed building envelope facilitates future development of a bulk and scale that is appropriate to the large lot and urban form of the surrounding context.
- The proposed development presents an opportunity for future works to stimulate redevelopment of the site, in turn providing for the conservation and maintenance of the heritage listed electricity Substation, which is a 'contributing' item in Sydney DCP 2012.
- The planning proposal provides the opportunity for future building designs to achieve a sympathetic response to the heritage items in the vicinity through a detailed examination of heritage context, scale and form. It provides a volume in which future development can respond to the scale, character and materiality of the area through a design excellence approach.

For the reasons stated above, the proposed works are recommended for approval from a heritage perspective having regard to the proposed recommendations below.

RECOMMENDATIONS

The following recommendations are provided to guide future Development Applications facilitated by this planning proposal:

- Future design proposals must be based on sympathetic design principles and be guided by a detailed contextual analysis to inform future development. The form, scale, materiality, articulation and the façade treatment of the future development should respond to adjacent development, the subject heritage item and proximate heritage items. A suitably experienced built heritage practitioner should therefore be engaged to provide ongoing advice throughout the design development, contract documentation and construction stages of the project.
- Future design proposals should adhere to the Design Excellence Guidelines provided by the City of Sydney.
- Future design proposals need to demonstrate that there would be direct conservation benefits for the electricity Substation. There are key opportunities for the conservation and interpretation of the Substation, such as maintenance and repair work and reinterpretation of the prior use.
- A detailed heritage impact statement and detailed street montages should be provided as part of the any future development application for work on the site.

1. INTRODUCTION

1.1. BACKGROUND AND PURPOSE

Urbis has been engaged by Apt. Residential to prepare the Heritage Impact Statement (HIS) of the proposed amendment to *Sydney Local Environmental Plan 2012* (SLEP 2012) as it applies to the site at 41-49 Mountain Street, Ultimo. This report has been prepared to accompany a planning proposal to the City of Sydney. No physical works are proposed.

The subject site itself constitutes a corner site at the intersection of Smail Street and Mountain Street, Ultimo. The site comprises a State heritage listed single-storey Federation period Substation, hard stand carparking, a demountable office structure, electricity station, and temporary awning structures. In addition to the State listing of the Substation (SHR No. 00934), it is also listed as a local heritage listed item (LEP I2053) under Schedule 5 of the *Sydney Local Environmental Plan (LEP) 2012* and on Section 170 of the Ausgrid Heritage Register of the *Heritage Act NSW 1977* as 'Electricity Substation No. 5' (3430486). The entire site is located within the Mountain Street Heritage Conservation Area (C68) under Schedule 5 of the *Sydney Local Environmental Plan (LEP) 2012*. This heritage impact statement is therefore required to assess the heritage impact of the proposal on the identified heritage significance of the subject site, the heritage conservation area and the proximate heritage items.

1.2. METHODOLOGY AND LIMITATIONS

This HIS has been prepared in accordance with the Heritage NSW guidelines 'Assessing heritage significance', and 'Guidelines for preparing a statement of heritage impact'. The philosophy and process adopted is that guided by The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance, 2013.

Site constraints, opportunities and impacts have been considered with reference to the relevant controls and provisions contained within the *Sydney Local Environmental Plan 2012* (Sydney LEP) and the Sydney Development Control Plan 2012 (Sydney DCP).

This HIS is limited to the assessment of the proposed built form envelope and associated amendment to height and floor space ratio standards on the subject site. No building work is proposed as part of this application.

1.3. AUTHOR IDENTIFICATION

The following report has been prepared by Hayley Campbell (Urbis Assistant) and Karen Urquhart (Urbis Associate Director).

Unless otherwise stated, all drawings, illustrations and photographs are the work of Urbis.

The historical background included in this report has been adapted from the Heritage Impact Statement prepared by Godden Mackay Logan in 2006, which was prepared for redevelopment of the site at 22-36 Mountain Street, Ultimo. Additionally, histories were drawn from the Final Excavation Report prepared by AMAC in 2024 undertaken to address the redevelopment of the 66 Bay Street, Ultimo property.

2. SITE DESCRIPTION

2.1. SITE LOCATION

The subject site is located at 41-49 Mountain Street, Ultimo within the Local Government Area (LGA) of City of Sydney. The site is legally described as Lot 1 in DP191928 and Lot 21 in DP5567.The site is located on Gadigal land.

Figure 1 - Location map showing the subject site outlined in red.

Source: NSW Government Explorer 2025

2.2. SETTING

The subject site comprises a consolidated allotment inclusive of one single storey Federation free style tuck pointed face brick Substation, hard stand carparking, a demountable office structure, electricity station, and temporary awning structures.

The site of 41-49 Mountain Street is located within the City of Sydney LGA and adjacent to the Camperdown - Ultimo health and education precinct as defined by the Our Greater Sydney 2056 Commission's Eastern City District Plan. Land uses in the area comprise a mix of educational and institutional, retail, commercial and residential uses.

The Mountain Street Conservation area is bounded by Macarthur St, Blackwattle Lane, the southern boundary of Nos.46-52 Mountain St, St Barnabas Street, the eastern and southern boundaries of Nos.86-90 Bay St and Bay St. This area contains many substantial Federation warehouses which are utilitarian in nature and characterised by simple and solid masonry cubic or rectangular forms. Several Federation warehouses are located on Mountain Street and Smail Street, and London plane trees line the streets in the vicinity of the subject site. The streetscape to both Smail and Mountain Street does not have a consistent street wall and is defined by buildings of varying height and scale.

Section 2 of the Sydney DCP 2012 contains the following statement for the Mountain Street locality:

The Mountain Street neighbourhood will retain its role as an important entry to Central Sydney. The area will continue to provide a diverse and sustainable mix of uses in restored and adaptively reused early warehouse buildings or in new buildings whose bulk and scale is appropriate to the large lots and existing urban form. Views through the precinct along streets towards Wentworth Park (and potentially to the waterfront) are to be retained to provide a strong visual association of the neighbourhood and Wentworth Park. Improved access to open space is important and will enhance the amenity of the area. Avenue planting along Mountain Street is to enhance the streetscape and help break down the scale of larger buildings[1].

[1] Sydney DCP 2012, Section 2.

Figure 2 – View south along Mountain Street looking towards Broadway.

Source: Urbis 2025.

Figure 3 – View west along Smail Street showing existing warehouse development in the vicinity of the site.

Source: Urbis 2025.

2.3. SUBJECT SITE DESCRIPTION

The subject site is located on the corner of Mountain and Smail Streets and comprises a consolidated allotment inclusive of a single storey Federation free style Substation, hard stand concrete, a demountable office structure, electricity station, and temporary awning structures.

The Substation is a State heritage listed item that is characterised on its street facing elevations by tuck pointed face brickwork and rows of sandstone window headers, sill detailing and gabled parapet with curvilinear elements. In the Mountain and Smail Street contexts, the Substation contrasts the existing pattern of development in terms of both scale and detailing. The lower scale and careful detailing of the brickwork demonstrates a refinement that distinguishes it from other buildings in the vicinity. Manganese banded brick parapets contrast the red face brick along the lengths of the exterior walls. Stylistic elements include large arched entrances flanked by a ventilator and multi paned window in the gabled wall.

The elevations facing into the subject site lack the level of detail of the street facing elevations, suggesting that the original design anticipated adjacent buildings being built to its south and west. This is also suggested by inclusion in the original specifications a reference to a "trough gutter" presumably a box gutter to the roof along the southern wall.[2] This analysis is supported by land title survey showing buildings adjoining the Substation at least since 1938[3] and the brick detailing at the corners of the building, with:

> *splayed corner bricks at the adjoining boundaries* [being] *hand shaped to marry with the faces of the southern and western walls, while the projecting corner brick at Smail and Mountain Streets is moulded to suit*.[4]

The roof of the Substation is pitched with exposed rafters. The windows are multipaned. Although the exterior is largely intact, there have been some interventions including the addition of a roller door along at the eastern elevation, the addition of the primary point of entry along the Mountain Street façade and the closure of a doorway along the Smail Street façade. The Substation is constructed to the street boundary.

The remaining area of the site includes a large open space area that is not characteristic of the locality, with the ground plane incorporating an expanse of hard stand concrete. The demountable office building is located in the eastern portion of the site and the electricity station is located on the west. Temporary awning structures are situated on the southern boundary of the allotment. Metal fencing lines the street boundaries of the allotment, except around the corner where the Substation is located.

The following photographs illustrate the subject site.

Figure 4 – View southwest towards the corner of Smail and Mountain Streets with the heritage listed electricity Substation in the centre. Adjacent warehouse buildings are located at 55 Mountain Street (left) and 1-3 Smail Street (right).

Source: Urbis 2025

[2] Building Contract dated 6 April 1909

[3] LTO Vol 4912 Fol 9

[4] NBRS, Statement of Heritage Impact Nos 41, 43-49 Mountain Street & Nos 5-9 Smail Street ULTIMO, 2007, September 2005, p.12

Figure 5 - View south showing the northern elevation of the electricity Substation.

Source: Urbis 2025.

Figure 6 - Interior of the Substation facing northeast.

Source: Urbis 2025.

Figure 7 - View of dormer windows and entrance to the electricity Substation.

Source: Urbis 2025.

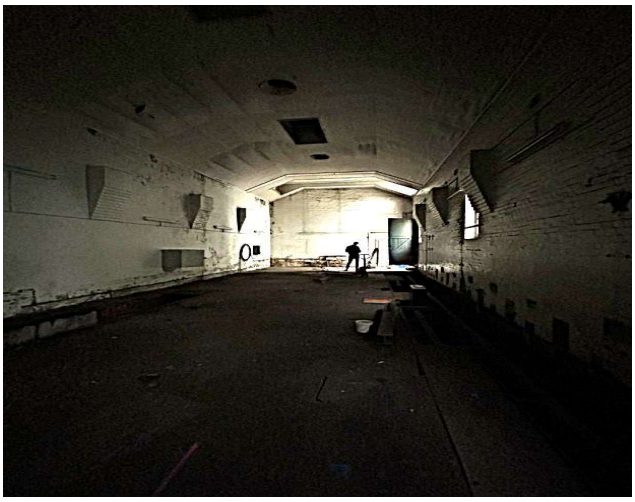


Figure 8 - Interior of the electricity Substation facing west.

Source: Urbis 2025.

Figure 9 - The electricity Substation roller door entrance with masonry detail archway.

Source: Urbis 2025.

Figure 10 - Southern façade of the electricity Substation showing spalling stone windowsills.

Source: Urbis 2025.

Figure 11 - View west showing the shadow profile of former buildings on neighbouring 1-3 Smail Street.

Source: Urbis 2025.

Figure 12 - View northwest showing in ground drainage connections and hardstand concrete.

Source: Urbis 2025.

Figure 13 - View northeast showing the concrete hardstand ground coverage.

Source: Urbis 2025.

Figure 14 - Detail of the rear façade of the electricity Substation, facing northeast.

Source: Urbis 2025.

Figure 15 - View southeast toward the subject site. 55 Mountain Street is to the rear. And 1-3 Smail Street is at right

Source: Urbis 2025.

Figure 16 - View of Smail Street streetscape from corner of Smail and Bay Streets. 1-3 Smail Street adjacent to the subject site is in the centre.

Source: Urbis 2025.

3. HISTORICAL OVERVIEW

3.1. AREA HISTORY (POST EUROPEAN SETTLEMENT)

The following historical overview of the local area has been partly reproduced from 'Heritage Impact Statement assessment' by Godden Mackay Logan in 2006 and the 'Final Excavation Report by AMAC in 2024.

The Ultimo region is situated on the traditional lands of the Gadigal people. Gadigal Country stretches from the southern side of Port Jackson from South Head to present day Petersham. The southern boundary of Gadigal land forms the Alexandra Canal and Cooks River.

The area was part of the estate of the surgeon John Harris, who was originally granted 34 acres in 1803. Harris called his land 'Ultimo Farm'. Harris was granted further land on the peninsula, and by 1818, with additional land purchases, Harris owned a cumulative 233 acres, covering Ultimo, and much of the adjoining Pyrmont and parts of Haymarket regions[5].

By the mid-1800s part of the estate facing Parramatta Street was sold off, and commercial industry began appearing within the area. Although the low-lying and swampy region of the area behind Parramatta Street, from the head of Darling Harbour to the head of the Black Wattle Swamp, was the only part of Ultimo that was developed.

At this time a number of workshops, slaughter yards and scrap industries took advantage of the water channels at Blackwattle Creek. The area also comprised of workers cottages which provided homes for the working poor. Residential living quarters during this period were cramped and unsanitary, known as one of the poorest and most undesirable regions in the growing Sydney settlement.

In 1859 Pyrmont Bridge officially opened, and in 1899 the Ultimo Powerhouse was commissioned to service power for Sydney's electric trams, which made the area more accessible.

Figure 17 – An extract from the 1845 Shields City of Sydney map. Approximate location of subject as indicated in red.

Source: City of Sydney Archives, call number: A-00880420

[5] Matthews, M 1982, *Pyrmont and Ultimo: A History*, M. Mathews, Sydney

Around the mid nineteenth century, much of Ultimo from Parramatta Road remained more or less rural. The initial grant to John Harris had specified that a reserve be created for a road along the peninsula, which eventuated in the modern-day Harris Street.

By the late nineteenth century homes were demolished to make way for large warehouses and store yards. In 1905, the City Council acquired powers that enabled the resumption of land for slum clearance[6]. Sydney City Council resumed the Athlone Place area in 1905, subsequently clearing buildings and filling and draining low lying land. William Greenwood was awarded the contract for the construction of the new streets in 1908. During this period many industries were set up in the area to take advantage of the water and rail access, from large mills to small manufacturing industries, while the wool stores that came to Wattle Street took advantage of the escarpment of the quarries.

The 1950s onwards bought more change for the suburb of Ultimo, with many established industries closing their doors in addition to the closure of schools and the establishment of freeway bypasses[7].

3.2. SUBJECT SITE HISTORY

3.2.1. Early 19th Century European Development (1789-1905)

Reverend Richard Johnson, a civil magistrate and chaplain of the first fleet, was first granted a 400-acre land allotment in Glebe, in which the subject site is located, by Lieutenant-Governor Philip Gidley King in August 1789[8]. A keen farmer, Johnson considered his Glebe allotment of little use likely due to the low-lying and swampy nature that characterised the land in proximity to the Blackwattle River. It is likely that Johnson subjected the land to clearance throughout his tenure however the land remained largely unoccupied for the better part of 30 years. By 1828, the Clergy and School Lands Corporation had acquired the land, advertising portions of Johnson's original grant for lease with permission to purchase stating that:

'*a transferrable lease for twenty-one years will be made, and may be, at any time within that period, purchase the fee simple by paying up the amount of twenty years rent, marking the first instance upon which development of the land was to occur*'[9].

By 1843, David Chambers and George Kenyon Holden had purchased a land portion of 3 acres and 3 roods in trust from within the Clergy land allotment. By all accounts, Chambers and Holden leased the land to tenants as residential dwellings. In the period from 1855 to 1865, the allotment had a series of improvements across seven lots. One timber dwelling fronting present Smail Street had verandahs to the north and east and no outbuildings associated with the main structure. A further three timber structures were set back to the rear facing Smail Street, each with an associated timber outbuilding. A vacant lot was located in the eastern portion of the allotment. Two structures fronted present day Mountain Street. A timber dwelling with verandah and 'U' shaped rear was located to the southeast whilst a brick structure fronting Mountain Street included timber structures to the rear that established a courtyard

In addition, a public water main had been established on Athlone Street for public use. A public brick sewer line was present just outside the subject area along Athlone Place, present day Mountain Street. The Sands Directory indicates that the subject area experienced a variety of occupants. In 1858, The Sands Directory lists Henry Cockburn, a carpenter, and Hypolite Dupain as occupying the site. By 1873, two vacant houses and Cornelius Hickory, a cab owner occupy the site. Historical documentation dating to 1888 further details improvements within the subject area. An additional structure had been erected adjacent to the existing timber dwelling on the Smail Street corner to the northeast. The previously vacant block had now a dwelling with verandah and rear outbuilding. A new vacant block in the mid portion of the allotment had experienced the demolition of the existing timber structures. The final occupier of the lot was Timothy Ryan who resided on the property until the Blackwattle Resumption in 1905.

In 1902, the 'Athlone Place' Substation was constructed on the corner of Athelone Street and Athelone Place; likely slightly to the south of where the current Substation stands and was known as 'Substation No.3' After the resumption of the area in 1905, inclusive of the clearance of buildings, tenders were called to for work to replace the former Substation in 1909, with the present structure built shortly afterwards. Prominent

[6] Fitzgerald, S and Golder H 1994, *Pyrmont and Ultimo: Under Siege*, Hale and Iremonger, Sydney

[7] 'Ultimo', Dictionary of Sydney

[8] 'Ultimo' Dictionary of Sydney

[9] The Australian 1828, 'Spirit of the Temporalties'

City Architect and Surveyor Robert Hargreaves Brodrick won the contract for the new Substation in 1909. The Substation would come to be known as the Athlone Place 'Substation No.3'

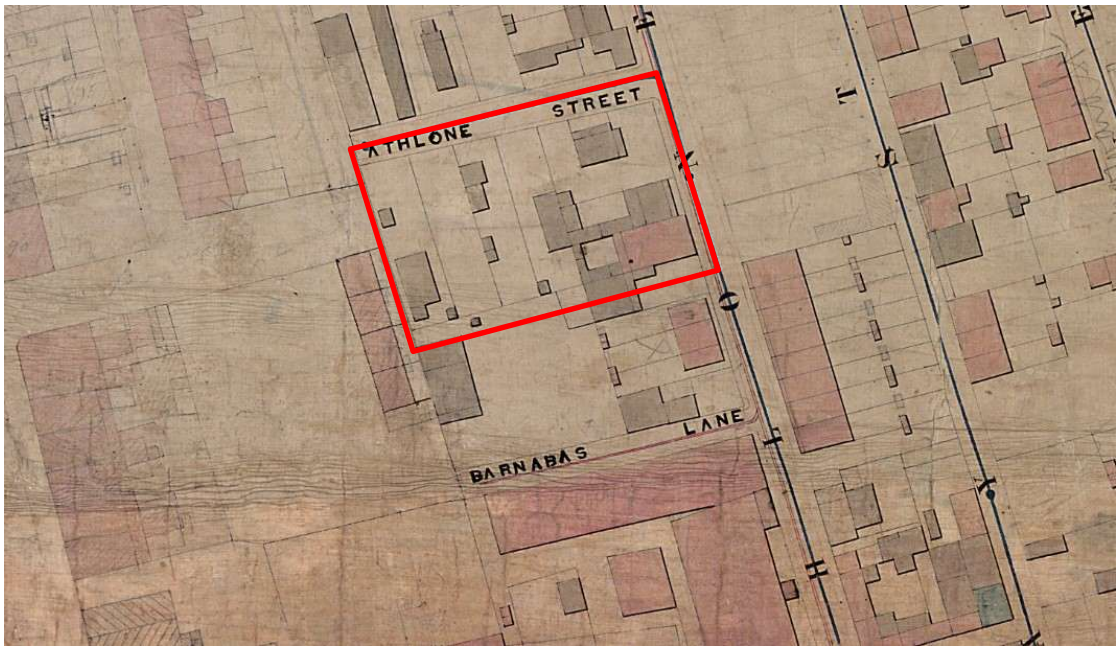


Figure 18 - An extract of an c.1855 City of Sydney Block U2 Trigonometry map. The subject site is approximately outlined in red.

Source: City of Sydney, call number: A0088041.

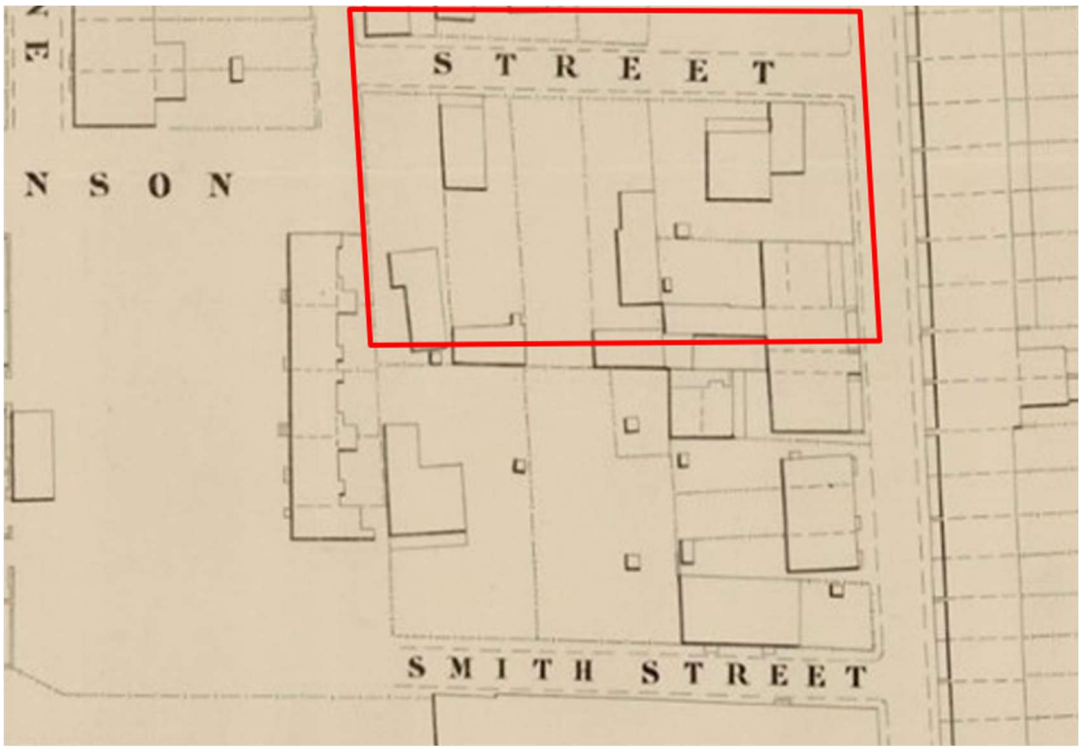


Figure 19 - An extract of a c.1888 City of Sydney Metropolitan detail sheet. The approximate location of the subject site in red.

Source: State Library of NSW, call number: M SER 811.17-1.

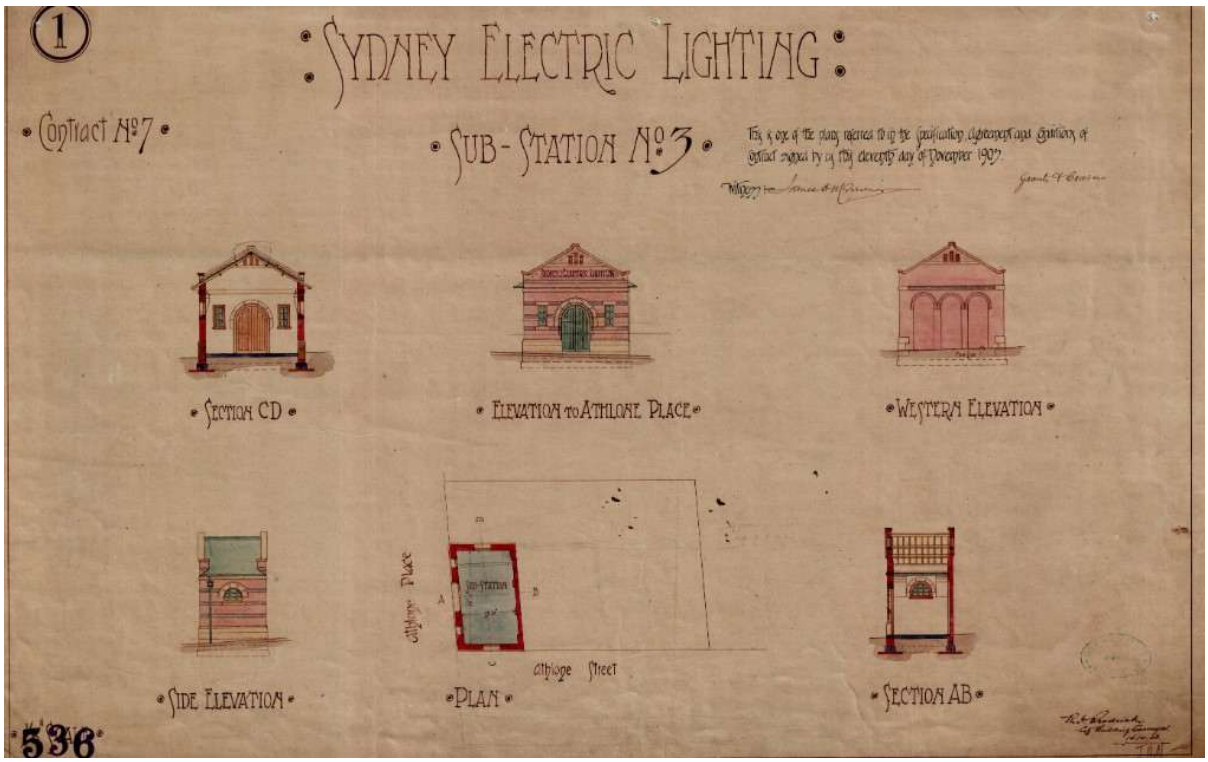


Figure 20 – A plan dated c.1903 of the Sydney Electric Lighting Substation No.3 drawn and surveyed by City Architect and surveyor Robert Hargreave Brodrick, located on the corner of Athlone Place and Athlone Street, Ultimo (within the subject site).

Source: City of Sydney, call number: A-00543828.

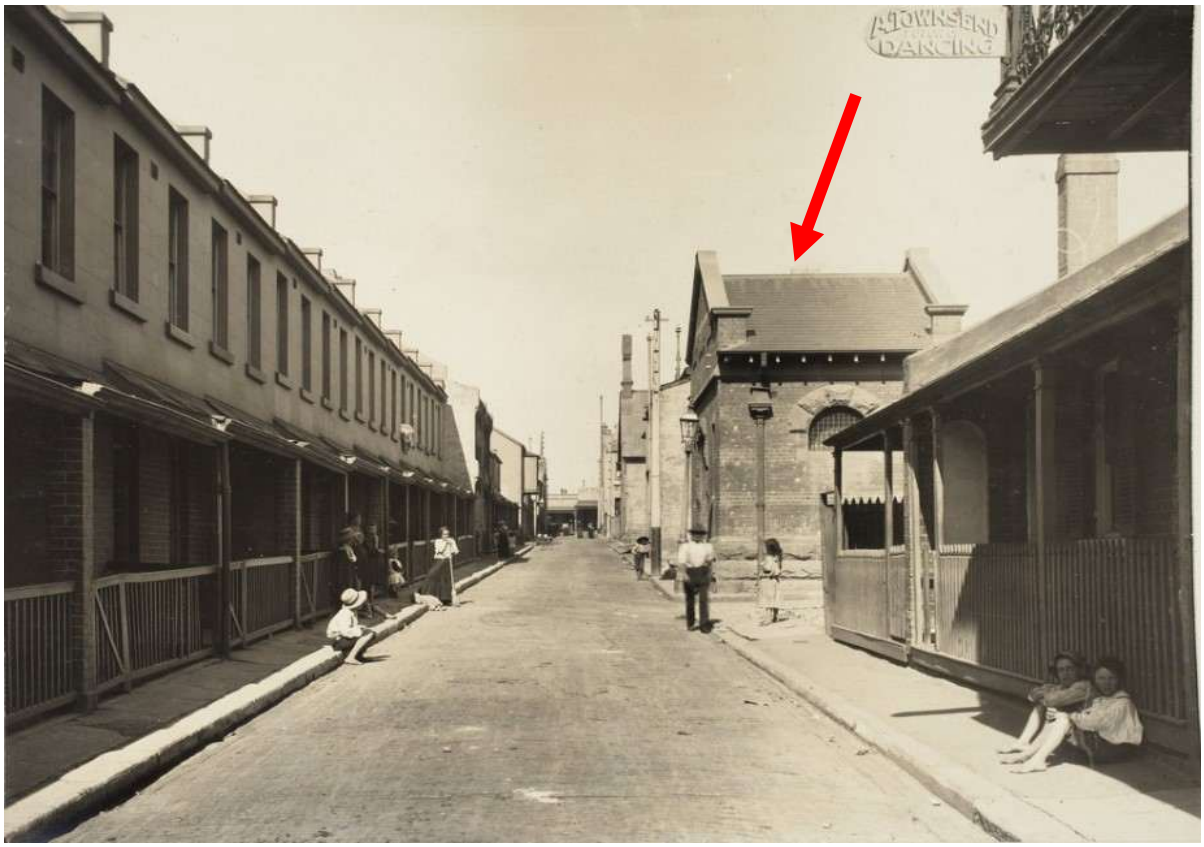


Figure 21 – A photograph dated c.1905 prior to resumption of the Athlone Place area. View from Athlone Place looking south, former 'Substation No.3' is extant on the middle right (red arrow).

Source: City of Sydney, call number: A0086734.

3.2.2. Land Resumption (1905 – 1909)

By 1905, the greater Ultimo region had become a wholly unsanitary suburb characterised by narrow laneways and small workers cottages. Lack of access to sewer drainage and water meant the living conditions in Ultimo in the late 19th Century and early 20th Centuries were said to be unfit for human habitation and subsequently declared as a slum. In the early 20th century, Ultimo was selected for resumption by the Sydney Municipal Council under the *Sydney Corporation Amendment Act 1905*[10]. Resumption commenced in 1905 by the purchasing of land by the Sydney Municipal Council. The resumption area stretched from Kelly Street to the southeast, Bay Street to the northeast and to the eastern line of Blackwattle Lane, inclusive of the subject site (Figure 22). The subsequent clearing of buildings in favour of the drainage of low-lying land razed approximately 400 houses and displaced 1,779 acres in the Athlone Place vicinity[11]. The Athlone Place 'Substation No.3' on the corner of present day Smail and Mountain Streets was demolished in line with resumption efforts in 1905 in addition to the residential dwellings across the lot.

Subsequent calls to tender for works on a new electricity Substation was initiated in 1905 with construction efforts occurring in 1909[12]. The new structure was to be constructed in the same location as the former Substation, the new tuck-pointed face brick structure was to be designed in the Federation Free Style with sandstone window headers, sill detailing and a gabled parapet. The construction of the Substation involved load bearing face brick and sandstone blocks for the parapet.

By 1909, the Municipal Council of Sydney had commenced a series of City council leases across the Blackwattle area of resumption. Leased at 50-year terms, the land portions were intended to generate commercial and industrial activity across Ultimo. In November 1909, James Connolly, an engineer residing in Woolloomooloo, leased Lot 21 in DP5567 from the Municipal Council of Sydney (Table 1). Historical documentation dated to 1909 details Lot 21 as excluding the electricity Substation from the leasehold, establishing an irregular shaped parcel of land that was to hold Connolly's industrial premises for over 30 years (Figure 22). The series of leases intended for industrial purpose would mark the character of Ultimo for years to come.

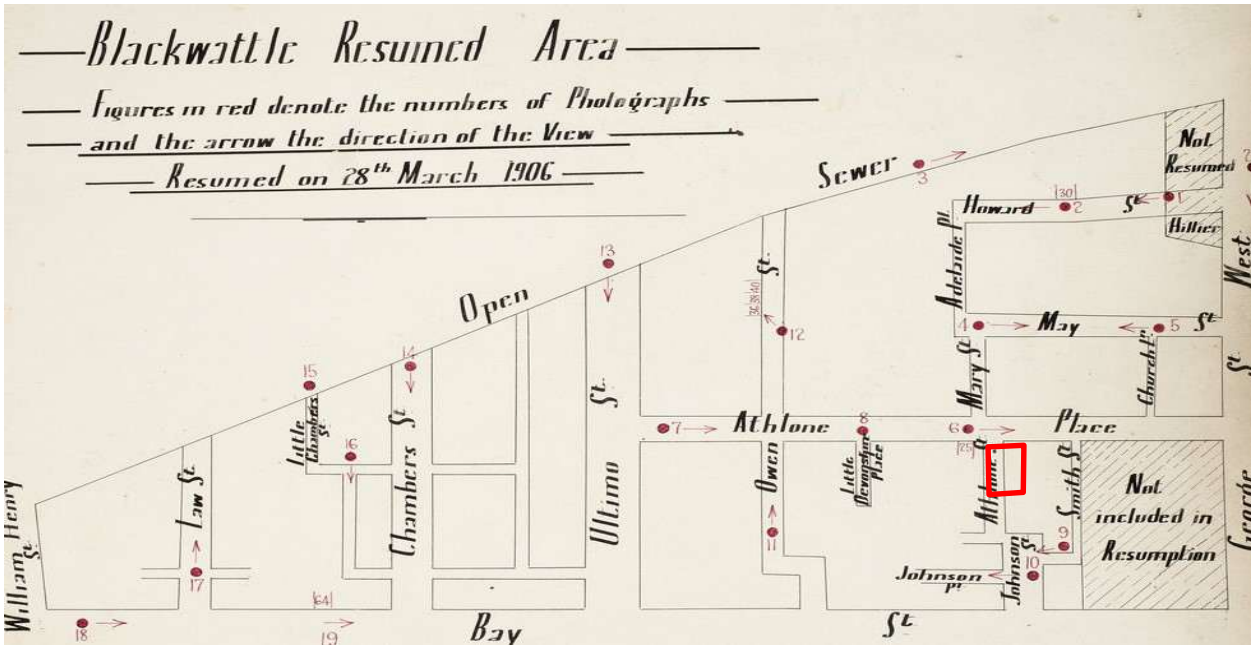


Figure 22 - A map dated c.1906 of the Blackwattle Resumed Area in present day Ultimo. The approximate location of the subject site as indicated in red.

Source: City of Sydney, call number: A00040049

[10] *Sydney Corporation Amendment Act 1905*

[11] NSW Government Gazette 1905, 'Resumption'

[12] State Heritage Inventory, 'Electricity Substation'

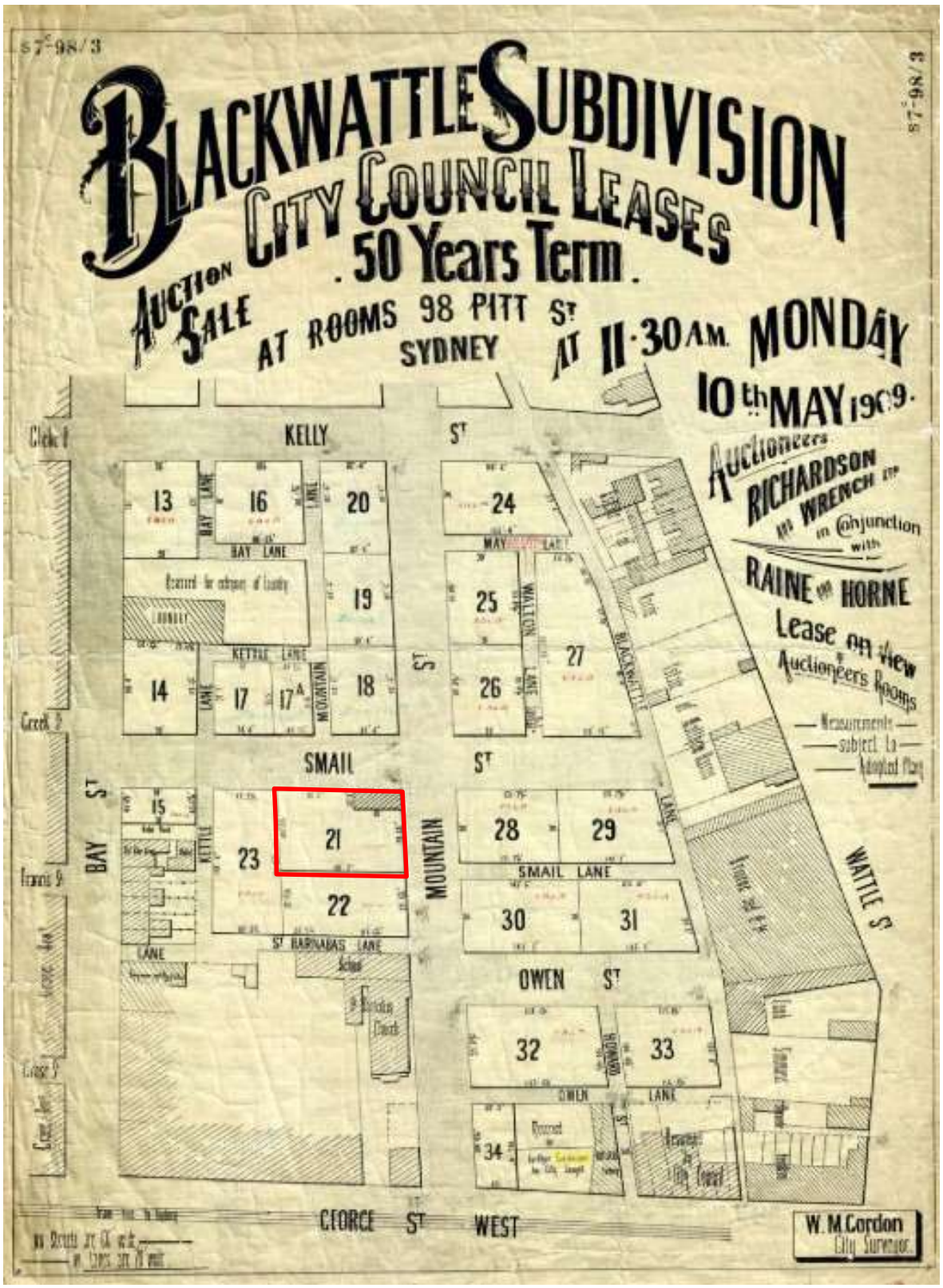


Figure 23 - Blackwattle subdivision map dated c.1909. The approximate location of the subject site as indicated in red. The subject site is located within Lot 21 of the subdivision.

Source: City of Sydney Archives, call number: A-0084521

3.2.3. Industrial Use (1909 – Present)

James Connolly established a prominent window manufacturing business in the early 19th century on the property, providing services to major development projects in the central township of Sydney. Lauded for his steel window frames, Connolly was mentioned in prominent architecture journals of the period, mentioning the superior fire resistance of his window frames[13]. A 1917 fire plan map of the Glebe locality detailed the development that had occurred throughout Connolly's tenure of the property. An open-air yard was located to the rear of the property, surrounded by open tin-roofed sheds housing a forge. To the southeast, a series of tin roofed warehouses encompassed the lot, serving as a machinery engineers shed. Further, the plan mentions the installation of electric light within the sheds, likely due to the close proximity to the Substation. It is, however, unclear as to whether the existing Substation was utilised within Connolly's property or utilised by another entity. The 1917 map details the location of the Substation as being utilised as 'offices' constructed of brick in an L-shaped arrangement (Figure 24). In 1925 an amendment to the 1917 fire plan was published detailing a business name change to 'Fitzroy Ironworks and J. Connolly'. The Substation is depicted clearly to the northeast of the lot as is a small office building immediately to the south.

The City of Sydney Sands Directory details Connolly's land improvements throughout his tenure as lessee from 1909. A workshop is listed as being of brick, slate and iron materiality with Connolly's enterprise named as an ironworks. The electricity Substation is listed within the directory as a 'light supply station'[14].

By 1936, James Connolly Steel Windows Limited was liquidated by G.C.O Beelaerts in Martin Place, Sydney[15]. By 1938, Connolly's leasehold had come to an end and the Sydney County Council, an entity who managed the electricity for the Sydney municipalities, had assumed the land. Aerial imagery dated to 1928 details that the subject site largely retained the spatial arrangement of the earlier 1917 layout save for the infill construction of a tin-roofed building in place of the former internal courtyard.

Details of the ownership of the subject site remains scarce throughout the majority of the 21st century, however it is likely that the land retained its industrial use. The arrangement of structures largely retained their formation until 2005, when electricity corporation Ausgrid assumed ownership of the land and removed the earlier structures entirely, with the exception of the existing electricity Substation. In 2023, the Substation was decommissioned.

[13] Building: the magazine for the architect, property owner and merchant 1936, Vol. 58, No.346

[14] The Sands Directory, 1911

[15] Government Gazette of the State of New South Wales 1936, James Connolly Steel Windows Limited

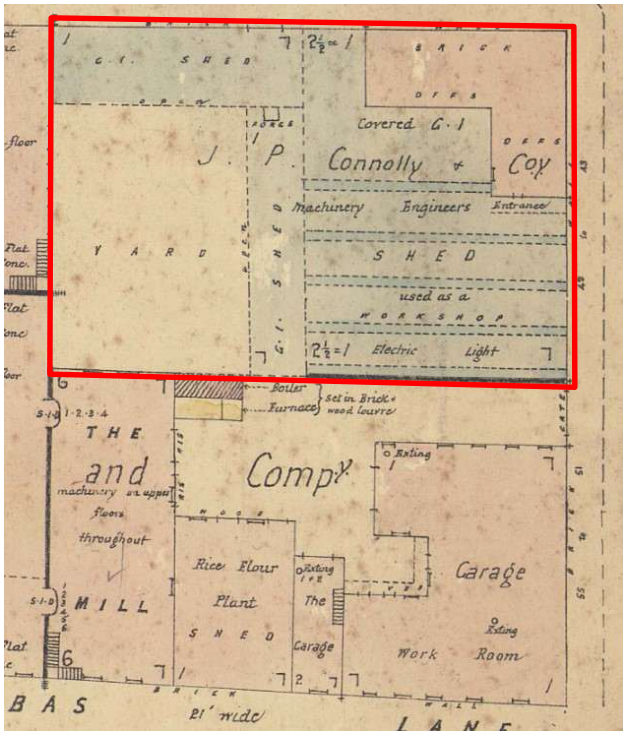


Figure 24 - Extract from Fire Insurance Underwriters Association of New South Wales Detail Survey Maps, Athlone Place Block No 205 Section 3, c.1917. The subject site is occupied by J.P Connolly and Coy.

Source: City of Sydney

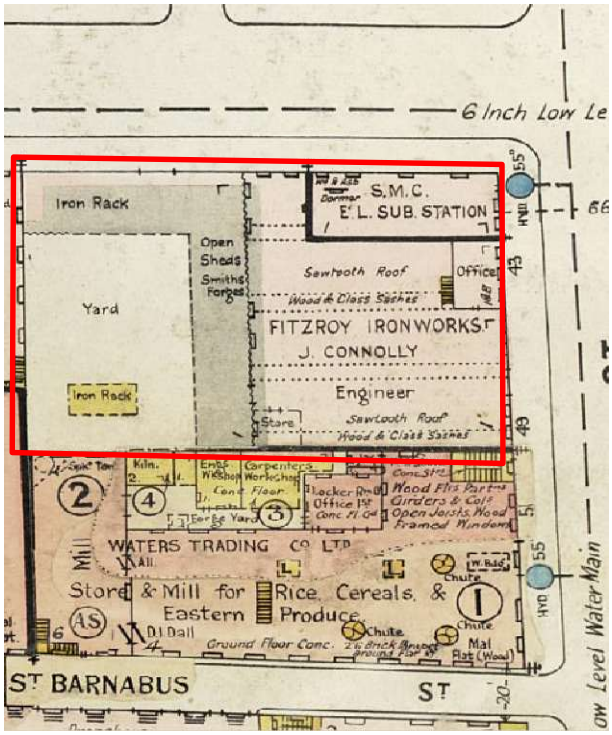


Figure 25 – Extract from Fire Insurance Underwriters Association of New South Wales Detail Survey Maps, Athlone Place Block No 205 Section 3, amendment to 8 October 1925. The subject site is occupied by Fitzroy Ironworks and J. Connolly.

Source: City of Sydney

3.3. HISTORICAL AERIAL IMAGERY

Historical aerial imagery illustrates that the original internal courtyard in the southwestern portion of the lot was infilled to allow for the construction of a tin-roofed structure, likely a workshop shed. It is likely that this occurred after the 1930s.

Figure 26 – Aerial photograph dated to c.1928. Approximate location of the subject site as indicated in red.

Source: Australian Government Historical Imagery Viewer

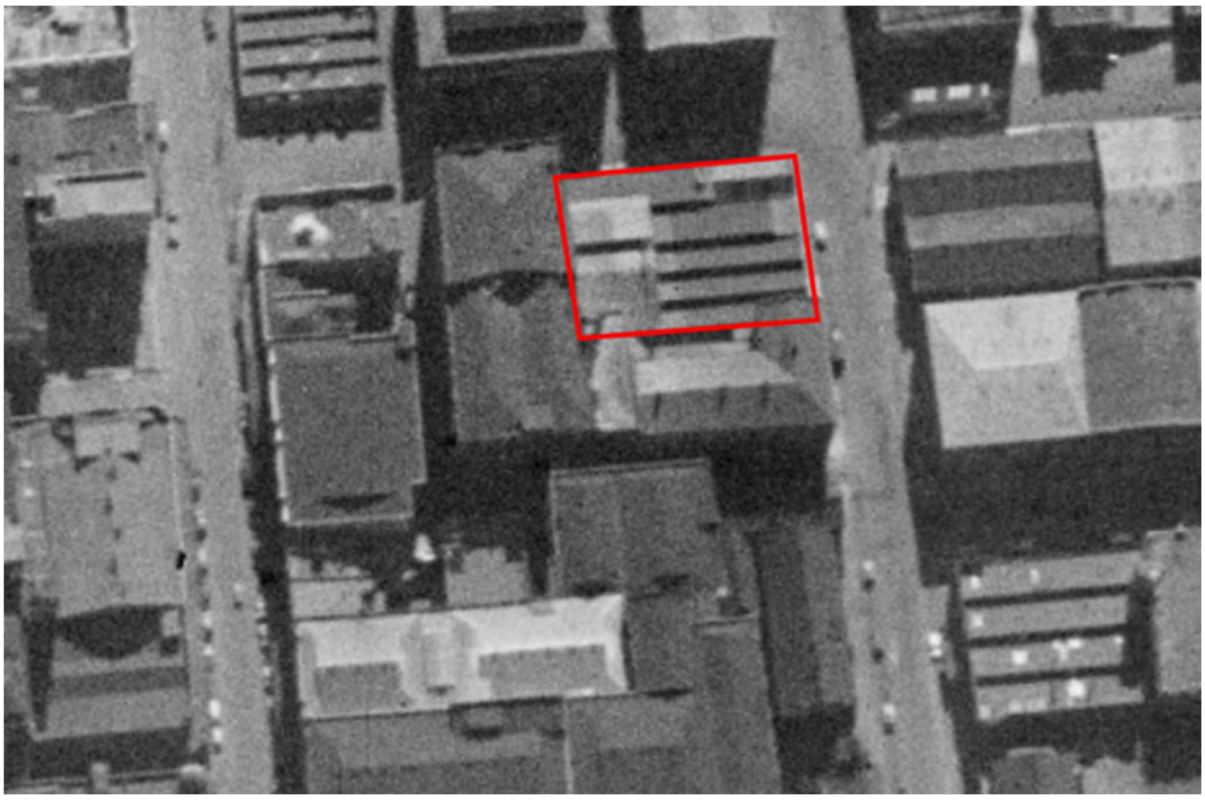


Figure 27 – Aerial photograph dated c.1943. Approximate location of subject site in red. The internal courtyard has been infilled with a warehouse structure.
Source: NSW Government Historical Imagery Viewer

Figure 28 - Aerial photograph dated to c.1970. Approximate location of subject site in red.

Source: NSW Government Historical Imagery Viewer

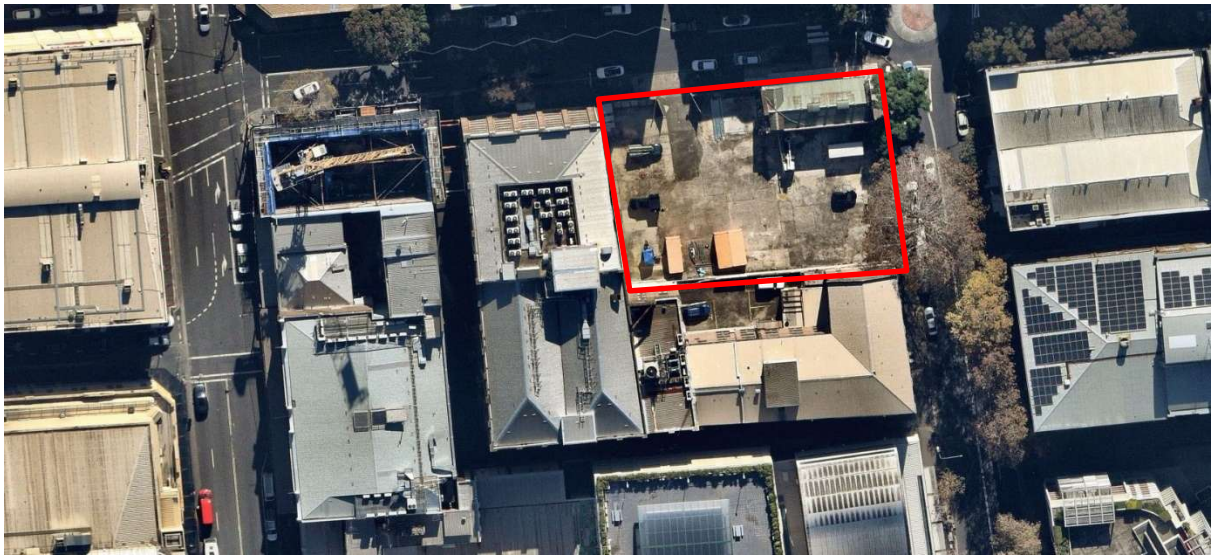


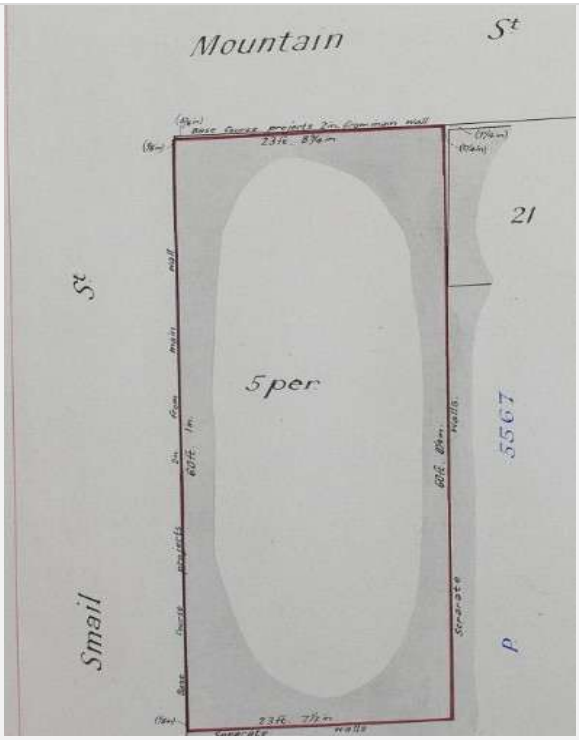
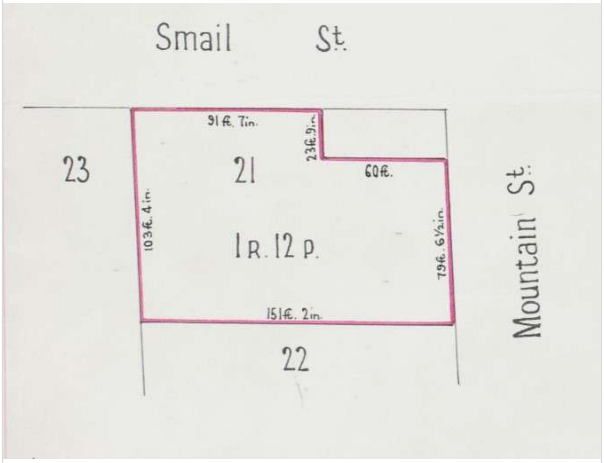
Figure 29 - Current aerial photograph c.2025 detailing the removal of structures within the subject site.
Source: NSW Government Historical Imagery Viewer

3.4. PROPERTY OWNERSHIP HISTORY

The relevant post European settlement property owners as identified through historical research are outlined below for reference.

Table 1 Property Ownership History.

Year/Date	Owner	Source
August 1792	**Crown Grant** **From:** Philip Gidley King (Lieutenant-Governor) **To:** Reverend Richard Johnson (Chaplain) 400 acres	Primary Application 15666
24 November 1829	**Conveyance** **From:** Reverend Richard Johnson (Chaplain) **To:** The Trustees of the Clergy and School Lands	Primary Application 15666
3 April 1843	**Conveyance** **From:** The Trustees of the Clergy and School Lands **To:** David Chambers and George Kenyon Holden (trustees) 3 acres, 3 roods.	Primary Application 15666
16 April 1909	**Conveyance** **From:** David Chambers and George Kenyon Holden (trustees) **To:** The Municipal Council of Sydney 3 acres, 3 roods Land holding from southeast Kelly Street, northeast line of Bay Street and the eastern line of Blackwattle Lane.	Vol. 5972 Fol. 95 and Vol.1965-50
8 October 1909	Land resumption under the *Sydney Corporation Amendment Act 1905.*	
16 November 1909	**Lease Indenture** **From:** The Municipal Council of Sydney **To:** James Connolly (Engineer) Lot 21 in DP5567	Vol 1965 Fol.50
23 February 1938	**Conveyance** **From:** The Municipal Council of Sydney **To:** The Sydney County Council (Electricity provider for Sydney municipalities) 5 perches	Vol. 4912 Fol. 97

Year/Date	Owner	Source
	 Figure 30 – Sydney County Council land purchase.	
4 January 1950	**Conveyance** **From:** The Sydney County Council **To:** J. Connolly Limited (Engineer) from Woolloomooloo One rood, 12 perches Lot 21  Figure 31 – Land holding of J. Connolly Limited c.1950.	Vol. 6079 Fol.245
14 July 1955	**From:** J. Connolly Limited (Engineer) from Woolloomooloo **To:** Eliza Linsky Proprietary Limited	Vol. 6079 Fol.245

4. HERITAGE SIGNIFICANCE

4.1. WHAT IS HERITAGE SIGNIFICANCE?

Before undertaking change a listed heritage item, a property within a heritage conservation area, or a property located in proximity to a listed heritage item, it is important to understand the heritage values of the place and its broader heritage context. This understanding will underpin the approach to any proposed changes and identify what is important and why, and how these values can be protected. Statements of heritage significance summarise the heritage values of a listed heritage item – why it is important and why a statutory listing was made to protect these values.

4.2. HERITAGE LISTINGS

4.2.1. Subject Site Heritage Listings

The following heritage listings apply to the subject site.

Table 2 Statutory Heritage Listings

Heritage List	Item Name	Item Number
NSW State Heritage Register under the *Heritage Act 1977*	Electrical Substation No.5	SHR 00934
Sydney Local Environmental Plan 2012	Mountain Street Heritage Conservation Area	C68
Sydney Local Environmental Plan 2012, Schedule 5	Electrical Substation	Item No. I2053
NSW State Agency Section 170 Heritage and Conservation Register under the *Heritage Act 1977*	Electrical Substation No. 5	3430486

The subject site is located within the Mountain Street Conservation Area (C68) and is identified as a contributing item at 41 Mountain Street and as a Detracting item at 43-49 Mountain Street within Sydney DCP 2012.

4.2.2. Heritage Items in the Vicinity

The subject site is located within the vicinity of the following heritage items:

- I2018 – 185-211 Broadway, Ultimo. Former “Grace Bros Homewares” including interior – local significance.
- I2052 – 16-20 Mountain Street - Former Sydney Technical College School of Rural Studies Including Interior – local significance.
- I2054 – Warehouse “Wilcox Mofflin” Ltd. - local significance
- I2055 – 57-61 Mountain Street - St Barnabas Anglican Church Site Remnant Building Components and Grounds – local significance

Figure 32 - Heritage map showing the subject site outlined in yellow.

Source: NSW Planning Portal ePlanning Spatial Viewer

Figure 33 - Extract of heritage map from the City of Sydney Local Environmental Plan 2012. The subject site as outlined in yellow.

Source: Sydney LEP 2012, HER_009.

Figure 34 – Extract of the Sydney Development Control 2012 Building Contributions Map. Location of subject site is outlined in red.

Source: Sydney DCP 2012, BC_009

4.3. STATEMENTS OF SIGNIFICANCE

4.3.1. Electricity Substation, 41- 43 Mountain Street, Ultimo

Section 170 Listing

A significance statement for the listed heritage item located at 41 Mountain Street has been drawn from the S170 listing for the item included on the NSW Heritage State Inventory as follows:

The Mountain Street Substation is the oldest operational Substation within the electricity network in Sydney and possibly the oldest in New South Wales. It is a fine example of public architecture from the early 20th century and demonstrates the pride the Municipal Council of Sydney felt for the early development of the electricity network. This Substation is the earliest surviving operational example of the electrification of Sydney, a significant step it in becoming a modern city. The Mountain Street Substation is a rare and early example of an externally intact Federation Free Style Substation.[16]

State Heritage Register and Sydney LEP Listing

The following statement of significance is included on the NSW Heritage State Inventory

The Mountain Street substation is a rare and early example of an externally intact substation dating from the Federation period.[17]

4.3.2. Mountain Street Heritage Conservation Area

The following statement of significance is taken from the State Heritage Inventory listing for the Mountain Street Conservation Area:

The Mountain Street Conservation Area demonstrates the evolution, patterns and process of the Ultimo area in the 19th and 20th centuries. The area provides evidence of the program of resumption, re-subdivision and reconstruction in the early years of the 20th century which transformed a high-density working class mixed residential, commercial and noxious industrial area to the predominantly warehouse precinct evident today. Aesthetically, the predominance of Federation warehouses with their strong masonry cubic forms creates a distinctive streetscape which is quite rare in the City of Sydney.[18]

The *Sydney Development Control Plan 2012*, Building Contributions Map, Sheet 009 details the Mountain Street Conservation Area with the subject site primarily identified as a "detracting" element with the exception of the Substation that has been identified as "contributing" (see Figure 43).

4.3.3. Vicinity Heritage Items

The subject site is located in the vicinity of the following heritage items identified within the Sydney LEP, Schedule 5, Part 1:

- Item No. I2018 – 185-211 Broadway, Ultimo. Former "Grace Bros Homewares" including interior – local significance
- Item No. I2052 – 16-20 Mountain Street - Former Sydney Technical College School of Rural Studies Including Interior – local significance.
- Item No. I2054 – Warehouse "Wilcox Mofflin" Ltd. - local significance.
- Item No. I2055 – 57-61 Mountain Street - St Barnabas Anglican Church Site Remnant Building Components and Grounds – local significance.

Statements of significance for the above heritage items in the vicinity are included on the following page.

[16] Heritage NSW, *Electricity Substation No. 5*, database no. 3430486

[17] Heritage NSW, *Substation*, database nos. 5011964 and 2420299

[18] Heritage NSW, *Mountain Street Heritage Conservation Area* database no. 2420408

185-211 Broadway, Ultimo. Former "Grace Bros Homewares" Including interior (# I2018)

The Grace Bros Homeware Building (former) has historic significance as being representative of the development of the Grace Bros retail empire between 1896 and 1937. It is associated with members of the Grace family and in particular JN Grace and AE Grace, the founders of Grace Bros whose approach to retailing was significant in the overall development of Department Stores in Australia. It is an Edwardian Department Store building with later Art Deco Alterations which was a focus for local social activity and special events for over 90 years The building , with its well-articulated façade, decorative features and corner tower with sphere, together with matching corner of the Homemakers Building, has high aesthetic significance and is a landmark making an outstanding contribution to the streetscape. Subsequent alterations and adaption have had considerable impact on the original and significant interpretation aspects of the building; however, it does maintain ongoing retail use with some preserved original and significant elements remaining in situ.[19]

16-20 Mountain Street - Former Sydney Technical College School of Rural Studies Including Interior (#I2052)

16-20 Mountain Street has local historic and aesthetic significance. The site provides evidence of the slum clearance programmed undertaken by the City Council in the early 20th century, with the resumption of Athlone Place and the replanning as the "Blackwattle Subdivision City Council Lease. " The building has historic significance as it demonstrates the expansion of warehousing and light industry in inner Sydney during the Federation years of the early 20th century. It is a good example of a Federation warehouse, incorporating an elaborate doorway from an earlier building, and makes a positive contribution to the streetscape.[20]

46-52 Mountain Street - Warehouse "Wilcox Mofflin" Ltd. (#I2054)

The Willcox Mofflin Building is an important remnant of the major development following the slum clearance in 1905 and represents a significant historical phase in the evolution of the area. It is an important element in the visual character of Mountain Street.[21]

57-61 Mountain Street - St Barnabas Anglican Church Site Remnant Building Components and Grounds (#I2055)

St Barnabas Church is a good example of a Victorian Gothic style church complex which makes a positive contribution to the streetscape and dates from one of the key periods of layers for the development of Ultimo as a direct result of subdivision of the Harris and Macarthur Estates. The Church Group is of social and historical significance as a place of worship since 1858. Note the Church Group was subject to a fire on 10 May 2006, causing major damage to all buildings on the site, and substantial destruction of the church.[22]

[19] Heritage NSW, *Former "Grace Bros Homewares' Including Interior*, database no. 2420516

[20] Heritage NSW, *Former Sydney Technical College School of Rural Studies Including Interior*, database no. 2421011

[21] Heritage NSW, *Warehouse 'Wilcox Moffflin Ltd'*, database no. 2420300

[22] Heritage NSW, *St Barnabas Anglican Church Site Remnant Building Components and Grounds*, database no. 2421012

5. THE PROPOSAL

5.1. BACKGROUND

5.1.1. Previous Development Applications for the Subject Site

Notwithstanding the current planning controls, previous development consent was provided for development of the subject site to a height of 31.15 metres and FSR of 4.34:1. Details of the key proposals for which development was provided for the same applicant are outlined below:

- U01/00833 was approved on 7 January 2003 for the Deferred Commencement Approval to demolish the existing building and erect a 6 and 9 storey mixed retail/office building with basement level car parking. A Section 96(2) modification to the approved 5 and 8 storey retail/commercial building was approved on 29 January 2009 (DU/2001/833/A)
- D/2005/1562 was approved on 8 September 2006 for demolition of existing buildings at 43-49 Mountain Street and construction of a 5 to 8 storey commercial building with 4 basement levels containing 64 parking spaces and retention of and conservation works to the existing state heritage listed Substation building at 41 Mountain Street. The time frame within which the conditions of the Deferred Commencement Consent for this DA must be satisfied were extended on 30 January 2007 (D/2005/1562A) and 27 March 2008 (D/2005/1562B).

These previous approvals demonstrate that the subject site has the capacity to accommodate a building envelope facilitating increased height and floor space ratio. While demolition of the previous development on 43-49 Mountain Street has occurred, no new construction work in accordance with the above approved development was commenced and consent for the previously approved development has now lapsed.

5.1.2. Pre Development Application Consultation

In developing the planning proposal subject of this report, several options were investigated to determine the appropriate massing for a new development in accordance with the proposed amended height and FSR controls.[23] The proposal has also been subject to review by the City of Sydney Design Advisory Panel, most recently at DAP meeting conducted on 4 September, 2025. Further consultation with the City of Sydney was undertaken on 9 September, 2025 to further refine the concept envelope.

5.2. DESCRIPTION OF THE PROPOSAL

Current government planning initiatives are paving the way for investment and renewal of the broader Camperdown-Ultimo precinct to become one of Australia's leading innovation districts within an established urban environment. The planning proposal aims to increase the height and floor space standards that apply to the site under SLEP 2012 to facilitate future developments with a height and density that is commensurate with the locality and objectives of Our Greater Sydney 2056 Commission's Eastern City District Plan.

The planning proposal seeks consent for a mixed-use building envelope in two primary built form volumes comprising a height of seven (7) stories facing Mountain Street and fifteen (15) stories facing Smail Street on the subject site. It does not provide an articulated building envelope or provide site specific guidelines to achieve a sympathetic heritage response. The planning proposal provides a key opportunity in a key economic location to facilitate future use of the site.

Urbis has been provided with concept documentation prepared by Bates Smart. This HIS has relied on these plans for the impact assessment include in Section 6. Extracts of the proposed plans are also provided overleaf. Full size plans should be referred to for detail.

[23] Bates Smart (2025) Planning Proposal Report, *43-49 Mountain Street, Ultimo, Planning Proposal*

Table 3 Proposed Concept Documentation

Author	Drawing No.	Drawing Title	Revision	Date
Bates Smart	PP03.B1	BASEMENT 1	AA	Sept 2025
Bates Smart	PP03.00	GROUND FLOOR	A	Sept 2025
Bates Smart	PP03.01	LEVEL 1	A	Sept 2025
Bates Smart	PP03.02	LEVEL 2-6 (TYPICAL)	A	Sept 2025
Bates Smart	PP03.07	LEVEL 7 (COMMUNAL)	A	Sept 2025
Bates Smart	PP03.08	LEVEL 8-14	A	Sept 2025
Bates Smart	PP03.15	ROOF	A	Sept 2025
Bates Smart	PP10.01	SECTION 1	A	Sept 2025
Bates Smart	PP10.02	SECTION 2	A	Sept 2025

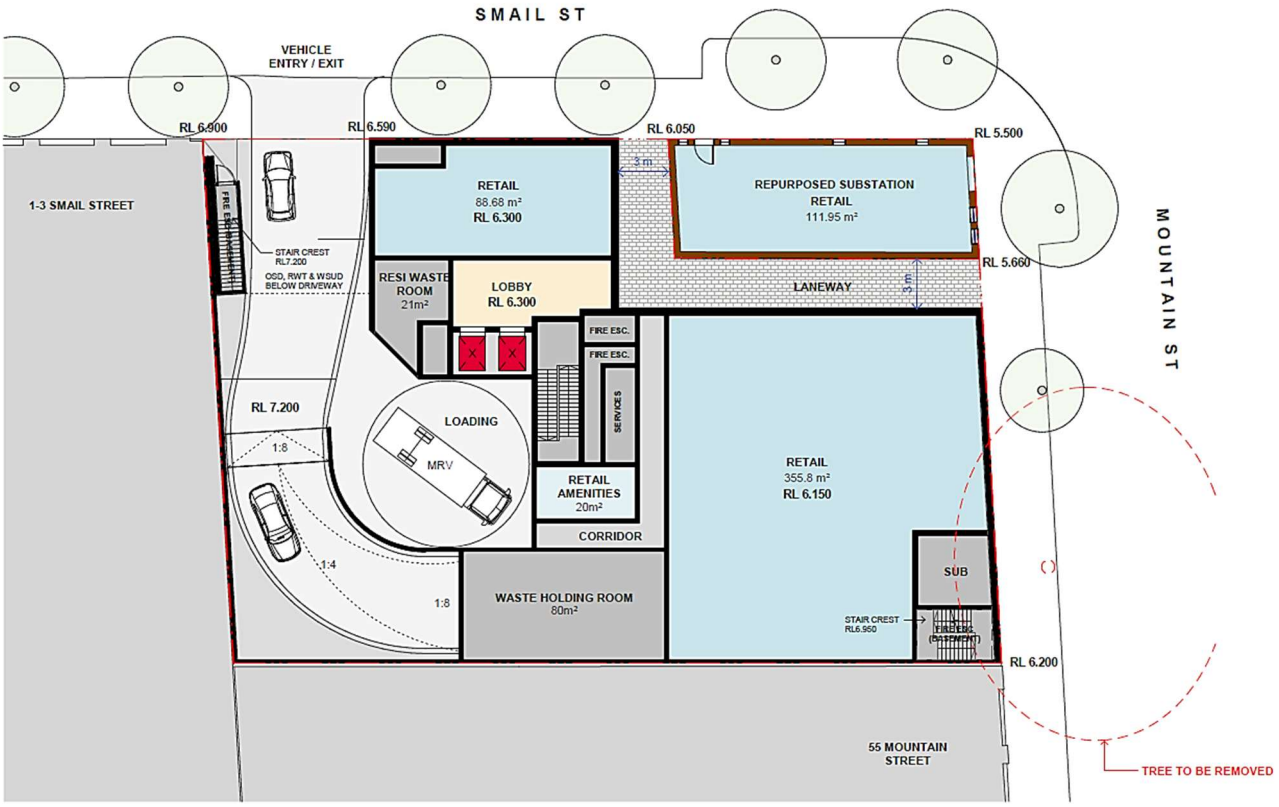


Figure 35 - Proposed planning proposal Ground Floor Plan (PP03.00).

Source: Bates Smart 2025

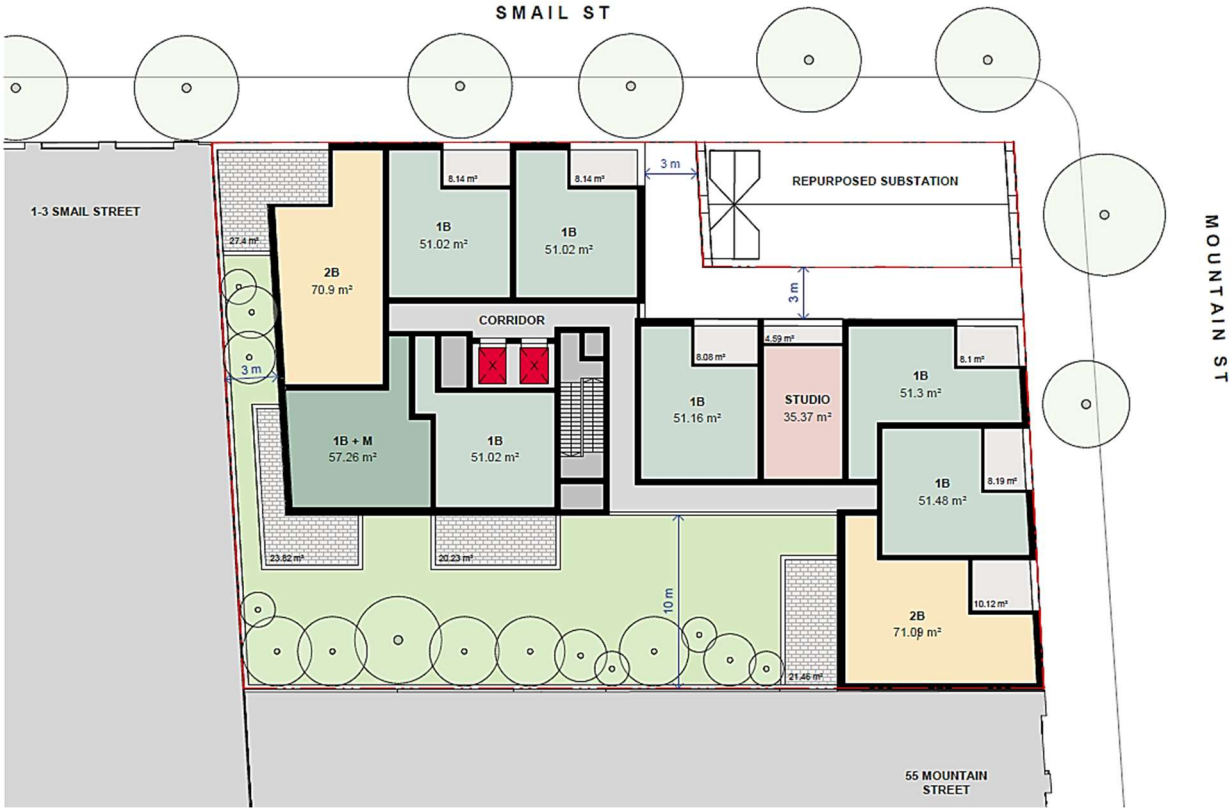


Figure 36 - Proposed planning proposal First Floor Plan (PP03.01).

Source: Bates Smart 2025

Figure 37 - Proposed planning proposal Level 2 – 6 (typical) (PP03.02).

Source: Bates Smart 2025

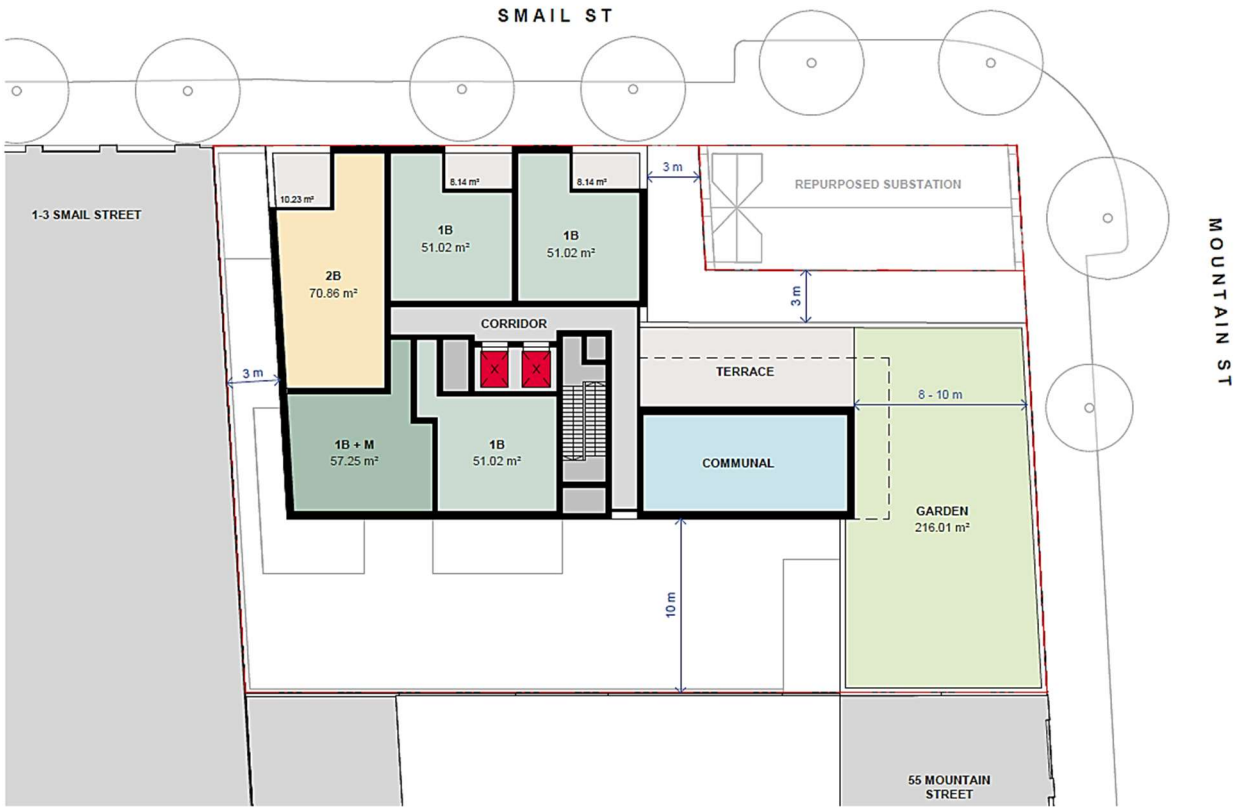


Figure 38 - Proposed planning proposal Level 7 (communal) (PP03.07).

Source: Bates Smart 2025

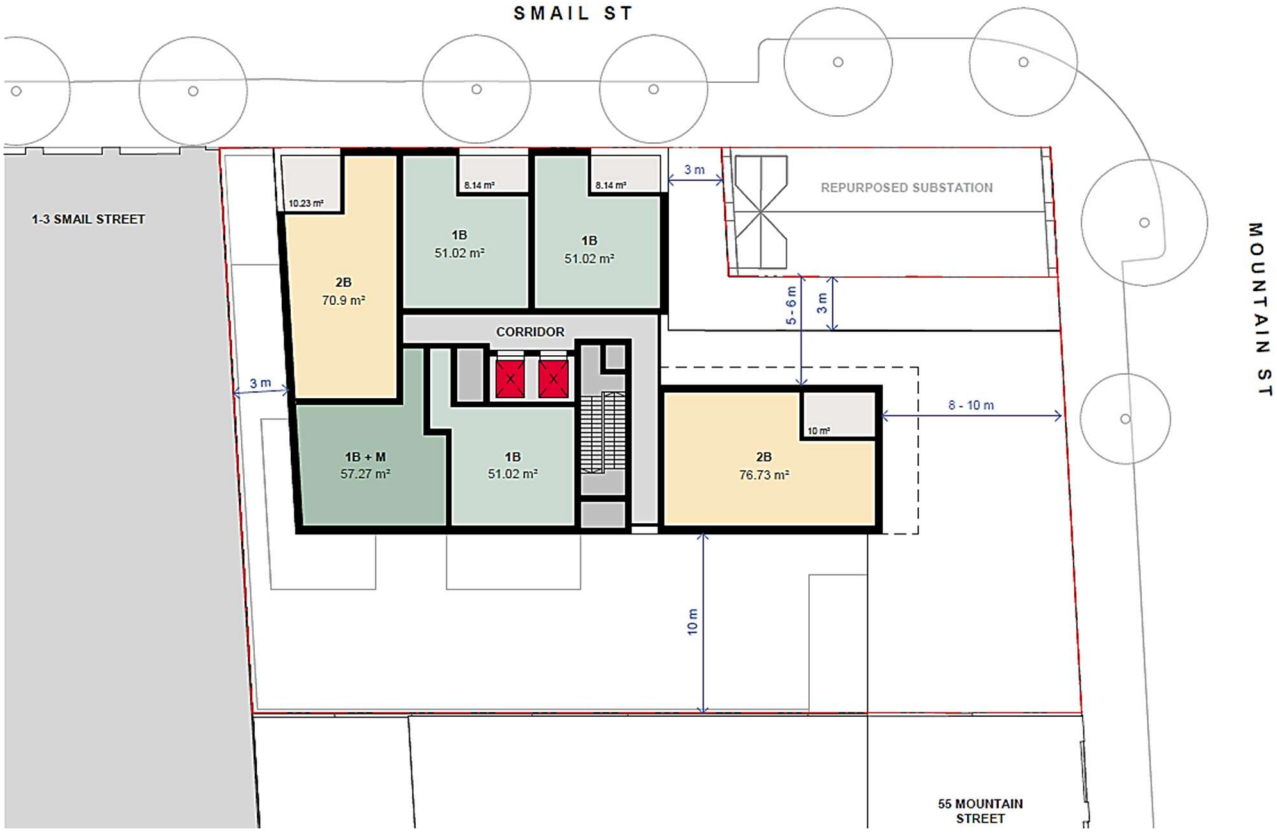


Figure 39 - Proposed planning proposal Level 8-14 (PP03.08).

Source: Bates Smart 2025

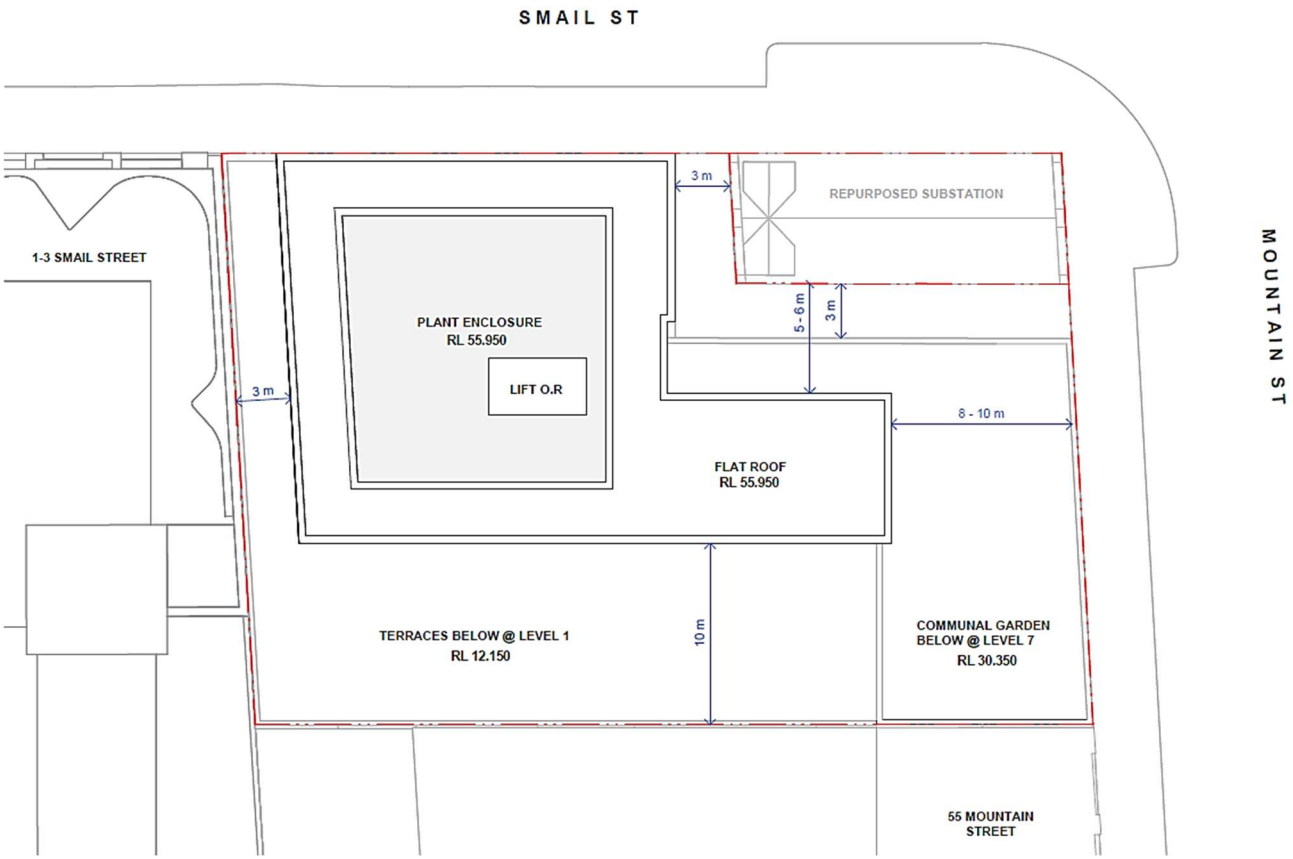


Figure 40 - Proposed planning proposal Roof (PP03.15).

Source: Bates Smart 2025

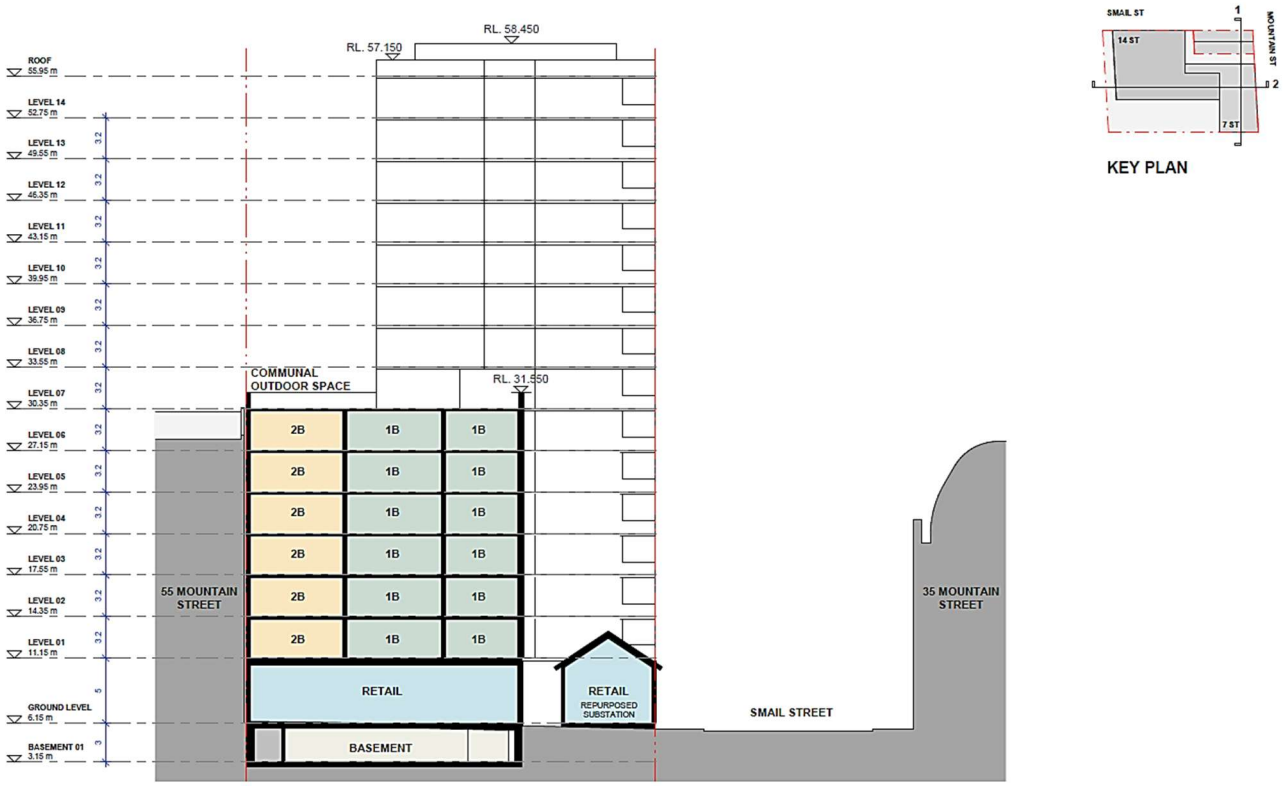


Figure 41 - Proposed planning proposal Section 1 (PP10.01).

Source: Bates Smart 2025

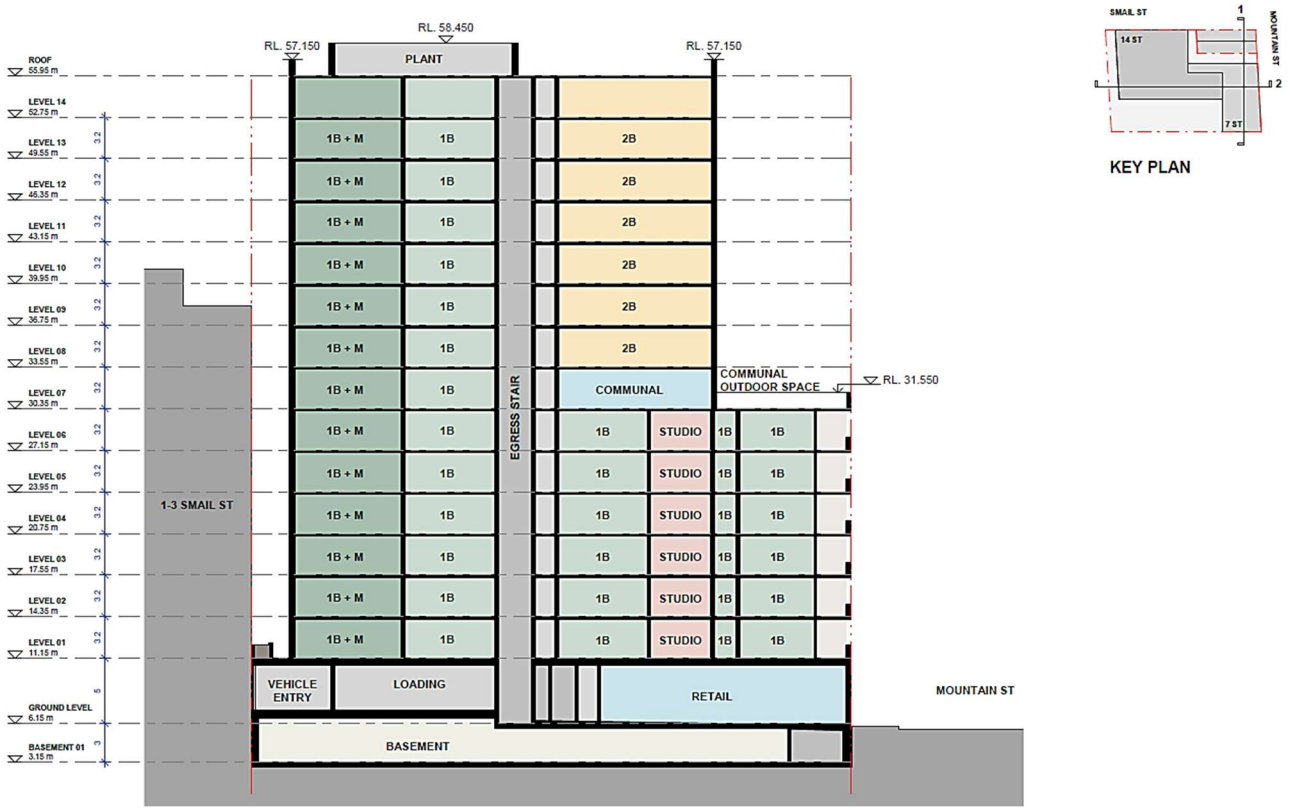


Figure 42 - Proposed planning proposal Section 1 (PP10.02).

Source: Bates Smart 2025

6. IMPACT ASSESSMENT

The following impact assessment has assessed the proposed works against the relevant provisions and controls of the Council's statutory and non-statutory planning controls as well as the guidelines contained within Heritage NSW 'Guidelines for preparing a statement of heritage impact'. This section provides an assessment of the heritage impact of the proposed building envelope and associated amendments to the planning controls. It does not address the indicative design. Any proposed future Development Application for the site would need to be accompanied by a Heritage Impact Statement that addresses the impact of the developed design proposal, including demolition/alteration of the existing development on the site.

6.1. SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

The table below provides an impact assessment of the proposal against the relevant clause for heritage conservation in the Sydney LEP 2012.

Table 4 Impact assessment against the relevant clauses of the Sydney LEP 2012.

Clause	Response
Height of buildings (Clause 4.3) (1) The objectives of this clause are as follows: (a) to ensure the height of development is appropriate to the condition of the site and its context, (b) to ensure appropriate height transitions between new development and heritage items and buildings in heritage conservation areas or special character areas, (c) to promote the sharing of views,	The planning proposal facilitates a concept envelope that is appropriate to its corner location and the surrounding context. The proposed street frontage height varies for the two primary built form envelopes of the concept envelope as follows: ▪ 7 stories fronting Mountain Street On Mountain Street, the proposed street frontage height is compatible with the existing adjacent former warehouse building at 55 Mountain Street and provides for future development to directly adjoin the neighbouring building at its eastern end and present a consistent street frontage height to Mountain Street. ▪ 15 stories fronting Smail Street. On Smail Street, the proposed street frontage height is taller than the adjacent development at 1-3 Smail Street in the order of 4.5 stories. Above the street frontage height, the envelope proposes setbacks to enable inclusion of roof plant. The envelope also provides for setbacks to the south and west, respectively ten and three metres. The variation in height is not inconsistent with the surrounding context, which is defined by buildings of varying height and scale. Within the proposed envelope, there is scope for interpretation of heights in a future developed design so that the overall result exhibits some 'naturalness' in street frontage presentation as opposed to a defined static level within the context of the Mountain Street HCA.

Clause	Response
	Where the scale exceeds the height of the Substation, which item height and scale is an anomaly in the locality, the building envelope provides a volume in which future development has the capacity to respond to the scale of the Substation through such measures as articulation of the envelope at a comparable datum and a thoughtful design response that promotes the prominence of this corner heritage item. Notably, the concept envelope provides a three metre setback to the south and west of the Substation to allow physical and visual access to the heritage item for public appreciation and maintenance access. The proposed height would not cause adverse effects on any important views. Rather, the proposed envelope extending to each the street boundary is consistent with existing development in the locality and would facilitate framed views along the streets. Views to the Substation would remain available owing to its corner location and there is opportunity for future development to provide a suitable backdrop that complements the heritage item. The planning proposal does not affect views to the street facing elevations of the Substation in accordance with the original design intent.
5.10 Heritage Conservation (1) Objectives The objectives of this clause are as follows: (a) to conserve the environmental heritage of the City of Sydney, (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (c) to conserve archaeological sites, (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.	For the reasons set out in this HIS, it is considered that planning proposal is broadly consistent with the objectives set out in the Sydney LEP. The planning proposal supports future redevelopment of the site at 43-49 Mountain Street, which is currently identified as a 'detracting' site in Sydney DCP 2012, providing opportunity for a more compatible development that contributes positively to the locality. It generates a building envelope that presents an opportunity for future works to stimulate redevelopment of the site, in turn providing for the conservation and maintenance of the heritage listed electricity Substation.
(2) Requirement for consent Development consent is required for any of the following: (a) demolishing or moving any of the following or altering the exterior of any of the following	The subject site is located within the Mountain Street HCA (C68) under the *Sydney Local Environmental Plan (LEP) 2012*. The subject site itself is a large land parcel that includes the former Mountain Street Electricity Substation No. 5, which is a State listed heritage item (SHR 00934) under

Clause	Response
(including, in the case of a building, making changes to its detail, fabric, finish or appearance): (i) a heritage item, (ii) an Aboriginal object, (iii) a building, work, relic or tree within a heritage conservation area, (b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item, (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed, (d) disturbing or excavating an Aboriginal place of heritage significance, (e) erecting a building on land: (i) on which a heritage item is located or that is within a heritage conservation area, or (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance, (f) subdividing land: (i) on which a heritage item is located or that is within a heritage conservation area, or (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.	the *NSW Heritage Act 1977*, a locally listed heritage item (I2053) under the *Sydney Local Environmental Plan (LEP) 2012* and a S.170 listed heritage item (3430486) under the Ausgrid Heritage Register of the *Heritage Act NSW 1977*. The subject site is also located in proximity to the following heritage listed items: ▪ Item No. I2018 – 185-211 Broadway, Ultimo. Former “Grace Bros Homewares” including interior – local significance ▪ Item No. I2052 – 16-20 Mountain Street - Former Sydney Technical College School of Rural Studies Including Interior – local significance. ▪ Item No. I2054 – Warehouse “Wilcox Mofflin” Ltd. - local significance ▪ Item No. I2055 – 57-61 Mountain Street - St Barnabas Anglican Church Site Remnant Building Components and Grounds – local significance This heritage impact statement has therefore been prepared to accompany a development application to the City of Sydney to assess the heritage impact of the planning proposal on the identified heritage significance of the subject site, the conservation area and vicinity heritage items.
(4) Effect of proposed development on heritage significance The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation	This report has assessed the planning proposal with consideration for the heritage item on the site, the site’s location in the Mountain Street Heritage Conservation Area and its proximity to several heritage listed items and finds that the building envelope provides opportunity for future design to respond to the heritage context. The building envelope generated by the planning proposal: - is consistent with the form, scale and massing of existing warehouses in the immediate vicinity

Clause	Response
management plan is submitted under subclause (6).	including 55 Mountain Street to the south and the Wilcox Mofflin building at 46 Mountain Street to the east; - adopts a taller form adjacent to 1-3 Smail Street where there is not a consistent existing streetwall height, with setbacks to neighbouring sites to provide physical and visual separation; - adopts a form that wraps around the electricity Substation while maintaining setbacks to the south and west, forming a backdrop that retains views to the item in its corner location; - would not impact on the setting or fabric of the heritage items in the vicinity, being generally located at a sufficient distance from these and screened via existing intervening built form developments; - would not impact on the setting or fabric of the Wilcox Mofflin building (#I2054), being located on the opposite side of Mountain Street, of a compatible scale and furthermore screened at pedestrian level via existing street trees; - provides an appropriate scale commensurate with the large lot of the subject site, its city fringe location and the existing urban form of the Mountain Street HCA.
(5) Heritage assessment The consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.	This heritage impact statement has been prepared to assist the consent authority in their determination and to assess the potential heritage impacts of the proposed works. This heritage impact statement satisfies the requirement under this clause. Any future Development Application/s for the site will have to be submitted for approval to the City of Sydney Council and be accompanied by a Heritage Impact Statement that assesses the impact of the proposed development on the heritage significance of listed items on and in the vicinity of the site and the Mountain Street Heritage Conservation Area.

6.2. SYDNEY DEVELOPMENT CONTROL PLAN 2012

The purpose of the Sydney Development Control Plan 2012 (SDCP 2012) is to provide objectives and provisions for the development of buildings, including those with heritage significance, either individually or as part of their street or area. The overall objectives for heritage of SDCP 2012 are as follows:

> *(a) Ensure that heritage significance is considered for heritage items, development within heritage conservation areas, and development affecting archaeological sites and places of Aboriginal heritage significance.*
>
> *(b) Enhance the character and heritage significance of heritage items and heritage conservation areas and ensure that infill development is designed to respond positively to the heritage character of adjoining and nearby buildings and features of the public domain.*

The table below provides an impact assessment of the proposal against the relevant clause for heritage conservation in the Sydney DCP 2012.

Table 5 Impact assessment against the relevant clauses of the Sydney DCP 2012.

Clause	Response
6.2.11 Mountain Street (a) Development must achieve and satisfy the outcomes expressed in the character statement and supporting principles. (b) Development is to respond to and complement heritage items and contributory buildings within heritage conservation areas, including streetscapes and lanes. (c) Encourage simple forms where appropriate to recognise the predominant warehouse character. Retain the strong warehouse building character of Mountain Street. (d) Maintain the prominent Federation warehouse character of the area by retaining warehouse and building facades and sympathetic adaptive reuse. (e) Provide commercial uses at least at ground and first floor levels, where appropriate. (f) Design new development next to strongly modelled heritage buildings, by responding to their floor to ceiling heights, proportion of bays and the design of horizontal elements. (g) Generous internal courtyard spaces are to be considered for conversions of large footprint buildings. (h) Retain the strong and consistent edge to Broadway. (i) Residential development on Wattle Street is to be set behind and buffered by commercial uses or	The planning proposal would support a future contemporary development that would complement the scale of existing development in the locality and contribute to the existing rich and diverse mix of building in the area. The locality statement describes the Mountain Street area as being noted for providing '*a diverse and sustainable mix of uses in restored and adaptively reused early warehouse buildings or in new buildings whose bulk and scale is appropriate to the large lots and existing urban form.*' The building envelope generated by the planning proposal is broadly compatible with the scale of existing development in the locality. The predominant character and scale of the area would not be adversely affected. The planning proposal stimulates opportunity for future development to provide for the conservation and adaptive reuse of the Substation. The building envelope provides a volume in which future development can respond to the character of the area through a design excellence approach. The different characters exhibited by the surrounding heritage buildings should be referenced in the composition of the future detailed design to aid in the decomposition of the street block to respond to the scale of the area and the Substation. The building envelope generated by the planning proposal accords with the alignment of buildings to the street boundary in the locality and provides for appropriate setbacks to adjoining sites at 55 Mountain Street and 1-3 Smail Street in addition to

Clause	Response
located at least above the first floor in mixed use buildings. (j) Retain early housing in the area, particularly along Glebe and Queen Streets.	setbacks within the site around the electricity Substation.
3.9.5 Heritage Items Development in the vicinity of a heritage item can have an impact upon the heritage significance of the item. The determination of the setting of a heritage item should consider the historical property boundaries, significant vegetation and landscaping, archaeological features, and significant views to and from the property.	The subject site includes the heritage listed electricity Substation at 41 Mountain Street, Ultimo. The building envelope provides a volume in which future development can respond to the scale and character of the Substation through a design excellence approach for the future detailed design. The proposed building envelope has the further capacity to provide an appropriate setting for the Substation, which was designed with plainly detailed south and west elevations, evidencing consideration in its original design for there to be adjacent development. Regardless, the concept envelope provides for a three metre setback to the south and west of the Substation to allow physical and visual access to the heritage item for public appreciation and maintenance access. Considering other heritage items in the vicinity of the subject site, the proposed concept envelope: - would not impact on the setting or fabric of the heritage items in the vicinity, being generally located at a sufficient distance from these and screened via existing intervening built form developments; - would not impact on the setting or fabric of the Wilcox Mofflin building (#I2054), being located on the opposite side of Mountain Street, of a compatible scale and furthermore screened at pedestrian level via existing street trees.
(3) Alterations and additions to buildings and structures and new development of sites in the vicinity of a heritage item are to be designed to respect and complement the heritage item in terms of the: (a) building envelope; (b) proportions; (c) materials, colours and finishes; and	The planning proposal generates an envelope that draws on cues from its context. This envelope provides a volume in which future development can respond to the character of the area through a design excellence approach.

Clause	Response
(d) building and street alignment.	
(4) Development in the vicinity of a heritage item is to minimise the impact on the setting of the item by: (a) providing an adequate area around the building to allow interpretation of the heritage item; (b) retaining original or significant landscaping (including plantings with direct links or association with the heritage item); (c) protecting, where possible and allowing the interpretation of archaeological features; and (d) Retaining and respecting significant views to and from the heritage item.	The proposed building envelope has the capacity to provide an appropriate setting for the Substation, which was designed with plainly detailed south and west elevations, evidencing consideration in its original design for there to be adjacent development. The interpretation of the building and its setting should be resolved through a design excellence approach in future detailed Development Application. Vicinity heritage items would retain their existing settings and the planning proposal would not adversely affect their interpretation for the reasons described in preceding sections. The Poplar and other street trees are a significant feature of the public domain and should generally be retained in conjunction with Development Application for future work. An Aboriginal Due Diligence and Historical Archaeology Assessment have been prepared separately and are submitted with this Development Application. The proposed envelope extending to the street boundary is consistent with existing development in the locality and would facilitate framed views along the streetscape. Views to the Substation would remain available owing to its corner location and there is opportunity for future development to provide a suitable backdrop that complements the heritage item. The planning proposal does not affect views to the street facing elevations of the Substation in accordance with the original design intent.
4.2.1 Building Height (2) The maximum may only be achieved where it can be demonstrated that the proposed development: (a) reinforces the neighbourhood character; (b) is consistent with the scale and form of surrounding buildings in heritage conservation areas; and	The planning proposal to amend the heigh standards for the site supports development that would be compatible with the existing character of adjacent buildings, and the general presentation of buildings of varying height and scale in the Mountain Street HCA. Through the adoption of two primary built form envelopes, the scale of development proposed by the planning proposal provides a considered response to the surrounding context, including the five storey scale of the most

Clause	Response
(c) does not detract from the character and significance of the existing building.	proximate heritage item, the Wilcox Mofflin building at 46 Mountain Street (#I2054). Where taller development is proposed on the Smail Street frontage, setbacks are proposed to adjoining sites to the west and south to provide physical and visual separation that would allow the existing neighbouring developments to retain both prominence and general amenity. In particular to the south the proposed ten metre setback provides for a generous courtyard space between the subject site and adjoining development at 55 Mountain Street. The scale of the proposed building envelope accords with both the existing character of the locality and defines an appropriate future one. The character and significance of existing development in the locality can be retained and enhanced through a design excellence approach subject of a future Development Application.
(4) Where the street frontage height of buildings map does not indicate the maximum height, the maximum street frontage height must generally be consistent with the street frontage height in storeys of adjacent buildings, or the predominant street frontage height in storeys in the vicinity of the proposed building.	On Mountain Street, the planning proposal concept envelope is consistent with the street frontage height of adjoining development at 55 Mountain Street and that of the heritage listed Wilcox Mofflin building (#I2054) on the opposite side of Mountain Street. On Smail Street in the vicinity of the subject site, the street frontage heights of existing buildings are highly varied and do not establish a predominant street frontage height. In this context, the adoption of a taller envelope on the Smail Street frontage would not be incompatible. Where the scale exceeds the height of adjacent development, the building envelope provides a volume in which future development has the capacity to respond to the scale of neighbouring buildings through such measures as articulation of the envelope at a comparable datum and a thoughtful design response.
(5) Height of buildings and the street frontage height in storeys should not match anomalous tall neighbouring buildings that are inconsistent with the neighbourhood.	See previous response. The proposed building height is consistent with the ‘urban’ scale of development on the city fringe.

6.3. HERITAGE NSW GUIDELINES

The table below provides an impact assessment of the proposal against the relevant questions posed in Heritage NSW's (former Heritage Office/Heritage Division) 'Statement of Heritage Impact' guidelines.

Table 6 Impact assessment against the relevant Heritage NSW Guideline Considerations

Provision	Response
Will the proposed works be the best conservation solution for the heritage item?	No physical works are proposed. The proposed amendments provide an envelope that allows future development to respond appropriately. The planning proposal stimulates opportunity for future development to provide for the conservation and adaptive reuse of the Substation. Notably, the concept envelope provides a three metre setback to the south and west of the Substation to allow physical and visual access to the heritage item for public appreciation and maintenance access.
Will the works promote the ongoing use and upkeep of the item?	The proposal encourages future reinvestment in the subject site, which provides an opportunity for the conservation and adaptive reuse of the heritage listed Substation located on the site.
Do the proposed works include removal of unsympathetic alterations and additions? How does this benefit or impact the heritage item and its significance?	N/A No physical works are proposed as part of the current Development Application
Do the proposed works affect the setting of the heritage item, including views and vistas to and from the heritage item and/or a cultural landscape in which it is sited? Can the impacts be avoided and/or mitigated?	The proposed building envelope has the capacity to provide an appropriate setting for the Substation, which was designed with plainly detailed south and west elevations, evidencing consideration in its original design for there to be adjacent development. The interpretation of the building and its setting should be resolved through a design excellence approach in future detailed Development Application.
If the proposed works are to a local heritage item, are the requirements of the development control plans or any local design guidelines that may apply to the site considered?	Yes, refer to the impact assessment included at Section 6.2 of this report.
Will the proposed works result in adverse heritage impact? If so, how will this be avoided, minimised or mitigated?	The proposed works have the capacity for future works to positively enhance the heritage listed Substation and broader heritage context through the ongoing use of the site and new development adopting a design excellence approach.

7. CONCLUSION

The planning proposal seeks consent for a mixed-use building envelope in two primary built form volumes comprising a height of seven (7) stories facing Mountain Street and fifteen (15) stories facing Smail Street on the subject site. It does not provide an articulated building envelope or provide site specific guidelines to achieve a sympathetic heritage response. No physical works are proposed.

43-49 Mountain Street is, at present, void of any fabric or material remains that indicate the past use of the site for industrial purposes. Additionally, the site has been largely underutilised since demolition efforts in 2005. The proposed building envelope provides a key opportunity in a key economic location to utilise a previously underused site for compatible and appropriate adaptive reuse. The subject site has, apart from the electricity Substation, been identified as a detracting item on the Sydney DCP 2012 and the planning proposal provides the opportunity to stimulate the potential of the subject site and ultimately to offer a meaningful contribution to the character of the conservation area in accordance with the objectives for the Mountain Street Heritage Conservation Area.

A detailed impact assessment of the proposed works has been undertaken in Section 6 of this report. The planning proposal has been assessed to have an acceptable heritage impact on the impact on the Substation on the subject site, the Mountain Street Heritage Conservation Area and heritage items in the vicinity of the subject site. Key aspects of the proposal assessment are listed below:

- The planning proposal has been subject to review by the City of Sydney Design Advisory Panel, with further consultation with the City of Sydney to further refine the concept envelope. The concept envelope for the planning proposal has responded appropriately to feedback provided by the City of Sydney.
- In conjunction with a future detailed design, the planning proposal provides an opportunity to reinvigorate the subject site, which has been largely vacant since 2005 and the majority of which is currently identified as a ‘detracting’ site in Sydney DCP 2012.
- The planning proposal provides for built form development to the street boundaries of both Mountain and Smail Streets, which is characteristic of development in the Mountain Street HCA and would provide for framed open views along the street.
- The proposed building envelope facilitates a response to the broad heritage context through setbacks and two distinct primary built form envelopes that are subject to future architectural resolution.
- The proposed building envelope facilitates future development of a bulk and scale that is appropriate to the large lot and urban form of the surrounding context.
- The proposed development presents an opportunity for future works to stimulate redevelopment of the site, in turn providing for the conservation and maintenance of the heritage listed electricity Substation, which is a ‘contributing’ item in Sydney DCP 2012.
- The planning proposal provides the opportunity for future building designs to achieve a sympathetic response to the heritage items in the vicinity through a detailed examination of heritage context, scale and form. It provides a volume in which future development can respond to the scale, character and materiality of the area through a design excellence approach.

For the reasons stated above, the proposed works are recommended for approval from a heritage perspective having regard to the proposed recommendations below.

7.1. RECOMMENDATIONS

The following recommendations are provided to guide future Development Applications facilitated by this planning proposal:

- Future design proposals must be based on sympathetic design principles and be guided by a detailed contextual analysis to inform future development. The form, scale, materiality, articulation and the façade treatment of the future development should respond to adjacent development, the subject heritage item and proximate heritage items. A suitably experienced built heritage practitioner should therefore be engaged to provide ongoing advice throughout the design development, contract documentation and construction stages of the project.
- Future design proposals should adhere to the Design Excellence Guidelines provided by the City of Sydney.

- Future design proposals need to demonstrate that there would be direct conservation benefits for the electricity Substation. There are key opportunities for the conservation and interpretation of the Substation, such as maintenance and repair work and reinterpretation of the prior use.
- A detailed heritage impact statement and detailed street montages should be provided as part of the any future development application for work on the site.

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Attachment A7

Historical Archaeological Assessment

URBIS

HISTORICAL ARCHAEOLOGICAL ASSESSMENT

41-49 Mountain Street,
Ultimo NSW

Prepared for
APT. RESIDENTIAL
September 2025

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Project Code	P00610084
Report Number	D01 issued for client review 04/07/2025
	F01 issue for Planning Proposal 04/09/2025
	F02 issue with revised plans for Planning Proposal 16/09/2025

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EXECUTIVE SUMMARY

Urbis has been engaged by Apt. Residential ('the proponent') to conduct a Historical Archaeological Impact Assessment (HAIA) of 41- 49 Mountain Street, Ultimo NSW legally referred to as Lot 1 in DP191928 and Lot 21 in DP5567 ('the subject site'). The subject site falls within the City of Sydney Local Government Area (LGA).

Through a planning proposal, the proponent seeks to amend the Floor Space Ratio, and the Height of Development as laid out in the *Sydney Local Environment Plan 2012*. Any works within the subject site that fall outside the scope of the currently proposed works will require the preparation of an updated HAIA.

The HAA has been undertaken to assess the impacts of the proposed works to any historical archaeological material within the subject area and to formulate appropriate heritage management measures.

The HAA has concluded the following:

- The historical development and use of the subject is broadly categorised according to the following phases:
    - Phase 1: 19th Century Colonial Development (1789 – 1905)
    - Phase 2: Land Resumption (1905 – 1909)
    - Phase 3: Industrial Use (1909- Present)
- No listed archaeological items have been identified within the subject area.
- Moderate to High archaeological potential has been identified for locally significant historical relics associated with the early development of the subject area during the mid-19th century (Phase 1), including road building materials postholes, sandstone and/or brick foundations, ceramic or brick or brick pipes, undocumented structures such as wells, cisterns, residential pipes, rubbish pits and cesspits which may contain artefact bearing deposits.
- As the proposed works include demolition of all existing buildings and construction of a new mixed-use development with a basement level, there is reasonable cause to suspect that the proposed works will impact historical relics; these relics have been identified as disturbed and locally significant. This can be mitigated through archaeological investigation and recording.
- This report did not identify potential for the presence of State significance relics or any relics where retention through redesign would be required. As such, this report has not identified any archaeological impediments in regard to the Planning Proposal or future Development Application.

In view of the above conclusions, Urbis makes the following recommendations:

- **Recommendation 1** – **Submission of Report**

  A copy of this report should be submitted to City of Sydney in support of the current Planning Proposal and future Development Application.

- **Recommendation 2 – Further Archaeological Investigation**

  As this assessment has identified that the proposed redevelopment is likely to remove locally significant relics, archaeological investigation under an s140 Excavation Permit is recommended for the site. Further archaeological investigation should be undertaken by a qualified archaeologist post demolition works and prior to any ground disturbing works. A historical archaeological research design and excavation methodology ('HARDEM') should be prepared to guide the archaeological monitoring and excavation, as well as include an Unexpected Finds Protocol. This report, HAA, along with the HARDEM should be submitted to Heritage NSW as part of an s140 Excavation Permit application prior to commencement of archaeological investigations, or any ground disturbing works anywhere within the subject area.

1. INTRODUCTION

Urbis has been engaged by Apt. Residential ('the proponent') to conduct a Historical Archaeological Assessment (HAA) at 41-49 Mountain Street, NSW, legally referred to as Lot 1 in DP191928 and Lot 21 in DP5567 ('the subject site') (Figure 1 - Figure 2). The Proponent is seeking to lodge a planning proposal for a multi-storey mixed-use development. Designs are currently in the concept phase.

The purpose of the HAA is to investigate the historical archaeological potential within the subject site and the likelihood that the proposed works would impact potential archaeological resources. The current report presents the results of the HAA.

1.1. SUBJECT SITE

The subject site is located at 41-49 Mountain Street, Ultimo within the Local Government Area (LGA) of City of Sydney. The site is legally described as Lot 1 in DP191928 and Lot 21 in DP5567. The site is located on Gadigal land.

The subject site comprises one single storey Federation Free style tuck pointed face brick substation that was constructed in c1909. Further improvements include two ancillary structures and concrete carparking facilities. The immediate streetscape of Mountain Street is characterised by Federation and Interwar warehouses.

The State Heritage Register listed substation is located on the northeastern corner of Smail Street and Mountain Street, lying opposite a series of commercial premises. The subject site is adjacent to former warehouses located on Mountain Street and Smail Street.

A locality statement provided in Section 2 of the Sydney DCP 2012 details the subject site as being located within the Mountain Street locality, which is bounded from Broadway to the south, Wattle Street to the east, Wentworth Park Road to the north, and Cowper Street to the west. The locality statement further details that:

> *The Mountain Street neighbourhood will retain its role as an important entry to Central Sydney. The area will continue to provide a diverse and sustainable mix of uses in restored and adaptively reused early warehouse buildings or in new buildings whose bulk and scale is appropriate to the large lots and existing urban form. Views through the precinct along streets towards Wentworth Park (and potentially to the waterfront) are to be retained to provide a strong visual association of the neighbourhood and Wentworth Park. Improved access to open space is important and will enhance the amenity of the area. Avenue planting along Mountain Street is to enhance the streetscape and help break down the scale of larger buildings*[1].

[1] Sydney DCP 2012, Section 2

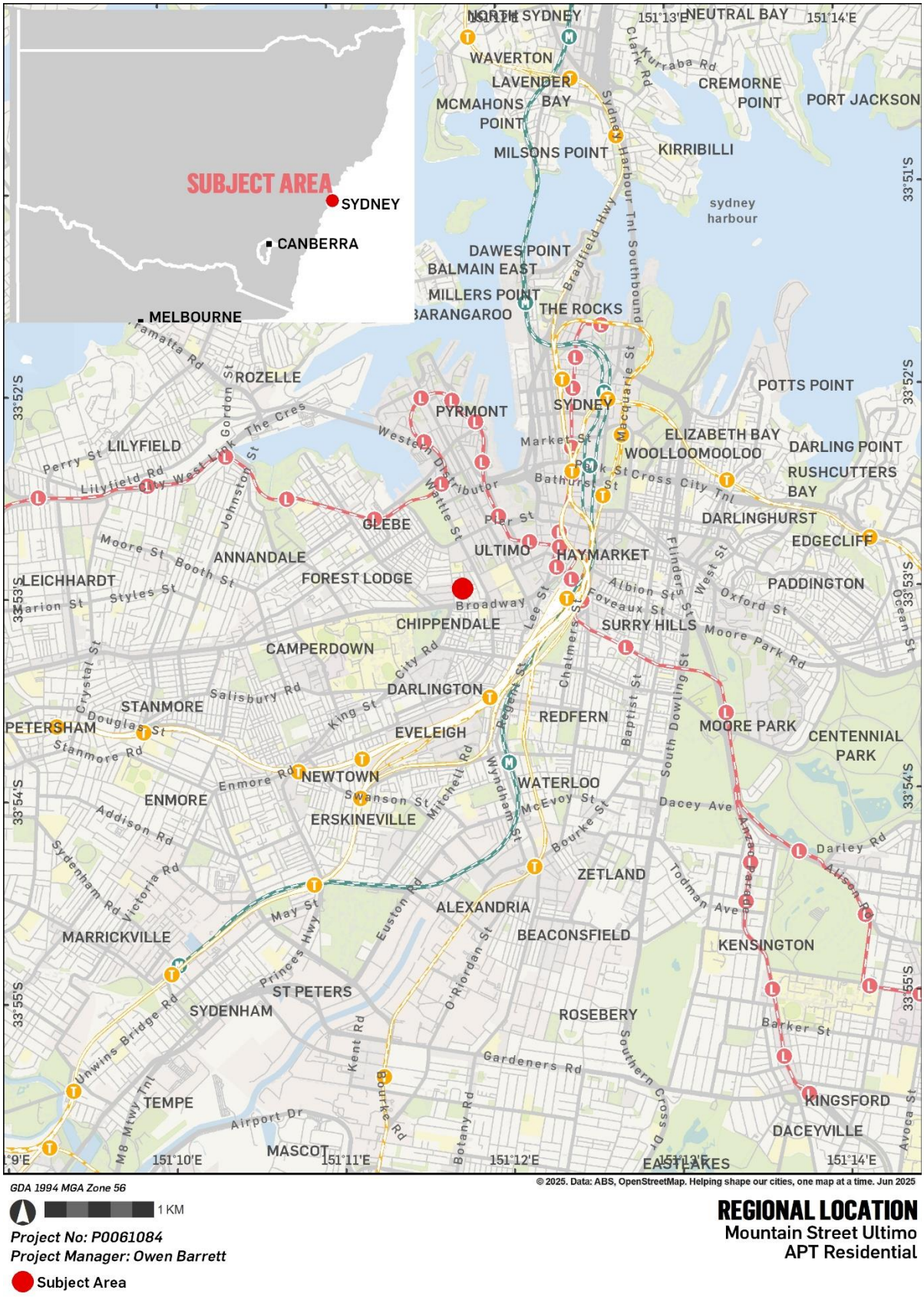


Figure 1 -Regional location of the subject area.

Source: [OpenStreetMap with Urbis Overlay]

Figure 2 – Location of the subject area.

Source: [NearMap with Urbis Overlay]

1.2. METHODOLOGY

The HAIA has been undertaken in accordance with the principles and guidelines of *The Burra Charter, The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS Incorporated, 2013) ('Burra Charter') and as described in the following publications:

- *NSW Heritage Manual* (Heritage Office and Department of Urban Affairs and Planning, 1996).
- *Archaeological Assessments* (Heritage Office and Department of Urban Affairs and Planning, 1996).
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Branch of the Department of Planning, 2009).
- *Historical Archaeology Code of Practice* (Heritage Office of the Department of Planning, 2006).

The HAIA included the following:

- Searches of statutory and non-statutory heritage listings (Section 2).
- Historical research on the subject site including analysis of historic mapping and imagery (Section 3).
- A physical survey of the subject site (Section 4.3).
- Analysis of relevant archaeological assessments (Section 4).
- Assessment of archaeological potential (Section 5).
- Assessment of archaeological significance (Section 6).
- Archaeological impact assessment (Section 7).
- Provision of recommendations for the management of archaeological relics (Section 8).

1.3. AUTHORSHIP

The present report has been prepared by Hayley Campbell (Archaeology Assistant), Pedro Silva (Consultant) with review and quality control undertaken by Kelly Strickland (Associate Director).

- Hayley Campbell holds a Bachelor of Archaeology from LaTrobe University, a Graduate Diploma in Museum Studies from Deakin University, and a master's degree in Heritage Conservation from the University of Sydney.
- Pedro Silva holds a Bachelor of History and Archaeology (Honours) from the University of Coimbra (Portugal).
- Kelly Strickland holds a Bachelor of Ancient History (Honours) from Macquarie University and a Graduate Certificate in Development Planning from Curtin University.

1.4. LIMITATIONS

The HAIA was undertaken to investigate historical archaeological heritage within the subject site. It does not consider Aboriginal archaeological remains or built heritage items.

2. STATUTORY CONTEXT

2.1. NATIONAL LEGISLATION

Environment Protection and Biodiversity Conservation Act 1999

In 2004, a new Commonwealth heritage management system was introduced under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The National Heritage List (NHL) was established to protect places that have outstanding value to the nation. The Commonwealth Heritage List (CHL) was established to protect items and places owned or managed by Commonwealth agencies. The Australian Government Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) is responsible for the implementation of national policy, programs and legislation to protect and conserve Australia's environment and heritage and to promote Australian arts and culture. Approval from the Minister is required for controlled actions which will have a significant impact on items and places included on the NHL or CHL.

Commonwealth Heritage List

The (CHL) was established by the EPBC Act to protect Indigenous, historic, and natural heritage places owned or controlled by the Australian Government. The CHL and EPBC Act contain provisions for the management and protection of listed places under Commonwealth ownership or control. There are no items on the Commonwealth Heritage List within the study area. As such, the heritage provisions of this act do not apply, and project works for the Proposal would not require referral to the Minister.

The subject site does not contain, nor is it located within proximity of, any items which are listed on the CHL.

National Heritage List

The National Heritage List (NHL) was established by the EPBC Act to protect places of significant natural or cultural heritage value at a national level. The EPBC Act requires NHL places to be managed in accordance with the National Heritage Management Principles. Under sections 15B and 15C of the EPBC Act, a referral must be made to the Department of the Environment and Energy for actions that are likely to have a significant impact on National Heritage listed properties. There are no items listed on the National Heritage List within the study area. As such, the heritage provisions of this act do not apply, and project works for the Proposal would not require referral to the Minister.

The subject site does not contain, nor is it located within proximity of, any items which are listed on the NHL.

2.1.1. State Legislation

New South Wales Heritage Act 1977

The NSW Heritage Act 1977 (the Heritage Act) provides protection to items of environmental heritage in NSW. Heritage items protected under the Heritage Act include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, social, aesthetic, scientific, archaeological, architectural, cultural or natural values.

State significant items are listed on the NSW State Heritage Register (SHR) and are given automatic protection under the Heritage Act against any activities that may damage an item or affect its heritage significance. Under Section 57(1) of the Heritage Act, Heritage Council approval is required to move, damage, or destroy a 'relic' listed in the SHR, or to excavate or disturb land which is listed on the SHR and there is reasonable knowledge or likelihood of relics being disturbed.

Section 4 of the Heritage Act defines a 'relic' as:

> *Any deposit, object or material evidence*
>
> *(a) which relates to the settlement of the area that comprises New South Wales, not being an Aboriginal settlement, and;*
>
> *(b) is of State or local heritage significance.*

Under Section 139(1) of the Heritage Act, an excavation permit is required to disturb or excavate land "knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is

carried out in accordance with an excavation permit". Under legislative changes in 2022, a Section 139(4) may be sought for certain exempt activities which result in ground disturbance not resulting in the removal of Local or State significant relics. A Section 139(4) requires assessment by a suitably qualified archaeologist but does not require approval from Heritage NSW.

The Heritage Act requires government agencies to identify and manage heritage assets in their ownership and control. Under Section 170 of the Heritage Act, Government agencies must keep a register which includes all local and State listed items or items which may be subject to an interim heritage order that are owned, occupied or managed by that Government body. Under Section 170A of the Heritage Act all government agencies must also ensure that items entered on its register are maintained with due diligence in accordance with State Owned Heritage Management Principles.

The current HIAA has been undertaken to determine the likelihood of any local or State archaeological resources being retained within the subject site.

State Heritage Register

The Heritage Act is administered by the Office of Environment and Heritage. The purpose of the *Heritage Act 1977* is to ensure cultural heritage in NSW is adequately identified and conserved. Items of significance to the State of NSW are listed on the NSW State Heritage Register (SHR) under Section 60 of the Act.

The subject site contains one heritage item that is the listed on the State heritage register. The item is listed as '*Electrical Substation No.5'* (SHR 00934).

Figure 3 Heritage Map detailing the subject area in yellow.

Source: NSW Planning Portal ePlanning Spatial Viewer

Section 170 Heritage and Conservation Register

The Heritage Act also requires government agencies to identify and manage heritage assets in their ownership and control. Under Section 170 of the Heritage Act, Government agencies must keep a register which includes all local and State listed items or items which may be subject to an interim heritage order that are owned, occupied or managed by that Government body. Under Section 170A of the Heritage Act all government agencies must also ensure that items entered on its register are maintained with due diligence in accordance with State Owned Heritage Management Principles.

The subject site does contain a site which are listed on a S.170 Register. The site is listed under the NSW State Agency Section 170 Heritage and Conservation Register as '*Electricity Substation No. 5'* (3430486).

Environmental Planning and Assessment Act 1979

Local Environmental Plans (LEPs) are made under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Sydney Local Environmental Plan 2012

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires each LGA to produce a Local Environment Plan (LEP). The LEP identifies items and areas of local heritage significance and outlines development consent requirements.

The subject site falls within the Sydney Local Government Area and is subject to the Sydney Local Environmental Plan 2012 (LEP) Under Section 5.10, Clause 2 of the Sydney LEP, development consent is required when:

> *(c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.*

Under Section 5.10, Clause 7 it is specified that:

> *(the) consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies):*
>
> *(a) notify the Heritage Council of its intention to grant consent, and*
>
> *(b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.*

Historical archaeological sites are listed under Part 3 of Schedule 5 of the Sydney LEP 2012.

The subject site contains a local, State and S.170 heritage item listed under Part 1 of Schedule 5 of the Sydney LEP as *'Electricity Substation'* (I2053). Further, the subject area is located within the *Mountain Street Heritage Conservation Area* (C68).

The subject site is also located in proximity to a number of heritage items of local significance, as identified in Table 1 below:

Table 1 - Heritage items located within proximity of the subject site – Sydney LEP 2012

Item Name	Item No.	Address	Level
Former "Grace Bros" Homewares" including interior	2018	185-211 Broadway, Ultimo NSW	Local
Former Sydney Technical College School of Rural Studies including Interior	2052	16-20 Mountain Street, Ultimo NSW	Local
Warehouse "Wilcox Mofflin" Ltd.	2054	46- 52 Mountain Street, Ultimo	Local
St Barnabas Anglican Church Site Remnant Building Components and Grounds	2055	57-61 Mountain Street, Ultimo NSW	Local

2.2. NON-STATUTORY IMPLEMENTS

The EP&A Act requires each LGA to produce a Development Control Plan (DCP). Not all LGAs provide specific development controls to protect historical archaeological resources.

The subject site is encompassed by the Sydney DCP 2012.

1) An archaeological assessment is to be prepared by a suitably qualified archaeologist in accordance with the guidelines prepared by the NSW Office and Environment and Heritage.
2) For development proposals in Central Sydney, refer to the Central Sydney Archaeological Zoning Plan to determine whether the development site has archaeological potential.
3) An archaeological assessment is to be submitted as part of the Statement of Environmental Effects for development applications affecting an archaeological site or a place of Aboriginal heritage significance, or potential archaeological site that is likely to have heritage significance.
4) An archaeological assessment is to include:
    a) an assessment of the archaeological potential of the archaeological site or place of Aboriginal heritage significance;
    b) the heritage significance of the archaeological site or place of Aboriginal heritage significance;
    c) the probable impact of the proposed development on the heritage significance of the archaeological site or place of Aboriginal heritage significance;
    d) the compatibility of the development with conservation policies contained within an applicable conservation management plan or conservation management strategy; and
    e) a management strategy to conserve the heritage significance of the archaeological site or place of Aboriginal heritage significance.
5) If there is any likelihood that the development will have an impact on significant archaeological relics, development is to ensure that the impact is managed according to the assessed level of significance of those relics.

2.3. SUMMARY OF HERITAGE CONTEXT

The statutory context of the subject site is summarised as follows:

- In view of the protections afforded to heritage items by the EPBC Act, Heritage Act, Sydney LEP 2012 and Sydney DCP 2012, the current HAIA has been undertaken to determine the likelihood of historical archaeological remains being retained within the subject site.
- The subject area contains one State heritage listed item under the Heritage Act 1977. The item is listed as '*Electrical Substation No.5'* (SHR 00934).
- The subject area contains one S.170 heritage listed item under the NSW State Agency Section 170 Heritage and Conservation Register as '*Electricity Substation No. 5'* (3430486).
- The subject area contains one heritage item listed for its local significance under Schedule 5 of the Sydney Local Environmental Plan 2012. The item is listed as *'Electricity Substation'* (I2053). Further, the subject area is located within the '*Mountain Street Heritage Conservation Area'* (C68)

3. HISTORICAL CONTEXT

The historical context of the subject site provides the basis for assessing what may be retained in the ground as archaeological evidence of past development. The following description is based on archival source material and provides an overview of the phases of site development, which includes the nature, character and distribution of historical land use and associated ground disturbance.

The historical context is discussed according to the following development and use phases:

- Phase 1: **Early 19th Century European Development (1789 – 1905)** (Section 3.2.1).
- Phase 2: **Land Resumption (1905 – 1909)** (Section 3.2.2).
- Phase 3: **Industrial Use (1909 – Present)** (Section 3.2.3)

Detailed mapping of each phase is included in Section 3.2.

3.1. HISTORY OF ULTIMO

The following historical overview of the local area has been partly reproduced from 'Heritage Impact Statement assessment' by Godden Mackay Logan in 2006 and the 'Final Archaeological Report by AMAC in 2024.

The Ultimo region is situated on the Traditional lands of the Gadigal people. Gadigal Country stretch from along the southern side of Port Jackson from South Head to present day Petersham. The southern boundary of Gadigal land forms the Alexandra canal and Cooks River.

The area was part of the estate of the surgeon John Harris, who was originally granted 34 acres in 1803. Harris called his land 'Ultimo Farm'. Harris was granted further land on the peninsula, and by 1818, with additional land purchases, Harris owned a cumulative 233 acres, covering Ultimo, and much of the adjoining Pyrmont and parts of Haymarket regions[2].

By the mid-1800s part of the estate facing Parramatta Street was sold off, and commercial industry began appearing within the area. Although the low-lying and swampy region of the area behind Parramatta Street, from the head of Darling harbour to the head of the Black Wattle Swamp, was the only part of Ultimo that was developed.

At this time a number of workshops, slaughter yards and scrap industries took advantage of the water channels at Blackwattle Creek. The area also comprised of workers cottages which provided homes for the working poor. Residential living quarters during this period were cramped and unsanitary, known as one of the poorest and most undesirable regions in the growing Sydney settlement.

In 1859 Pyrmont Bridge officially opened, and in 1899 the Ultimo Powerhouse was commissioned to service power for Sydney's electric trams made the area more accessible.

Around the mid nineteenth century, much of Ultimo from Parramatta Road remained more or less rural. The initial grant to John Harris had specified that a reserve be created for a road along the peninsula, which eventuated in the modern-day Harris Street.

By the late nineteenth century homes were demolished to make way for large warehouses and store yards. In 1905, the City Council acquired powers that enabled the resumption of land for slum clearance[3]. Sydney City Council resumed the Athlone Place area in 1905, subsequently clearing buildings and filling and draining low lying land. William Greenwood was awarded the contract for the construction of the new streets in 1908. During this period many industries were set up in the area to take advantage of the water and rail access, from large mills to small manufacturing industries, while the wool stores that came to Wattle Street took advantage of the escarpment of the quarries.

[2] Matthews, M 1982, *Pyrmont and Ultimo: A History*, M. Mathews, Sydney

[3] Fitzgerald, S and Golder H 1994, *Pyrmont and Ultimo: Under Siege*, Hale and Iremonger, Sydney

The 1950's onwards bought more change for the suburb of Ultimo, with many established industries closing their doors in addition to the closure of schools and the establishment of freeway bypasses[4].

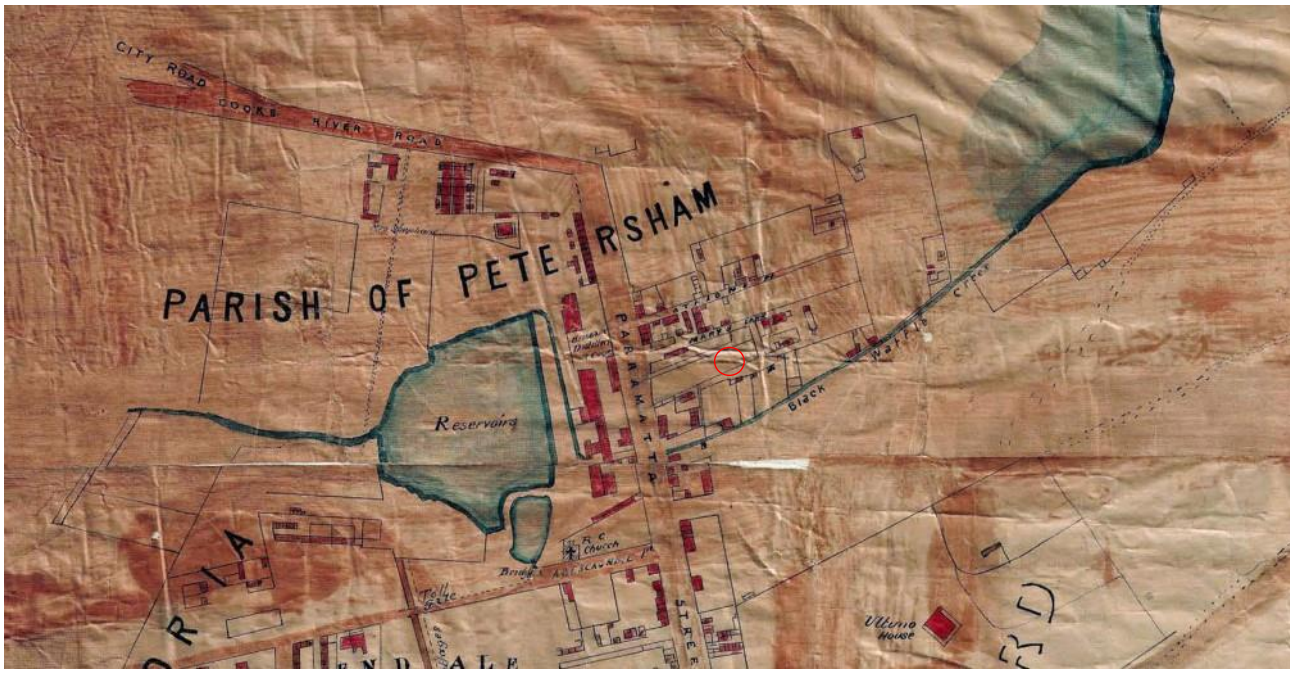


Figure 4 – An extract from the 1845 Shields City of Sydney map. Approximate location of subject as indicated in red.

Source: City of Sydney Archives, call number: A-00880420

3.2. HISTORIC DEVELOPMENT PHASES

3.2.1. Phase 1: 19th Century Colonial Development (1789-1905)

Reverend Richard Johnson, a civil magistrate and chaplain of the first fleet, was first granted a 400-acre land allotment in Glebe, in which the subject area is located, by Lieutenant-Governor Philip Gidley King in August 1789[5]. A keen farmer, Johnson considered his Glebe allotment of little use likely due to the low-lying and swampy nature that characterised the land in proximity to the Blackwattle River. It is likely that Johnson subjected the land to clearance throughout his tenure however the land remained largely unoccupied for the better part of 30 years. By 1828, the Clergy and School Lands Corporation had acquired the land, advertising portions of Johnson's original grant for lease with permission to purchase stating that:

> '*a transferrable lease for twenty-one years will be made, and may be, at any time within that period, purchase the fee simple by paying up the amount of twenty years rent, marking the first instance upon which development of the land was to occur*'[6].

By 1843, David Chambers and George Kenyon Holden had purchased a land portion of 3 acres and 3 roods in trust from within the Clergy land allotment (Figure 4 and Figure 5). By all accounts, Chambers and Holden leased the land to tenants as residential dwellings. In the period from 1855 to 1865, the allotment had a series of improvements across seven lots. One timber dwelling fronting present Smail Street had verandahs to the north and east and no outbuildings associated with the main structure. A further three timber structures were set back to the rear facing Smail Street, each with an associated timber outbuilding. A vacant lot was located in the eastern portion of the allotment. Two structures fronted present day Mountain Street. A timber dwelling with verandah and 'U' shaped rear was located to the southeast whilst a brick structure fronting Mountain Street included timber structures to the rear that established a courtyard. (Figure

[4] 'Ultimo', Dictionary of Sydney

[5] 'Ultimo' Dictionary of Sydney

[6] The Australian 1828, 'Spirit of the Temporalties'

6) In addition a public water main had been established on Athlone Street for public use. A public brick sewer line was present just outside the subject area along Athlone Place, present day Mountain Street. The Sands Directory indicates that the subject area experienced a variety of occupants. In 1858, The Sands Directory lists Henry Cockburn, a carpenter, and Hypolite Dupain as occupying the site. By 1873, two vacant houses and Cornelius Hickory, a cab owner occupy the site. Historical documentation dating to 1888 further details improvements within the subject area. An additional structure had been erected adjacent to the existing timber dwelling on the Smail Street corner to the northeast. The previously vacant block had now a dwelling with verandah and rear outbuilding. A new vacant block in the mid portion of the allotment had experienced the demolition of the existing timber structures. The final occupier of the lot was Timothy Ryan who resided on the property until the Blackwattle Resumption in 1905[7].

In 1902, the 'Athlone Place' substation was constructed on the corner of Athelone Street and Athelone Place; likely slightly to the south of where the current substation stands and was known as 'Substation No.3' After the resumption of the area in 1905, inclusive of the clearance of buildings, tenders were called to for work to replace the former substation in 1909, with the present structure built shortly afterwards. Prominent City Architect and Surveyor Robert Hargreaves Brodrick won the contract for the new substation in 1909. The substation would come to be known as the Athlone Place 'Substation No.3'[8] (Figure 8).

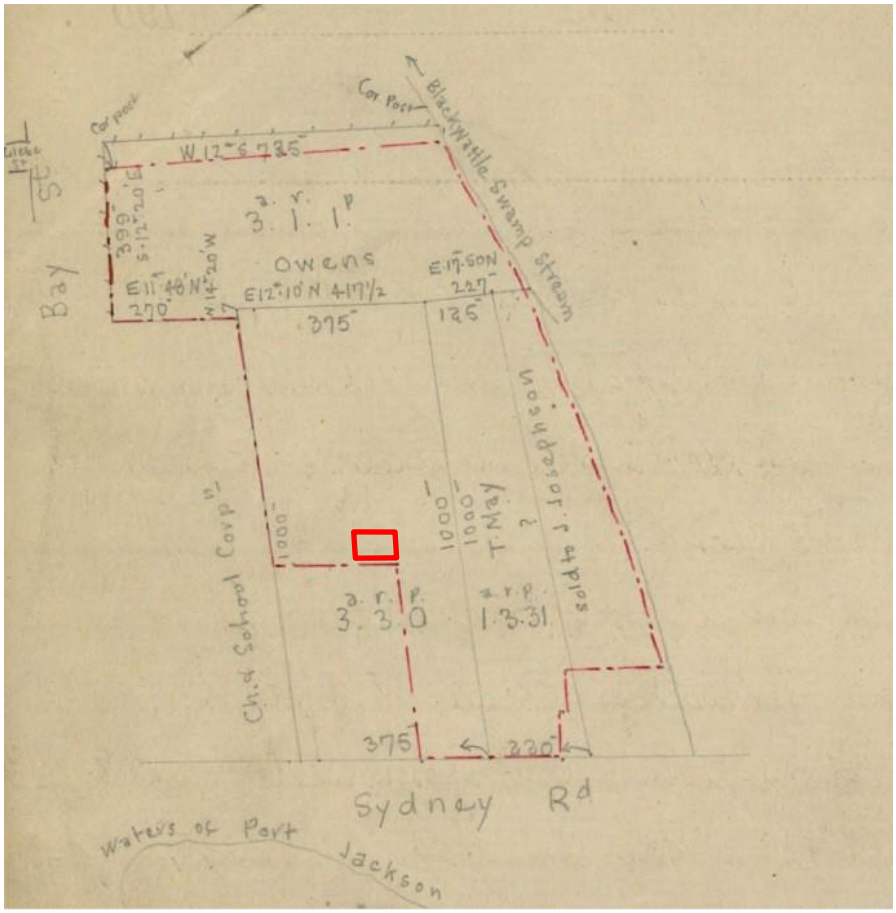


Figure 5 An extract Primary Application map, 1909, showing allotments prior to resumption efforts in 1905, detailing the approximate location of the subject area during this period.

Source: HLRV, Primary Application 15666

[7] The Sands Directory, 1904.

[8] NSW State Heritage Inventory, 'Electricity Substation'

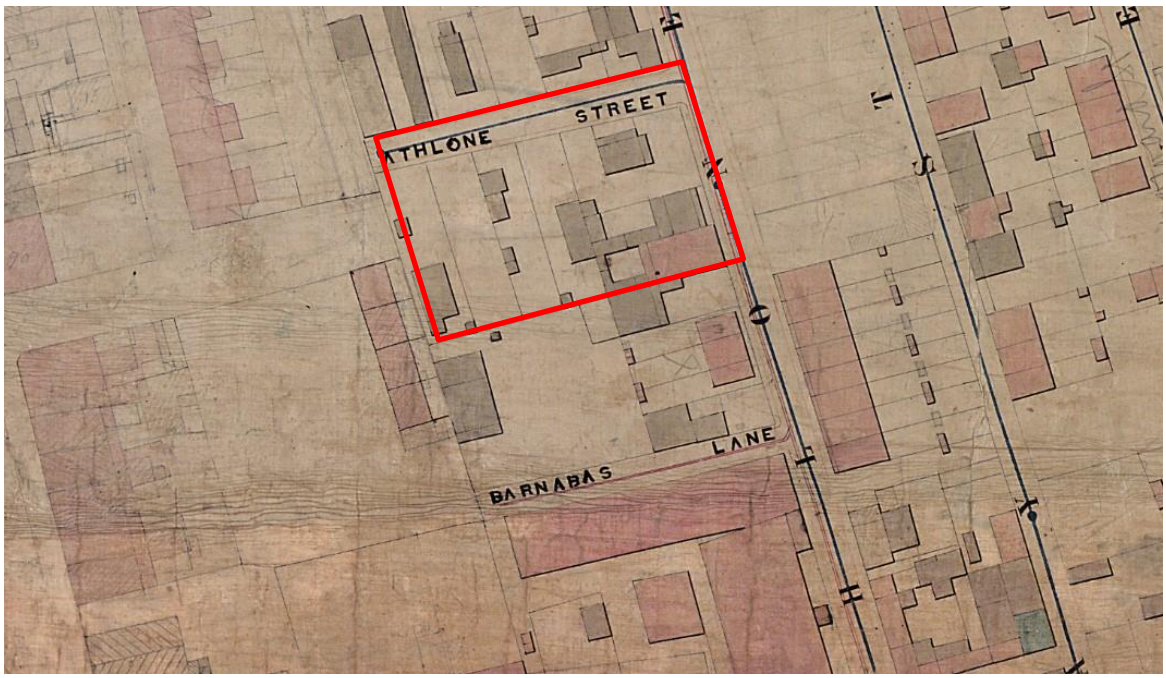


Figure 6 - An extract of an c.1855-1865 City of Sydney Block U2 Trigonometry map. The subject area as indicated in red features several dwellings that has been developed on the property (grey shading indicates timber structures, pink shading indicates brick structures).

Source: City of Sydney, call number: A0088041

Figure 7 - An extract of a c.1888 City of Sydney Metropolitan detail sheet. The approximate location of the subject area as in red, detailing the residential dwellings and Athlone Street within the property boundaries.

Source: State Library of NSW, call number: M SER 811.17-1

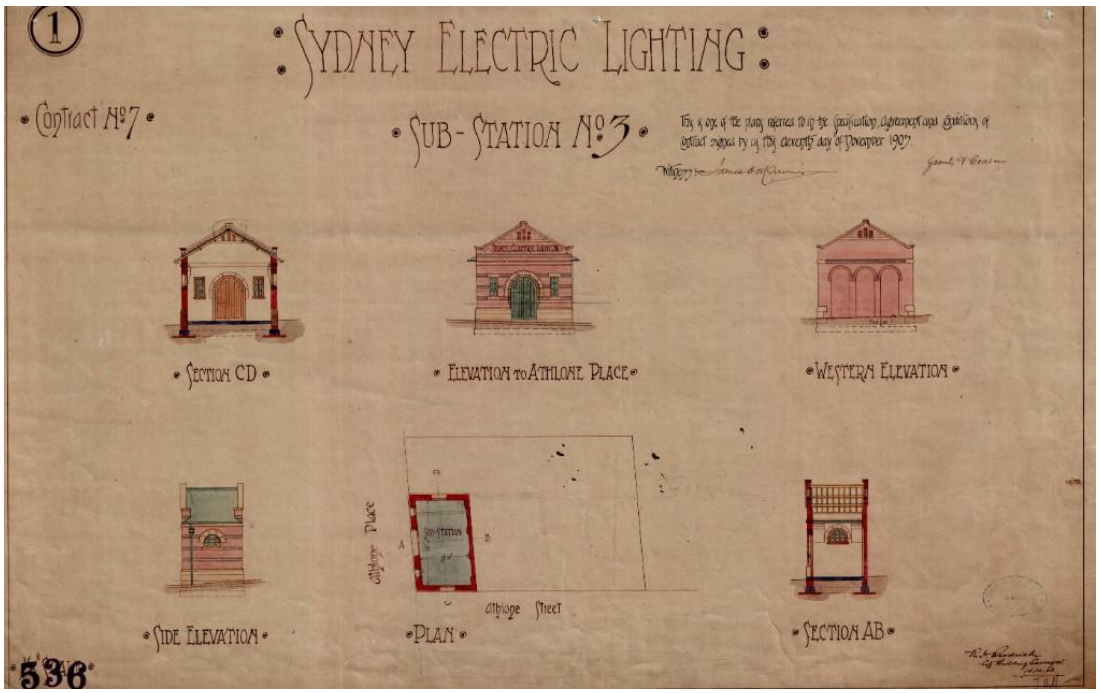


Figure 8 – A plan dated c.1903 of the Sydney Electric Lighting Substation No.3 drawn and surveyed by City Architect and surveyor Robert Hargreave Brodrick, located on the corner of Athlone Place and Athlone Street, Ultimo (within the subject area).

Source: City of Sydney, call number: A-00543828

Figure 9 – A photograph dated c.1905 prior to resumption of the Athlone Place area. View from Athlone Place looking south, former 'Substation No.3' is extant on the middle right, as indicated by arrow.

Source: City of Sydney, call number: A0086734

3.2.2. Phase 2: Land Resumption (1905 - 1909)

By 1905, the greater Ultimo region had become a wholly unsanitary suburb characterised by narrow laneways and small workers cottages, lack of access to sewer drainage and water meant the living conditions in Ultimo in the late 19th Century and early 20th centuries were said to be unfit for human habitation and subsequently declared as a slum. In the early twentieth century, Ultimo was selected for resumption by the Sydney Municipal Council under the *Sydney Corporation Amendment Act 1905*[9]. Resumption commenced in 1905 by the purchasing of land by the Sydney Municipal Council. The resumption area stretched from the region extending from Kelly Street to the southeast, Bay Street to the northeast and to the eastern line of Blackwattle Lane, inclusive of the subject area (Figure 10). The subsequent clearing of buildings in favour of the drainage of low-lying land razed approximately 400 houses and displaced 1, 779 acres in the Athlone Place vicinity[10]. The Athlone Place 'Substation No.3' on the corner of present day Smail and Mountain Streets was demolished in line with resumption efforts in 1905 in addition to the residential dwellings across the lot.

Subsequent calls to tender for works on a new electricity substation was initiated in 1905 with construction efforts occurring in 1909[11]. The wider resumption works included filling and draining low lying land up to 3.1m above the original ground surface.[12] The new structure was to be constructed in the in proximity to the former substation location, the new tuck-pointed face brick structure was to be designed in the Federation free style with sandstone window headers, sill detailing and a gabled parapet. The construction of the substation involved load bearing face brick and sandstone blocks for the parapet.

[9] *Sydney Corporation Amendment Act 1905*

[10] NSW Government Gazette 1905, 'Resumption'

[11] State Heritage Inventory, 'Electricity Substation'

[12] Mider 2001, *Historical Archaeological Assessment Broadway and Mountain St Development Site*

The first systemic resumption efforts were centred around Athlone Place, Ultimo, inclusive of the subject area. Slum clearance operations, including the demolition of existing buildings often included street widening and creation as a result. In 1906, Smail Street was established as the northern boundary to the subject area on a similar alignment to that of the former Johnston Street. Smail Street was named for John Moore Smail, the chief engineer of the Sydney Water Board[13].

By 1909, the Municipal Council of Sydney had commenced a series of City council leases across the Blackwattle area of resumption, leased at 50-year terms, the land portions were intended to generate commercial and industrial activity across Ultimo. In November 1909, James Connolly, an engineer residing in Woolloomooloo, leased Lot 21 in DP5567 from the Municipal Council of Sydney (Table 2) which forms the present-day subject area. Historical documentation dated to 1909 details Lot 21 as excluding the electricity substation from the leasehold, establishing an irregular shaped parcel of land that was to hold Connolly's industrial premises for over 30 years (Figure 10). The series of leases intended for industrial purpose would mark the character of Ultimo for years to come.

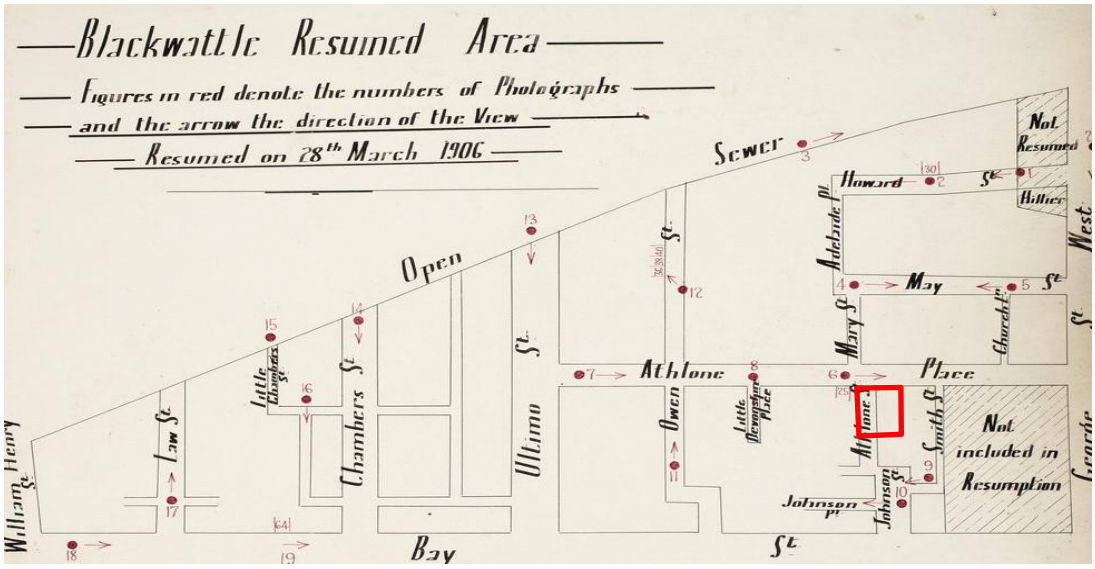


Figure 10 - A map dated c.1906 of the Blackwattle Resumed Area in present day Ultimo. The approximate location of the subject area as indicated in red.

Source: City of Sydney, call number: A00040049

[13] City of Sydney 2020, 'History of Sydney Streets'

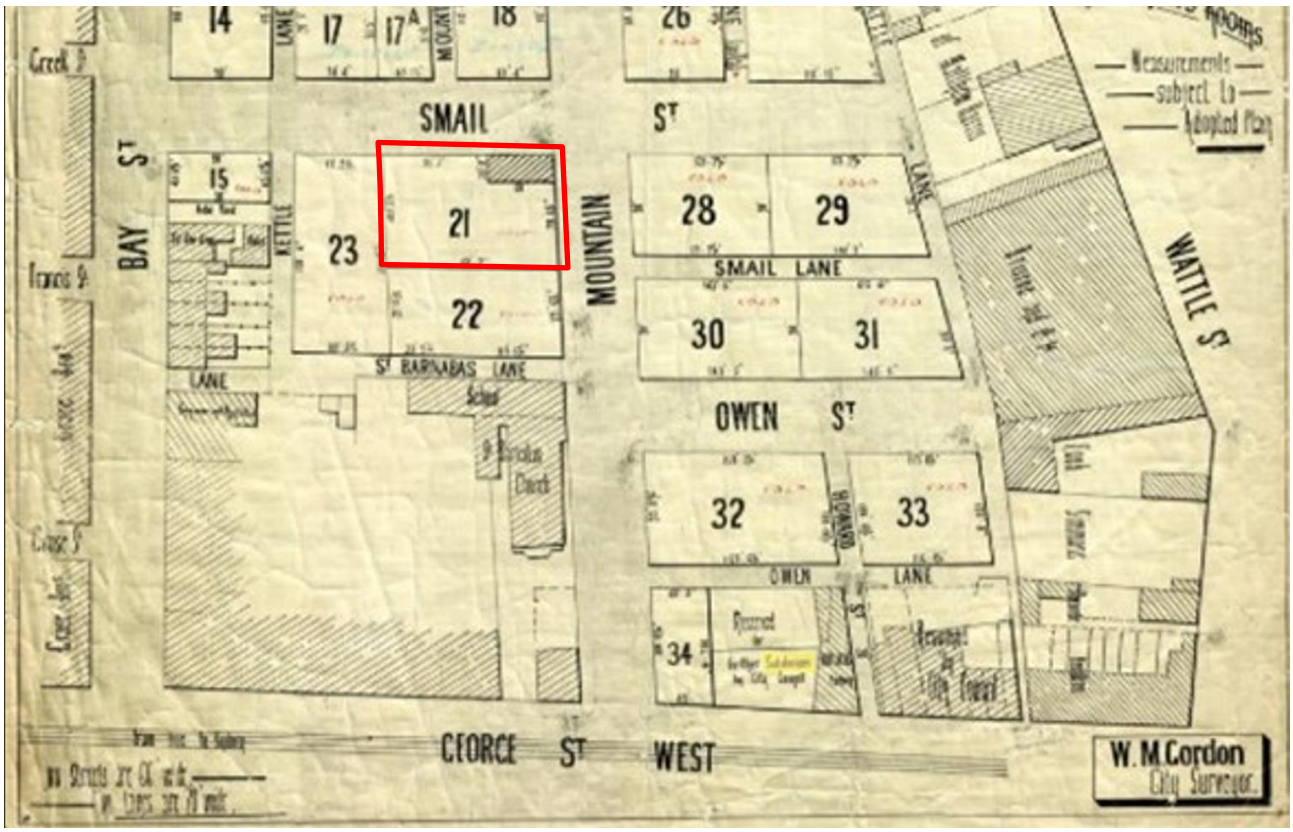


Figure 11 Blackwattle subdivision map dated c.1909. The approximate location of the subject area as indicated in red. The subject area is located within Lot 21 of the subdivision.

Source: City of Sydney Archives, call number: A-0084521

3.2.3. Phase 3: Industrial Use (1909 – Present)

James Connolly established a prominent window manufacturer in the early 19th century on the property, providing services to major development projects in the central township of Sydney, lauded for his steel window frames, Connolly was mentioned in prominent architecture journals of the period, mentioning the superior fire resistance of his window frames[14]. A 1917 fire plan map of the Glebe locality detailed the development that had occurred throughout Connolly's tenure of the property. An open-air yard was located to the rear of the property, surrounded by open tin-roofed sheds housing a forge. To the southeast, a series of tin roofed warehouses encompassed the lot, serving as a machinery engineers shed. Further, the plan mentions the installation of electric light within the sheds, likely due to the close proximity to the substation. It is, however, unclear as to whether the existing substation was utilised within Connolly's property or utilised by another entity. The 1917 map details the location of the substation as being utilised as 'offices' constructed of brick in an L-shaped arrangement (Figure 12). In 1925 an amendment to the 1917 fire plan was published detailing a business name change to 'Fitzroy Ironworks and J. Connolly'. The substation is depicted clearly to the northeast of the lot as is a small office building immediately to the south (Figure 13).

The City of Sydney Sands Directory details Connolly's land improvements throughout his tenure as lessee from 1909. A workshop is listed as being of brick, slate and iron materiality with Connolly's enterprise named as an ironworks. The electricity substation is listed within the directory as a 'light supply station'[15].

[14] Building: the magazine for the architect, property owner and merchant 1936, Vol. 58, No.346

[15] The Sands Directory, 1911

By 1936, James Connolly Steel Windows Limited was liquidated by G.C.O Beelaerts in Martin Place, Sydney[16]. By 1938, Connolly's leasehold had come to an end and the Sydney County Council, an entity who managed the electricity for the Sydney municipalities, had assumed the land.

Aerial imagery dated to 1928 details that the subject area largely retained the spatial arrangement of the earlier 1917 layout save for the infill construction of a tin-roofed building in place of the former internal courtyard. From the mid to late 20th century industrial activity still featured heavily within the subject area and still associated with the Connolly name for the same purposes of its early occupation until 1950. [17] From 1961 until 1986 a manufacturer of asbestos products, known as Eliza Tinsley Pty. Ltd., was also present on site.[18] Between 1975 and 1991 the subject area was also used for warehousing and supply of multiple goods, including clothing, toy, homewares, flooring and machinery parts.[19]

There were a variety of different owners of the allotment throughout the majority of the 20th century, however it is likely that the land retained its industrial use. The arrangement of structures largely retained its formation until 2005, when electricity corporation Ausgrid assumed ownership of the land and removed the earlier structures entirely, with the exception of the existing electricity substation. Works for the preparation of the extant concrete surface took place in 2010 (Figure 21). In 2023, the substation was decommissioned.

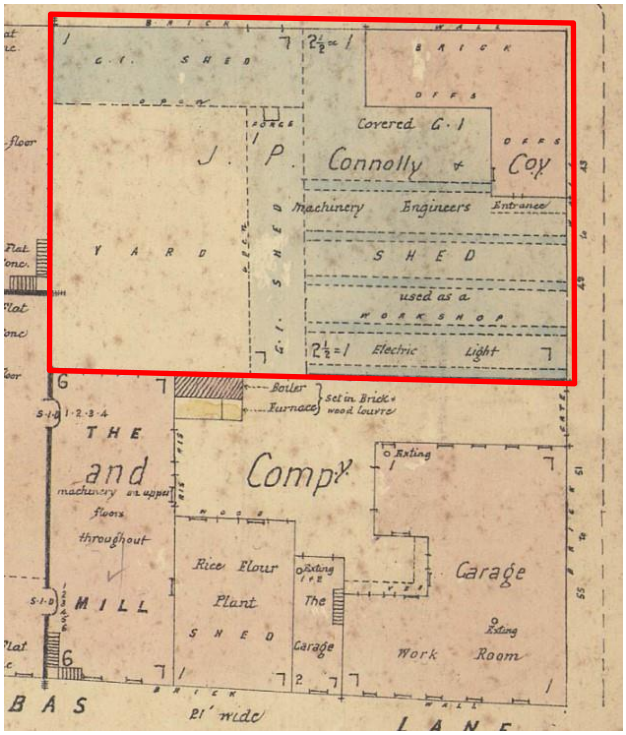


Figure 12 - Extract from Fire Insurance Underwriters Association of New South Wales Detail Survey Maps, Athlone Place Block No 205 Section 3, c.1917. The subject area is occupied by J.P Connolly and Coy.

Source: City of Sydney

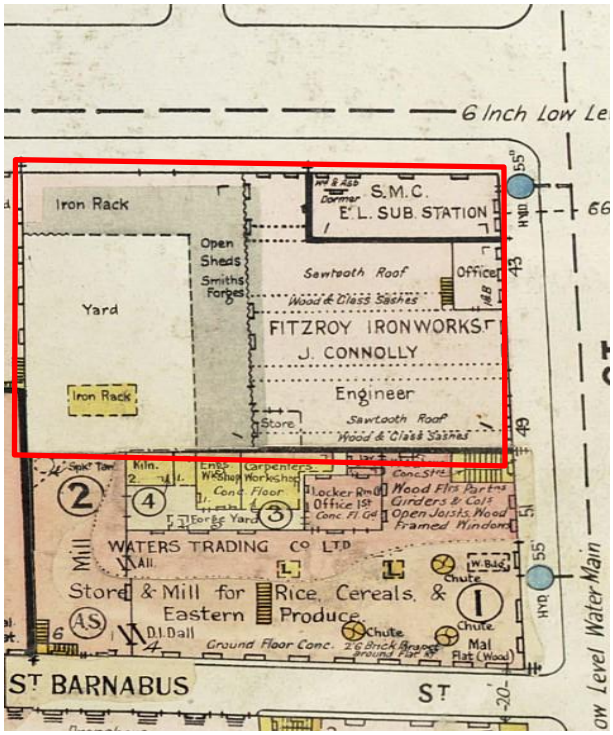


Figure 13 – Extract from Fire Insurance Underwriters Association of New South Wales Detail Survey Maps, Athlone Place Block No 205 Section 3, amendment to 8 October 1925. The subject area is occupied by Fitzroy Ironworks and J. Connolly.

Source: City of Sydney

[16] Government Gazette of the State of New South Wales 1936, James Connolly Steel Windows Limited

[17] Douglas Partners 2025, *Report on Detailed Site (Contamination) Investigation Proposed Mixed Use Development 41-49 Mountain Street, Ultimo NSW, Appendix C,* Page 24

[18] Ibid, Page 23-24

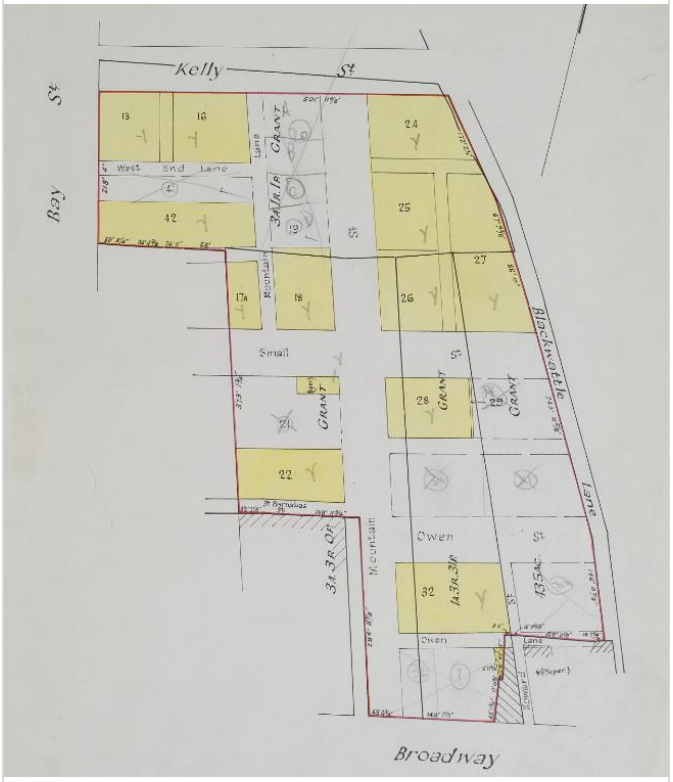
[19] Ibid, Page 21-22

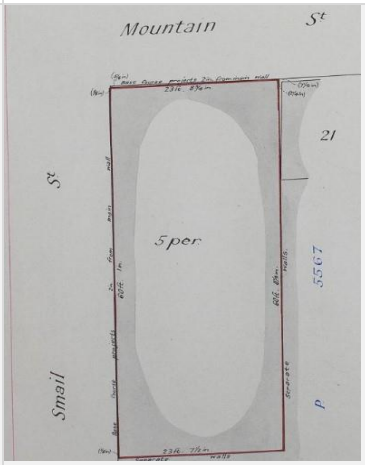
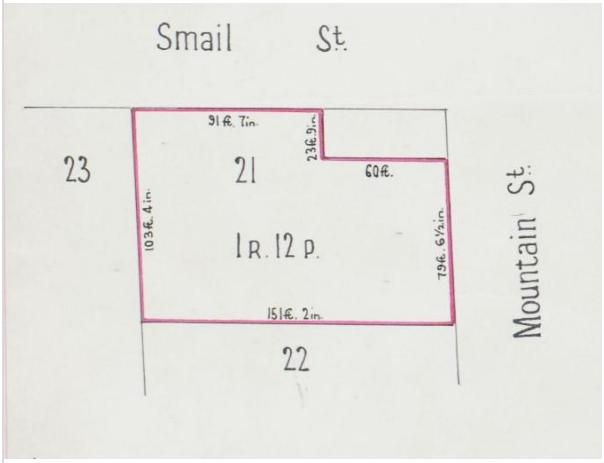
3.3. PROPERTY OWNERSHIP HISTORY

The relevant post European settlement property owners as identified through historical research are outlined below for reference.

Table 2 Property Ownership History

Year/Date	Owner	Source
August 1792	**Crown Grant** **From:** Philip Gidley King (Lieutenant-Governor) **To:** Reverend Richard Johnson (Chaplain) 400 acres	Primary Application 15666
24 November 1829	**Conveyance** **From:** Reverend Richard Johnson (Chaplain) **To:** The Trustees of the Clergy and School Lands	Primary Application 15666
3 April 1843	**Conveyance** **From:** The Trustees of the Clergy and School Lands **To:** David Chambers and George Kenyon Holden (trustees) 3 acres, 3 roods	Primary Application 15666
16 April 1909	**Conveyance** **From:** David Chambers and George Kenyon Holden (trustees) **To:** The Municipal Council of Sydney 3 acres, 3 roods Land holding from southeast Kelly Street, northeast line of Bay Street and the eastern line of Blackwattle Lane.	Vol. 5972 Fol. 95 and Vol.1965-50

Year/Date	Owner	Source
	 Figure 14 Sale of land to The Municipal Council of Sydney for resumption purposes. Subject area is included in lot 21.	
8 October 1909	Land resumption under the *Sydney Corporation Amendment Act 1905.*	
16 November 1909	**Lease Indenture** **From:** The Municipal Council of Sydney **To:** James Connolly (Engineer) Lot 21 in DP5567	Vol 1965 Fol.50
23 February 1938	**Conveyance** **From:** The Municipal Council of Sydney **To:** The Sydney County Council (Electricity provider for Sydney municipalities) 5 perches	Vol. 4912 Fol. 97

Year/Date	Owner	Source
	 Figure 15 – Sydney County Council land purchase.	
4 January 1950	**Conveyance** **From:** The Sydney County Council **To:** J. Connolly Limited (Engineer) from Woolloomooloo One rood, 12 perches Lot 21  Figure 16 – Land holding of J.Connolly Limited c.1950.	Vol. 6079 Fol.245
14 July 1955	**From:** J. Connolly Limited (Engineer) from Woolloomooloo **To:** Eliza Linsky Proprietary Limited	Vol. 6079 Fol.245

3.4. HISTORICAL AERIAL IMAGERY

Historical aerial imagery illustrates that the original internal courtyard in the southwestern portion of the lot was infilled to allow for the construction of a tin-roofed structure, likely a workshop shed. It is likely that this occurred after the 1930s.

Figure 17 – Aerial photograph dated to c.1928. Approximate location of the subject area as indicated in red.

Source: Australian Government Historical Imagery Viewer

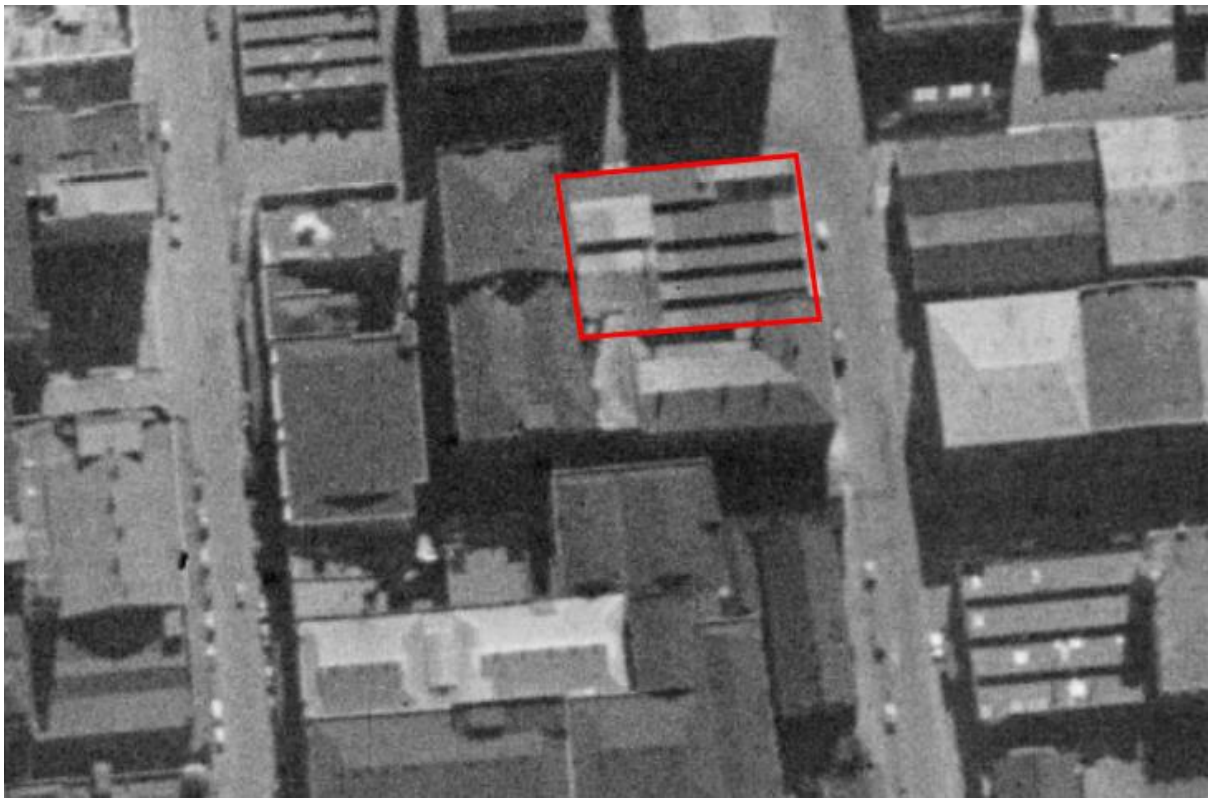


Figure 18 – Aerial photograph dated to c.1943. Approximate location of the subject area as indicated in red.

Source: Australian Government Historical Imagery Viewer

Figure 19 – Aerial photograph dated c.1948. Location of subject area in red. The internal courtyard has been infilled with a warehouse structure.
Source: NSW Government Historical Imagery Viewer

Figure 20 - Aerial photograph dated to c.1970. Location of subject area in red.

Source: NSW Government Historical Imagery Viewer

Figure 21 Aerial photograph 2010 detailing the preparation works for the extant structures within the subject area and addition of fill layer.

Source: NearMap 2025.

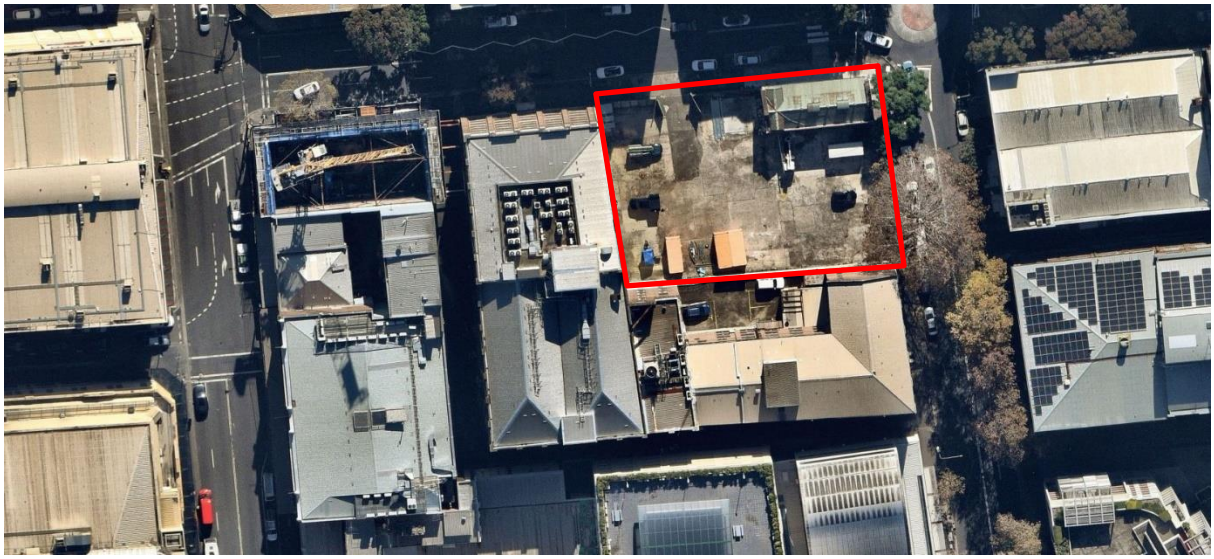


Figure 22 Current aerial photograph c.2025 detailing the extant structures within the subject area.

Source: NSW Government Historical Imagery Viewer

4. ARCHAEOLOGICAL CONTEXT

4.1. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Previous archaeological investigations may provide information on the potential nature and distribution of archaeological resources in a given area. A summary of relevant assessments is provided below.

4.1.1. Comparative Archaeological Reports

Previous archaeological investigations of similar contexts to the subject site may provide information on the potential nature and distribution of archaeological resources. A summary of relevant assessments is provided below.

AMAC Group 2023, 66 Bay Street, Ultimo

An archaeological investigation was undertaken by AMAC in 2023 of 66 Bay Street, Ultimo NSW. The site is located approximately 50m west of the present subject area with the archaeological investigation consisting of a salvage excavation. The salvage excavation was undertaken ahead of bulk excavation works to establish a new basement level within the site. The excavation found that although the site was classified as being within a disturbed location that evidence of a weathering, natural sandstone bedrock was present across the entirety of the site. Additionally, alluvial fills directly above the bedrock were consistent with dredged material, and subsoils that naturally occur within a swampy landscape. The study site contained partially disturbed structural remains dating to the mid to late 19th century and associated with the domestic occupation of the 1860's brick terrace.

The investigation found that most pre-terrace phase fills formed variants of clayey sands. Though the site is located on the Blackwattle resumption lands in vicinity of Johnsons Creek and Blackwattle Bay, most alluvial fills on the site appear to have accumulated naturally. However, the deepest clayey-sand alluvial fills were all damp and waterlogged indicating a higher water content in the layers toward the east of the site, consistent with the natural sloping topography. Ultimately, the deepest units were consistent as having been on the outer edges of a swamp or exposed ground for a period of time. Ultimately, the research potential of the study site was considered low in conjunction with the development program that would excavate deep into the bedrock, all locally significant relics and structural features were removed as a consequence.

Dana Mider 2001, *Historical Archaeological Assessment Broadway & Mountain St Development Site, Sydney*

In 2001, Dana Mider conducted a Historical archaeological assessment of a site located at 40-60 Mountain Street directly east of the subject area. The assessment concluded that, due to the substantial fill introduced in the area post land resumption between 1906 and 1910, archaeological deposits associated with the from the 1828 to 1910 occupation of the site used as commercial and domestic area, have a '*high likelihood of (…) surviving'.*

It further considers that such archaeological resources may have been preserved in situ, considering that no basements were established by subsequent development, including evidence of pre 1820s use of the site such as fences, tracks and farming activities.

Godden Mackay Logan 1990, 22-36 Mountain Street and 16-20 Smail Street, Ultimo NSW

Godden Mackay Logan undertook an archaeological investigation of 22- 36 Mountain Street and 16-20 Smail Street, Ultimo NSW in 2005. The site is located approximately 120m northeast of the present subject site. Prior to the commencement of the excavation, the existing buildings were demolished and the fill beneath them removed by machine excavation to a depth of 2 metres. The entirety of the subject area was divided by the remains of low, concrete piers belonging to the demolished structures. Of note, the site was located in low lying land with the excavated levels close to the water table, flooding occurred regularly.

Of note, across the six areas of excavation, all areas featured timber posts supported by brick pieces to prevent toppling. Further, all areas experienced in some form historic water ingress that had caused significant damage and disturbance to any structural features that may have remained. Additionally, Area 4 yielded soils that suggested that sandy soils formed historic fill intended to attempt to raise area to combat the wet, swampy nature of the landscape. Of further note was the lack of underground drainage throughout the entire subject area.

4.2. GEOTECHNICAL INVESTIGATIONS

Geotechnical investigations were undertaken by Douglas Partners at the subject site in early 2025. This investigation included the drilling of twelve boreholes and the installation of three groundwater monitoring wells across the site (Figure 23). A summary of the borehole logs is quoted below:

> *Concrete Pavement: Concrete pavement was encountered at the surface in all test locations, thickness of 80 mm to 160 mm to depths of between 0.05 m and 0.3 m below ground level (bgl) except for BH10.*
> *Fill: Variably compacted sandy soil with varying amounts of sandstone gravels and reclamation fill including asphalt, sandstone cobbles, tiles, metal, slag, ash, bricks, concrete. The fill extended to depths of between 1.0 m and 1.5 m; overlying*
> *Alluvial Soil: Very loose to dense sandy soil with varying amount of sandstone and ironstone gravels, extending to depths between 2.4 m and 2.5 m; overlying*
> *Sandstone Bedrock: Extremely weathered sandstone only encountered at depths of between 2.5 m and 3.6 m in BH102. Generally highly to moderately weathered low strength with medium strength bands becoming slightly weathered and medium to high strength encountered to termination depth.*
> *Building debris and / or other anthropogenic inclusions (sandstone gravel, brick, cobbles, sandstone cobbles, tile, trace terracotta, concrete, rusty metals, glass, ash, slag) were recorded in all boreholes across the site within the fill material from 0.1 to 1.5 m bgl. No potential asbestos containing material (PACM) was recorded, however; building debris is indicative of the potential presence of asbestos. Trace of ash, slag and asphalt were also encountered in all of the boreholes across the site within the fill layer.*[20]

Figure 23 Locations for geotechnical investigations

Source: ***Douglas Partners 2025 Appendix A***

[20] Douglas Partners 2025, *Report on Detailed Site (Contamination) Investigation Proposed Mixed Use Development 41-49 Mountain Street, Ultimo NSW,* page 29

4.3. SITE INSPECTION

On the 24 June 2025, Hayley Campbell (Urbis Archaeology Assistant), conducted a visual inspection of the subject area. The purpose of the visual inspection was to observe the ground disturbance, soil conditions, and to investigate whether there were any observable historical archaeological remains within the subject area.

One extant single level electricity substation building occupies the northeastern corner portion of the subject area fronting Mountain Street. The interior of the electricity substation contained concrete flooring across its footprint. This building is not believed to contain a basement level (Figure 23). The 43-49 Mountain Streets lots are wholly encompassed by hardstand concrete with one temporary demountable office structure located to the northeast and one electricity housing structure to the west (Figure 26). Groundwater monitoring wells are interspersed throughout the subject area, in addition to remnant drainage connections (Figure 27). Visible connections to in ground services, specifically electricity and drainage were observable. Further, the shadow profile of prior structures was observable on neighbouring 1-3 Smail Street (Figure *28*).

Ground surface visibility (GSV) across the entirety of the subject area was assessed as low due to the presence of structures and hardstand concrete. No soils or vegetation were visible throughout the subject area. No major subsurface disturbance was observed in the 43-49 Mountain Street properties. Additionally, no historical archaeological remains were visible on the ground surface.

Figure 24 - View northwest along Mountain Street towards the subject area.

Figure 25 – View southwest facing Mountain Street and Smail Street, towards the subject area.

Figure 26 View south detailing the northern elevation of the electricity substation.

Figure 27 Interior of the substation facing northeast.

Figure 28 View west detailing the shadow profile on neighbouring 1-3 Smail Street.

Figure 29 View northwest detailing in ground drainage connections and hardstand concrete,

Figure 30 View northeast detailing the concrete hardstand ground coverage.

Figure 31 View north detailing a ground monitoring well.

5. ARCHAEOLOGICAL POTENTIAL

5.1. FRAMEWORK FOR ASSESSMENT

The *NSW Heritage Manual* (Heritage Office and Department of Urban Affairs and Planning, 1996) defines historical archaeological potential as:

> *The degree of physical evidence present on an archaeological site, usually assessed on the basis of physical evaluation and historical research.*

Archaeological research potential of a site is the extent to which further study of relics likely to be found is expected to contribute to improved knowledge about NSW history which is not demonstrated by other sites, archaeological resources or available historical evidence. The potential for archaeological relics to survive in a particular place is significantly affected by later activities that may have caused ground disturbance. These processes include the physical development of the site (for example, phases of building construction) and the activities that occurred there.

The archaeological potential of the subject site is assessed based on the background information presented in Section 3 and graded according to the following scheme:

- **Nil Potential:** the land use history demonstrates that high levels of ground disturbance have occurred that would have destroyed any archaeological remains; or archaeological excavation has already occurred and removed any potential resource.
- **Low Potential:** the land use history suggests limited development or use, or there is likely to be quite high impacts in these areas; however, deeper sub-surface features such as wells, cesspits and their artefact bearing deposits may survive.
- **Moderate Potential:** the land use history suggests limited phases of low to moderate development intensity, or there have been some impacts in the area. Some archaeological remains are likely to survive, including building footings and shallower remains, in addition to deeper sub-surface features.
- **High Potential:** substantially intact archaeological deposits could survive in these areas.

The potential for archaeological remains or 'relics' to survive in a particular place is significantly affected by land use activities that may have caused ground disturbance. These processes include the physical development of the site (e.g. phases of building construction) and the activities that occurred there. The following definitions are used to consider the levels of disturbance:

- **Low Disturbance**: the area or feature has been subject to activities that are likely to have had a minor effect on the integrity and survival of archaeological remains.
- **Moderate Disturbance**: the area or feature has been subject to activities that may have affected the integrity and survival of archaeological remains. While archaeological evidence may be present, they are likely to have been disturbed.
- **High Disturbance**: the area or feature has been subject to activities that would have had a major effect on the integrity and survival or archaeological remains. Archaeological evidence is likely to be significantly disturbed or destroyed.

The following assessment of archaeological potential of the present subject site has been undertaken based on the above framework.

5.2. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

An assessment of archaeological potential associated with each phase of development of the subject site is provide in Table 3 below.

Table 3 – Assessment of Archaeological Potential

Phase	Potential Archaeological Resource	Integrity	Archaeological Potential
1. 19th Century Colonial Development **(1789-1905)**	Early-mid 19th century occupation and use	There is no known occupation of the site for the first half of the 19th century and it is understood that the land was low-lying and not suitable for agriculture. By the mid-19th this land had been developed suggesting that some amount of remediation had occurred; this is consistent with what was found at 66 Bay St Ultimo. Evidence of this levelling is expected for the earliest phase of the site.	**Moderate:** ▪ 19th century levelling fills
	Road building materials, discarded items associated with Athlone Street's use and occupational deposits associated with transient use of the road.	The former Athlone Street is located within the northern boundary of the subject area. While later phases of building construction and demolition and earthworks have likely removed or destroyed a portion of the former road, the western section of Athlone Street may still be present in the form of road building materials. Occupational deposits associated with transient use of the road may also be present, however, it is less likely that such evidence can be directly linked to the use of Athlone Street.	**Low:** ▪ Occupational deposits **Moderate:** ▪ Road building materials
	Structural remains of mid-19th Century Dwellings such as postholes, sandstone and/or brick foundations and associated underfloor deposits.	The mid-19th Dwellings were demolished and the subject area subsequently raised through additional filling (Phase 2). The historical record was confirmed by recent geotechnical investigations which have established the presence of a layer of historical fill. Impacts by industrial buildings established on site during Phase 3 have likely consisted of light leveling with brick or concrete surfaces interspersed with piling. Such piling works are expected to have caused an overall low level of disturbance to this historical fill. A moderate level of disturbance has likely impacted the northeastern corner of the	**Low:** ▪ Underfloor occupation deposits **Moderate - High:** ▪ Postholes ▪ Sandstone and/or brick foundations ▪ Cesspits

Phase	Potential Archaeological Resource	Integrity	Archaeological Potential
		subject area more extensively (extant substation and former 20th century offices addition to the substation). As such structures such as postholes and sandstone/brick foundations relating to the Dwellings are likely to have been preserved by the deposition of the early 20th century fill. A number of privies are shown on the 1865 and 1888 plan and likely associated with cesspits which are likely to survive on the site. Evidence of underfloor occupation deposits may also be present albeit disturbed by the early 20th century fill and construction.	
	Undocumented finds associated with Residential Dwellings such as deeper subsurface features (e.g. wells, residential pipes and drains and rubbish pits).	Despite the presence of public water supply within the subject area and nearby water waster services it is still likely that dwellings still feature private infrastructure to manage water collection and waste disposal. As such, rubbish pits, wells and residential pipes/drains may still have been used for the Dwellings. However, no historical plan provides an indication of such features. While not illustrated it is highly likely that features such as rubbish yard scatters were present on site specifically within yard areas, which may also contain artefact bearing deposits. Considering the lower level of impact caused by subsequent phases, if present, archaeological evidence of such features may have survived, albeit with a moderate to high level of disturbance.	**Moderate-High:** ▪ Wells ▪ Rubbish pits and yard scatters ▪ Associated artefact bearing deposits ▪ Residential pipes/drains
	Public water supply (ceramic pipes or brick drains).	As discussed above a portion of Athlone Street has seen a lower degree of impact during later phases. Historical maps provide the indication for the presence of a potential water main with a fire plug. As such evidence of the ceramic pipes or	**High:** ▪ Water main pipes (ceramic or brick)

Phase	Potential Archaeological Resource	Integrity	Archaeological Potential
		brick drains associated with this feature are likely to have survived.	
	Structural remains of Substation No. 3 (sandstone/brick footings and associated underfloor deposits.)	Historical records of the 1903 substation have indicated the building featured substantial footings likely consisting of a mix of brick and sandstone. The building was demolished during Land Resumption works (Phase 2) and partially built upon over the record historical fill. As such evidence of structural remains of Substation No. 3 is very likely to have survived in situ.	**Moderate-high:** ▪ Sandstone and/or brick foundations
2. Land Resumption **(1905-1909)**	Earthworks and historical fills associated with Land Resumption works	Evidence of the demolition and earthworks is highly likely to be present on site as subsequent development made use of historical introduced fills to establish a levelled surface on which to build upon. Piling works and the construction of the second substation will have likely disturbed these fills however, for most of the subject area, they are likely to have remained intact.	**High**
	Structural remains and occupational evidence (e.g. fittings and discarded material) of the Electrical Substation No. 5	Extant	**High**
3. Industrial Use **(1909 – present)**	Structural remains and occupational evidence associated with Connolly Window Factory, Fitzroy Ironworks (foundations, brick surfaces, industrial refuse)	During Phase 3 the subject area featured intense industrial use (warehousing and manufacturing). Early 21st century demolition works have removed all above ground evidence of these buildings however the visual inspection identified roof features of the former industrial structures (roof outlines in adjoining extant buildings). Aerial imagery further suggest the	**High:** ▪ Foundations (concrete or brick) ▪ Brick surfaces

Phase	Potential Archaeological Resource	Integrity	Archaeological Potential
	Tinsley asbestos manufacturing, and goods warehousing (artefactual scatters and industrial refuse)	introduction of another fill layer in 2010. Considering recent development of the site is very likely that evidence such as foundations, brick surfaces, artefactual scatters and industrial refuse associated with the industrial use of the site is present within the subject area.	▪ Artefactual scatters ▪ Industrial refuse

5.3. STATEMENT OF ARCHAEOLOGICAL POTENTIAL

The subject area has a **moderate to high potential** to contain archaeological resources associated with the early residential use of the site during **Phase 1** as well as evidence of the former Athlone Street, water and electrical infrastructure. This is due to the introduction of a historical fill in later phases during the process of building demolition and earthworks which likely resulted in the preservation of associated archaeological resources. This includes remains such as road building materials (Athlone Street), postholes, sandstone and/or brick foundations and cesspits as well as undocumented structures such as wells, residential pipes, rubbish pits and yard scatters which may contain artefact bearing deposits (Dwellings). Evidence of the ceramic pipes or brick drains (public water supply) and other sandstone and/or brick foundations (Substation No. 3). These mid-19th century buildings may also be founded on earlier levelling fills.

Archaeological potential for **Phases 2** and **3** is also **high** as subsequent processes of demolition have had a low level of ground disturbance. This includes evidence of earthworks and historical fills associated with Land Resumption (**Phase 2**) and brick/concrete foundations, brick surfaces, artefactual scatters and refuse linked to the industrial use of the subject area (**Phase 3**).

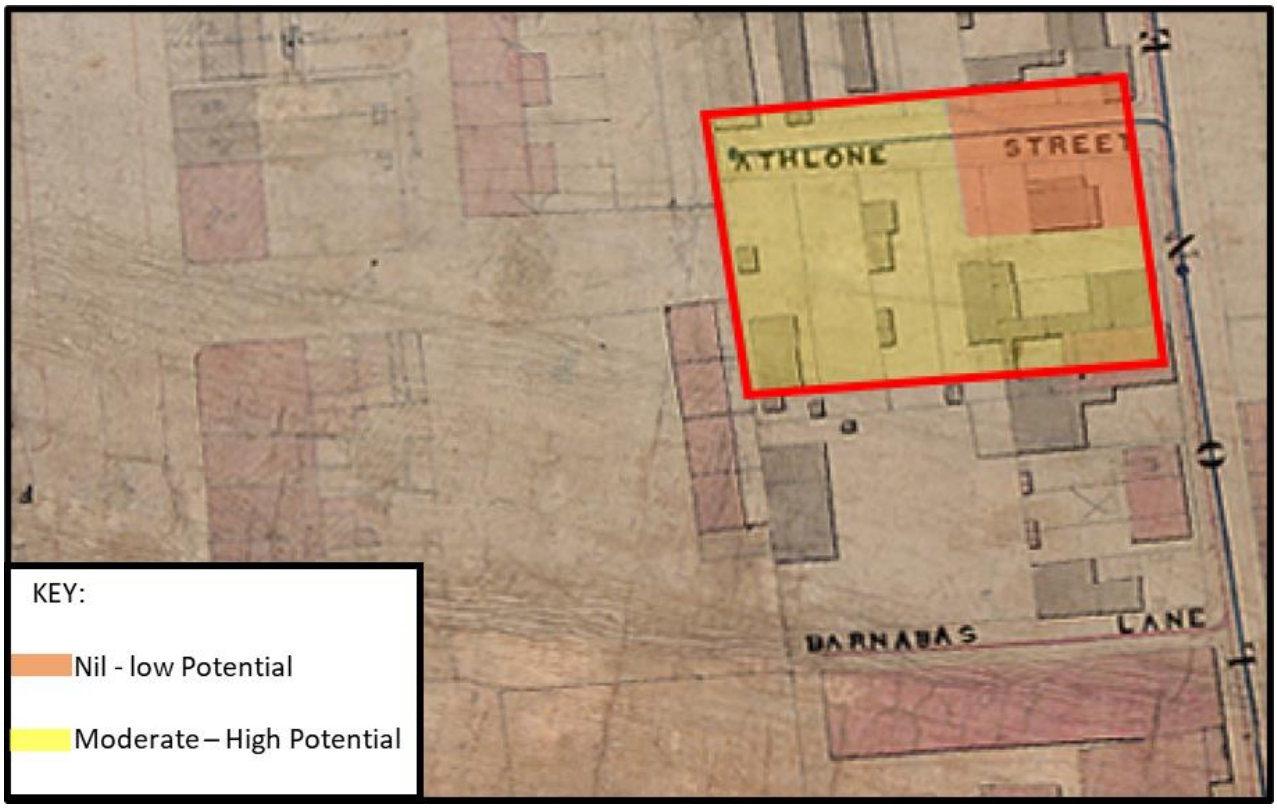


Figure 32 Archaeological Potential Zoning map.
Source: Urbis using City of Sydney, call number: A0088041; NSW Government Historical Imagery Viewer.

6. SIGNIFICANCE ASSESSMENT

6.1. FRAMEWORK FOR ASSESSMENT

The concept of archaeological significance is independent of archaeological potential. For example, there may be 'low potential' for certain relics to survive, but if they do, they may be assessed as being of (State) significance.

Archaeological significance has long been accepted as linked directly to archaeological (or scientific) research potential: a site or resource is said to be scientifically significant when its further study may be expected to help answer questions. Whilst the research potential of an archaeological site is an essential consideration, it is one of a number of potential heritage values which a site or 'relic' may possess. Recent changes to the *Heritage Act 1977* (Section 33(3) (a)) reflect this broader understanding of what constitutes archaeological significance by making it imperative that more than one criterion be considered.

The below assessment of archaeological significance considers the criteria, as outlined in the NSW Heritage Branch publication *Assessing Significance for Historical Archaeological Sites and 'Relics'.* Sections which are extracted verbatim from this document are italicized.

For the purposes of this assessment, significance is ranked as follows:

- **No Significance –** it is unlikely that any archaeological resources recovered will be attributed significance in accordance with the assessment criteria on a state or local level.
- **Local Significance –** it is likely that archaeological resources recovered will be significant on a local level in accordance with one or more of the assessment criteria.
- **State Significance –** it is likely that archaeological resources recovered will be significant on a state level in accordance with one or more of the assessment criteria.

The following Criteria are used to assess archaeological significance (from Assessing Significance for Historical Archaeological Sites and Relics', Heritage Branch NSW).

Table 4 Significance Criteria

Criterion Letter	Criterion	Definition
A	Historical Significance	An item is important in the course or pattern of the local area's cultural or natural history.
B	Associative Significance	An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history.
C	Aesthetic or technical significance	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.
D	Social Significance	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
E	Research Potential	An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.
F	Rarity	An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.

Criterion Letter	Criterion	Definition
G	Representativeness	An item is important in demonstrating the principal characteristics of a class of NSWs (or the local area's) ▪ cultural or natural places; or ▪ cultural or natural environments

6.2. ASSESSMENT OF SIGNIFICANCE

An assessment of archaeological significance associated with each phase of development of the subject site is provided in Table 5 below.

Table 5 Assessment of Significance

Criterion	Discussion
A - Historical Significance	Archaeological evidence associated with the residential use of **Phase 1 (1789-1905)** is very likely to be present within the subject area. Such evidence would consist of the earliest form of colonial development and form of the part of the course/development of the Ultimo area's history. The installation of Substation No.3 was also a significant piece of local infrastructure provisioning electricity for street lights and improving the amenity of the local area. Archaeological resources associated with the dwellings, either recorded or undocumented would assist in such understanding, as well as evidence of Substation No. 3, as demonstrating the historical evolution of the locality. **Archaeological resources of Phase 1 are likely to meet the threshold for Local heritage significance under this criterion.** Subsequent phases however have been thoroughly documented, and a wealth of historical information is available. While there is high potential for the presence of archaeological resources associated with Phases 2 and 3, these would not significantly contribute to further our understanding of historical process. **Archaeological resources from any of Phases 2 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**
B – Associative Significance	The former Substation No. 3 is associated with the City Architect and Building Surveyor Robert Hargreave Brodrick and his chief assistant James H Merriman who designed and oversaw the construction of a variety of public works buildings in the transition between the 19th and 20th centuries. Evidence of structural remains associated with the Substation would provide information regarding the works of Brodrick and Merriman. **Archaeological resources of Phase 1 are likely to meet the threshold for Local heritage significance under this criterion.** Other former structures within the subject area are not known to have been constructed or designed by any notable people, nor have the buildings been identified as being occupied by any significant persons. **Archaeological resources from any of Phases 2 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**

Criterion	Discussion
C – Aesthetic and Technical Significance	The potential archaeological resources within the subject area are unlikely to possess either unique aesthetic characteristics or to demonstrate a high degree of creative achievement. Evidence of Substation No.3 has the potential to reveal knowledge or information of technical details of the construction of important early infrastructure to the development of the wider Ultimo area. **Archaeological evidence of the original Substation No. 3 has the potential to be of local significance under this criterion.**
D – Social Significance	There is no evidence that potential archaeological resources at the subject site would hold a special association with a particular community or cultural group for social, cultural or spiritual reasons. **Archaeological resources from any of Phases 1 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**
E – Research potential	There is a moderate to high potential for the presence of archaeological resources associated with **Phase 1 (1789-1905)** and several structures developed during this period. Undocumented evidence of occupational deposits linked to the residential use of the subject area may yield further or new information regarding the earliest period of European occupation of the local area. Documented archaeological remains associated with the dwellings would also serve this purpose. Archaeological remains of the public water main may clarify our understanding of how water management was conducted in association of the timber cottages. **Archaeological resources of Phase 1 are likely to meet the threshold for Local heritage significance under this criterion.** A high potential for evidence associated with of **Phase 2 (1905-1909)** and the industrial uses of **Phase 3 (1905- present)** has been identified however, such archaeological remains are less likely to reveal new knowledge and yield further information regarding the use of the subject area, considering the larger data set is available for these phases. **Archaeological resources from any of Phases 2 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**
F - Rarity	Archaeological remains deriving from the residential or industrial use of the subject site during Phases 1 to 3 are unlikely to be rare examples of an event, phase, period, process, function, movement, custom, way of life or activity of importance to the local area or State. **Archaeological resources from any of Phases 1 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**
G - Representativeness	Archaeological resources associated with Phases 1 to 3 are unlikely to be important in demonstrating the principal characteristics of a class of the local area's or State's cultural or natural places or environments. **Archaeological resources from any of Phases 1 to 3 are unlikely to meet the threshold for either Local or State heritage significance under this criterion.**

6.3. STATEMENT OF SIGNIFICANCE

This assessment has concluded that archaeological resources, which could occur at the subject site, may be significant at a Local level.

Evidence associated with the Phase 1, the 19th Century Colonial Development (1789-1905) may be of Local significance under criterions A (Historical Significance), B (Associative Significance), C (Technical Significance) and E (Research Potential).

If identified, *in situ* or moderately disturbed, archaeological evidence associated with the residential use of the subject area have the capacity to demonstrate the historical evolution of the Ultimo area. The same applies for remains of the Substation No. 3 for their association with the works of Brodrick and Merriman. Research information may also be drawn from all evidence of residential use and infrastructure remains such as the public water and electrical supply as they have the capacity to yield further or new information regarding the earliest period of colonial occupation and evolution of the local area.

While a high potential for remains associated with Phase 2, the Land Resumption (1905 – 1909) and Phase 3 Industrial Use (1909-present), such archaeological resources would not be significant at either Local or State level under any criteria established by the NSW Heritage Branch publication *Assessing Significance for Historical Archaeological Sites and 'Relics'.*

The assessment of significance should be updated following further archaeological investigation.

7. IMPACT ASSESSMENT

7.1. PROPOSED DEVELOPMENT

The proponent is proposing the development of a new multi-storey mixed-use development (Figure 33 - Figure 36) which includes the following:

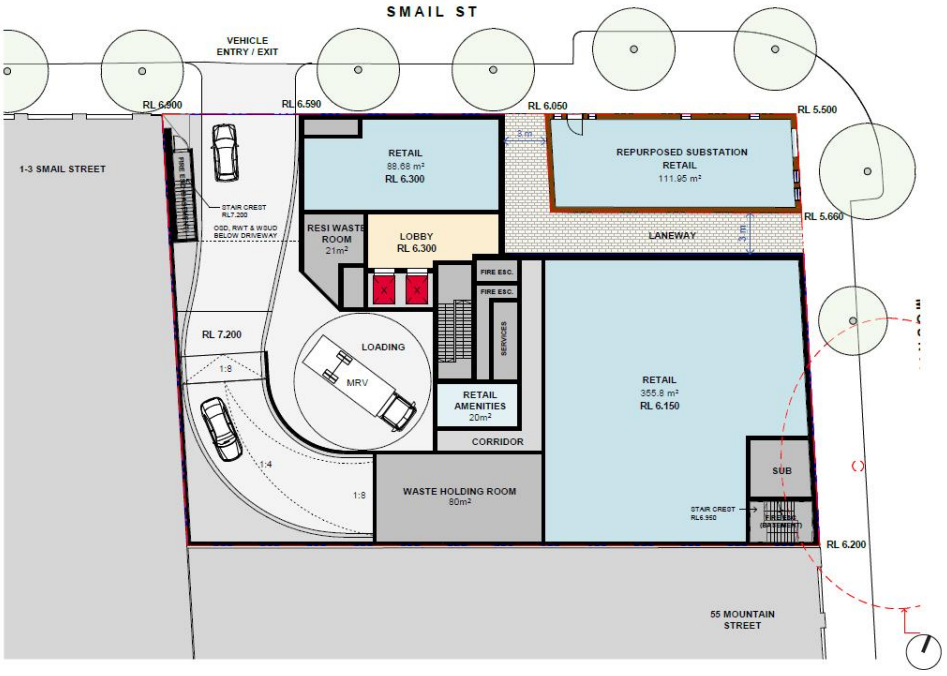
- Demolition of all existing temporary structures;
- Removal of the existing concrete surface ;
- Construction of a 15-storey apartment building fronting Smail Street and 7- storey building fronting Mountain Street
- Bulk excavation for one underground basement parking level.

The initial concept designs feature the proposed basement level extending down to 3.5 metres below the current ground level, occupying the majority of the subject area (Figure 34) with the exception of the extant State Heritage listed item - *Electrical Substation No.5'* (SHR 00934). The below ground footprint immediately surrounding the substation will remain in situ.

Reference Design
Ground Level Plan

Key Moves

- Substation with 3m Wide lane way.
- Central Lobby and Retail accessed via Lane way
- Secure access to car park and loading dock.
- Double sided retail laneway.
- Predominant Retail activation to perimeter of Smail + Mountain Street.



BATES SMART 41-49 MOUNTAIN STREET ULTIMO

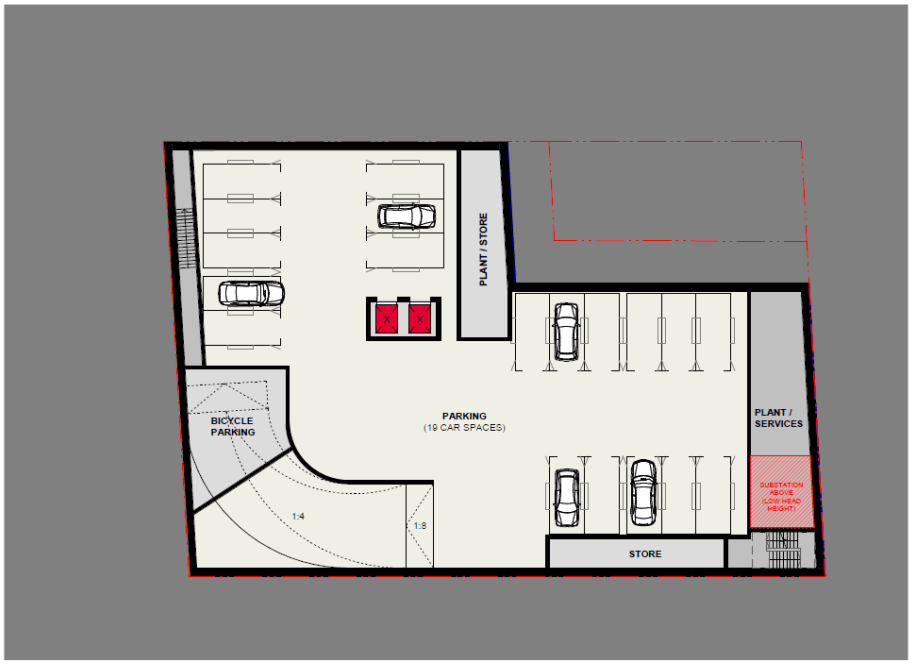
Figure 33 Extract of concept plan showing ground floor layout.

Source: Bates Smart 2025.

Reference Design
Basement Level Plan

Key Moves

- Single level proposed to minimise excavation
- No excavation proposed below substation
- Ramp in south west corner to minimise impact on prime useable spaces above
- Provision for bicycle parking
- Motorcycle parking is achievable



BATES SMART 41-49 MOUNTAIN STREET ULTIMO

Figure 34 Extract of concept plan showing proposed basement footprint.

Source: Bates Smart 2025.

Reference Design
Section 1

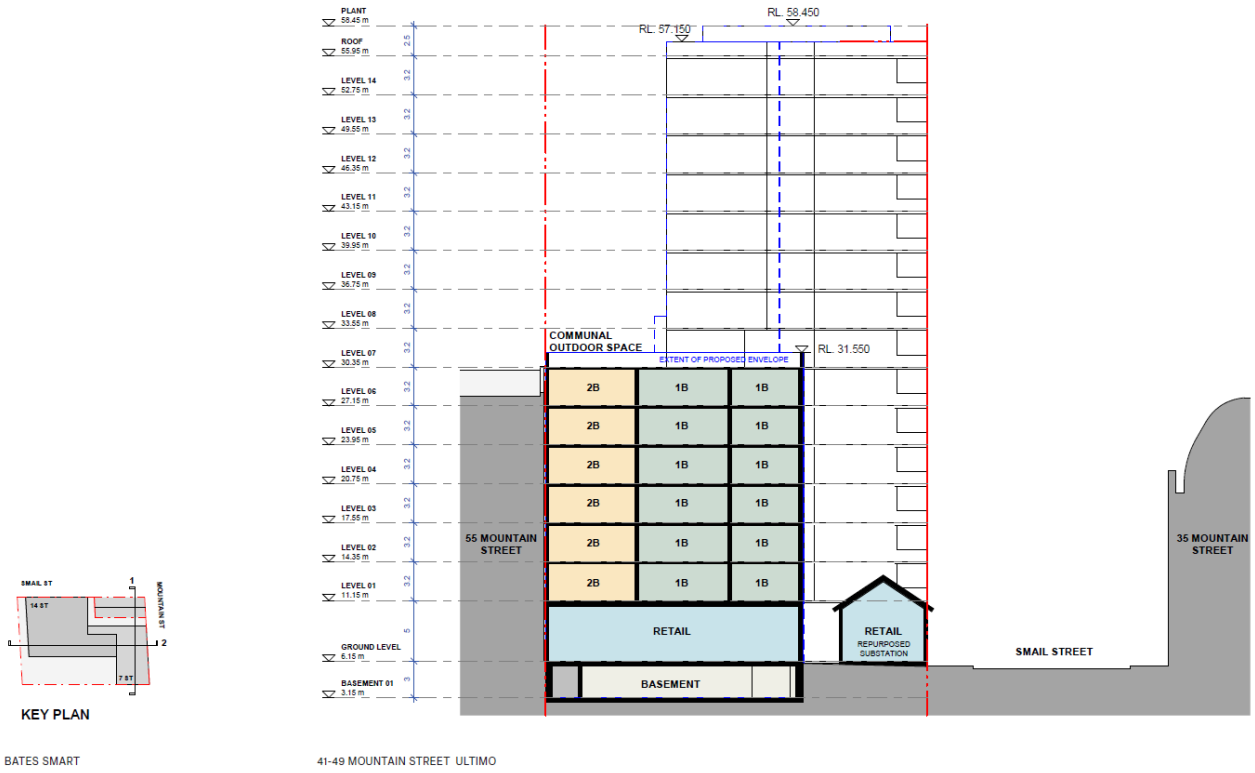


Figure 35 Extract of concept plan showing section 1 facing towards Mountain Street site frontage.

Source: Bates Smart 2025.

Reference Design
Section 2

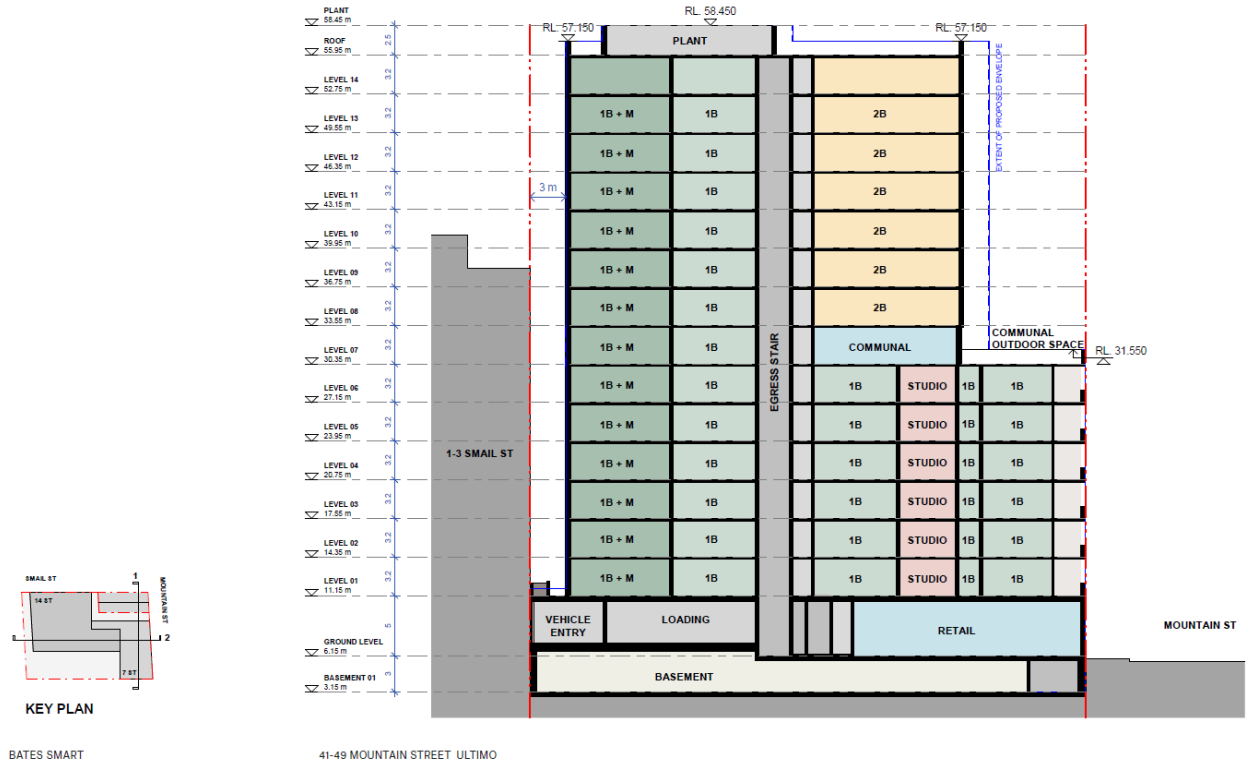


Figure 36 Extract of concept plan showing section 2 facing towards Smail Street site frontage.

Source: Bates Smart 2025.

7.2. ARCHAEOLOGICAL IMPACT ASSESSMENT

The proposed works are described above and include bulk excavation for the establishment of one basement level extending across the entire subject area with the exception of the extant State Heritage listed item - *Electrical Substation No.5'* (SHR 00934).

As there is moderate to high potential for locally significant archaeological resources to be retained within parts of the subject area and the proposed ground-disturbing impacts extend across the locations of identified archaeological potential subject to a depth sufficient for one basement level, there is reasonable cause to suspect that the proposed works will impact all potential historical archaeological relics. As such, archaeological investigation, such as archaeological monitoring and salvage excavation, is recommended in order to mitigate the proposed archaeological heritage impact of the work.

8. CONCLUSIONS & RECOMMENDATIONS

8.1. CONCLUSIONS

The HAA has been undertaken to assess the impacts of the proposed works to any historical archaeological material within the subject area and to formulate appropriate heritage management measures.

The HAA has concluded the following:

- The historical development and use of the subject is broadly categorised according to the following phases:
  - Phase 1: 19th Century Colonial Development (1789 – 1095)
  - Phase 2: Land Resumption (1905 – 1909)
  - Phase 3: Industrial Use (1909- Present)
- No listed archaeological items have been identified within the subject area.
- Moderate to High archaeological potential has been identified for locally significant historical relics associated with the early development of the subject area during the mid-19th century (Phase 1), including road building materials postholes, sandstone and/or brick foundations, ceramic or brick or brick pipes, undocumented structures such as wells, cisterns, residential pipes, rubbish pits and cesspits which may contain artefact bearing deposits.
- As the proposed works include demolition of all existing buildings and construction of a new mixed-use development with a basement level, there is reasonable cause to suspect that the proposed works will impact historical relics; these relics have been identified as disturbed and locally significant. This can be mitigated through archaeological investigation and recording.
- This report did not identify potential for the presence of State significance relics or any relics where retention through redesign would be required. As such, this report has not identified any archaeological impediments in regard to the Planning Proposal or future Development Application.

8.2. RECOMMENDATIONS

In view of the above conclusions and the 'relics' provisions of the s. 139 of the *Heritage Act 1977* (NSW), Urbis recommends the following mitigation measures:

- **Recommendation 1** – **Submission of Report**

  A copy of this report should be submitted to City of Sydney in support of the current Planning Proposal and future Development Application.

- **Recommendation 2 – Further Archaeological Investigation**

  As this assessment has identified that the proposed redevelopment is likely to remove locally significant relics, archaeological investigation under an s140 Excavation Permit is recommended for the site. Further archaeological investigation should be undertaken by a qualified archaeologist post demolition works and prior to any ground disturbing works. A historical archaeological research design and excavation methodology ('HARDEM') should be prepared to guide the archaeological monitoring and excavation, as well as include an Unexpected Finds Protocol. This report, HAA, along with the HARDEM should be submitted to Heritage NSW as part of an s140 Excavation Permit application prior to commencement of archaeological investigations, or any ground disturbing works anywhere within the subject area.

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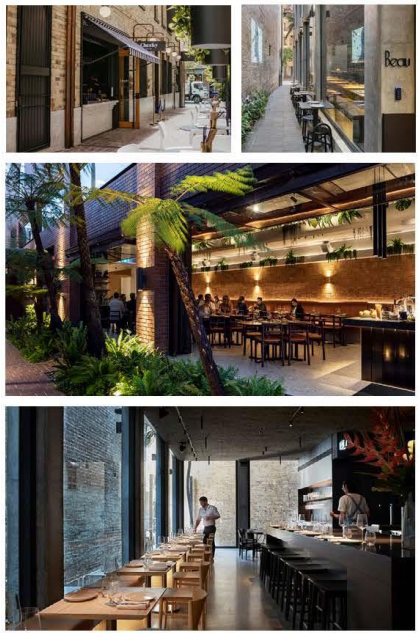
This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

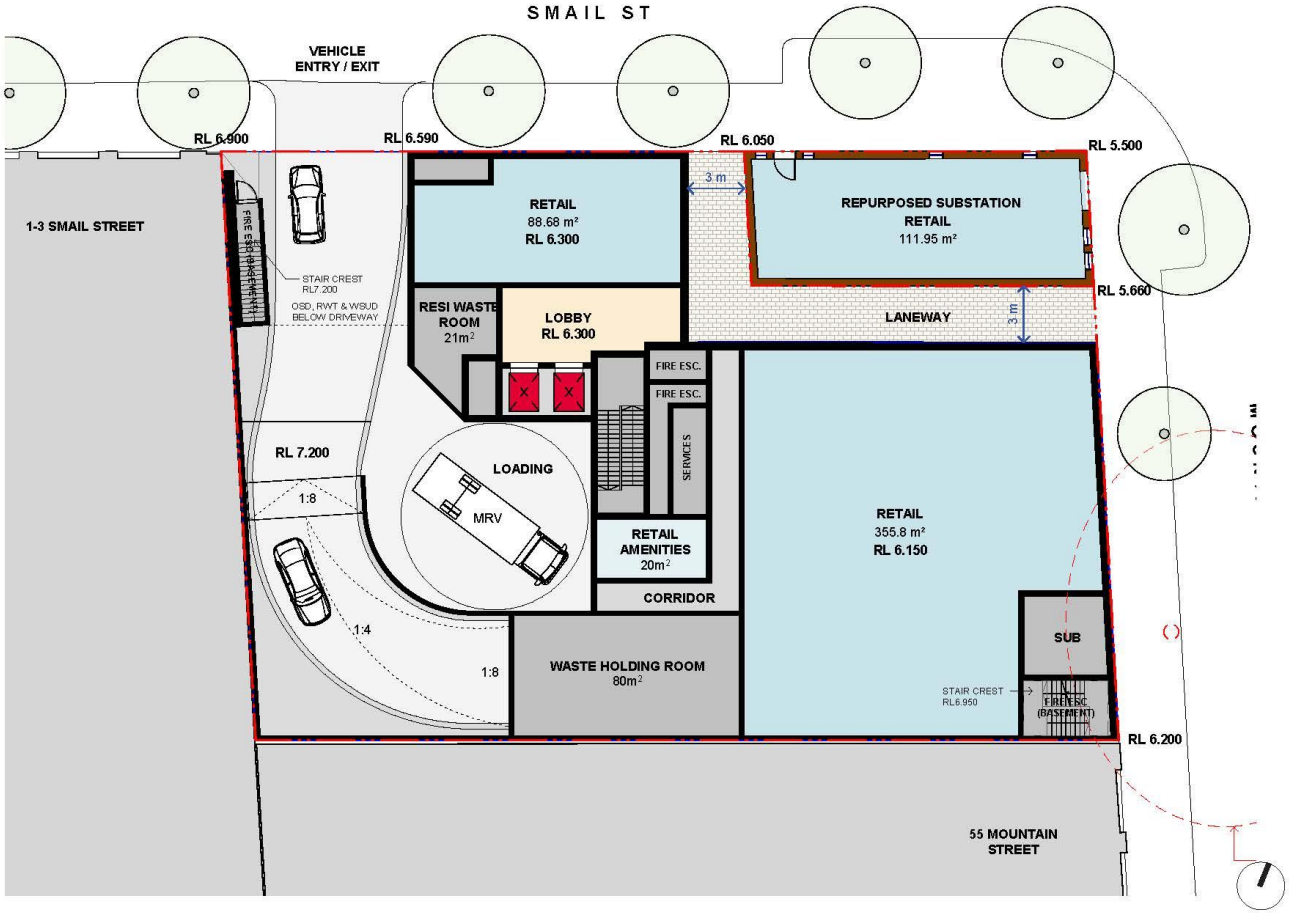
APPENDIX A CONCEPT DEVELOPMENT PLANS

Reference Design
Ground Level Plan

Key Moves

- Substation with 3m Wide lane way.
- Central Lobby and Retail accessed via Lane way
- Secure access to car park and loading dock.
- Double sided retail laneway.
- Predominant Retail activation to perimeter of Smail + Mountain Street.





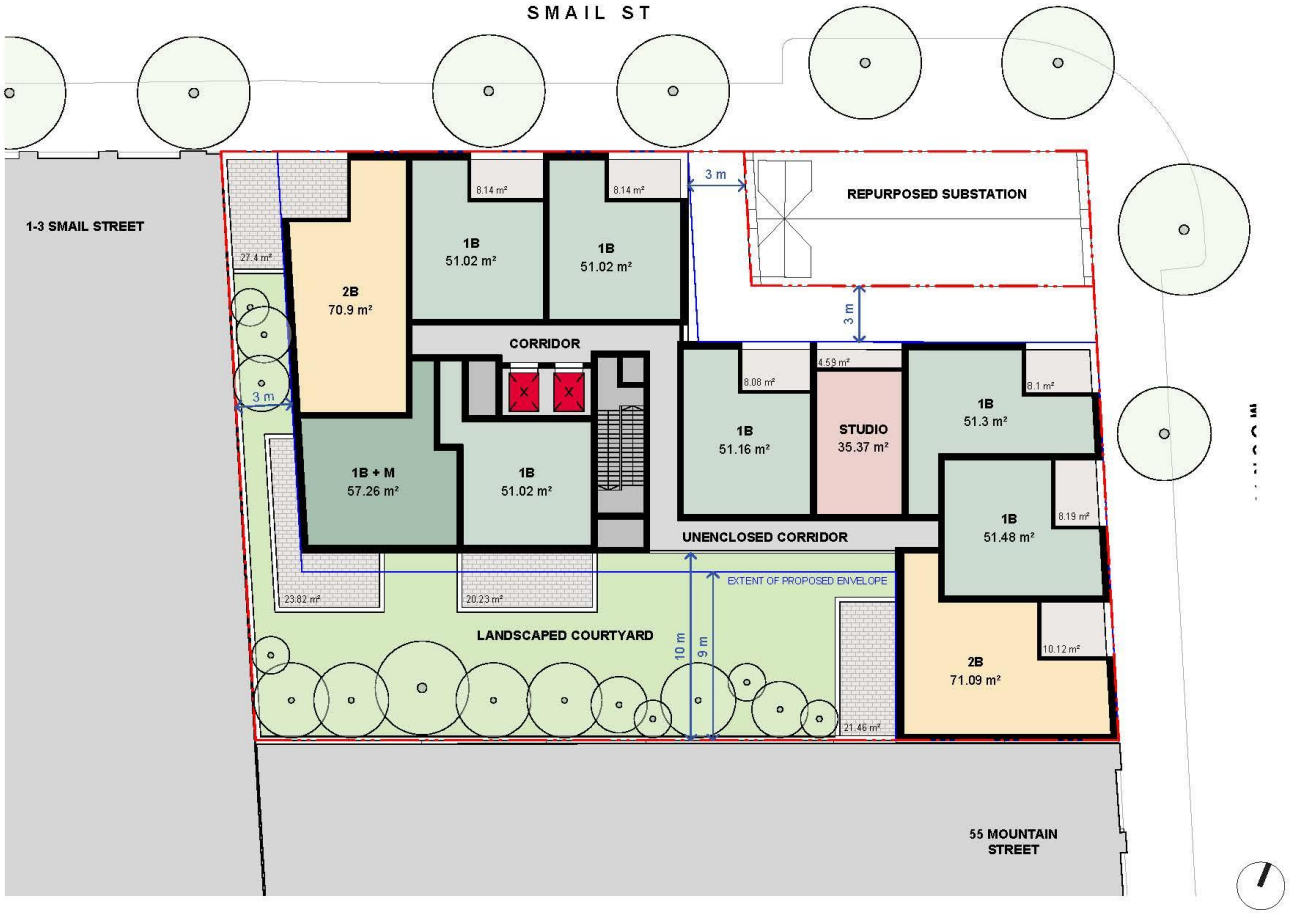
BATES SMART

41-49 MOUNTAIN STREET ULTIMO

Reference Design
Level 01 Plan

Key Moves

- Generous terraces in landscaped courtyard.
- 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B
- Apartments with >2H solar access: 8/10 (80%)
- Apartments with cross ventilation: 7/10(70%)
- 10m Setback to South facade



Reference Design
Level 02-06 Plan

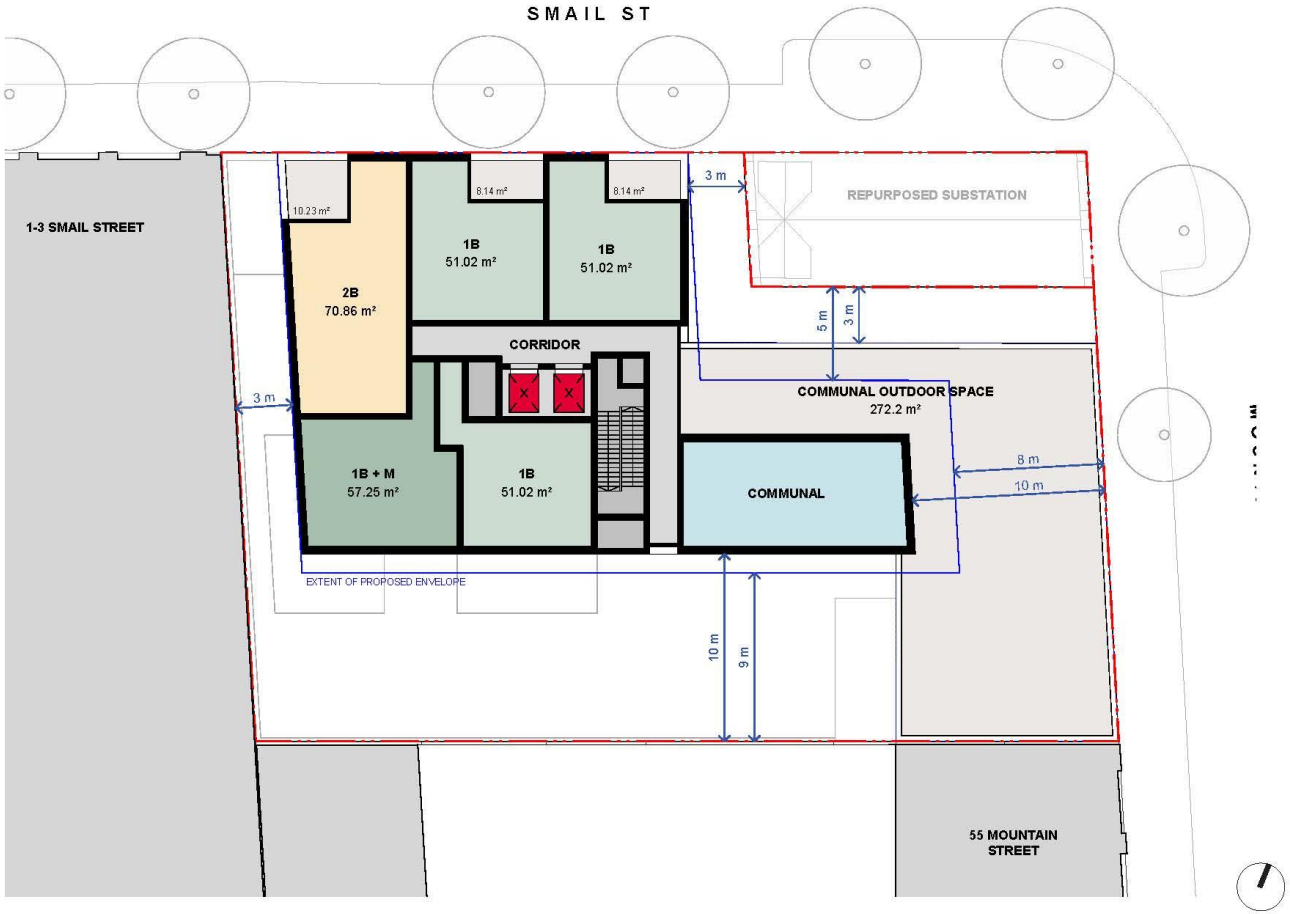
Key Moves

- 10 apartments per floor: 1 x Studio, 7 x 1B, 2 x 2B
- Apartments with >2H solar access: 8/10 (80%)
- Apartments with cross ventilation: 7/10(70%)
- 10m Setback to South facade

Reference Design
Level 07 - Communal Plan

Key Moves

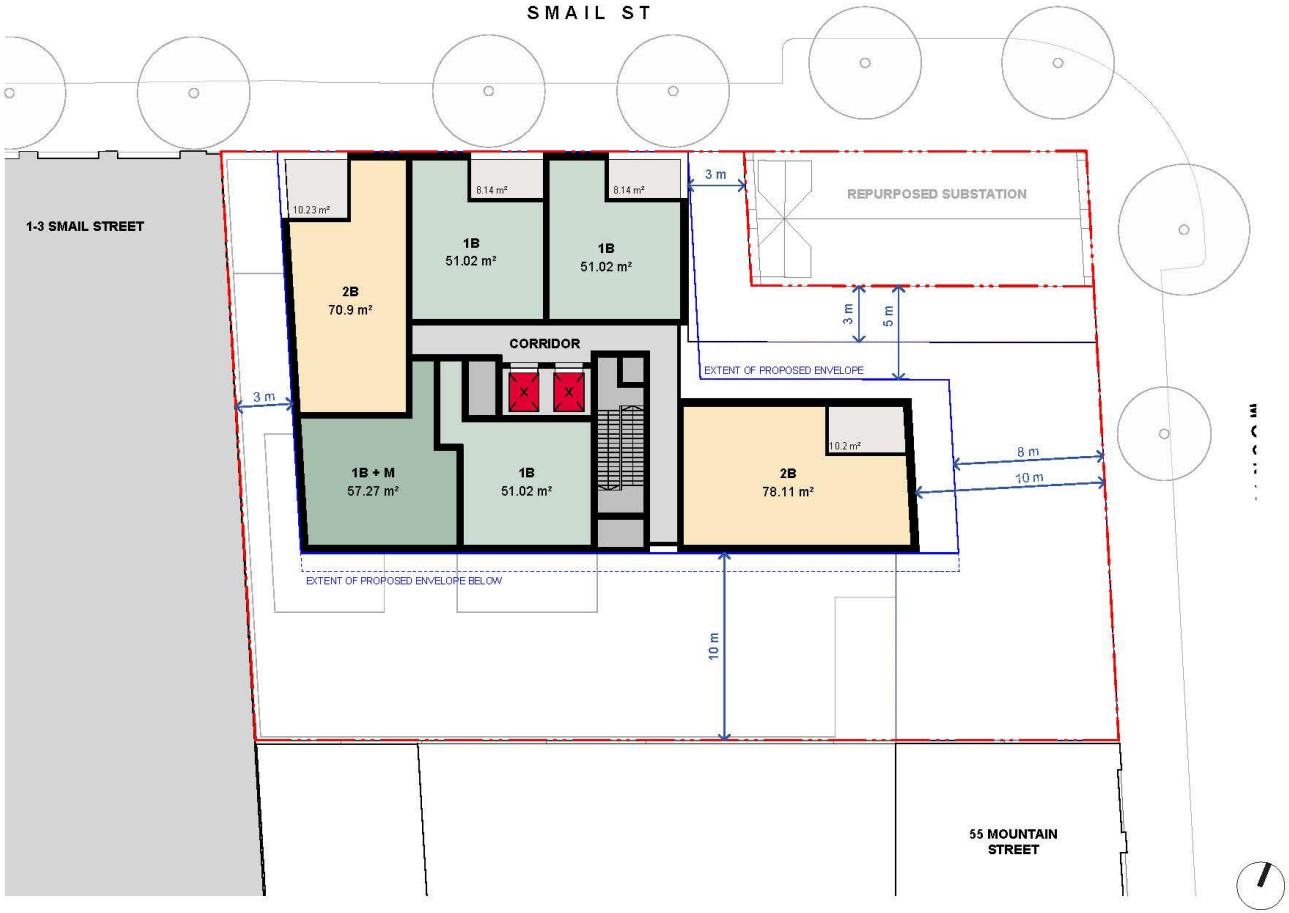
- Communal open space with communal room.
- 5 apartments per floor: 4 x 1B, 1 x 2B
- Apartments with >2H solar access: 3/5 (60%)
- Apartments with cross ventilation: 3/5 (60%)
- 10m Setback to South facade.
- Eastern wall of courtyard aligns with neighbour.



Reference Design
Level 08-14 Plan

Key Moves

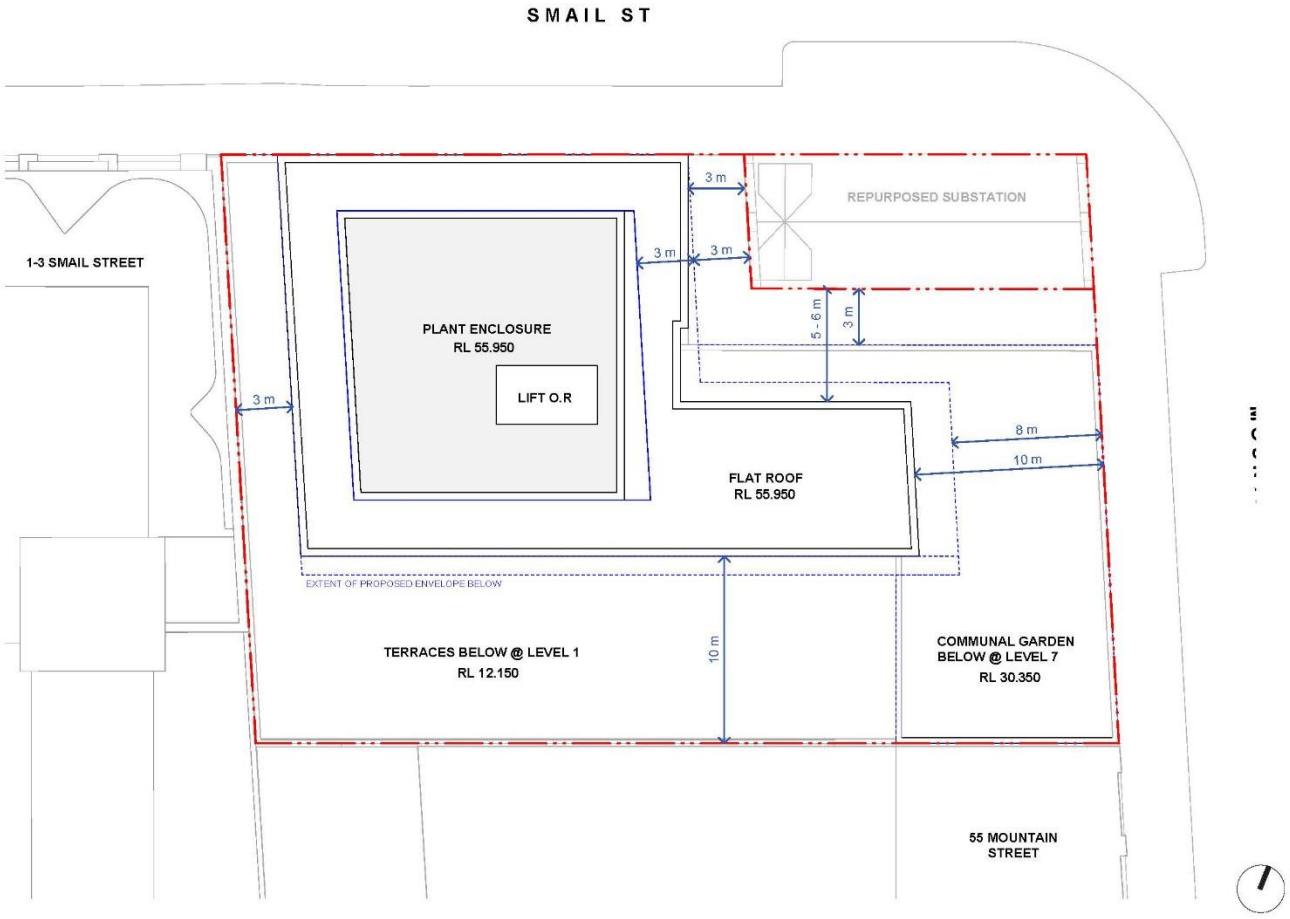
- 3m Setbacks to Mountain Street Block
- 6 apartments per floor: 4 x 1B, 2 x 2B
- Apartments with >2H solar access: 4/6 (67%)
- Apartments with cross ventilation: 4/6 (67%)
- 10m Setback to South facade.



Reference Design
Roof Level Plan

Key Moves

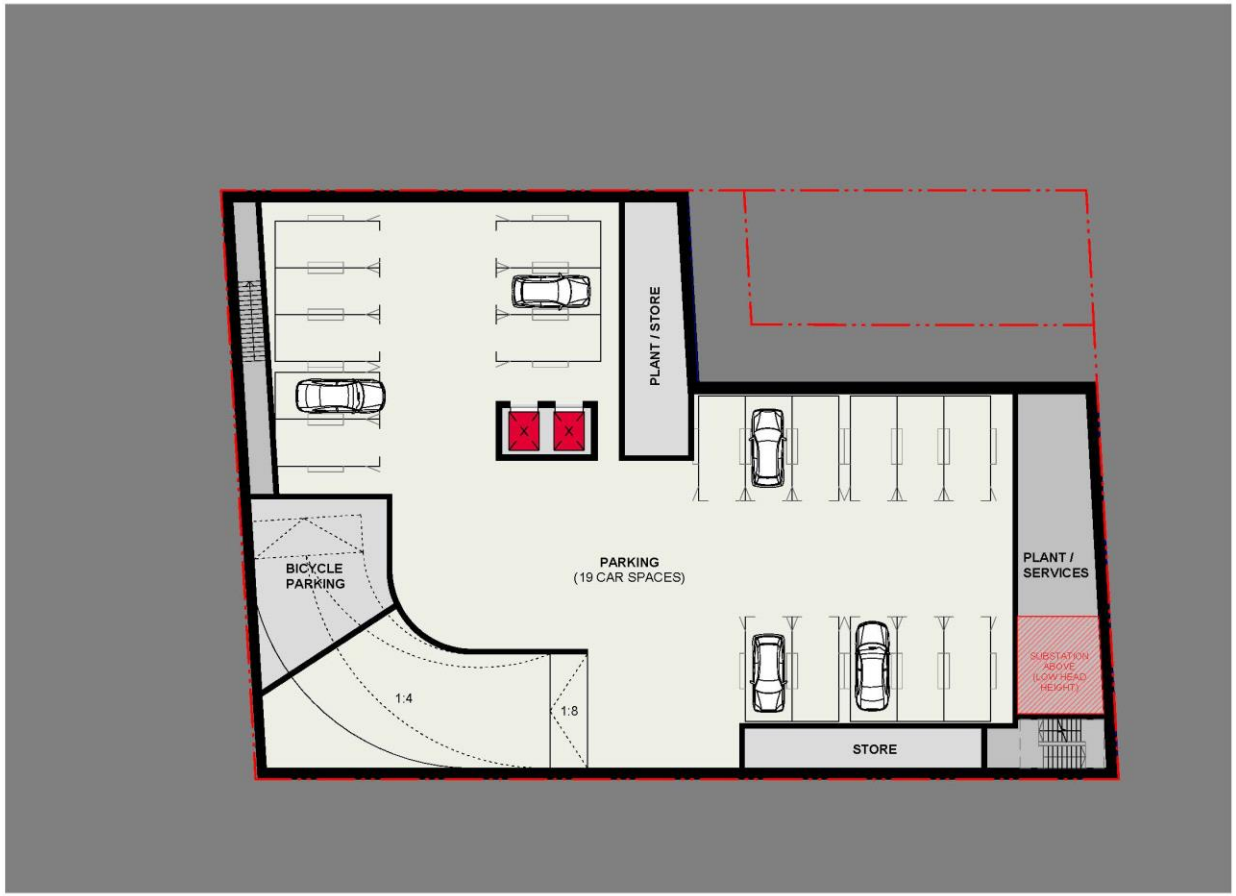
- Generous setback to plant enclosure to minimise visibility.
- Lift overrun consealed by plant enclosure.



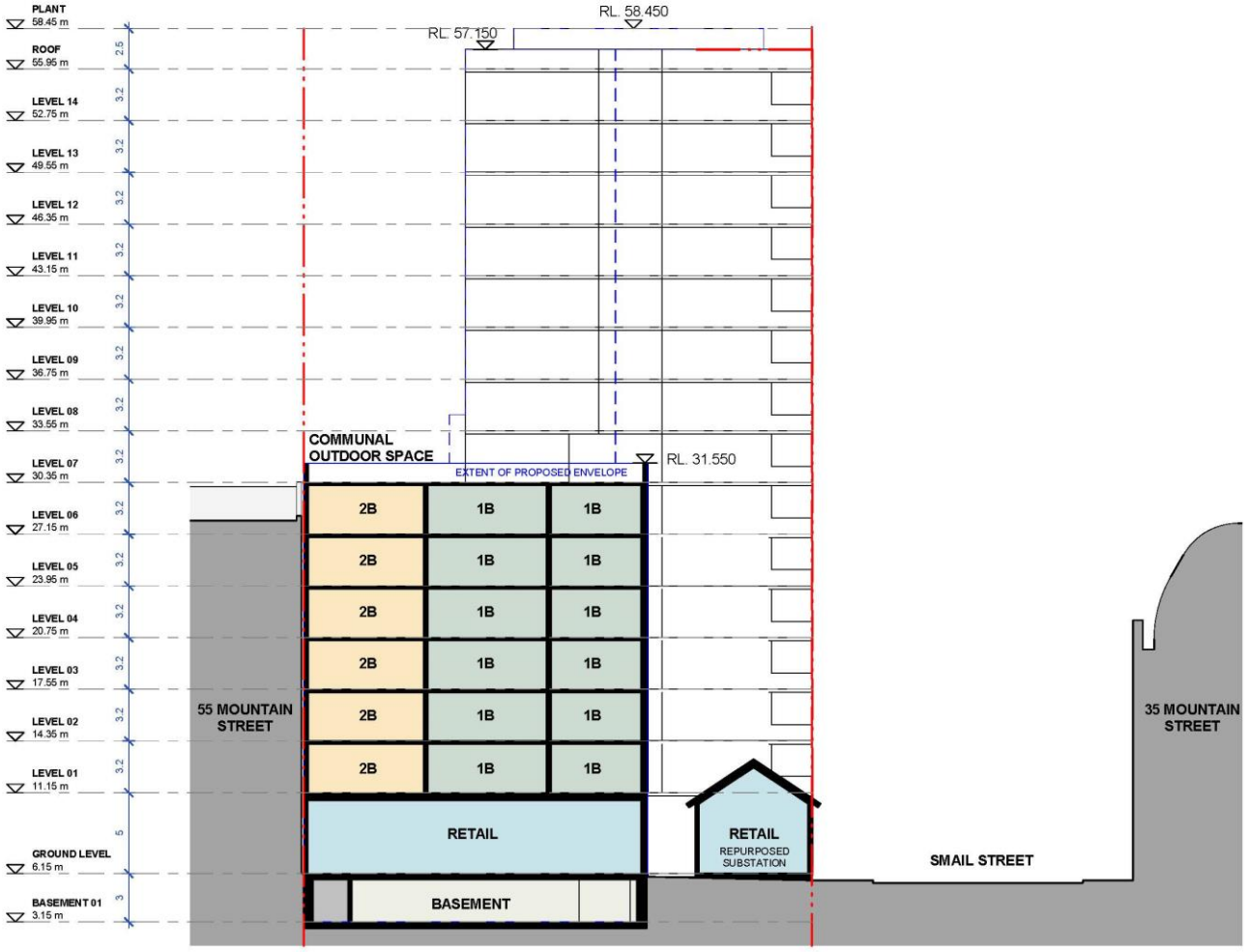
Reference Design
Basement Level Plan

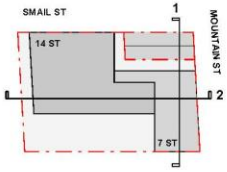
Key Moves

- Single level proposed to minimise excavation
- No excavation proposed below substation
- Ramp in south west corner to minimise impact on prime useable spaces above
- Provision for bicycle parking
- Motorcycle parking is achievable



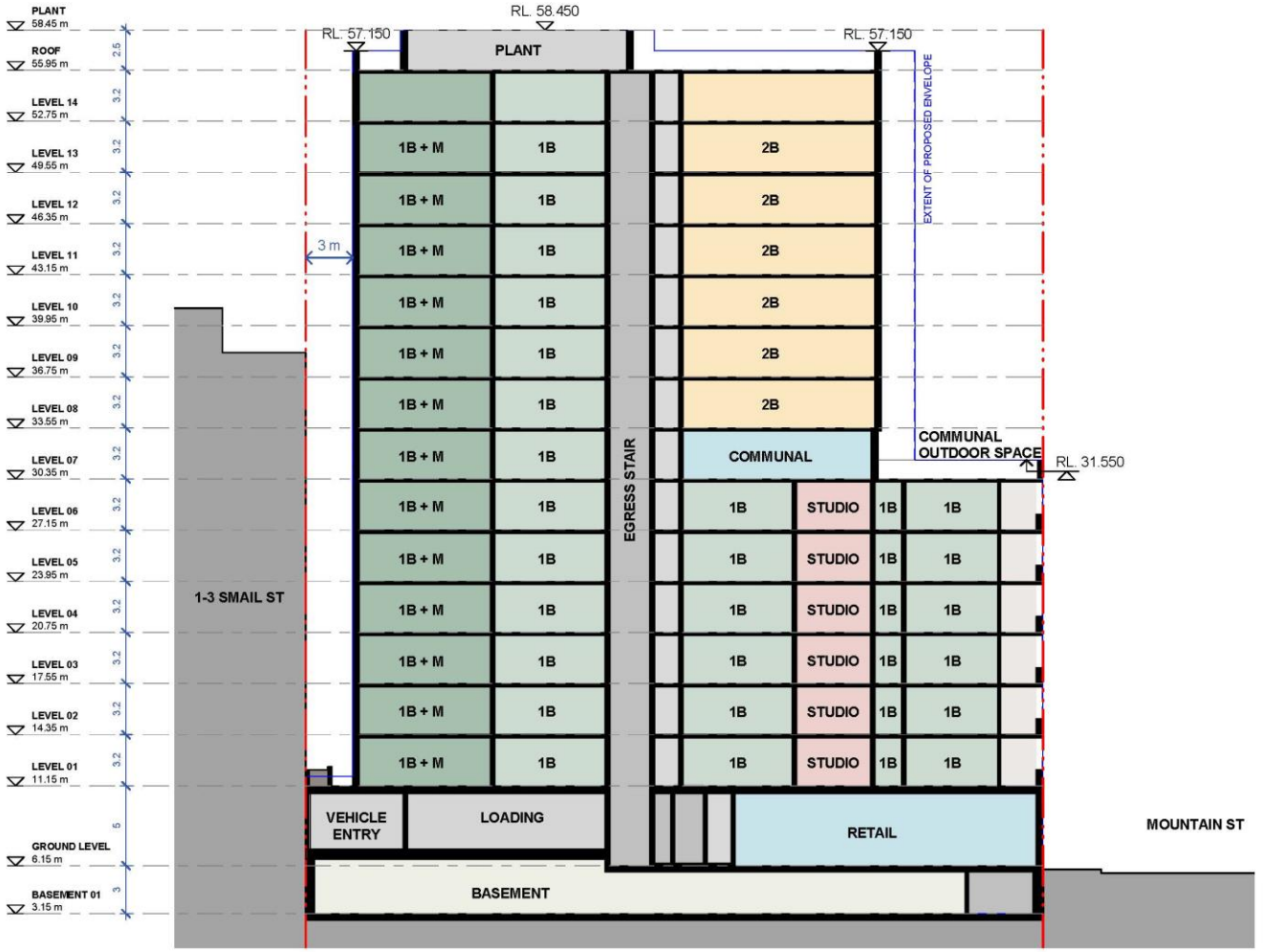
Reference Design
Section 1

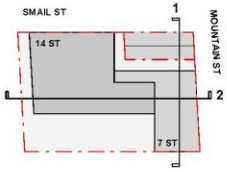




KEY PLAN

Reference Design
Section 2





KEY PLAN

379

Attachment A8

Traffic Impact Statement

TRAFFIC IMPACT STATEMENT

43-49 Mountain Street (5 Smail Street), Ultimo

PREPARED FOR:
Evolution MIT Services Pty Ltd ATF APT Hold Trust 2

REFERENCE:
24.173r01v03

DATE:
18/09/2025

TRAFFIC IMPACT STATEMENT

43-49 Mountain Street (5 Smail Street), Ultimo

Prepared for: Evolution MIT Services Pty Ltd ATF APT Hold Trust 2

ACN: 627 198 476 652 798 688

Reference: 24.173r01v03

Date: 18/09/2025

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Revision History

VERSION	DATE	PREPARED	REVIEWED	APPROVED	SIGNED
01	4/12/2024	Rohan Jain	Ben Midgley	Ben Midgley	Original signed
02	15/09/2025	Rohan Jain	Ben Midgley	Ben Midgley	Original signed
03	18/09/2025	Rohan Jain	Ben Midgley	Ben Midgley	Ben Midgley

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1. Introduction

1.1. Overview

This Traffic Impact Statement (TIS) report has been prepared on behalf of Evolution MIT Services Pty Ltd ATF APT Hold Trust 2 to accompany the Planning Proposal (PP) for a proposed mixed-use development at 43-49 Mountain Street (5 Small Street), Ultimo, including:

- 107 build-to-rent apartments consisting of:
    - 6 studios.
    - 74 one-bedroom apartments.
    - 27 two-bedroom apartments.
- Ground retail spaces for a combined total of 479 m^2 gross floor area (GFA).
- 19 parking spaces on the basement level, including eight tandem parking spaces.

Having regard for the above, it is evident that the development is not of a scale that requires referral of the DA to Transport for NSW (TfNSW) under Clause 2.122 of the State Environmental Planning Policy (Transport and Infrastructure) 2021.

The site is in the City of Sydney local government area (LGA) and as such, the proposed development has been assessed in accordance with the Sydney Development Control Plan 2012 and Local Environmental Plan 2012. The site has also been assessed against the requirements of the State Environmental Planning Policy (Housing) 2021.

1.2. Structure of this Report

This report documents the findings of our investigations in relation to the anticipated traffic and parking impacts of the proposed development and should be read in the context of planning documentation, prepared separately. The remainder of this report is structured as follows:

- Section 2: Describes the site and existing traffic and parking conditions in the locality.
- Section 3: Describes the proposed development.
- Section 4: Assesses the parking requirements of the development.
- Section 5: Assesses the traffic impacts of the development.
- Section 6: Discusses the proposed access and internal design arrangements.
- Section 7: Presents the overall study conclusions.

1.3. References

In preparing this report, reference has been made to the following guidelines and standards:

- Sydney Local Environmental Plan 2012 (SLEP 2012).
- Sydney Development Control Plan 2012 (SDCP 2012).
- State Environmental Planning Policy (Transport and Infrastructure) 2021.
- State Environmental Planning Policy (Housing) 2021 (Housing SEPP).
- Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area, 2013 (Integrated Public Transport Planning Guidelines).
- Australian Standard AS 2890.1-2004, Part 1: Off-Street Car Parking (AS 2890.1).
- Australian Standard AS 2890.2-2018, Part 2: Off-Street Commercial Vehicle Facilities (AS 2890.2).
- Australian Standard AS 2890.3-2015, Part 3: Bicycle Parking (AS 2890.3).
- Transport for NSW Guide to Transport Impact Assessment 2024 (GTIA).
- National Cycling Participation Survey, CDM Research for City of Sydney, 2019 (Cycling Participation Survey).
- Austroads Guide to Traffic Management Part 11: Parking Management Techniques (AGTM11).

2. Existing Conditions

2.1. Location and Site

The site is legally described as Lot 21 in Deposited Plan 5567 and has a total area of 1,460 m^2. It is located within Ultimo, south-west of the Sydney CBD, within the City of Sydney LGA. The site is within close proximity to the Broadway Shopping Centre, University of Technology Sydney, and the University of Sydney.

The site is bordered by Smail Street to the north, Mountain Street to the east, and other commercial developments to the south and west. The site is currently zoned Mixed Use (MU1) but is largely vacant and occupied by a small commercial office shed of around 180 m^2 and a heritage listed substation.

One 5-metre-wide combined entry and exit vehicle access is provided to the existing site from Smail Street at the site's northwest corner. Access to the site at this location is currently controlled via swing doors providing access to the entirety of the site. Internally, the site contains a large at-grade hardstand area which is used for storage of materials, traffic circulation, servicing and loading, and car and truck parking. Review of aerial imagery suggests the site can accommodate 5—10 cars parked on site at any one time.

Figure 1 and **Figure 2** provide an appreciation of the site's location in a broad and local context, respectively.

2.2. Road Network

The road hierarchy in the vicinity of the site is shown by **Figure 1**, with the following roads considered noteworthy:

- **Great Western Highway**: forms part of a TfNSW Highway, HW 5, which runs in an east-west direction from Quay Street at Haymarket to Bathurst in the west. North of Quay Street, it continues as George Street which forms an unclassified regional road and extends northwards through the Sydney CBD. Near the site, it is subject to 50 km/h speed zoning restrictions and accommodates three lanes of traffic in each direction, flaring to provide turn bays at intersections. A combination of parking restrictions operates near the site, and nearside lanes in both directions operate as bus lanes during AM (6—10am) and PM (3—7pm) peak periods.

- **Mountain Street**: a local road which runs in a north-south alignment between Blackwattle Lane and Broadway. It is subject to 40 km/h speed zoning restrictions and permits two-way travel through a two-lane width roadway. No Stopping and time restricted (1P) parallel parking restrictions operate near the site.

- **Smail Street**: a local road which runs in an east-west alignment between Blackwattle Lane and Bay Street. It is subject to 40 km/h 'high pedestrian activity area' speed zoning restrictions and carries a single lane of travel in each direction. No Stopping and time restricted (1P) parallel parking restrictions operate near the site.

- **Kettle Lane**: a local road which runs in a north-south alignment between Mountain Lane and St Barnabas Street. It is subject to 40 km/h speed zoning restrictions and permits two-way travel through a narrow, single-lane width roadway. No Stopping and No Parking restrictions operate along its length.

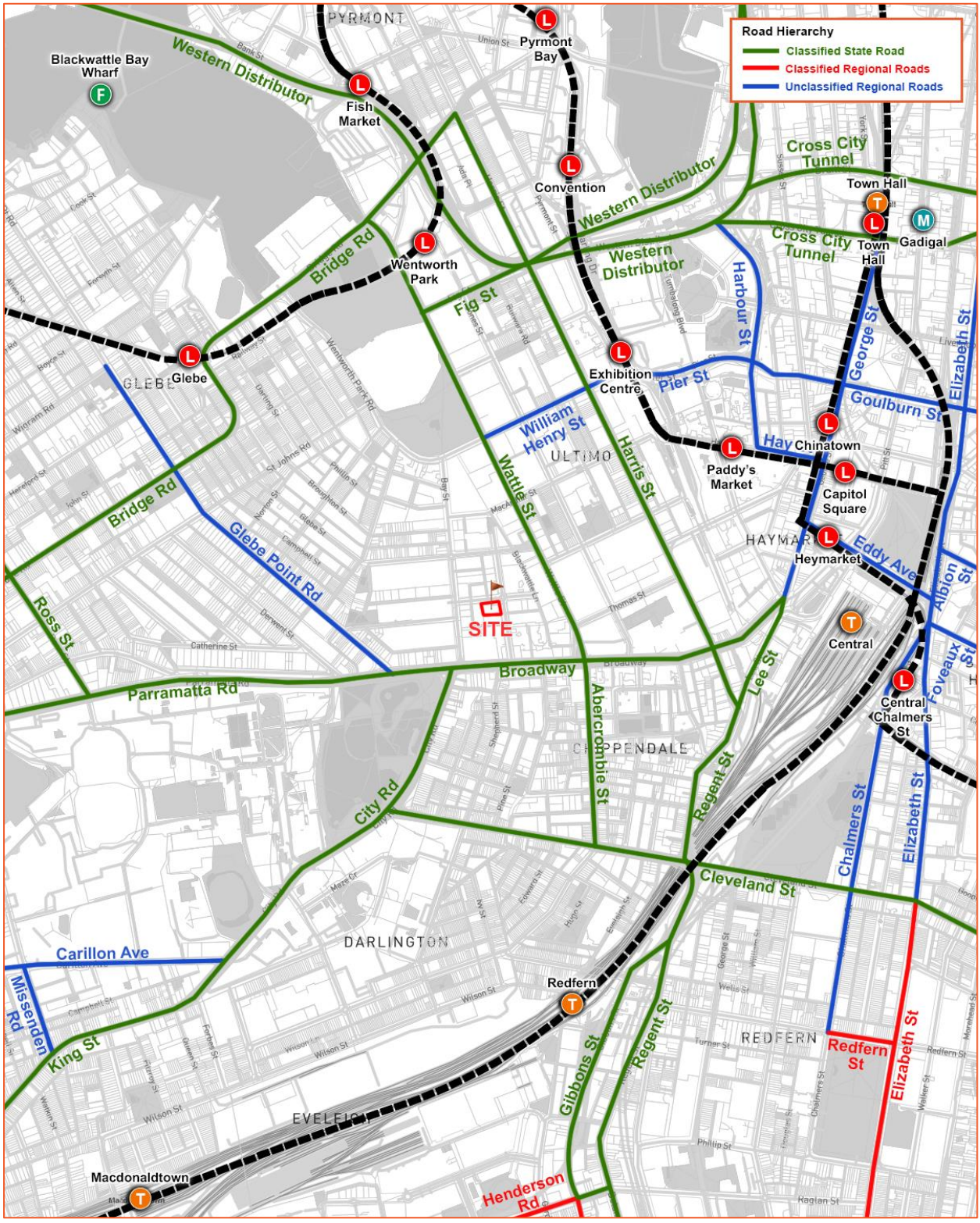


Figure 1: Location and Road Hierarchy Plan

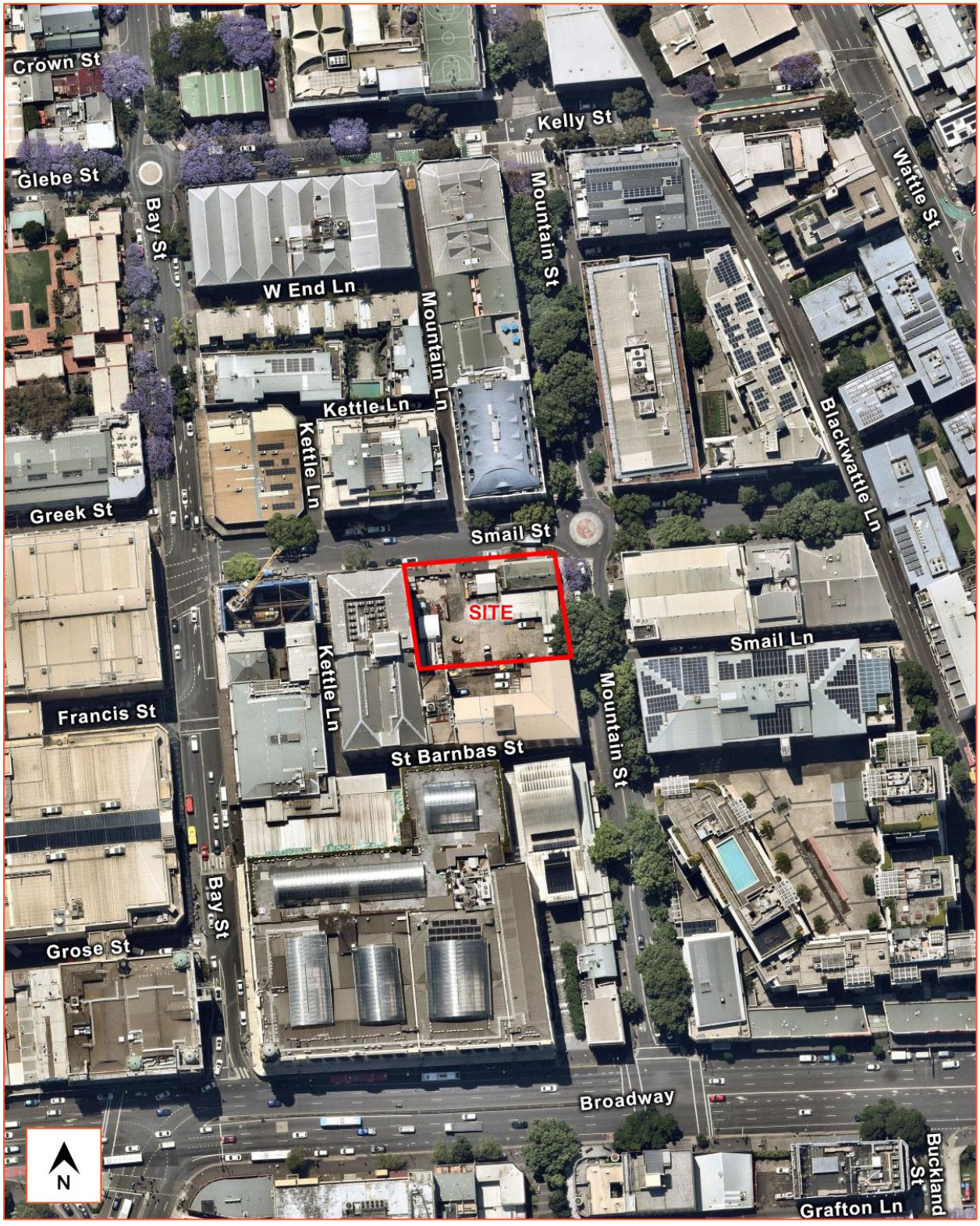


Figure 2: Site Plan

2.3. Public and Active Transport

2.3.1. Rail Services

The Integrated Public Transport Planning Guidelines states that the walking catchment for metropolitan railway stations includes all areas within an 800-metre radius of a station. It can be seen from **Figure 3** that Central Railway Station is located just outside this catchment, which provides linkages to all regions of the Sydney metropolitan area and several regional centres across NSW. Accordingly, residents and employees of the proposed development would have excellent access to the Sydney rail network.

Central Railway Station is serviced by the T1–2, T4, T8–9 Lines and the M1 Line. **Table 1** shows the notable town centres that are accessible along these Lines and the average service headways during peak and off-peak periods.

Table 1: Rail Services

RAILWAY LINE	NOTABLE TOWN CENTRES ALONG LINE	AVERAGE HEADWAY
T1 North Shore	Berowra, Hornsby, Gordon, Lindfield, Chatswood, North Sydney, Sydney CBD & Parramatta	Weekdays: 15 minutes Weekends: 15 minutes
T1 Western	Either Emu Plains, Penrith, St Marys or Richmond, Schofields then: Blacktown, Seven Hills, Parramatta, Lidcombe, Strathfield, Redfern and Sydney CBD	Weekdays: 5-15 minutes Weekends: 5-15 minutes
T2 Inner West & Leppington Line	Leppington, Glenfield, Liverpool, Cabramatta, Parramatta or Parramatta then: Lidcombe, Homebush, Strathfield, Ashfield, Redfern & Sydney CBD	Weekdays: 8-10 minutes peak / 30 minutes off peak Weekends: 15 minutes
T4 Eastern Suburbs & Illawarra Line	Cronulla or Waterfall, then: Sutherland, Hurstville, Wolli Creek, Redfern, Sydney CBD & Bondi Junction	Weekdays: 20 minutes peak / 30 minutes off peak Weekends: 30 minutes
T8 Airport & South Line	Macarthur, Campbelltown, East Hills, Revesby, Turrella, Wolli Creek, International Airport, Domestic Airport, Sydney CBD, Redfern, & Sydenham	Weekdays: 3-7 minutes peak / 7-8 minutes off peak Weekends: 4-11 minutes
T9 Northern Line	Hornsby, Epping, Strathfield, Redfern, Sydney CBD, North Sydney, Chatswood, Lindfield & Gordon	Weekdays: 5-15 minutes Weekends: 5-15 minutes
M1 Metro North West & Bankstown Line	Rouse Hill, Kellyville, Bella Vista, Baulkham Hills, Castle Hill, Cherrybrook, Epping, Macquarie Park, North Ryde, Chatswood, Crows Nest, Victoria Cross, Barangaroo, Sydney CBD, Martin Place, Gadigal, Central, Waterloo & Sydenham	Weekday peak: 5 minutes Weekday off-peak: 10 minutes Weekends: 10 minutes

2.3.2. Light Rail Services

The Integrated Public Transport Planning Guidelines states that the walking catchment for metropolitan light rail stations includes all areas within an 800-metre radius of a station. It can be seen from **Figure 3** that the site is within 800 metres of two light rail stations, with others such as the hub at Central falling just outside this catchment. Accordingly, residents and employees of the proposed development would have excellent access to the Sydney light rail network.

Table 2 shows the notable town centres that are accessible along the L1–3 Lines and the average service headways during peak and off-peak periods.

Table 2: Light Rail Services

LIGHT RAIL LINE	DESCRIPTION	AVERAGE HEADWAY
L1 Dulwich Hill Line	Dulwich Hill to Central	Weekdays: 5-15 minutes Weekends: 8-15 minutes
L2 Randwick Line	Circular Quay to Randwick	Weekdays: 8-12 minutes Weekends: 10-15 minutes
L3 Kingsford Line	Circular Quay to Juniors Kingsford	Weekdays: 8-12 minutes Weekends: 10-15 minutes

2.3.3. Bus Services

The Integrated Public Transport Planning Guidelines states that the walking catchment for metropolitan bus services includes all areas within a 400-metre radius of a bus stop. As can be seen from **Figure 3**, the site is situated within 400 metres of several bus stops, including the major bus hub of Railway Square. Accordingly, the site falls within the walking catchment, with residents and employees expected to utilise these services for journeys to and from the proposed development.

These closely located bus stops serve several bus services with destinations across the Sydney metropolitan area, and as such the site has excellent access to the Sydney bus network. Some key bus services accessible via these stops are summarised by **Table 3**.

Table 3: Bus Services

ROUTE NO.	ROUTE (TO / FROM)	ROUTE DECRIPTION	AVERAGE HEADWAY
352	Marrickville Metro to Bondi Junction	Via Newtown, Darlington, Chippendale, Darlinghurst, Paddington, Centennial Square	Weekdays: 15 - 30 minutes Weekends: 30 minutes
370	Coogee to Glebe Point	Via Randwick, Kensington, Erskineville, Newtown, Darlington	Weekdays: 10 minutes Weekends: 10 minutes
412	Campsie to City Martin Place via Earlwood & Dulwich Hill	Via Clemton Park, Earlwood, Marrickville, Camperdown, Chippendale	Weekdays: 30 minutes Weekends: 30 minutes
413	Campsie to Central Pitt St	Via Ashbury, Summer Hill, Lewisham, Camperdown, Chippendale	Weekdays: 30 minutes Weekends: 30 minutes
422	Kogarah to Central Pitt St	Via Rockdale, Wolli Creek, Tempe, Sydenham, St Peters, Camperdown, Chippendale	Weekdays: 15 - 20 minutes Weekends: 20 - 30 minutes
423	Kingsgrove to City Martin Place	Via Clemton Park, Earlwood, Marrickville, Enmore, Darlington, Chippendale	Weekdays: 10 - 15 minutes Weekends: 10 minutes
426	Dulwich Hill to City Martin Place	Via Marrickville, Enmore, Darlington, Chippendale	Weekdays: 10 - 15 minutes Weekends: 15 - 20 minutes
428	Canterbury to City Martin Place	Via Lewisham, Enmore, Darlington, Chippendale	Weekdays: 5 - 10 minutes Weekends: 10 - 15 minutes

ROUTE NO.	ROUTE (TO / FROM)	ROUTE DECRIPTION	AVERAGE HEADWAY
430	Sydenham to City Martin Place	Via Marrickville, Enmore, Darlington, Chippendale	Weekdays: 10 - 15 minutes Weekends: 20 minutes
431	Glebe Point to City Martin Place	Via Chippendale	Weekdays: 20 minutes Weekends: 15 - 30 minutes
433	Balmain Gladstone Park to Central Pitt St	Via Rozelle, Forest Lodge, Chippendale	Weekdays: 10 minutes Weekends: 10 - 15 minutes
438N	Abbotsford to City Martin Place (Night Service)	Via Wareemba, Five Dock, Haberfield, Leichhardt, Camperdown, Chippendale	Weekdays: 11 Service only Weekends: 11 Services on Saturday / 5 Services on Sunday
440	Bondi Junction to Rozelle	Via Centennial Square, Darlinghurst, Chippendale, Camperdown, Leichhardt, Lilyfield	Weekdays: 10 minutes Weekends: 15 minutes
461N	Burwood to City Hyde Park (Night Service)	Via Fiver Dock, Haberfield, Camperdown, Chippendale	Weekdays: 9 Services only Weekends: 5 Services only on Saturday/ 4 Services only on Sunday
470	Lilyfield to City Martin Place	Via Annandale, Chippendale	Weekdays: 10 - 15 minutes Weekends: 15 minutes
480	Strathfield to Central Pitt St via Homebush Rd	Via Enfield, Burwood Heights, Ashfield, Camperdown, Chippendale	Weekdays: 30 - 60 minutes Weekends: 1 hour on Saturday / No services on Sunday
483	Strathfield to Central Pitt St via South Strathfield	Via Enfield, Burwood Heights, Ashfield, Camperdown, Chippendale	Weekdays: 30 minutes Weekends: 30 minutes
501	Parramatta to Central Pitt St via Victoria Rd & Pyrmont	Via Rydalmere, Ermington, West Ryde, Ryde, Gladsville, Huntleys Cove, Drummoyne, Rozelle, Ultimo	Weekdays: 5 minutes Weekends: 10 - 15 minutes

2.3.4. Cycle Network

Figure 3 shows that the site has good access to the local bicycle network with off-road cycle paths provided along Lee Street and Regent Street to the south, The Goods Line to the west and north, and Wattle Street and Castlereagh Street to the east.

Further on-road facilities and low-speed local roads supplement these, providing connections across the Sydney CBD and to the wider active and public transport networks.

2.4. Existing Traffic Generation

As discussed in Section 2.1 of this report, the site currently accommodates a small commercial office and heritage substation and is largely used as car parking and for storage of miscellaneous equipment. Given this somewhat informal use, existing trip generation cannot be accurately estimated using conventional trip rates. However, given aerial imagery suggests around 5—10 cars are parked on the site at any given time, it would be reasonable to assume this number of vehicles arrive in the morning of a typical day and then depart in the evening.

2.4.1. Retail

The GTTGD recommends application of weekday PM peak period trip generation rates for 'speciality shops' of 5.6 vehicle trips per 100 m^2 GLA but does not provide a respective rate for the weekday AM peak, given demand during this time would typically be much lower. Accordingly, the PM peak rate has been factored down by 50% to estimate an AM peak trip generation rate of 2.8 vehicle trips per 100 m^2 GLA.

Application of these rates to the existing retail area results in the following estimated traffic generation:

- 10 vehicle trips / hour (5 in, 5 out) during the AM peak period.
- 19 vehicle trips / hour (10 in, 9 out) during the PM peak period.

The above assumes a 50% outbound and 50% inbound split for visitors, given trade is generally passing with both in and outbound trips occurring within the same hour.

2.4.2. Commercial

The TDT 2013/04a recommends application of weekday AM and PM peak period trip generation rates for office blocks of 1.6 and 1.2 trips / 100 m^2 GLA / hour during the AM and PM peak period, respectively.

Application of these rates to the existing commercial area results in the following estimated traffic generation:

- 119 vehicle trips / hour (95 in, 24 out) during the AM peak period.
- 89 vehicle trips / hour (17 in, 72 out) during the PM peak period.

The above assumes an 80% inbound and 20% outbound split for workers during the AM peak, noting employees would typically arrive for work in the weekday morning, and vice versa for the PM peak.

2.4.3. Summary

It is reiterated that conventional and published trip generation rates within GTTGD and TDT 2013/04a are generally based on sites with unconstrained parking, which is not the case at the subject development.

It is unlikely that the existing development, which provides only a modest amount of car parking on part of the ground floor, would generate over 100 vehicle trips per hour during the typical commuter weekday AM and PM peak periods.

Given the site's highly accessible location and constraints placed on car parking, it is estimated that the vast majority of users of the site would use public or active transport for travel.

Notwithstanding, it is considered that the most relevant use of the above is to determine the net change in traffic generation resulting from the proposed development and ensuring that consistent approaches are adopted. Discussion on estimated traffic generation is provided in Section 5.

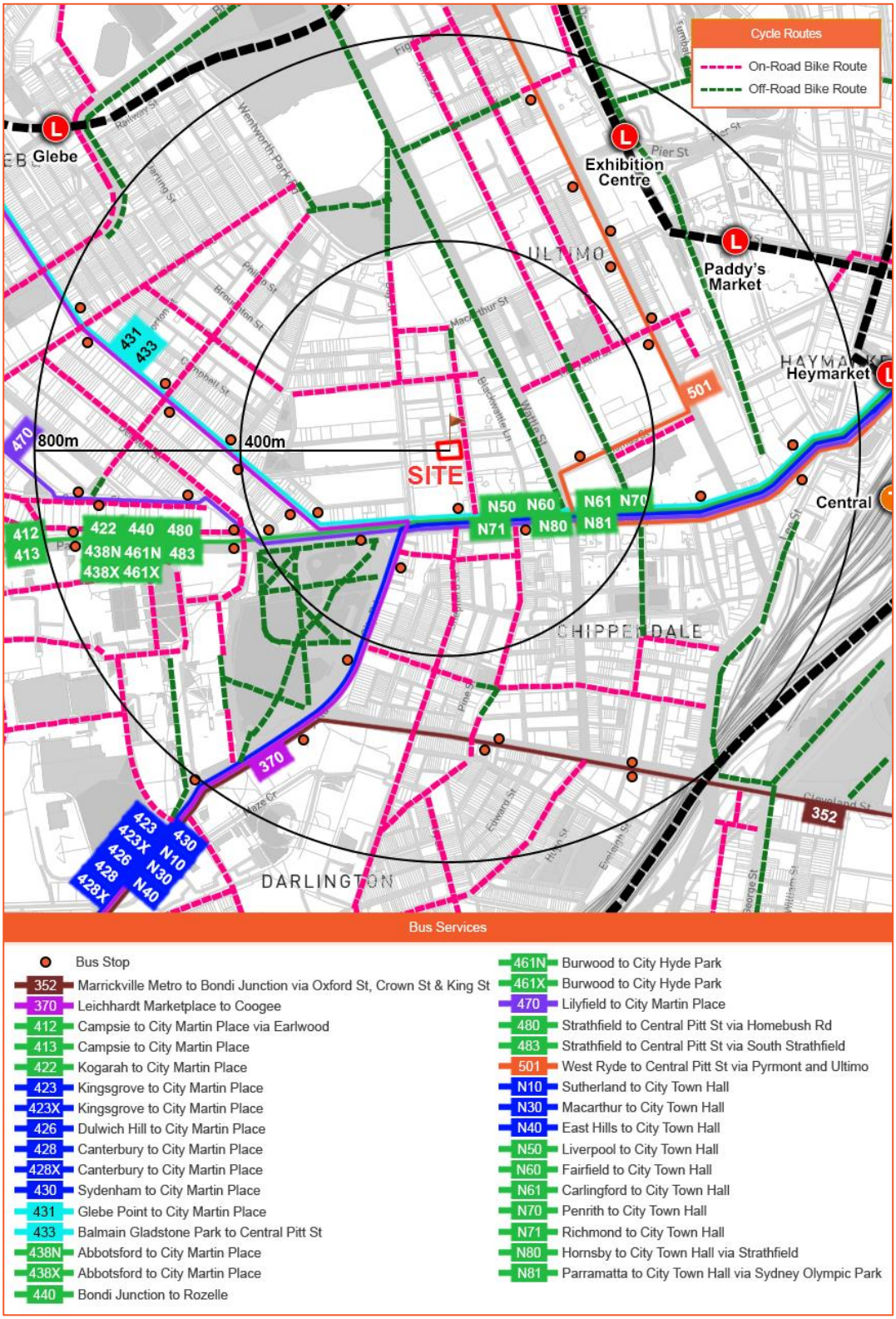


Figure 3: Public & Active Transport Services

3. Proposed Development

A detailed description of the proposed development for which approval is now sought, is outlined in planning documentation prepared separately. Specifically, consent is sought for a mixed-use development including:

- 107 build-to-rent apartments consisting of:
    - 6 studios.
    - 74 one-bedroom apartments.
    - 27 two-bedroom apartments.
- Ground retail spaces for a combined total of 479 m^2 GFA.
- 19 parking spaces on the basement level, including eight tandem parking spaces.

The parking and traffic implications arising from the proposed development are discussed in Sections 4 and 5, respectively. A copy of the relevant architectural drawings, prepared by Bates Smart Architects, is included in Appendix A.

4. Parking and Access Report

4.1. Car Parking

4.1.1. Build-to-Rent Housing

Clause 3.11.4(1) of SDCP 2012 provides that *"Where the development comprises a land use not specified in the Sydney LEP 2012, the proposed rate of car parking provision is to be justified via a Parking and Access Report."*

The proposed build-to-rent land use is not specifically itemised in SDCP 2012 or SLEP 2012, and as such a bespoke approach has been adopted to assess the car parking requirement for the development, following a literature review of available standards and controls for comparable developments across NSW. The findings of this review are discussed herein.

Housing SEPP

Relevant parts of Clause 74 of the Housing SEPP stipulate car parking rates for 'build-to-rent housing' uses as follows.

> ***74 Non-discretionary development standards—the Act, s 4.15***
>
> *(1) The object of this section is to identify development standards for particular matters relating to development for the purposes of build-to-rent housing that, if complied with, prevent the consent authority from requiring more onerous standards for the matters.*
>
> ***Note—***
> *See the Act, section 4.15(3), which does not prevent development consent being granted if a non-discretionary development standard is not complied with.*
>
> *(2) The following are non-discretionary development standards in relation to the carrying out of the development to which this Part applies—*
>
> *(d) unless a relevant planning instrument specifies a lower number –*
>
> *(i) for land within an accessible area—0.2 parking spaces for each dwelling, or*
>
> *(ii) otherwise—0.5 parking spaces for each dwelling, or*
>
> *(iii) if a relevant planning instrument specifies a requirement for a lower number of parking spaces—the lower number specified in the relevant planning instrument,*

The Housing SEPP defines 'accessible area' as follows:

> ***accessible area** means land within –*
>
> *(a) 800m walking distance of a public entrance to –*
>
> *(i) a railway station, or*

(ii) a wharf from which a Sydney Ferries ferry service operates, or

(b) 400m walking distance of –

(i) a public entrance to a light rail station, or

(ii) for a light rail entrance with no entrance – a platform of the light rail station, or

(b) 400m walking distance of a bus stop used by a regular bus service, within the meaning of the Passenger Transport Act 1990, that has at least 1 bus per hour servicing the bus stop between –

(i) 6am and 9pm each day from Monday to Friday, both days inclusive, and

(ii) 8am and 6pm on each Saturday and Sunday

Public and active transport accessibility discussed in Section 2.3 demonstrates that the site is within an 'accessible area' as defined by the Housing SEPP. Accordingly, the car parking rate outlined in Clause 74(2)(d)(i) of the Housing SEPP would apply to the proposed development, which for a 107-apartment development would result in 21 car parking spaces.

This is not a minimum requirement; however, rather Clause 74(1) notes that the object of these requirements is to identify development standards that, if complied with, prevent Council from requiring more onerous standards for the matters. It notes that Council is not prevented from granting development consent if this standard is not complied with.

In response, the proposal provides 19 car parking spaces, which is considered satisfactory given SLEP 2012 generally espouses maximum car parking rates as a means of reducing private car use.

4.1.2. Retail

Clause 7.7(d) of SLEP 2012 provides the formula for determining car parking provision for a retail premises on category D land which has a floor space ratio greater than 3.5:1, as follows:

$$M = (G \times A) / (50 \times T)$$, where:

- **M** is the maximum number of parking spaces.
- **G** is the GFA of the retail premises.
- **A** is the site area.
- **T** is the total GFA of the entire building, including the residential component.

Application of this calculation to the proposed retail floor space would result in a maximum permitted number of retail car spaces of two spaces.

4.2. Car Share Parking

Clause 3.11.2 of SDCP 2012 stipulates a minimum car share scheme parking rate based on the number of car spaces provided at the proposed development. The car share scheme parking rate is based on the Land Use and Transport Integration (LUTI) map which shows the development falling under Category 'A' with a rate of 1 per 50 car spaces.

Assessment against SDCP 2012 finds the site is required to provide zero car share parking spaces. In response, the proposal provides zero car share parking spaces and is therefore considered acceptable.

4.3. Accessible Car Parking

Clause 7.8.5 of the SDCP 2012 Schedules requires that one accessible space be provided for every 20 car spaces or part thereof. As 19 car spaces are proposed at the development, the proposal should provide one accessible car parking space.

4.4. Motorcycle Parking

Clause 7.8.4 of the SDCP 2012 Schedules requires that one motorcycle space be provided for every 12 car spaces as separate parking for motorcycles. As 19 car spaces are proposed at the development, the proposal requires two motorcycle parking spaces.

4.5. Bicycle Parking

Clause 69(1)(h) of the Housing SEPP requires that "*the build-to rent housing will include adequate bicycle and motorcycle parking spaces*". SDCP 2012 in turn states a bicycle parking rate of "1 per dwelling" for residential accommodation plus "1 per 10 dwellings" for visitors and "1 per 250 m^2 area" for shops.

As 107 apartments and 479 m^2 GFA are proposed at the development, the site should target 119 bicycle parking spaces.

4.6. Servicing and Waste Collection

Neither the SLEP 2012 nor SDCP 2012 specify a rate for the provision of service vehicle parking for build-to-rent housing developments; however, SDCP 2012 does specify a minimum service vehicle parking rate for 'residential buildings and serviced apartments', being 1 space for the first 50 dwellings plus 0.5 spaces for every 50 dwellings thereafter. SDCP 2012 also provides service vehicle rates for 'shops, shopping centres' at 1 space per 350 m^2 GFA up to 2,000 m^2.

Totalling the requirements for the two land uses would result in a requirement for three service bays, though the size of these is not nominated by SDCP 2012.

The site proposes provision of one ground level loading dock capable of accommodating vehicles up to an 8.8-metre medium rigid vehicle (MRV). This loading dock contains a vehicle turntable upon which servicing and waste collection vehicles would stand whilst servicing the site. This turntable will enable forward entry and exit

movements for trucks at the site. The proposed loading dock would be actively managed through development of a Loading Dock Management Plan (LDMP), which could be required by Council via an appropriately worded condition of consent.

This LDMP would set out the management protocol for the bay to ensure it is used in a safe and efficient manner between all tenants of the site, thereby reducing the impact to other road users. The LDMP will coordinate and stagger all service and waste collection vehicles in such a manner that operations will work efficiently with the one proposed bay.

5. Traffic Impacts

5.1. Trip Generation

5.1.1. Build-to-Rent Apartments

GTIA does not provide traffic generation rates for build-to-rent housing developments. However, given the nature of the development, it has been considered that the build-to-rent housing component of the development is comparable to that of a 'high-density residential flat building'.

Accordingly, the AM and PM peak traffic generation rates for high-density residential flat buildings under GTIA have been adopted. This is however deemed an conservative assumption, given the trip generation rates for high density residential developments are based on different demographic users. Despite this, the GTIA rates are adopted without adjustment.

Application of these rates to the build-to-rent housing results in the following estimated traffic generation:

- 20 vehicle trips / hour (3 in, 17 out) during the AM peak period.
- 16 vehicle trips / hour (14 in, 2 out) during the PM peak period.

The above assumes an 80% outbound and 20% inbound split for residents during the AM peak, noting residents would typically depart for work in the weekday morning, and vice versa for the PM peak.

5.1.2. Retail

The GTIA recommends application of a weekday (Thursday) PM peak period trip generation rate for specialty shops of 3.2 trips / 100 m^2 gross leasable floor area (GLFA) / hour. No respective rate is given for the weekday AM peak, which is therefore assumed as generating traffic at a rate of half that of the evening peak, given speciality retail shops are generally either not open during the commuter morning traffic peak (7—9am) or are not generating as many trips if they are. A conversion between GFA and GLFA of 75% is adopted.

Application of these rates to the proposed retail area results in the following estimated traffic generation:

- 6 vehicle trips / hour (3 in, 3 out) during the AM peak period.
- 12 vehicle trips / hour (6 in, 6 out) during the PM peak period.

The above assumes a 50% outbound and 50% inbound split for visitors, given retail trade is generally occurring with both in and outbound trips occurring within the same hour.

5.1.3. Summary

The proposed development would result in the following total number of trips during the weekday AM and PM peak periods:

- 26 vehicle trips / hour (6 in, 20 out) during the AM peak period.
- 28 vehicle trips / hour (20 in, 8 out) during the PM peak period.

This however is not a net increase as it does not consider trips generated by the existing development detailed in Section 2.4. Existing trip generation has been assumed as seven vehicle trips per hour during each peak period, reflecting the number of vehicles observed by aerial imagery to be parked at the site. The net increase in trips generated as a result of the PP would be as follows:

- 19 vehicle trips / hour (-1 in, 20 out) during the AM peak period.
- 21 vehicle trips / hour (20 in, 1 out) during the PM peak period.

5.2. Traffic Impacts

The anticipated net increase traffic generation of the proposed development is therefore small at around 20 vehicles per hour, or one vehicle every three minutes. This is under the conservative adoption of trip generation rates for sites with unconstrained car parking, which is not the case at the subject site given car parking would be constrained in accordance with the objectives of SLEP 2012. The likely trip generation resulting from the site would be lower.

There will therefore be no material traffic impacts on the nearby local streets and accordingly, no external improvements will be required to facilitate the development. The traffic impacts of the proposed development are therefore considered acceptable.

6. Design Aspects

6.1. Access

The proposed vehicular access arrangements have been designed in accordance with the relevant width, grade, and visibility requirements of the respective AS 2890 guidelines and are considered satisfactory.

With 19 car parking spaces of User Class 1A, the proposed development requires a Category 1 Driveway under Table 3.1 of AS 2890.1, being a combined entry and exit driveway of width 3.0 metres to 5.5 metres. The requirements of AS 2890.2 are also considered given the site access would accommodate vehicles up to an 8.8-metre MRV. In response, the development proposes a combined entry and exit driveway which satisfies the requirements under AS 2890.1.

6.2. Internal Design

The internal parking arrangements generally comply with the relevant requirements of AS 2890, including the:

- Car and motorcycle space dimensions, grades and aisle widths, in accordance with Clause 2.4 of AS 2890.1.
- Internal roadway widths and grades, in accordance with Clause 2.5 of AS 2890.1.
- Design vehicle envelope required for clearance to columns, walls, and obstructions, in accordance with Clause 5.2 of AS 2890.1.
- Headroom and ground clearances, in accordance with Clause 5.3 of AS 2890.1.
- Service vehicle and loading arrangements, in accordance with AS 2890.2.
- Bicycle parking arrangements, in accordance with AS 2890.3.

Critical movements have been assessed by swept path analysis where necessary, and the parking areas of the proposed development are considered satisfactory. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

It is noted that the design of the vehicle access and car parking arrangements as shown by the architectural drawings provided at **Appendix A** are considered appropriate for this stage. Post-consent, it is likely that further refinement of the design will be required as more detail is incorporated into the drawings which will be assessed and resolved prior to the release of a Construction Certificate.

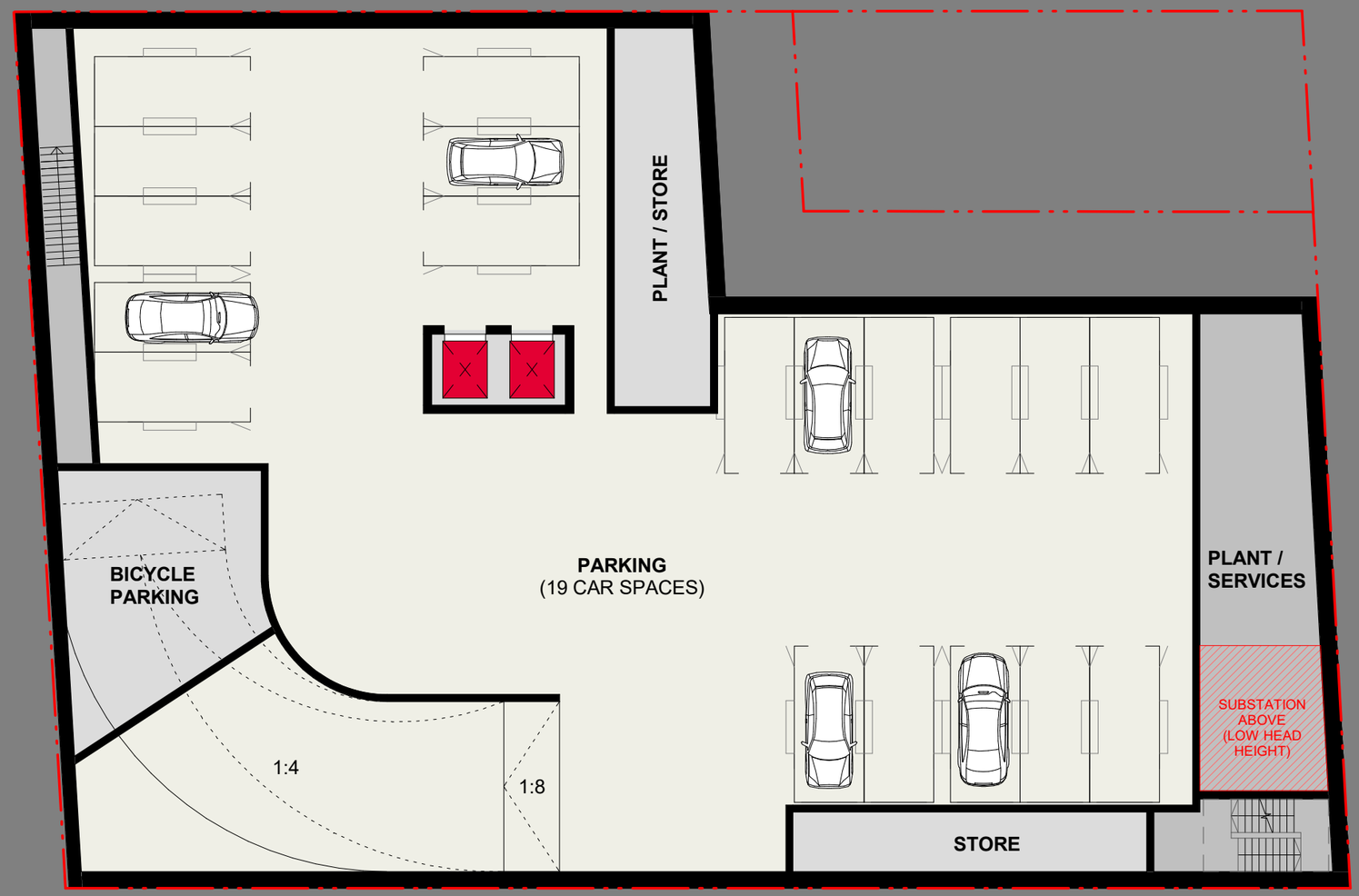
7. Conclusions

In summary:

- The PP seeks consent for rezoning for a mixed-use build-to-rent development. Specifically, development consent is sought for:
    - 107 build-to-rent apartments consisting of:
        - 6 studios.
        - 74 one-bedroom apartments.
        - 27 two-bedroom apartments.
    - Ground retail spaces for a combined total of 479 m^2 GFA.
    - 19 parking spaces on the basement floor.
- Car parking at the site has been assessed in accordance with the Housing SEPP and Council's planning controls to determine a suitable level of provision. In response, 19 car parking spaces are proposed at the site which is considered acceptable.
- The traffic generation assessment confirms that the development will have a negligible impact on the performance of the external road network and is therefore considered acceptable.
- The proposed access and internal parking arrangements comply with the relevant requirements of AS 2890.1, AS 2890.2, AS 2890.3 and AS 2890.6. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

It is therefore concluded that the proposed development is supportable on traffic planning grounds

Appendix A



406

PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

BASEMENT 1
S12603
1 : 200 @ A3

Drawing no. PP03.B1 Rev. A

SMAIL ST

VEHICLE ENTRY / EXIT

RL 6.900

RL 6.590

RL 6.050

RL 5.500

RL 5.660

RL 6.200

RL 7.200

1-3 SMAIL STREET

FIRE ESC (BASEMENT)

STAIR CREST RL7.200

OSD, RWT & WSUD BELOW DRIVEWAY

RETAIL
88.68 m²
RL 6.300

3 m

REPURPOSED SUBSTATION
RETAIL
111.95 m²

LANEWAY

3 m

RESI WASTE ROOM
21m²

LOBBY
RL 6.300

FIRE ESC.

FIRE ESC.

SERVICES

LOADING

MRV

1:8

1:4

1:8

RETAIL
AMENITIES
20m²

CORRIDOR

RETAIL
355.8 m²
RL 6.150

WASTE HOLDING ROOM
80m²

SUB

STAIR CREST RL6.950

FIRE ESC (BASEMENT)

MOUNTAIN ST

55 MOUNTAIN STREET

TREE TO BE REMOVED

407

PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

GROUND FLOOR
S12603
1 : 200 @ A3

Drawing no. PP03.00

Rev. A

Attachment A9

Report on Detailed Site (Contamination) Investigation

Douglas PARTNERS

GROUNDED EXPERTISE

Report on Detailed Site (Contamination) Investigation

Proposed Mixed Use Development

41-49 Mountain Street, Ultimo NSW

Prepared for Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

Project 231957.01

5 September 2025

Douglas Partners Pty Ltd
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NSW 2114
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Document History

Details

Project No.	231957.01
Document Title	Report on Detailed Site (Contamination) Investigation
Site Address	41-49 Mountain Street, Ultimo NSW
Report Prepared For	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
Filename	231957.01.R.001.Rev0

Status and Review

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Draft A	Setareh Pourkazemi	Nerilee Edwards	21 March 2025
Revision 0	Setareh Pourkazemi	Nerilee Edwards	5 September 2025

Distribution of Copies

Status	Issued to
Draft A	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
Revision 0	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature	Date
Author	5 September 2025
Reviewer	5 September 2025

FS604853

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

Executive Summary

Douglas Partners Pty Ltd (Douglas) has been engaged by Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 for a geotechnical and preliminary site (contamination) Investigation associated with a proposed mixed-use development at 41-49 Mountain Street, Ultimo ('the site'). The site is shown on Drawing 1, Appendix A.

The objective of this investigation is to assess the suitability of the site from a contamination perspective for the proposed development and whether further investigation and/or management is required.

This DSI comprised a site walkover, a desktop study and intrusive soil, groundwater and vapour sampling to assess the suitability of the site for the proposed mixed-use commercial residential development and whether further investigation and/or management of contamination is required.

The desktop search identified on-site activities / potential source of contamination as including imported fill of unknown origin, demolition of previous structures which may have contained hazardous building materials (including asbestos), substation, metal and engineering workshop(s), warehousing (including of asbestos products), Ausgrid depot [including storage of waste (including in an inground pit) and small containers / quantities of fuels, chemical and batteries] storage area and hazardous building materials from current buildings. The long history of commercial / industrial land use in the area around the site is also considered to indicate the potential for contamination off the site which could impact the site. The previous workshop / warehousing buildings appear to have been demolished between 2006 and 2014, and the former substation is currently disused.

The field work comprised sampling from 10 boreholes (BH101 to BH107, BH110, BH1014A and BH105A) across the accessible areas of the site. Fill was encountered in all of the boreholes to depths between 1 m to 1.9 m bgl. Building debris (brick, concrete, sandstone, metal, ash, slag, asphalt, tile, terracotta) were recorded in all boreholes across the site, which can be an indicator of asbestos. Three groundwater wells were constructed, in BH101 to BH103 as part of the geotechnical investigation. Groundwater sampling was conducted from each groundwater well. A soil vapour sample was collected from one soil vapour well constructed for the DSI (BH105A) and one ambient air sample was collected from within the disused substation building. Selected soil, groundwater and vapour samples were analysed for the identified CoPC.

Limitations to current investigation included:

- The footprint of the demountable buildings / metal containers and storage areas were not accessible for sampling;
- Intrusive sampling in the former substation building was not permitted; and
- The use of boreholes instead of test pits to minimise disturbance to current site activities, noting boreholes are not efficient for identifying asbestos. Given that building debris, a potential indicator of asbestos, was observed across the site, there is considered to be a risk of asbestos being present more extensively than identified herein that has not been well characterised by the current data.

The soil, soil vapour and groundwater sampling and analysis has identified the following during the current investigation:

- Soils:
  - Fill was encountered in all of the boreholes to depths between 1 m to 1.9 m bgl. Building debris (brick, concrete, sandstone, metal, ash, slag, asphalt, tile, terracotta) were recorded in all boreholes across the site, which can be an indicator of asbestos;
  - Chrysotile asbestos identified above the HSL B criteria in one fill sample. As asbestos contamination is often associated with building debris, and small diameter boreholes are not efficient sampling at detecting asbestos, there is considered to be a high potential for undetected asbestos to be present at other locations in the fill; and
  - B(a)P TEQ: above the HIL B criteria in various fill samples. Total PAH was also recorded during pervious investigation at the site (reviewed herein).
- Vapour and ambient air:
  - All results were within the adopted SAC.
- Groundwater:
  - Lead in the sample from BH101 was above the adopted SAC and expected ambient levels. The source is unknown;
  - TRH, toluene and trihalomethanes recorded in the sample from BH103 are considered to indicate the potential for impact from sediments, potable water and/or drilling fluids. It is noted that the sample collected was poor quality due to the limited water and high turbidity; and
  - Other metals, and PFAS recorded above the adopted SAC are considered to be within expected ambient concentrations.

Preliminary comments on waste classification of soils and rock are provided in Section 14.

Based on the results of the DSI it is considered that the site can be made suitable for the proposed mixed-use development subject to implementation of the following:

- Preparation of a remediation action plan (RAP) to outline the process for data gap investigation (if not conducted prior to RAP preparation, refer to next dot point), remediation and validation of the site as required to render the site suitable for the proposed development. The RAP should also include an unexpected finds protocol and contingency plan;
- A data gap investigation to address the data gaps in the current investigation. This should include testing in the footprints of existing demountable buildings, metal containers, storage areas and the former substation, further groundwater assessment and characterisation of asbestos (as required to for waste classification and to meet remediation objectives). The data gap investigation may need to occur when the site is unoccupied / following removal of current structures; and
- Implementation and validation of the works under the RAP.

All soils to be removed from the site will need to be classified and managed in accordance with the *Protection of the Environment Operations Act 1997*.

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Report on Detailed Site (Contamination) Investigation
Proposed Mixed Use Development
41-49 Mountain Street, Ultimo NSW

1. Introduction

Douglas Partners Pty Ltd (Douglas) has been engaged by Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 for a geotechnical and contamination Investigation associated with a proposed mixed-use development at 41 - 49 Mountain Street, Ultimo ('the site'). The site is shown on Drawing 1, Appendix A.

The investigation was undertaken in accordance with Douglas' proposal 231957.02.P.001.Rev1 dated 29 November 2024.

The objective of this investigation is to assess the suitability of the site from a contamination perspective for the proposed development and whether further investigation and/or management is required.

Douglas has also conducted a hazardous building material survey (reference 231957.01.R.001.Rev) and geotechnical investigation (reference: 231957.02.R.001.Rev0), which are reported separately. Fieldwork for this.

This report must be read in conjunction with all appendices including the notes provided in Appendix B.

The following key guidelines were consulted in the preparation of this report:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013); and
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020).

2. Proposed development

Douglas has been provided with the planning proposal – DAP Pack (prepared by Bates Smart, dated 28 January 2025). The Planning Proposal includes three options being considered for the development.

It is understood that all three options include:

- Retention and adaptive reuse of the heritage-listed substation at the corner of Mountain and Smail Streets (for retail use);
- Removal of the existing demountable buildings, metal containers and external pavements;
- Construction of a mixed-use residential / commercial development including:
    - A single-level basement over the site, excluding the heritage listed substation area. The basement is proposed for parking and services;

- Ground level commercial (retail, loading dock), residential lobby and service area; and
- Residential units on Level 1 and above.

3. Scope of work

The scope of work comprised:

Desktop

- Review of available relevant previous reports prepared for the site and inclusion of relevant information and results in the current assessment;
- Review of publicly available government held records including NSW Environment Protection Authority (EPA) contaminated land databases and the environmental protection license and notices database;
- Obtain a property report from Lotsearch and review the following included data:
  - Historical aerial photographs;
  - Historical business records;
  - Historical maps;
  - Registered groundwater wells;
  - Geological and topographic maps;
  - Published maps of acid sulfate soil (ASS) potential for the site; and
  - Published maps of salinity potential for the site.
- Obtain and review records of chemicals stored on-site held by SafeWork NSW under a Schedule 11 hazardous chemicals on premises search; and
- A site walkover to observe signs or indicators of Potential Areas of Environmental Concern (PAEC).

Fieldwork and Laboratory

- Preparation of a fieldwork, safety and environmental plan (FWSEP) and safe work method statements (SWMS);
- Before You Dig Australia (BYDA) search and scanning of the test locations for buried services. Note Douglas was advised that no plans of services within the site were available at the time of fieldwork;
- Concrete coring at nine boreholes (BH101 to BH107, BH104A and BH105A);
- Drilling of 10 boreholes (BH101 to BH107 and BH110, BH104A and BH105A) across the site using non destructive digging (NDD) and hand tools (hand auger) as below:
  - Boreholes BH101, BH102, BH106, BH107 and BH110 drilled 0.5 m below ground level into natural soil to depths ranging between 1.5 m to 2.4 m bgl;
  - Boreholes BH103, BH104 and BH105 were terminated at depths ranging between 0.5 m to 0.8 m bgl due to practical refusal on sandstone boulders, bricks and concrete;

  - Borehole BH104A was drilled to depth of 1.1 m bgl (to provide additional data given the early refusal in BH104). BH104A was terminated due to practical refusal on sandstone cobbles;
  - Borehole BH105A was drilled to depth of 1.7 m bgl (to provide additional data given the early refusal in BH105). Borehole BH105A was terminated upon reaching the target depth of 0.5 m into natural soil. It was then backfilled to a depth of 1 m below ground level (bgl) to enable the construction of a vapour well;
  - Three of the locations (BH101 to BH103) were subsequently extended to depths of between 5 m and 10.1 m bgl as part of the geotechnical investigation using a drilling rig; and
  - Groundwater wells were constructed in BH101 to BH103 as part of the geotechnical investigation.
- Logging and collection of soil samples from the 10 boreholes drilled into the soil. Collection and field screening of replicate soil samples for volatile organic compounds (VOC) using a photoionization detector (PID);
- Purge and sample the soil vapour well;
- Collect one ambient air sample in the substation building;
- Develop the groundwater wells;
- Micropurge the groundwater wells and collect groundwater on 21 February 2025. Samples were collected using a low flow bladder pump including measuring and recording physical parameters prior to sampling. Note: insufficient water was present in BH103 to allow micropurging, or collection of field parameters, and as such a 'grab' groundwater sample was collected;
- Analyse selected samples at a National Association of Testing Authorities (NATA) accredited laboratory for various combination of the identified contaminants of potential concern (CoPC), as follows:

  Soil samples:

  - Metals (including arsenic (As), cadmium (Cd), total chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni) and zinc (Zn));
  - Total recoverable hydrocarbons (TRH) (as a screening test for total petroleum hydrocarbons - TPH);
  - Benzene, toluene, ethyl benzene, total xylenes (BTEX);
  - Polycyclic aromatic hydrocarbons (PAH);
  - Organochlorine pesticides (OCP);
  - Organophosphorus pesticides (OPP);
  - Polychlorinated biphenyls (PCB);
  - Per- and poly-fluoroalkyl substances (PFAS);
  - Asbestos (fibrous asbestos / asbestos fines - FA / AF);
  - Toxicity characteristic leaching procedure (TCLP) (metal, PFAS).

Groundwater samples:

- Metals (total and dissolved);
- TRH;
- BTEX;
- VOC;
- PAH;
- OCP;
- OPP;
- PCB;
- PFAS;
- pH / turbidity / hardness;
- Oil and grease;
- Total dissolved solids (TDS); and
- Total suspended solids (TSS).

Soil vapour and ambient air samples:

- Volatile chlorinated hydrocarbons (VCH); and
- Volatile total recoverable hydrocarbons.

- Quality control (QC) samples were also collected and analysed, including replicate samples, rinsate samples and trip spike and trip blanks; and
- Preparation of this report.

4. Site information

The site is located within Ultimo, south-west of the Sydney CBD. The site is known as 41-49 Mountain Street, Ultimo and comprising two lots.

The site is located at the corner of Smail and Mountain Streets, one block east of Broadway Shopping Centre. It is in a mixed-use area with residential, commercial, and hotel developments, near several tertiary campuses, and within 200 m of public transport to the CBD and Western suburbs. It is also part of the 'Mountain Street' heritage conservation area under the LEP.

The site features at the time of reporting comprised a single storey substation at the north-east corner, along with various demountable sheds, structures, pavements and parking space for service vehicles.

Summary information for the site is provided below:

Site address	41-49 Mountain Street, Ultimo NSW
Legal description	Lot 21 Deposited Plan 5567 Lot 2 Deposited Plan 191928 (Former substation)
Approximate area	1,460 m^2
Zoning	Zone MU1 Mixed Use
Local council area	City of Sydney
Current use	Ausgrid Ultimo depot site and a former single storey disused substation building in north-east corner
Surrounding uses	North – Small Street, followed by 35-39 Mountain Street (a four-storey hotel accommodation) East – Mountain Street, followed by commercial / retail development South – St Barnabas Street, followed by 51-55 Mountain Street (a mixed used commercial / retail development) West – immediately adjacent to the site a mixed-use commercial / retail, followed by Kettle Lane

The site boundary is shown on Figure 1.

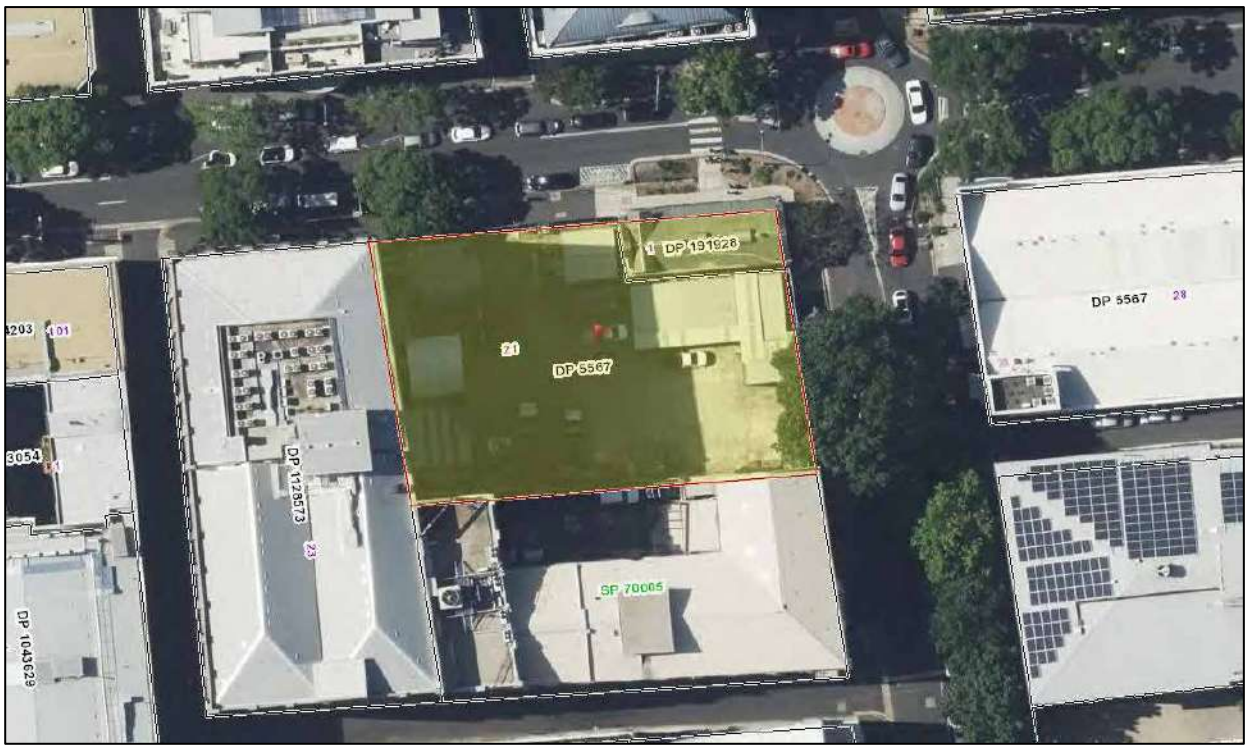

Figure 1: Site location (red outline shows site boundary, refer to Drawing 1 for full legend)

5. Environmental setting

The desktop assessment involved a search of the site history information obtained from published database and mapping. In addition, the Lotsearch report provides supporting figures and information, and in included in Appendix C.

5.1 Topography

The NSW elevation contours obtained from NSW Department of Lands in April 2009, indicate that the regional topography around the site slopes towards a valley sloping generally north / north-west to Blackwattle Bay approximately 1.1 km to the north-west of the site. The site is located on the south-western slopes of the valley, which slope generally to the north / north-east.

Reference to the NSW 2 m elevation contour map indicates that the site levels slope gently downwards to the north-east with an approximate elevation of 8 m relative to Australian Height Datum (AHD) in the south-west corner to 6 m AHD in the north-east.

5.2 Soil landscape

Reference to the Soil Landscape of Sydney 1:100 000 sheet maps the site as being within an area of disturbed terrain. The soil landscape is mapped as being extensively disturbed by human activity, including complete disturbance, removal or burial of soil. Landfill includes soil, rock, building and waste materials.

Approximately 90 m south of the site is shown to be underlain by Blacktown residual soils, comprising of shallow to moderately deep (>100cm) red brown podzolic soils. The Blacktown soil landscape comprises gently undulating rises in Wianamatta group shales and Hawkesbury shale with broad rounded crests and ridges with gently inclined slopes. Blacktown residual soils, comprising of shallow to moderately deep (>100cm) red brown podzolic soils.

Approximately 120 m north-east of the site is shown to be underlain by Gymea landscape comprising undulating to rolling rises and low hills on Hawkesbury Sandstone.

Figure 2: Soil landscape mapping with approximate site location (red boundary)

5.3 Site geology

Reference to the NSW Seamless Geology Dataset indicates that the site is located on the boundary of areas mapped as anthropogenic deposits (in the north) and Hawkesbury Sandstone (in the south).

The anthropogenic deposit are recorded to typically vary from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, within an interstitial sand to clay matrix.

Hawkesbury Sandstone consists of medium to coarse grained quartz sandstone with minor shale and laminate lenses, refer to Figure 3.

Approximately 150 m south of the site is shown to be underlain by Ashfield Shale, which consists of black to light grey shale and laminate.

Figure 3: NSW Seamless Geology map with approximate site location (red boundary)

5.4 Acid sulfate soils

The Atlas of Australia Acid Sulfate Soil maps the site as being within an area with low probability of occurrence with a 6-7% chance of occurrence.

Review of NSW Acid Sulfate Soil Risk map (Reference to 1:25,000 Acid Sulfate Soil Risk Mapping, 1994-1998) indicated that the northern half of the site is located within an area mapped as Disturbed Terrain which require acid sulfate soil investigation.

Review of the Sydney Local Environmental Plan (LEP) 2012, Acid Sulfate Soils Map Sheet ASS_009, indicates that the northern and eastern portions of the site fall within 'Class 2' Acid Sulfate Soils, while the remainder of the site in the western portion is classified 'Class 5'.

Class 2 Acid Sulfate Soils are likely to be found below the natural ground surface. Development consent is required in Class 2 areas for works below natural ground surface and works by which the water table is likely to be lowered below natural ground surface.

Acid Sulfate soils are not typically found in Class 5 areas. Development consent is required in Class 5 areas for works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

Douglas previously conducted a contamination investigation for the adjacent site at 1 Smail Street. An acid sulfate soil investigation was undertaken and reported as part of the contamination assessment. The field and laboratory results for the adjacent site indicated low potential for the presence of acid sulfate soil.

Based on the desktop data the potential for acid sulfate soil at the site is generally considered to be low. Further assessment of the potential for acid sulfate soils at the site is discussed in Section 13.1.

5.5 Dryland salinity

Regional mapping of salinity potential in Western Sydney was undertaken in 2002 by the former Department of Infrastructure, Planning and Natural Resources, now the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW). The site is located outside the mapped area of salinity potential.

Reference to the NSW DCCEEW information system (eSPADE) indicates that soils in the surrounding area have shown 'no salting evident' within available soil profiles.

5.6 Surface water and groundwater

Surface water is anticipated to be intercepted by the local stormwater drainage system. The stormwater system is expected to discharge into Blackwattle Bay, located approximately 1 km to the north-west.

A search of Water NSW (formerly the NSW Office of Water) groundwater bores database was undertaken on 12 February 2025. The search indicated that there are 13 registered groundwater bores within 500 m radius of the site. The groundwater wells were constructed to depths between 3.7 m to 8.2 m with the standing water level ranging between 2.18 m to 5.93 m bgl. The intended purpose of all of the bores was monitoring. Table 1 provides a summary of the six closest wells to the site.

Table 1: Summary of available information from nearby registered groundwater bores

Bore ID	Location	Depth	Geology	Water Level	Purpose
GW109646	Up-gradient 135 m east	8.20 m	Fill to 0.8 m bgl Clay, silt and sand to 8.0 m bgl Sandstone to 8.2 m bgl	5.93 m bgl	Monitoring bore
GW109649	Up-gradient 139 m east	7.2 m	Fill to 4.8 m bgl Silty sand to 5.9 m bgl Sandstone to 7.2 m bgl	2.95 m bgl	Monitoring bore
GW109648	Up-gradient 159 m east	6.2 m	Fill to 2.9 m bgl Silty sand/clay to 5.8 m bgl Sandstone to 6.2 m bgl	5.23 m bgl	Monitoring bore
GW109501	Up-gradient 313 m south-east	6.0 m	Not supplied	2.30 m bgl	Monitoring bore
GW109502	Up-gradient 355 m south-east	6.4 m	Not supplied	2.18 m bgl	Monitoring bore

Bore ID	Location	Depth	Geology	Water Level	Purpose
GW109503	Up-gradient 400 m south-east	5.20	Not supplied	2.24	Monitoring bore

Based on the regional topography, the anticipated groundwater flow direction is to the north / north-east towards Blackwattle Bay. The results from the registered bore search indicate groundwater levels at the site could be between 2 m and 6 m bgl.

The Hydrological Map of Australia: Commonwealth of Australia (Geoscience Australia) indicates that the aquifer beneath the site comprises porous, extensive highly productive aquifers. Given the highly urbanised nature of the area, and known long history of contaminating land uses, it is considered that the potential for beneficial use of groundwater from shallow aquifers beneath the site is low. This is consistent with the results of the registered bore search.

6. Previous investigation and summary report

Douglas has previously prepared a Statutory Site Audit Report and a Hazardous Building Materials (HAZMAT) on the site, reported in:

- *Statutory Site Audit Report on 43-49 Mountain Street, Ultimo* (report reference: 43701, February 2006) (Douglas, 2006); and
- *Report on Hazardous Building Materials (HAZMAT) Survey – 41-49 Mountain Street, Ultimo* (report reference:231957.00, February 2025) (Douglas, 2025).

6.1 Douglas (2006)

Douglas (2006) comprise a Site Audit Report (SAR) for a statutory site audit under the Contaminated Land Management Act 1997 (CLM Act) undertaken for a previous proposed development. The Audit Area covered by Douglas (2006) and the reports reviewed therein, did not over the portion of the current site cover by the former substation building.

Douglas (2006) included a review of reports, including environmental site assessments, conducted by Environmental Investigation Services Py Ltd (EIS).

EIS initially conducted a Stage 1 environmental site assessment (2005) including a review of site history and site walkover. At the time of EIS investigation, the site was occupied by a two storey commercial building with no basement.

The site history and walkover recorded that:

- The land title deeds suggest that the Audit Area was under ownership of Council of the City of Sydney, and then was subdivided into three parts in 1949 and went under different ownership;
- Council records suggest the (then) existing building at the Audit Area may have been constructed in 1909 for use as a workshop and subsequently been used as a warehouse and office;

- A review of SafeWork records indicated no records of licensed dangerous goods storage pertinent to the Audit Area;
- Council records indicates that the existing building within the Audit Area may have constructed in 1909 and were used as a workshop, warehouses and offices;
- The main potential sources for contamination determined to be: imported filling and hydrocarbons associated with workshop activities; and
- EIS recorded the Audit Area to be completely covered by two storey commercial building with a café and unoccupied areas. EIS found limited evidence of any potential contamination during the walkover.

In December 2005 to January 2006, EIS conducted a Phase 2 environmental site assessment comprising intrusive testing of soil and groundwater sampling. Seven boreholes (BH1 to BH7) were drilled across the site. A summary of the results is provided below:

- Boreholes were drilled to a maximum depth of 4.5 m bgl prior to refusal on sandstone;
- Concrete pavement (150-450 mm thick) was encountered in all boreholes except at BH3;
- Fill comprises silty sand, sandstone, traces of igneous gravel, clay, traces of ceramics and bricks, ash and slag; with silty or clayey (in-situ) silty or clayey sand below the filling grading into sandstone;
- Fill thickness above natural soils ranged from 0.45 m to 1.6 m, with the thickest fill was found in BH6. EIS did not record fil in BH3;
- Sandstone was recorded at depths ranging between 1.2 m to 2.7 m;
- No seepage water was encountered during drilling;
- A temporary piezometer was installed in BH3 with a slotted screen from 1.5 m to 4.5 m against sandstone. Water level was recorded at 2.2 m in the piezometer after 4 hours;
- PID screening results were recorded as 0 ppm in all samples;
- All laboratory results were below the site assessment criteria (SAC) adopted in the current DSI (refer to Section 11) with the exception of:
    - Total PAH: in samples BH1/0.15-0.5 and BH6/0.2-0.6 at concentrations 109 mg/kg and 197 mg/kg which exceeded HIL criteria of 100 mg/kg; and
    - B(a)P TEQ: although B(a)P TEQ was not reported in Douglas (2006) (and was not a required analyte at that time, it is noted that B(a)P in samples BH1/0.15-0.5, BH2/0.15-1.05 and BH6/0.2-0.6 at concentrations 8.1 mg/kg, 5.3 mg/kg and 23 mg/kg exceeded current HIL criteria of 5 mg/kg, and B(a)P in samples BH5/0.2-0.5 and BH7/0.25-0.4 recorded B(a)P concentrations of 2.5 mg/kg and 3 mg/kg respectively, close the current B(a)P TEQ HIL, indicating a potential that B(a)P TEQ, if analysed, would have exceeded in these samples.
- Asbestos was not detected in any of the fill soils tested. Douglas notes, however, that boreholes are not efficient at detected asbestos, and that the laboratory methods available for asbestos at the time of the EIS investigations were not as well developed as current methods; and
- Zinc at 11 µg/L was detected in groundwater sample above the ANZECC trigger level for the protection of 95% of species of 8 µg/L.

An extract of borehole locations, drawings and summary table results are included in Appendix D.

6.2 Douglas (2025)

Douglas conducted a HAZMAT survey of the Ausgrid substation building at 41-49 Mountains Street. The assessment comprised a non-destructive / non-intrusive visual inspection along with a limited program of testing and analysis. Samples of suspected ACM, lead paint, ceiling cavity dust and SMF insulation were collected by Douglas using hand tools and analysed by a NATA accredited laboratory.

The laboratory results of HAZMAT survey summarised below:

- Asbestos detected in multiple locations in the main room / ground (conduit); and
- Lead paint detected in white paint on the walls, green paint on the door and red paint on the trench wall.

Douglas recommended a destructive / intrusive survey of all areas prior to building modification work (e.g. demolition, refurbishment and maintenance work).

7. Site history

7.1 Information from previous reports

Historic information from Douglas (2006) is summarised in Section 6.1.

7.2 Former substation heritage

The Bates Smart planning proposal – DAP Pack (dated 28 January 2025) reported that the Mountain Street Substation was built in 1906 and is located in the Pyrmont / Ultimo Urban Conservation Area.

7.3 Historical aerial photography

The historical aerial photographs for the years of 1930, 1943, 1951, 1956, 1970, 1978, 1982, 1956, 1991, 1994, 2000, 2014 and 2024 were obtained from the Lotsearch historical database on 19 September 2024. These photographs were reviewed with reference to possible previous land use and around the site. Further information is provided in the Lotsearch report included in Appendix C.

Note: The Lotsearch report cover both the site, and the adjacent property at 1-3 Small Street, which are shown using two site boundaries. For this investigation, the pertinent site boundary is the one corresponding to the current site only, i.e. Lots 21 Deposited Plan 5567 and Lot 2 Deposited Plan 191928 (Former substation).

It is noted that the site boundary appears to shift in some of the aerial photographs. This is due to georeferencing issues related to the age of the aerial photographs, and as such the marked boundaries should be used for reference purposes only.

A summary of key features observed for the site and surrounding land is presented in Table 2.

Table 2: Summary of historical aerial photographs

Year	Site	Surrounding land use
1930	Available image resolution is poor, and potential structures cannot be clearly seen.	Smail Street was present to the north of the site with St Barnabas Street to the south and Mountain Street to the east. The building on the adjacent surrounding land were consistent with commercial / industrial land use.
1943	The entire site was occupied by commercial / industrial style structures. The substation was present in the north-east corner of the site.	No significant changes to the land use of the surrounding lands to the north, south, east and west were apparent when compared with the 1930 aerial photograph.
1951 - 1970	No significant changes to the site layout were apparent when compared with the 1943 aerial photograph.	No significant changes to the general land use of the surrounding lands to the north, south, east and west were apparent when compared with the 1930 aerial photograph. A building to the south-east of the site was demolished and appeared to have changed to at grade parking land use.
1978	No significant changes to the site layout were apparent when compared with the 1943 aerial photograph.	No significant changes to the land use were apparent when compared with the 1930 aerial photograph.
1982 - 1986	No significant changes to the site layout were apparent when compared with the 1943 aerial photograph.	No significant changes to the land use of the surrounding lands to the north, south, east and west were apparent when compared with the 1978 aerial photograph.
1991	No significant changes to the site layout were apparent when compared with the 1943 aerial photograph.	No significant changes were apparent to the land use of the surrounding lands were apparent when compared to 1986 aerial photograph.
1994	Some of the structures in the south-west corner has undergone some redevelopment, with the site layout remained the same.	No significant changes to the land use of the surrounding lands to the north, south, east and west were apparent when compared with the 1991 aerial photograph.
2000	The building in the north-west of the site may have been demolished. The remainder of the building at site appeared largely unchanged.	Redevelopment of the buildings further to the south with commercial building.
2014	All previous commercial structures / warehouses had been demolished and removed from the site. Few structures (demountable buildings) including	Development of land further to the west of the site had been completed,

Year	Site	Surrounding land use
	Ausgrid substation were present in the north, north-east and southern part of the site with the remainder of the site is vacant.	which is consistent with the current commercial building structure.
2024 - 2025	Additional structures were present along the western boundary of the site. The remainder of the site appeared similar to 2014 aerial photograph.	Development of the land further to the west, south and south-east of the site had been completed with commercial building structures.

7.4 **Historical maps**

Historical maps from the Lotsearch report are included in Appendix C. Relevant information includes:

- A Fires Underwriters' plan dated 1917 from the Council of City of Sydney showing the site layout and businesses, and surrounding land uses. An extract is provided as Figure 4 below. The plan shows the site occupied by the substation, a sawtooth building and yard. The occupiers are listed as being Fitzroy Ironworks (J. Connolly) and an Engineer. Surrounding land uses are shown as including warehousing, Waters Trading (with a carpenters workshop and rice and cereal storage, engineering and welding workshop, pattern store, motor engineering and repair shop; and
- A map from 1956 showing the site containing the substation with the remaining area marked as "Eliza Tinsley Pty Ltd'. Labels on surrounding land indicate generally commercial or industrial land uses, with the exception of a school and church to the south.

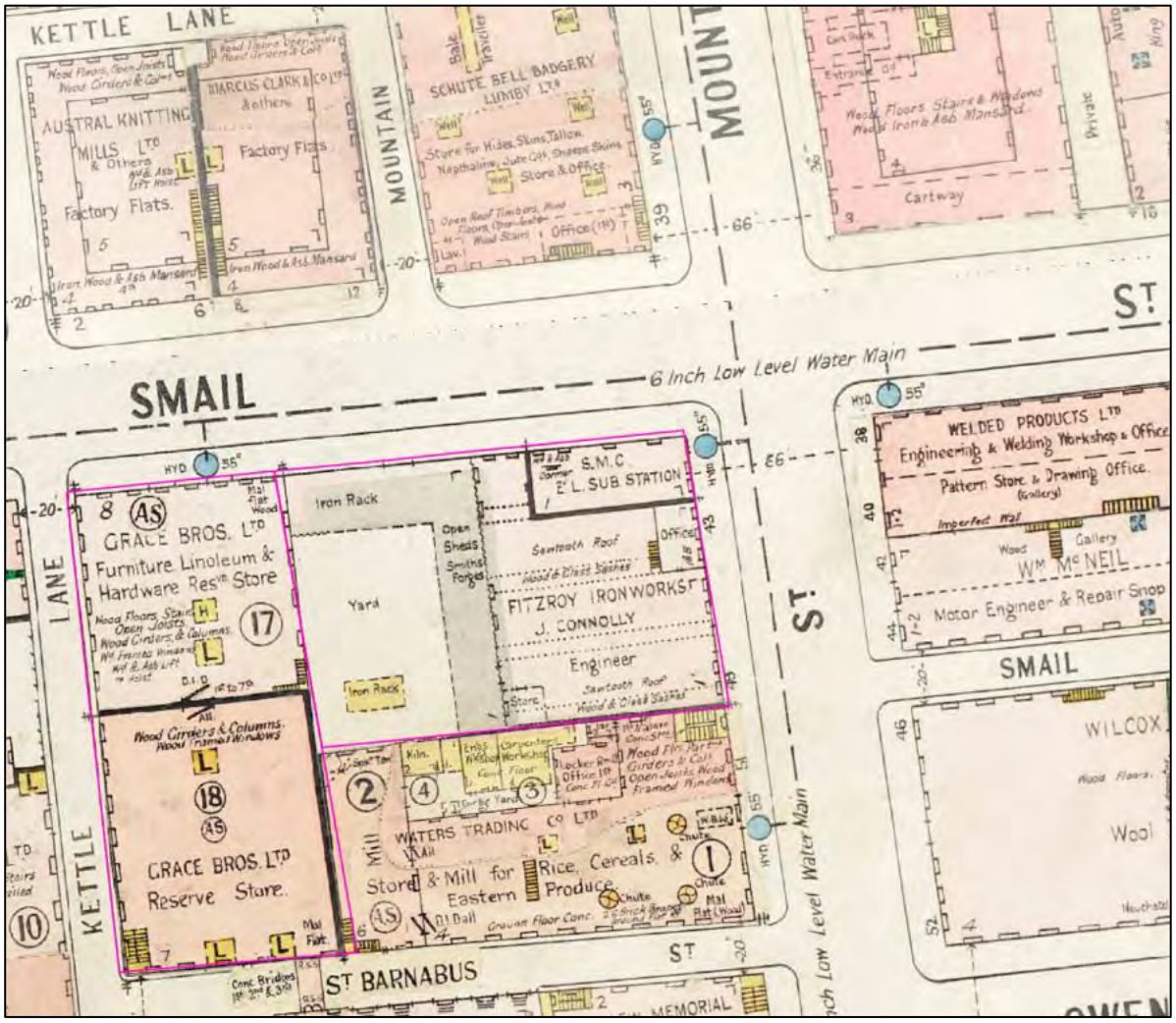

Figure 4: Extract of 1917 Fire Underwriters' Plans, from Lotsearch report

7.5 Public registers and planning records

7.5.1 EPA Notices under Section 58 of the Contaminated Land Management (CLM Act)

A search of the record of notices on the NSW EPA public register of contaminated land record was undertaken on 3 March 2025. The search did not identify notices for the site or for other sites within the suburb of Ultimo.

The Lotsearch report mapped listings under NSW EPA contaminated sites, with the closest property was located approximately 600 m south-east of the site. Given the distance of the property, the potential for it to impact the site is considered low and such no further detail was sought.

7.5.2 List of NSW contaminated sites notified to EPA under section 60 of the CLM Act

A search of the public database of sites notified to the NSW EPA under Section 60 of the CLM was undertaken on 3 March 2025 on the NSW EPA website. The results of the search indicated that the site was not listed as a notified contaminated site.

One property was recorded for the suburb of Ultimo for the Shell Coles Express Service Station located at 387-429 Wattle Street, approximately 152 m north-east (down-gradient) of the site. Regulation under CLM Act was not required. Given the topography, the property is not considered to present a contamination risk to the site and therefore further detail was not sought.

7.5.3 Licences listed under section 308 of the protection of the Environment Operations Act 1997 (POEO Act)

A search of the NSW EPA public records of current environmental protection license, applications, notices or audits under POEO Act was undertaken on the NSW EPA website on 12 March 2025. No listings were recorded for the site or for other properties listed under the suburb of Ultimo.

The Lotsearch report mapped listings under the POEO Act register, with the closest property located approximately 370 m south-east of the site at 3 Central Park Avenue, Chippendale. The license number for this operation is 20768 and the activity pertaining to the site recorded as generation of electrical power from gas. The license review indicates that the site's activities involve air pollution with ammonia and nitrogen oxides as pollutant, necessitating air monitoring. Based on the license summary information this property is not considered to present a contamination risk to the site.

7.5.4 Former Licensed Activities under the POEO Act 1997

A search of the NSW EPA public records of former environmental protection license, applications, notices or audits under POEO Act was undertaken on the NSW EPA website on 12 March 2025. No listings were recorded for the site.

The Lotsearch report mapped former listings under the POEO Act register, with the closest property located approximately 280 m south-east of the site at 26-28 Broadway, Chippendale. The license number for the property was 1521, and the activity pertaining to the site recorded as brewing and distilling, hazardous, industrial or Group A Waste generation or storage.

However, the property has been redeveloped for commercial, public open space and residential uses and is not listed as a notified site. As such, the property is not considered to present a contamination risk to the site and no further detail was sought.

7.5.5 PFAS investigations sites listed on the EPA

A review of PFAS investigation sites listed on the NSW EPA website was undertaken on 12 March 2025, along with a review of additional PFAS investigation registers undertaken by Lotsearch.

Neither the site nor adjacent sites were listed under:

- NSW EPA PFAS Investigation Program;

- Defence PFAS Management Program;
- Defence PFAS Management Program; and
- Airservices Australia national PFAS Management Program.

7.6 SafeWork NSW record search

A NSW Dangerous Good Search application for the site was submitted on 6 December 2024. The SafeWork NSW response stated that they did not locate any records pertaining to site.

A copy of the SafeWork NSW search record is included in Appendix E.

7.7 Historical business activity

A review of the Universal Business Directory (UBD) records was undertaken as part of the Lotsearch report for the site and of surrounding area for high-risk activities including dry cleaning, motor garage and service stations. The UBDs were published between 1950 and 1991, with selected years searched. Further information is provided in the Lotsearch report, provided in Appendix C and in Section 7.7.

Businesses identified at the site included the following:

- Eliza Tinsley (Aust) Pty Ltd, listed business activities included:
  - Asbestos Cement Products manufacturing and/or distribution and/or suppliers;
  - Asbestos Cloth Suppliers; and
  - Manufacturers and/or distributors and wholesalers of Adhesives / tape, insulation materials, felt, filters, welding equipment.
- Connolly J. Ltd, listed business activities included:
  - Frame manufacturers;
  - Engineering;
  - Metal workers;
  - Tool makers;
  - Vice manufacturers; and
  - Safe and strongroom door manufacturers.

Overall, given the variety of business activities listed for Eliza Tinsley (Aust) Pty Ltd, it appears that these most likely related to the warehousing and distribution of various products, notably including asbestos products.

Overall, given the variety of business activities listed for Connolly J. Ltd, it appears that this business is likely to have included manufacturing / engineering works.

Lotsearch identified the following off-site potentially contaminating businesses:

- Multiple motor garages and/or engineers and/or dry cleaners over 200 m south of the site. These are not deemed to pose a significant contamination risk to the site based on their distance from the site;

- Multiple motor garages and/or engineers and/or dry cleaners were identified within a range of 70 m or more to the cross-gradient of the site. These are not deemed to pose a significant contamination risk to the site based on their distance and relative location; and
- Multiple motor garages and/or engineers and/or dry cleaners were identified within a range of 20 m or more to the north – north-east (down-gradient) of the site. These were operational between 1948 to 1972. These are not deemed to pose a significant contamination risk to the site based on their distance and relative location.

7.8 Site history integrity assessment

The information used to establish the history of the site was sourced from reputable and reliable reference documents, many of which were official records held by Government departments / agencies. The databases maintained by various Government agencies potentially can contain high quality information, but some of these do not contain any data at all.

In particular, aerial photographs can provide high quality information that is generally independent of memory or documentation. They are only available at intervals of several years, so some gaps exist in the information from this source. The observed site features are open to different interpretations and can be affected by the time of day and/or year at which they were taken, as well as specific events, such as flooding. Care has been taken to consider different possible interpretations of aerial photographs and to consider them in conjunction with other lines of evidence.

7.9 Summary of site history

The site history indicates that the electrical substation was constructed at the site in 1906. It is not known when the substation was decommissioned, however there has been no information on it having been used for other purposes since decommissioning.

The site history records commercial / light industrial use of the site from circa 1909, commencing with metal and engineering workshops and then becoming warehousing. Records indicate that products distributed from the site may have included asbestos products.

The previous workshop / warehousing buildings appear to have been demolished between 2006 and 2014. Recent use of the site has been as an Ausgrid work depot.

A search of EPA notices and licenses did not identify the site to be identified to the EPA as contaminated, be regulated under the CLM Act, hold a license or have received any EPA notices. A SafeWork NSW search did not locate any records pertaining to storage of chemicals / fuels at the site.

No significant recent adjacent off-site sources of contamination have been identified, however the review did identify that the surrounding land has a long history of light industrial uses, including motor garages, workshops and dry cleaners, which may be source of contamination to the site, especially in groundwater.

8. Site walkover

8.1 Observations

A site walkover was undertaken by an environmental scientist on 6 December 2024 (and subsequently during field work). The general topography was consistent with that described in Section 5.1, relatively level with a gentle slope towards north-east. The site layout was also observed to be generally consistent with the 2024 aerial photograph.

The following key site features pertinent to the site were observed (refer to site photographs in Appendix F):

- The electrical substation was located at the corner of Smail Street and Mountain Street, and was disused at the time of fieldwork (Photograph 1);
- Access to the former substation building was from a small entrance door from the Mountain Street footpath (no vehicular access was available to the substation building at the site of fieldwork);
- No plant remained in the substation building. A number of pits and pipes were observed in the floor;
- Access to the remainder of the site was via an entrance gate from Smail Street to the north;
- The site was being used as an Ausgrid depot;
- Two demountable buildings and two metal containers were observed in the north-east portion of the site, functioning as an office, first aid office, and storage area (Photograph 2);
- Vehicle batteries and a small fuel container were observed at the ground surface to the east of a demountable (Photograph 3);
- Petroleum gases liquid cylinders were stored in metal cage located in the north-east of the site, to the west of the substation (Photograph 4);
- A small open stormwater drain was observed in the north east of the site, to the west of the substation (Photograph 5);
- An electrical kiosk with high voltage electricity was present on an elevated concrete slab in the north-west corner of the site (Photograph 6);
- A few metal containers were located in the north-western part of the site next to the elevated concrete slab. There was no access to the containers (Photograph 7);
- A canopy structure was present the west central portion of the site, being used as a car space and storage area (Photograph 8);
- A covered maintenance area was present the south-western part of the site. The area was used to store a variety of items including equipment, tools for maintenance, wood, small containers of chemical, including cleaning products, spray paints, fertiliser, cement additive, sealants, pesticides, oil containers, containers of solvent degreaser to remove oil, grease, paint (Photographs 9 and 10);
- A storage cupboard signed as a ‘flammable liquid’ depot was present in covered maintenance area and was observed to contain small containers (‘jerry cans’) of fuel, fuel additives, lubricants, acetone and thinners (Photograph 11);

- A second metal cabinet depot signed as 'flammable liquid' was present in the south-west of the site adjacent to the southern boundary (Photograph 12). It was empty when opened on 6 December 2024;
- A shed being used to store asphalt mix was present in the south-west of the site adjacent to the southern boundary (Photographs 13 and 14);
- A washdown areas was observed in the south-west of the site adjacent to the southern boundary, between the asphalt storage shed and the flammable liquid depot. A number of containers were present in this area at the time of inspection (Photograph 13);
- A pit was located in the south-east corner of the site (Photograph 15);
- The site was paved with concrete with major cracks and staining (Photograph 16); and
- Adjacent land uses were not observed to contain point sources of contamination (based on limited inspection from the street). Land uses were observed to be predominantly commercial (retail / office space) with some residential units.

8.2 Discussion with site personnel

Ausgrid personnel present on 6 December 2024 provided the following anecdotal information:

- That there were no known service plans for the site;
- The substation (signed as No. 5) was the fifth one constructed in the Sydney area;
- That the substation was disused, and that all known live electrical services at the site were above ground (with power controlled at the meter board in the north-west of the site, with conduits service the site attached to the walls at the site boundaries);
- The site was used a works depot for an Ausgrid civil works team;
- That the pit in the south-east of the site was used to collect wash down water from equipment following works, with the liquids subsequently being pumped out for off-site disposal site (Photograph 15); and
- That they were unaware of any underground fuel or chemical storage / tanks at the site.

9. Preliminary conceptual site model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e. it enables an assessment of the potential source – pathway – receptor linkages (complete pathways).

Based on the current investigation / previous reports, the following potential sources of contamination and associated contaminants of potential concern (CoPC) have been identified and summarised in Table 3.

Table 3: Summary of potential sources

Potential sources and associated CoPC
On-site sources
S1: Fill: Imported fill from unknown sources and demolition of former buildings on the site. Douglas noted ash, slag ceramic and brick inclusions reported in Douglas (2006) CoPC: asbestos, metals, TRH, BTEX, PAH, PCB, OCP, phenols and PFAS **S2:** Former activities including substation, engineering and metal workshop, warehousing, including of asbestos products CoPC: include asbestos, metals, PCB, TRH, BTEX, PAH, OCP, OPP, VOC **S3:** Current activities including maintenance shed, chemical storage areas (including petroleum containers, oil, paint, thinners, cleaners, pesticides, fertilisers) in the south-west portion of the site CoPC: include metals, TRH, BTEX, PAH, OCP, OPP, and VOC **S4:** Open pit used for storage of wash down water in the south-west corner of the site CoPC: include asbestos, metals, TRH, BTEX, PAH, OCP, PCB, VOC, PFAS **S5:** Existing buildings (hazardous building materials from existing structures CoPC: asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB
Off-site sources
S6: Surrounding historical land uses (commercial / industrial CoPC: metals, TRH, BTEX, PAH, PCB, OCP, OPP, phenols, VOC and PFAS

The following potential human and environmental receptors, along with relevant potential pathways, have been identified and summarised in Table 4.

Table 4: Summary of potential receptors and pathways

Potential human receptors
HR1: Construction and maintenance workers **HR2:** End users [mixed use commercial / residential] **HR3:** Adjacent site user's [commercial / residential]
Potential environmental receptors
ER1: Surface water [Blackwattle Bay, marine / estuarine aquatic ecosystems] **ER2:** Groundwater Note: given the distance of the closest surface water body (1 km north of the site), the potential for contamination at the site to impact the nearest surface water body is considered to be low unless transported via the stormwater system. Note: given the current state of the site, which is entirely paved with concrete and the proposed basement excavation, the ecological significance of the site is considered to be low, and not to provide high value habitat to terrestrial ecology. Accordingly, terrestrial ecosystem receptors have not be considered further.

Potential pathways to human receptors
HP1: Ingestion and dermal contact **HP2:** Inhalation of dust and/or vapours **HP3:** Vapour migration into buildings
Potential pathways to environmental receptors
EP1: Surface water run-off **EP2:** Leaching of contaminants and vertical migration into groundwater **EP3:** Lateral migration of groundwater providing base flow to water bodies

Summary of potentially complete exposure pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S4) and receptors are provided in below Table 5.

Table 5: Summary of potentially complete exposure pathways

Source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill: Imported fill from unknown sources and demolition of former buildings on the site: Asbestos, metals, TRH, BTEX, PAH, PCB, OCP, phenols and PFAS **S2:** Former activities including substation, engineering and metal workshop, warehousing: asbestos, metals, PCB, TRH, BTEX, PAH, OCP, OPP, VOC **S3:** Current activities including maintenance shed, chemical storage	**HP1:** Ingestion and dermal contact	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential]	An intrusive investigation is recommended to assess possible contamination, including testing of the soils, soil vapour and groundwater
	HP2: Inhalation of dust and/or vapours	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential] **HR3:** Adjacent site users [commercial/ residential]	
	EP1: Surface water run-off **EP3:** Lateral migration of groundwater providing base flow to water bodies	**ER1:** Surface water	

Source and CoPC	Exposure pathway	Receptor	Risk management action
areas in the south-west portion of the site: metals, TRH, BTEX, PAH, OCP, OPP, and VOC **S4:** Open pit used for storage of wash down water in the south-west corner of the site: asbestos, metals, TRH, BTEX, PAH, OCP, PCB, VOC, PFAS **S6:** Surrounding historical land uses: metals, TRH, BTEX, PAH, PCB, OCP, OPP, phenols, VOC and PFAS	**EP2:** Leaching of contaminants and vertical migration into groundwater	**ER2:** Groundwater	
S5: Existing buildings (hazardous building materials from existing structures): asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB	**HP1:** Ingestion and dermal contact	**HR1:** Construction and maintenance workers	Undertake a hazardous building materials survey and manage hazardous building materials in accordance with the recommendations of the survey and regulatory requirements.
	HP2: Inhalation of dust and/or vapours	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential] **HR3:** Adjacent site users [commercial/ residential]	

10. Sampling and analysis plan

10.1 Data quality objectives

The contamination investigation was devised with reference to the seven-step data quality objectives (DQO) process, which is provided in Appendix B Schedule B2, NEPC (2013). The data quality objectives process is outlined in Appendix G.

10.2 Soil sampling and analysis rationale

Based on the CSM and data quality objectives (DQO) a judgmental sampling strategy was adopted for the site, including locations targeted at specific areas of concern and locations to provide indicative information on general site conditions, taking into consideration data available from previous investigations.

The soil sampling locations were chosen based on the previous investigation results, previous site uses, suspected contamination and the CSM with the rationale provided below. Borehole locations are shown on Drawing R.001.D01, Appendix A.

Table 2 of NSW EPA (2022) recommends a minimum of eight test locations to characterise a site of 0.15 ha. Soil samples were collected from a total 10 boreholes including additional two additional locations drilled due to practical refusal of the primary borehole locations (BH104A and BH105A) comprising the following:

- BH101 to BH104, BH104A, BH106 to BH107: boreholes on general to identify potential source of contamination;
- BH105 and BH105A; boreholes targeting fuel containers, chemical storage areas and flammable liquid storage area; and
- BH110: borehole targeting the pit used for storage of wash down water in the south-east corner of the site.

Note that Ausgrid did not permit intrusive investigation in the former substation during this investigation, and consequently, the two proposed boreholes (BH108 and BH109) inside the substation were not drilled.

The footprint of the demountable buildings, metal containers and sheds, which are predominately situated in the north-east and western portion of the site, were not accessible for intrusive sampling at the time of fieldwork.

Concrete coring was undertaken at all sampling locations except for BH110. Boreholes were drilled using NDD with samples collected using hand tools. Two additional boreholes (BH104A and BH105A) were drilled due to termination of the primary boreholes, which encountered sandstone cobbles.

Soil samples were collected from each borehole and directly from hand auger at regular depth intervals, or upon signs of contamination, and changes in lithology or signs of contamination (such as odours or staining).

Samples were selected for analysis based upon field observations and PID screening results, and to provide lateral and vertical coverage of the site. At least one fill sample from each borehole was analysed for CoPC associated with fill, with more samples analysed from boreholes where deeper fill was encountered, or where signs of contamination were observed (such as staining and odours). Four natural soil samples have been analysed to initially evaluate the contamination status of the natural soil.

The selected samples were analysed for the CoPC in the CSM as discussed in Section 9. The general sampling methods are described in the field work methodology in Appendix H.

10.3 Soil vapour sampling and analysis rationale

In order to assess the current soil vapour concentrations at the site and evaluate whether historical / current off site land uses have impacted the site, sampling was undertaken from one soil vapour well. Vapour samples were tested for the identified CoPC, namely VOC.

BH105A, used for soil vapour sampling, was positioned in the vicinity of the maintenance shed including fuel containers and flammable liquid storage area.

Details of the vapour well construction are provided in Appendix H and on the borehole log in Appendix K. General sampling methods are described in the field work methodology in Appendix H.

10.4 Ambient air sampling rationale

As discussed in Section 10.2, the installation of boreholes BH108 and BH109 was not possible due to access restriction within the former substation. To provide preliminary data, an ambient air sample was collected to assess the potential VCH in ambient air inside the enclosed space of substation building.

The general sampling methods are described in the field work methodology in Appendix H.

10.5 Groundwater sampling and analysis rationale

Groundwater monitoring wells were constructed as part of the geotechnical investigation, and groundwater sampling from the geotechnical monitoring wells was carried out as part of this contamination investigation.

The locations were selected based on the following rationale:

- GWBH102 is positioned in the south-west corner, hydraulically up-gradient. The results from GWBH102 will be used to evaluate data on the concentration of contaminants in groundwater sourced entering the site;
- GWBH101 is positioned in the central portion of the site; and
- GWBH103 is positioned in the south-east corner and hydraulically up-gradient. The results from GWBH103 will be used to evaluate data on the concentration of contaminants in groundwater entering the site.

Note: no borehole could be constructed in the down-gradient portion of the site due to restrictions on drilling in the substation building.

Details of the groundwater well construction are provided in Appendix H and on the borehole logs in Appendix K. The general sampling methods are described in the field work methodology in Appendix H.

11. Site assessment criteria

The site assessment criteria (SAC) applied in the current investigation are informed by the CSM (Section 7) which identified human and environmental receptors to potential contamination on the site. Analytical results are assessed (as Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013). The investigation and screening levels applied in the current investigation comprise as follow:

The site is proposed development includes a mixed commercial / residential building with a single-level basement across the entire site excluding the substation building.

The SAC applied in the current investigation comprise levels adopted for a generic residential with minimal opportunities for soil access, land use category 'B'. Given the currently proposed basement commercial use, the land use category 'D' for commercial / industrial land use potential suitability of commercial category 'D' will be also applied.

The derivation of the SAC is in Appendix I, and the adopted SAC are listed on the summary analytical results tables in Appendix J.

12. Results

12.1 Field work results

12.1.1 Soil

The borehole logs for this assessment are provided in Appendix K. The logs recorded the following general sub-surface profile:

Concrete Pavement:	Concrete pavement was encountered at the surface in all test locations, thickness of 80 mm to 160 mm to depths of between 0.05 m and 0.3 m below ground level (bgl) except for BH10.
Fill:	Variably compacted sandy soil with varying amounts of sandstone gravels and reclamation fill including asphalt, sandstone cobbles, tiles, metal, slag, ash, bricks, concrete. The fill extended to depths of between 1.0 m and 1.5 m; overlying
Alluvial Soil:	Very loose to dense sandy soil with varying amount of sandstone and ironstone gravels, extending to depths between 2.4 m and 2.5 m; overlying
Sandstone Bedrock:	Extremely weathered sandstone only encountered at depths of between 2.5 m and 3.6 m in BH102. Generally highly to moderately weathered low strength with medium strength bands becoming slightly weathered and medium to high strength encountered to termination depth.

Building debris and/or other anthropogenic inclusions (sandstone gravel, brick, cobbles, sandstone cobbles, tile, trace terracotta, concrete, rusty metals, glass, ash, slag) were recorded in all boreholes across the site within the fill material from 0.1 to 1.5 m bgl. No potential asbestos containing material (PACM) was recorded, however; building debris is indicative of the potential presence of asbestos.

Trace of ash, slag and asphalt were also encountered in all of the boreholes across the site within the fill layer.

The photoionisation detector (PID) screening for volatile organic compounds was conducted on the soil samples collected at each borehole. The PID recorded values of less than 10 ppm (consistent with background Australian soils) suggesting very low concentrations, of VOC in the samples tested.

No free groundwater was observed during drilling of boreholes. It should be noted that groundwater levels area affected by climate conditions and soil permeability and will therefore vary with time. In addition, the essential use of water during NDD precluded any further groundwater observations during drilling.

12.1.2 Soil vapour

Soil vapour sampling location is shown on Drawing 2, Appendix A and construction details are outlined on the borehole logs provided in Appendix K. Field records are provided in Appendix L.

Field measurements were recorded from vapour well prior to sampling. In summary:

- Carbon dioxide was recorded at concentrations of 0 v/v;
- Methane, hydrogen sulfate and carbon monoxide were not recorded above the detection limit in the sample; and
- PID sampling was less than 1 ppm.

12.1.3 Groundwater

Groundwater BH101, BH102 and BH103 levels were gauged on 12, 13 and 14 February 2025 using an electronic oil/water interface meter prior to developing the wells and again on 20 February 2025 prior to sampling. The measured water levels prior to sampling are shown in Table 6.

Table 6: Summary of groundwater level measurements on 20 February 2025

Well ID	Location of monitoring well	Ground level * m (AHD)	SWL m (bgl)	SWL m (AHD)
GW BH101	down-gradient	6.50	3.9	2.6
GWBH102	up-gradient	12.30	2.60	9.7
GWBH103	up-gradient	5.0	3.87	1.13

Notes:
*Surveyed by dGPS
AHD – Australian Height Datum
SWL – standing water level
bgl – below ground level

No non-aqueous phase liquid was recorded by the interface meter and no hydrocarbon odour was noted during development or sampling. The purge groundwater was light brown and silty during sampling.

The stabilised groundwater field parameters recorded prior to sampling are shown on the groundwater field sheets provided in Appendix L and summarised below.

Physical parameters were measured whilst sampling (where possible) and are summarised in Table 7.

Table 7: Summary of field parameters (groundwater and surface water)

Well / Sample ID	Temp. (°C)	DO (ppm)	Turbidity	EC (µS/cm)	pH	Redox (mV)
BH101	23.2	-0.20	75.17	12.2	3.81	409.4
BH102	22.5	-0.17	37.82	18.4	5.13	230.7
BH103	Insufficient groundwater in well to obtain parameters					

12.2 Laboratory analytical results

The results of laboratory analysis are summarised in the following tables in Appendix J:

- Table J1: Summary of results of soil analysis;
- Table J2: Summary of results of waste classification assessment;
- Table J3: Summary of results of soil vapour and ambient air analysis; and
- Table J4: Summary of results of groundwater analysis.

The laboratory certificate(s) of analysis together with the chain of custody and sample receipt information is / are provided in Appendix M.

12.3 Data quality assurance and quality control

The data quality assurance and quality control (QA / QC) results are provided in Appendix N. Based on the results of the field QA and field and laboratory QC, and evaluation against the data quality indicators (DQI) it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

13. Discussion

13.1 Soils

Chemical Contaminants

The concentration of BTEX, phenols, OCP, OPP and PCB in all samples tested were below the PQL and the adopted human health investigation levels (HIL B). Concentrations of metals, PAH, TRH and PFAS were recorded above the practical quantification limit (PQL) but below the adopted SAC with the exception of:

- Benzo(a)pyrene [B(a)P] TEQ: in samples BH101/0.1-0.3, BH101/0.9-1.1, BH102/0.35-0.55, BH103/0.1-0.3 and BH105/0.25-0.35 at concentrations of 5.4 mg/kg, 5 mg/kg, 8 mg/kg, 6.2 mg/kg and 14 mg/kg respectively, which exceeded the HIL B criteria of 4 mg/kg.

It is noted that trace ash, slag and asphalt were observed and logged in the fill profile across the site at depths between 0.2 to 1.9 m. The presence of ash, slag and asphalt inclusions are common indicators of elevated PAH and TRH levels and is possibly the source of the elevated B(a)P TEQ and TRH concentrations.

EIS (as reported in Douglas, 2006) also recorded inclusions of ash and slag within the fill layer. In addition, total PAH and B(a)P at concentrations which exceeded B(a)P TEQ HIL within fill samples including ash and slag were detected.

Asbestos

Chrysotile asbestos identified embedded in a fragment of fibre cement of 1.29 g/kg (0.13%) which exceeded the SAC of 0.04%.

Although asbestos was only detected in one sample, building rubble (tile, asphalt, sandstone block, brick, concrete, slag, glass) was observed in all of the boreholes. As asbestos contamination is often associated with building debris, and small diameter boreholes are not efficient sampling at detecting asbestos, there is considered to be a high potential for undetected asbestos to be present at other locations in the fill.

Acid sulfate soil

Based on the acid sulfate soils (ASS) mapping (as reviewed in Section 5.4) the risk of ASS was assessed to be low. The risk of ASS was further assessed based on the field results of the current testing, along with pH testing conducted as part of the geotechnical investigation. The assessment considered the following:

- The groundwater in the site was present in the rock, with all encountered alluvial soil and fill being above the water table;
- No sulfide odours were recorded in soils during the drilling or soil sampling; and
- Testing for pH for geotechnical aggressivity testing (Douglas reference: 231957.02.R.001.Rev0) of recorded pH results of between 8.5 and 9.5. Three samples were tested, one of the fill and two of the alluvial soils.

Based on these findings, the materials recorded in the boreholes are considered to have a very low risk of comprising ASS, and testing for ASS was not considered warranted. If alluvial soils with indicators of ASS (e.g. grey soils below the water table, sulfide odours) are observed on the in future site (e.g. in the currently inaccessible north east area of the site), assessment of these materials would be warranted.

13.2 **Soil vapour**

All analytical results for sample BH105A and the duplicate sample BD were found to be within the adopted HSL and HIL for commercial land use and adopted screening values for indoor air (where no SAC available).

In summary, the data has not identified a vapour intrusion risk in the location tested.

13.3 **Ambient air**

All analytical results for sample Sub-AB01 were found to be within the adopted screening values for indoor air, and less than the adopted HSL and interim HIL for commercial land use by a factor of 10 (noting the soil vapour screening values are based on an indoor air-to-soil vapour attenuation factor of 0.1).

In summary, the data has not identified a vapour intrusion risk in the substation.

13.4 **Groundwater**

As shown in Table J4, groundwater concentrations of dissolved metals: arsenic, cadmium, chromium, mercury and nickel; PAH, OCP, OPP, PCB were within the recreation land use and 95% (LOP) marine water criteria.

Elevated levels of copper, lead, manganese, zinc and PFOS were variously detected above the adopted SAC in the following groundwater samples:

BH101:

- Dissolved copper (8 µg/L), lead (9 µg/L) and zinc (23 µg/L), exceeded the ANZC (2018) 95% marine guideline; and
- PFOS (0.028 µg/L), exceeded the HEPA (2018) 99% LOP marine guideline, but was within the 95% LOP guideline.

BH102:

- Dissolved copper (2 µg/L), manganese (110 µg/L) and zinc (72 µg/L), exceeded the ANZ (2018) 95% marine water guideline; and
- PFOS (0.06 µg/L), exceeded the HEPA (2018) 99% LOP marine water guideline, but was within the 95% LOP guideline.

BH103:

- Total chromium (93 µg/L), copper (220 µg/L), nickel (170 µg/L) and zinc (250 µg/L), exceeded the ANZC (2018) 95% marine guideline.

The dissolved copper, manganese and zinc detected above the adopted SAC are generally considered to be consistent with ambient background ranges. The lead is not considered likely to be background, and the source is unknown.

PFAS concentrations were elevated at both up-gradient BH102 and mid-gradient BH101 groundwater wells. Concentration of PFOS in BH102 (positioned up-gradient) is higher than BH101 (positioned mid-gradient) of the site. Given the results above, and the surrounding commercial land use, it is considered that the elevated concentration of PFOS and metals are likely attributed to background / regional concentrations rather than specifically associated with the site.

It is noted that the below contaminants were recorded below the SAC (where one is available) but above expected background concentrations:

- BH103:
  - TRH F2 (>C10-C16 less Naphthalene) (120 µg/L);
  - TRH F3 (>C16-C34) (180 µg/L);
  - Toluene (81 µg/L); and

- Trihalomethanes [bromodichloromethane (1 µg/L)] and Chloroform (7 µg/L)](note these are byproduct of water chlorination).

Borehole BH103 was initially drilled to a maximum depth of 8.7 m bgl and subsequently backfilled with fill material (bentonite / dirt) to 0.5 m to facilitate geotechnical investigation to allow for the construction of a shallow well for geotechnical purposes. At the time of sampling there was only limited water in the well, and as such a lower quality 'grab' sample was collected which was observed to be highly turbid. Insufficient sample was recovered to allow all proposed analytes to be tested. Review of the field observation, methods and laboratory results indicates that the sample collected may have been impacted by sediment, potable and/or drilling fluids, which may be contributing to the TRH, toluene, bromodichloromethane and chloroform detections. The physical parameters of the groundwater samples collected from BH103 also differed from samples BH101 and BH102, indicating a potential different source.

Low chloroform concentrations recorded in BH101 and BH102 are considered to be within expected ambient levels.

14. Preliminary comments on waste classification

14.1 Limitations

The comments in this section are preliminary advice only based on currently available results, which have known limitations (including areas inaccessible for sampling, and a sampling method which is inefficient at detection asbestos).

If soil is proposed for removal from the site, a formal waste classification is required, which incorporate the test data reported herein and addition supplementary sampling and testing.

14.2 Fill

The following Table 8 presents the results of the six-step procedure outlined in NSW EPA (2014) for determining the type of waste and the waste classification. This process applies to the fill (including surface soils) at the site, which do not meet the definition of VENM.

Table 8: Six step classification procedure

Step	Comments	Rationale
1. Is the waste special waste?	Yes BH107	Chrysotile asbestos identified embedded in a fragment of fibre cement in sample BH107/0.5-0.7. No clinical or related waste, or waste tyres were observed in the boreholes.

Step	Comments	Rationale
	Remaining areas Not detected in samples to date**	No ACM, clinical or related waste, or waste tyres were observed in the boreholes. Asbestos was not detected in the soils samples tested; however, the presence of building rubble and the limitations of the sampling method indicates the potential for asbestos to be present throughout fill at the site.
2. Is the waste liquid waste?	No	The fill comprised a soil matrix.
3. Is the waste "pre-classified"?	No	The fill is not pre-classified with reference to NSW EPA (2014).
4. Does the waste possess hazardous waste characteristics?	No	The fill was not observed to contain of considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances, corrosive substances, coal tar, batteries, lead paint or dangerous goods containers.
5. Determining a wastes classification using chemical assessment.	Conducted	Refer to Table J2, Appendix J.
6. Is the waste putrescible or non-putrescible?	Non-putrescible	The fill does not contain materials considered to be putrescible*.

*Note: Wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

**Note: Whilst asbestos was not found in the sampling locations, there is a potential for asbestos to be found in fill in other parts of the site. This risk is elevated given the historical demolition of previous structures within the site and the building rubble recorded during the sampling process. The demolition of the existing dwelling may also contribute asbestos contamination to surface soils.

As shown in Table J2, Appendix J, all contaminant concentrations for the analysed fill samples were below the contaminant thresholds (CT1) for general solid waste (GSW) with the exception of the following:

- Lead in a number of samples (as indicated by the highlighted results on Table J2) exceeded the CT1 criteria for GSW of 100 mg/kg. Subsequent toxicity characteristic leaching procedure (TCLP) analysis was conducted on the 'worst-case' scenario', with the recorded total and TCLP contaminant concentrations within the SCC1 and TCLP1 thresholds for GSW; and
- Benzo(a)pyrene B(a)P in a number of samples (as indicated by the highlighted results on Table J2) exceeded the CT1 criteria for GSW of 0.8 mg/kg. TCLP extract and analysis was conducted on the 'worst-case' scenario, with the recorded total and TCLP contaminant concentrations within the SCC1 and TCLP1 thresholds for GSW.

PFAS was detected in fill in three samples (BH101/0.1-0.3, BH102/0.9-1.0, BH110/0-0.2). Noting there are no CT thresholds for PFAS, TCLP was conducted on two samples. The recorded total and TCLP contaminant concentrations within the SCC1 and TCLP1 thresholds for GSW.

Chrysotile asbestos was detected and confirmed by laboratory analysis in a fragment of fibre cement collected at BH107 /0.5-0.7 m which exceeded 0.1 g/kg reporting limit. Although no asbestos was detected in any of the other samples, the potential risk of uncovering asbestos in the soil remains a significant concern for the site, given the presence of building rubble recorded through the fill.

Based on the observations at the time of sampling and the reported analytical results, the following preliminary waste classification are provided for fill at the site:

- Fill soils in the vicinity of BH107 is provisionally classified as Special Waste (Asbestos) – GSW (non-putrescible); and
- Remaining fill within the site – further assessment required to assess the for asbestos contamination, GSW (non-putrescible) with respect to chemical contamination.

14.3 Natural soil and rock

The following Table 9 presents the results of the assessment of natural soil and rock at the site with reference to the VENM definition in the POEO Act and the EPA website.

Table 9: VENM classification procedure

No.	Item	Comment	Rationale
1.	Is the material natural?	Yes	Natural soil and rock logged in the test pits as sand, silty sand and clayey sand underlain by sandstone. These materials underlie the fill at the site.
2.	Are manufactured chemicals or process residues present?	Low risk	There were no visual or olfactory indicators of chemical contamination of the materials in the test pits. Concentrations of contaminants are shown in Table J2 and discussed below.
3.	Are sulfidic ores or soils present?	Not identified in current investigation	Refer to Section 13.1
4.	Are there current or previous land uses that have (or may have) contaminated the materials?	Yes	Refer to Section 9.

As shown in the attached Table J2, contaminant concentrations for the analysed natural soil samples were within the typical background concentration in three of the four samples tested. One sample (BH110/1.2-1.4) recorded trace levels of PAH, which could be naturally sourced or from cross contamination with the overlying fill during the sampling process.

Indicators of ASS were not recorded in the current boreholes as discussed in Section 13.1. Noting that Class 2 Ass was mapped in the north-east of the site, which was not accessible for sampling during the current investigation, further assessment of ASS in this area would be required to finalise the classification of alluvial soils in this area.

Based on the outcomes presented in Table 6, the sandstone bedrock within the assessment area as shown on Drawing 1, is considered to be classifiable as virgin excavated natural material (VENM). Further assessment is considered to be required to assess if the alluvial soils are VENM, although the current data is considered to be generally consistent with VENM classification subject to the soils not being mixed with other materials / fill.

15. Updated conceptual site model

The data collected during this DSI has generally confirmed that certain potential contaminant sources outlined in the CSM outlined in Section 9 pose a potentially complete pathway to the identified receptor(s) whilst others do not.

Based on the discussion presented in Section 13, the following key considerations informed the updated CSM:

- Soils:
  - Detections of CoPCs above the SAC was limited to asbestos and B(a)P TEQ in the current investigation and B(a)P / B(a)P TEQ and total PAH in the previous investigation (Douglas, 2006);
  - Based on observations during the fieldwork, slag, asphaltic concrete, and ash were observed in fill in all of sampling locations, and may be the source of the PAH;
  - Asbestos was detected in only one sample analysed, however due to presence of building debris within fill layer across the site, there is considered to be a high potential for undetected asbestos to be present at other locations in the fill. Testing pitting and sampling in accordance with the recommendations of NEPC (2013) would be required to characterise asbestos concentrations across the site;
  - The confirmed contamination in soil is associated with the fill. As discussed in Section 2, the majority of the site, excluding the substation area, is proposed for a single-level basement, therefore, it is expected a bulk excavation across the site would require removal of fill; and
  - Not all areas of the site were accessible for soil sampling (notably the former substation and north east of the site, and as such contamination has not been characterised in these areas. This is considered to be a data gap.
- Soil vapour:
  - The results did not record contaminant concentrations of concern.

- Groundwater:
  - A number of contaminants were recorded above the SAC;
  - Of these only one, lead, was recorded above expected ambient concentrations. The source of this has not been identified, but could be fill at the site;
  - The sample collected from well BH103 was of low quality due to the limited water int eh well at the time of sampling; and
  - Construction of a down-gradient groundwater well was not possible at the time of assessment due to the down-gradient north east of the site not being accessible for intrusive investigation at the time of the assessment. This is considered to be a data gap.

Table 10: Updated summary of potentially complete exposure pathways

Source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill: Imported fill from unknown sources and demolition of former buildings on the site: Asbestos, metals, TRH, BTEX, PAH, PCB, OCP, phenols and PFAS **S2:** Former activities including substation, engineering and metal workshop, warehousing: asbestos, metals, PCB, TRH, BTEX, PAH, OCP, OPP, VOC **S3:** Current activities including maintenance shed, chemical storage areas in the south-west portion of the site: metals, TRH, BTEX, PAH, OCP, OPP, and VOC **S4:** Open pit used for storage of wash down water in the south-west corner of the site: asbestos, metals, TRH, BTEX, PAH, OCP, PCB, VOC, PFAS	**HP1:** Ingestion and dermal contact	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential]	Remediation / management is required for the asbestos, B(a)P TEQ ad PAH recorded in fill at the site. Given the proposed basement over the majority of the site (except the area of the heritage substation), off-site disposal of soil to form the basement is likely to achieve the remediation goals for the above contaminants. Further testing is required in areas which are currently not accessible and of groundwater. Further investigation of the extent of asbestos may be conducted as required to inform the remediation requirements / waste classification of soils.
	HP2: Inhalation of dust and/or vapours	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential] **HR3:** Adjacent site users [commercial/ residential]	
	EP1: Surface water run-off **EP3:** Lateral migration of groundwater providing base flow to water bodies	**ER1:** Surface water	
	EP2: Leaching of contaminants and vertical migration into groundwater	**ER2:** Groundwater	

Source and CoPC	Exposure pathway	Receptor	Risk management action
S6: Surrounding historical land uses: metals, TRH, BTEX, PAH, PCB, OCP, OPP, phenols, VOC and PFAS			Implementation of appropriate WHS and environmental management controls during construction works.
S5: Existing buildings (hazardous building materials from existing structures): asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB	**HP1:** Ingestion and dermal contact	**HR1:** Construction and maintenance workers	Undertake a hazardous building materials survey and manage hazardous building materials in accordance with the recommendations of the survey and regulatory requirements.
	HP2: Inhalation of dust and/or vapours	**HR1:** Construction and maintenance workers **HR2:** End users [mixed use commercial / residential] **HR3:** Adjacent site users [commercial/ residential]	

16. Conclusions and recommendations

This DSI comprised a site walkover, desktop study and intrusive soil, groundwater and vapour sampling to assess the suitability of the site for the proposed mixed-use commercial residential development and whether further investigation and/or management of contamination is required. Ten boreholes were drilled in accessible portions of the site as part of the DSI.

The desktop search identified on-site activities / potential source of contamination as including imported fill of unknown origin, demolition of previous structures which may have contained hazardous building materials (including asbestos), substation, metal and engineering workshop(s), warehousing (including of asbestos products), Ausgrid depot [including storage of waste (including in an inground pit) and small containers / quantities of fuels, chemical and batteries] storage area and hazardous building materials from current buildings. The long history of commercial / industrial land use in the area around the site is also considered to indicate the potential for contamination off the site which could impact the site. The previous workshop / warehousing buildings appear to have been demolished between 2006 and 2014, and the former substation is currently disused.

Limitations to current investigation included:

- The footprint of the demountable buildings / metal containers and storage areas were not accessible for sampling;
- Intrusive sampling in the former substation building was not permitted; and
- The use of boreholes instead of test pits to minimise disturbance to current site activities, noting boreholes are not efficient for identifying asbestos. Given that building debris, a

potential indicator of asbestos, was observed across the site, there is considered to be a risk of asbestos being present more extensively than identified herein that has not been well characterised by the current data.

The soil, soil vapour and groundwater sampling and analysis has identified the following during the current investigation:

- Soils:
  - Fill was encountered in all of the boreholes to depths between 1 m to 1.9 m bgl. Building debris (brick, concrete, sandstone, metal, ash, slag, asphalt, tile, terracotta) were recorded in all boreholes across the site, which can be an indicator of asbestos;
  - Chrysotile asbestos identified above the HSL B criteria in one fill sample. As asbestos contamination is often associated with building debris, and small diameter boreholes are not efficient sampling at detecting asbestos, there is considered to be a high potential for undetected asbestos to be present at other locations in the fill; and
  - B(a)P TEQ: above the HIL B criteria in various fill samples. Total PAH was also recorded during pervious investigation at the site (reviewed herein).
- Vapour and ambient air:
  - All results were within the adopted SAC.
- Groundwater:
  - Lead in the sample from BH101 was above the adopted SAC and expected ambient levels. The source is unknown;
  - TRH, toluene and trihalomethanes recorded in the sample from BH103 are considered to indicate the potential for impact from sediments, potable water and/ or drilling fluids. It is noted that the sample collected was poor quality due to the limited water and high turbidity; and
  - Other metals, and PFAS recorded above the adopted SAC are considered to be within expected ambient concentrations.

Preliminary comments on waste classification of soils and rock are provided in Section 14.

Based on the results of the DSI it is considered that the site can be made suitable for the proposed mixed-use development subject to implementation of the following:

- Preparation of a remediation action plan (RAP) to outline the process for data gap investigation (if not conducted prior to RAP preparation, refer to next dot point), remediation and validation of the site as required to render the site suitable for the proposed development. The RAP should also include an unexpected finds protocol and contingency plan;
- A data gap investigation to address the data gaps in the current investigation. This should include testing in the footprints of existing demountable buildings, metal containers, storage areas and the former substation, further groundwater assessment and characterisation of asbestos (as required to for waste classification and to meet remediation objectives). The data gap investigation may need to occur when the site is unoccupied / following removal of current structures; and
- Implementation and validation of the works under the RAP.

All soils to be removed from the site will need to be classified and managed in accordance with the *Protection of the Environment Operations Act 1997*.

17. References

Douglas. (2006). *Statutory Site Audit Report on 43-49 Mountain Street, Ultimo.* (Report reference: 43701, February 2006).

Douglas. (2025). *Report on Hazardous Building Materials (HAZMAT) Survey.* (Reference: 231957.00 dated 27 February 2025).

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land.* Contaminated Land Guidelines: NSW Environment Protection Authority.

NSW EPA. (2022). *Contaminated Sites, Sampling Design Guidelines.* NSW Environment Protection Authority.

18. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at 41-49 Mountain Street, Ultimo NSW in line with Douglas' proposal dated 29 November 2024 and acceptance received from Juey Thanyakittikul of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

Asbestos was detected in only one location. Building demolition materials such as brick and ceramic, were however, located in below ground fill, and there are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos. Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions, or to parts of the site being inaccessible and not available for inspection / sampling. It is therefore considered possible that HBM, including asbestos, may be hence no warranty can be given that asbestos is not present.

Appendix A

Drawings

SITE LOCATION

LEGEND

Site Boundary

0 2 4 6 8 10 12 m

457

Douglas PARTNERS

CLIENT: Apt. Residential Pty Ltd		TITLE: **Site Boundary**	PROJECT: 231957.01
OFFICE: Sydney	DRAWN BY: NLE/MN	**Proposed Mixed Use Development**	DRAWING NO: 1
SCALE: 1:200 @A3	DATE: 18.March.2025	**41-49 Mountain Street, Ultimo NSW**	REVISION: 0

\\dpsydnas02\Projects\231957.01 - ULTIMO, 41-49 Mountain St, Env\7.0 Drawings\7.3 QGIS\Ultimo.qgz

SITE LOCATION

LEGEND

- Site Boundary

Current Investigation

- Borehole Location
- Borehole and Groundwater Well
- Previous Contamination Borehole

0 2 4 6 8 10 12 m

458

Douglas PARTNERS

CLIENT:	Apt. Residential Pty Ltd	TITLE:	**Test Locattion Plan**
OFFICE:	Sydney	DRAWN BY:	NLE/MN		**Proposed Mixed Use Development**
SCALE:	1:200 @A3	DATE:	18.March.2025		**41-49 Mountain Street, Ultimo NSW**

N

PROJECT:	231957.01
DRAWING NO:	2
REVISION:	0

\\dpsydnas02\Projects\231957.01 - ULTIMO, 41-49 Mountain St, Env\7.0 Drawings\7.3 QGIS\Ultimo.qgz

Appendix B

About this Report

About this Report

November 2023

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

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This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

continued next page

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

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Appendix C

Lotsearch Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 19 Sep 2024 10:49:24

Reference: LS061831 EP

Address: 1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	24/07/2024	24/07/2024	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	21/05/2024	21/05/2024	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority NSW	02/09/2024	13/08/2024	Monthly	1000m	0	0	4
Contaminated Land Records of Notice	Environment Protection Authority NSW	02/09/2024	02/09/2024	Monthly	1000m	0	0	1
Former Gasworks	Environment Protection Authority NSW	06/08/2024	14/07/2021	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority NSW	03/09/2024	03/09/2024	Monthly	1000m	0	0	3
National Waste Management Facilities Database	Geoscience Australia	29/04/2024	29/11/2022	Annually	1000m	0	1	1
National Liquid Fuel Facilities	Geoscience Australia	20/09/2023	07/09/2020	Annually	1000m	0	0	2
EPA PFAS Investigation Program	Environment Protection Authority NSW	19/08/2024	14/06/2024	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Australian Department of Defence	19/08/2024	19/08/2024	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Australian Department of Defence	19/08/2024	19/08/2024	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	19/08/2024	19/08/2024	Monthly	2000m	0	0	0
Defence Controlled Areas	Australian Department of Defence	17/07/2024	17/07/2024	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Australian Department of Defence	05/08/2024	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Australian Department of Defence	17/07/2024	17/07/2024	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority NSW	13/11/2023	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	3
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	3
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	10
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	100m	114	1340	1340
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	100m	-	25	25
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	250m	0	111	214
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	250m	-	2	2
Points of Interest	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	2	101
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	09/08/2024	09/08/2024	Quarterly	1000m	0	1	6
State Forest	Forestry Corporation of NSW	12/12/2023	11/12/2023	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Geoscience Australia	17/04/2024	19/08/2019	Annually	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Climate Change, Energy, the Environment and Water	28/05/2024	23/02/2018	Quarterly	1000m	0	0	1
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	28/05/2024	20/06/2023	Annually	2000m	0	0	91
NSW Seamless Geology Single Layer: Rock Units	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	2	2	6
NSW Seamless Geology Single Layer: Trendlines	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	7
NSW Seamless Geology Single Layer: Geological Boundaries and Faults	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Department of Regional NSW	26/04/2024	14/03/2024	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	12/01/2024	17/02/2011	Annually	1000m	1	1	3
Soil Landscapes of Central and Eastern NSW	NSW Department of Climate Change, Energy, the Environment and Water	12/12/2023	27/07/2020	Annually	1000m	1	2	5
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Housing and Infrastructure	13/09/2024	16/08/2024	Monthly	500m	2	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	12/01/2024	21/02/2013	Annually	1000m	1	1	3
Dryland Salinity - National Assessment	Australian Bureau of Agricultural and Resource Economics and Sciences	03/06/2024	24/05/2024	Annually	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service	06/08/2024	06/08/2024	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	12	12	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Housing and Infrastructure	13/09/2024	08/09/2023	Monthly	1000m	0	0	7
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Housing and Infrastructure	13/09/2024	30/08/2024	Monthly	1000m	1	4	130
Commonwealth Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	20/10/2023	13/04/2022	Annually	250m	0	0	0
National Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	20/10/2023	13/04/2022	Annually	250m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	29/07/2024	05/07/2024	Quarterly	250m	1	1	2
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Housing and Infrastructure	13/09/2024	30/08/2024	Monthly	250m	2	10	52
Bush Fire Prone Land	NSW Rural Fire Service	26/08/2024	19/07/2024	Monthly	1000m	0	0	0
NSW Native Vegetation Type Map	NSW Department of Climate Change, Energy, the Environment and Water	02/09/2024	30/11/2023	Quarterly	1000m	1	1	1
Ramsar Wetlands of Australia	Australian Department of Climate Change, Energy, the Environment and Water	16/05/2024	11/04/2024	Annually	1000m	0	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Terrestrial	Australian Department of Climate Change, Energy, The Environment and Water	04/03/2024	30/06/2022	Annually	1000m	0	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Marine	Australian Department of Climate Change, Energy, The Environment and Water	04/03/2024	30/06/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/05/2024	28/05/2024	Annually	1000m	0	0	0
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/05/2024	28/05/2024	Annually	1000m	0	0	0
NSW BioNet Species Sightings	NSW Department of Climate Change, Energy, the Environment and Water	10/09/2024	10/09/2024	Monthly	10000m	-	-	-

Site Diagram

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 2839m²

Total Perimeter: 316m

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Scale: 0 — 12.5 Meters — 25

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 September 2024

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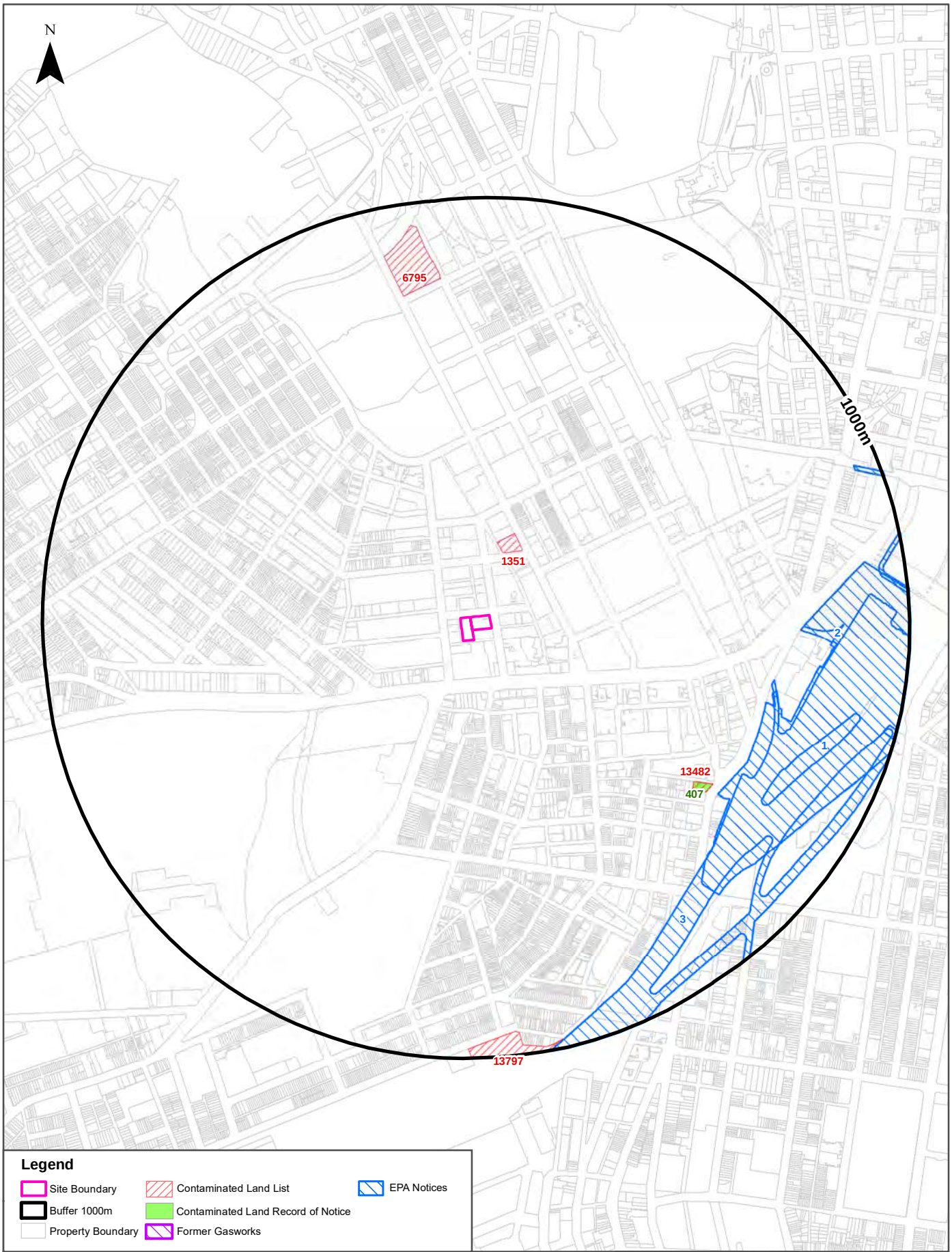
Contaminated Land

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



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Contaminated Land

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
1351	Shell Coles Express Service Station	387-429 Wattle Street	Ultimo	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	152m	North East
13482	Cnr Regent Street & Wellington Street, Chippendale	Wellington STREET	CHIPPENDALE	Chemical Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	606m	South East
6795	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Pyrmont	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	783m	North
13797	Redfern North Eveleigh Precinct – Paint Shop and Clothing Storesub-precincts	281 Wilson STREET	DARLINGTON	Unclassified	Under assessment	Current EPA List	Premise Match	941m	South

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.

EPA site management class	Explanation
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Contaminated Land

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
407	Cnr Regent Street & Wellington Street, Chippendale	Wellington Street	Chippendale	3 current and 7 former	3406	Premise Match	606m	South East

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Contaminated Land

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

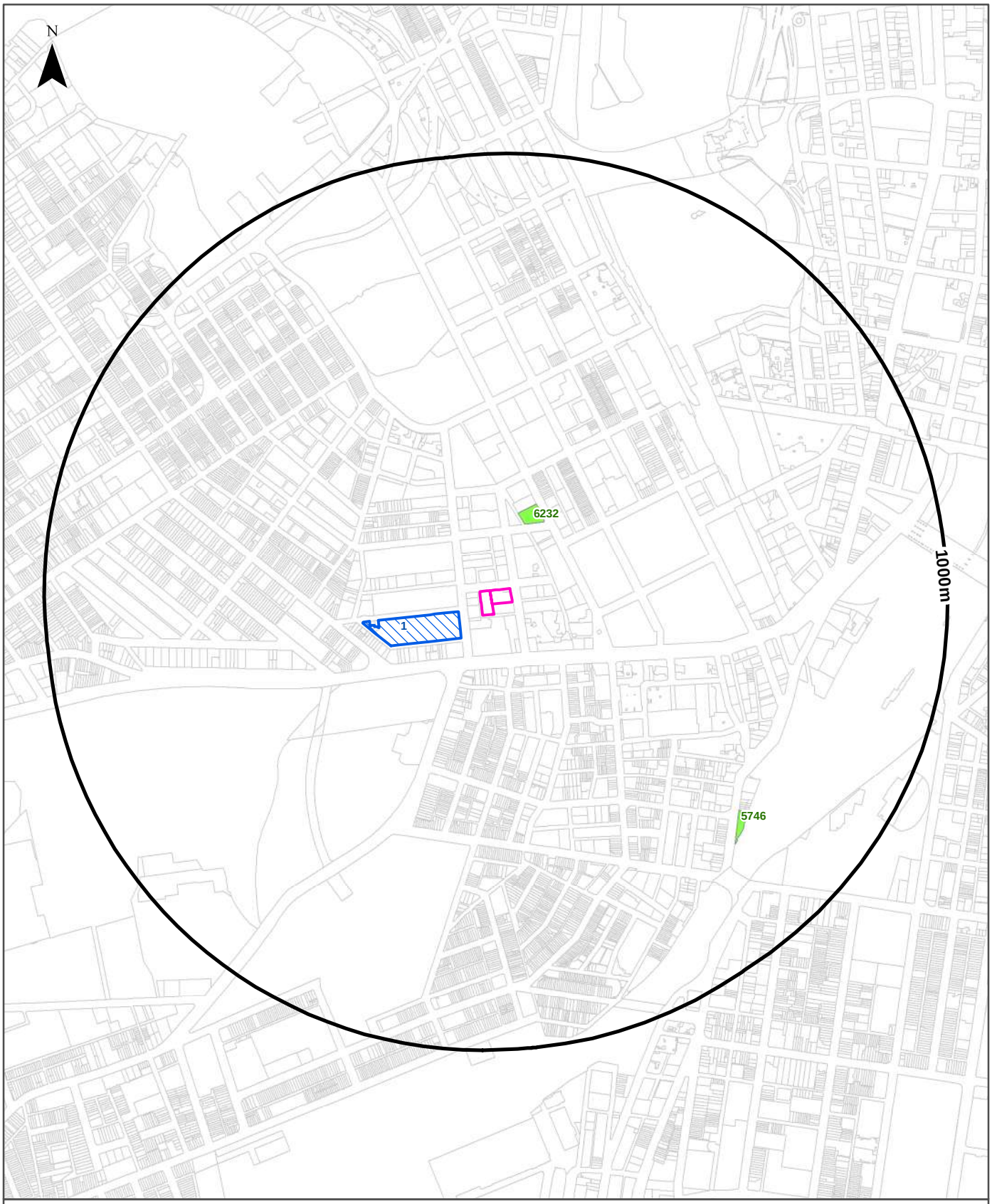
Map ID	Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
1	3085778300	Penalty Notice	JACKSON PHILLIPS	Central Station, HAYMARKET, NSW 2000	Issued	18/12/2015	Protection of the Environment Operations Act 1997 - 145(1)	Deposit litter (lit cigarette) excluding from vehicle - Individual	16/12/2015	Premise Match	670m	East
2	3173529820	Penalty Notice	LAING O'ROURKE AUSTRALIA CONSTRUCTION PTY LTD	HAYMARKET, NSW 2000	Issued	10/12/2020	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	19/03/2020	Premise Match	670m	East
3	3173530755	Penalty Notice	SYDNEY TRAINS	SYDNEY TRAINS, HAYMARKET, NSW 1238	Issued	10/11/2021	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	31/05/2021	Network of Features	687m	South East

NSW EPA Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Waste Management Facilities
- National Liquid Fuel Facilities

Scale: 0 100 200 400 600 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024

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Waste Management & Liquid Fuel Facilities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

National Waste Management Facilities Database

Sites on the National Waste Management Facilities Database within the dataset buffer:

Map ID	Owner	Name	Address	Management Type	Facility Type	Status	Loc Conf	Dist	Dir
1	COLES	COLES SUPERMARKET	1-21 BAY STREET, GLEBE	DROP-OFF	SOFT PLASTICS DROP-OFF FACILITY	OPERATIONAL	Premise Match	54m	West

Source: Waste Management Facilities Database
Creative Commons 4.0 © Commonwealth of Australia (Geoscience Australia) 2022

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
6232	COLES EXPRESS	COLES EXPRESS ULTIMO	387 427 WATTLE STREET	ULTIMO	PETROL STATION	OPERATIONAL			Premise Match	152m	North East
5746	BUDGET	BUDGET PETROL CHIPPENDALE	66-70 REGENT STREET	CHIPPENDALE	PETROL STATION	OPERATIONAL			Premise Match	706m	South East

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 4.0 © Commonwealth of Australia

PFAS Investigation & Management Programs

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

Site ID	Location Name	Loc Conf	Dist	Dir
N/A	No records in buffer			

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

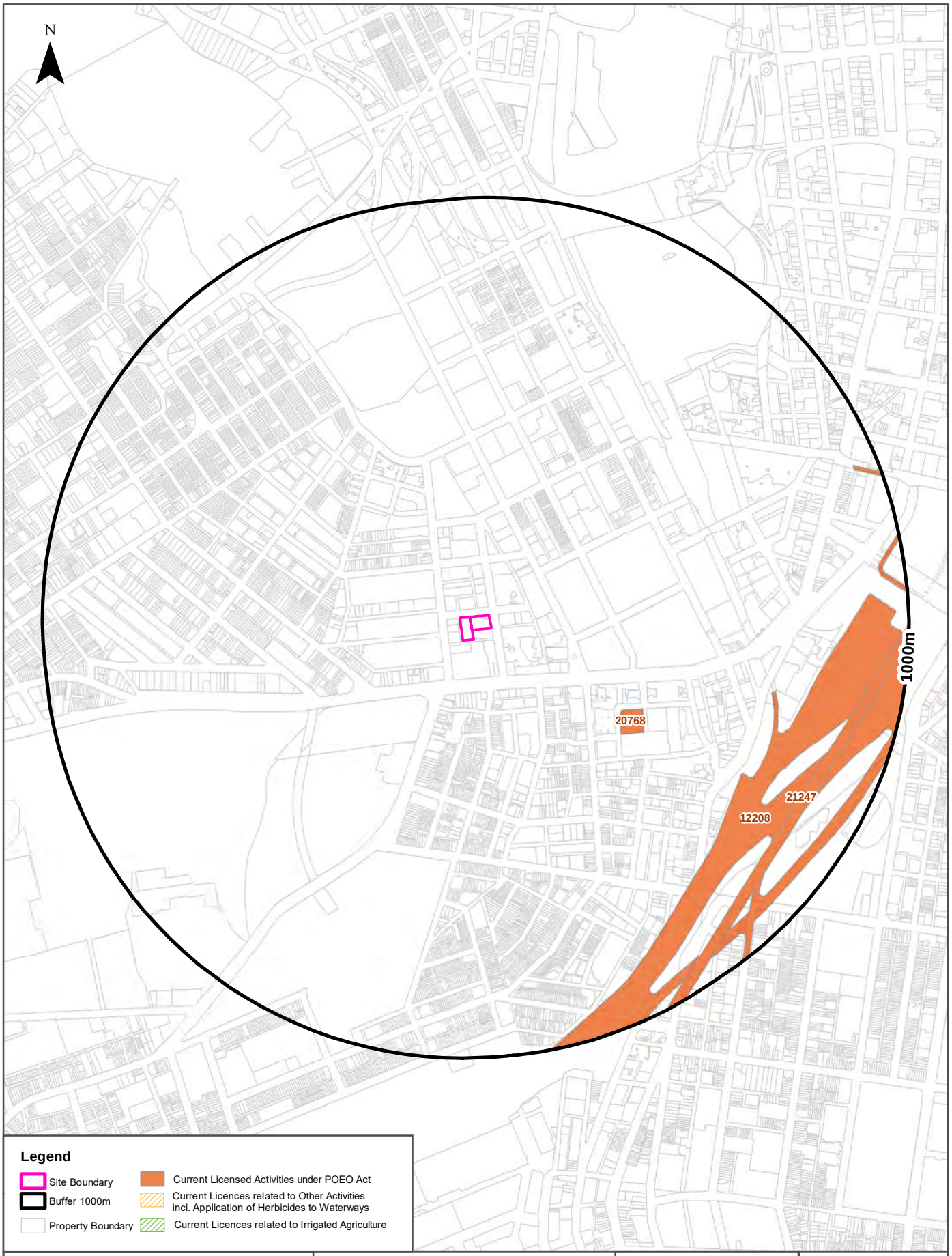
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



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EPA Activities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Licensed Activities under the POEO Act 1997

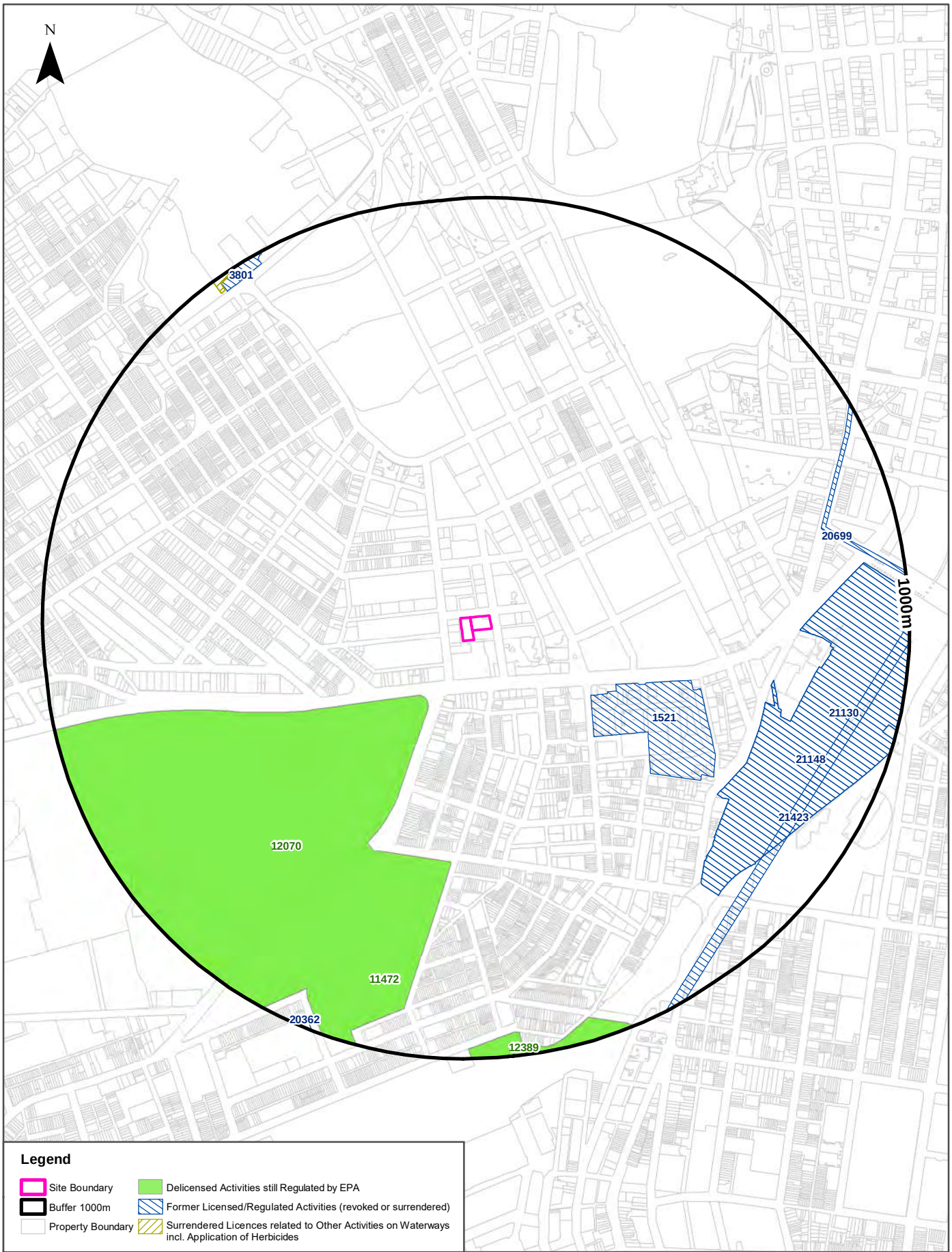
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
20768	CPE CENTRAL PARK PTY LTD		3 CENTRAL PARK AVENUE, CHIPPENDALE, NSW 2008		Generation of electrical power from gas	Premise Match	368m	South East
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	687m	South East
21247	Metro Trains Sydney Pty Ltd		SYDNEY METRO, ROUSE HILL, NSW 2155		Railway systems activities	Network of Features	839m	South East

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Property Boundary Data Source:
© Department Finance, Services & Innovation 2024

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

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EPA Activities

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12070	THE UNIVERSITY OF SYDNEY	The University of Sydney	Camperdown & Darlington Campuses	SYDNEY UNIVERSITY	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	164m	South West
11472	INTEC LTD	INTEC LTD	Room 427, Building J01, Maze Crescent, the University of Sydney	DARLINGTON	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	808m	South
12389	RAIL CORPORATION NEW SOUTH WALES	Xplorer Service Centre	Henderson Road (off)	EVELEIGH	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	941m	South

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
1521	CARLTON & UNITED BREWERIES (N S W) PTY LTD	26-98 BROADWAY, SYDNEY, NSW 2000	Surrendered	24/03/2000	Brewing and distilling, Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	286m	South East
21130	DOWNER EDI WORKS PTY LTD	, Parts of Lot 118 DP1078271 and Lot 103 DP1188890, SYDNEY, NSW 2000,	Surrendered	10/10/2018	Railway systems activities	Premise Match	670m	East
21148	Laing O'Rourke Australia Construction Pty Ltd	HAYMARKET, NSW 2000,	Surrendered	28/11/2018	Railway systems activities	Premise Match	670m	East
20699	ACCIONA INFRASTRUCTURE AUSTRALIA PTY LTD	CBD and South East Light Rail, CBD and South East Light Rail Alignment and Ancillary Sites, SYDNEY	Surrendered	08/04/2016	Land-based extractive activity	Network of Features	821m	East
21423	CPB CONTRACTORS PTY LIMITED	BETWEEN CHATSWOOD DIVE SITE AND SYDENHAM DIVE SITE, SYDNEY, NSW 2000,	Surrendered	31/07/2020	Railway infrastructure construction (<50,000T)	Network of Features	839m	South East
3801	HANSON CONSTRUCTION MATERIALS PTY LTD	HANSON CONSTRUCTION MATERIALS PTY LTD, BRIDGE ROAD, GLEBE	Surrendered	09/12/1999	Shipping in bulk	Premise Match	962m	North West
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	966m	North West

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	966m	North West
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	966m	North West
20362	JOHN HOLLAND PTY LTD	University of Sydney Darlington Campus, Corner Codrington and Abercrombie Streets, DARLINGTON	Surrendered	20/01/2014	Land-based extractive activity	Premise Match	973m	South West

Former Licensed Activities Data Source: Environment Protection Authority
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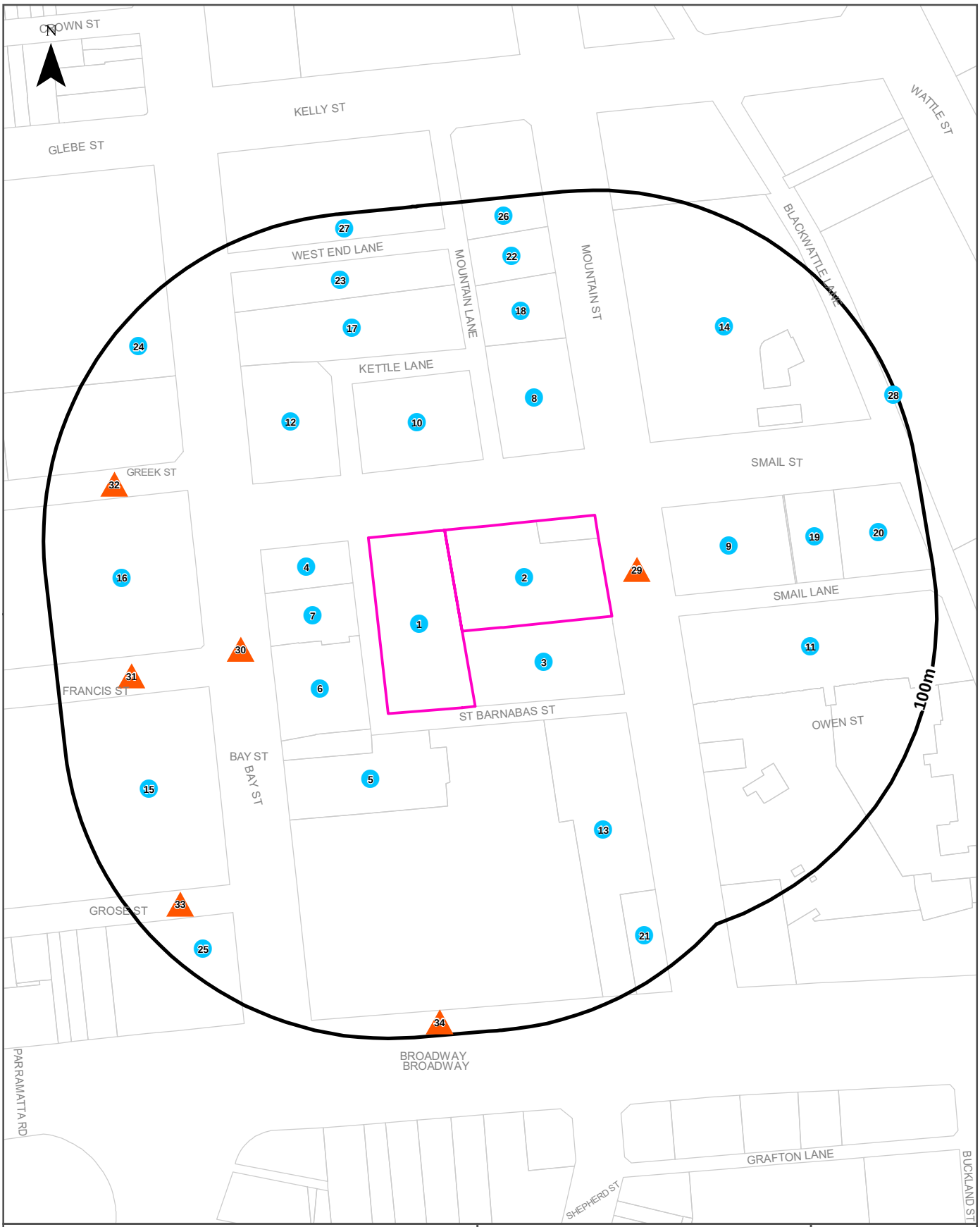
Historical Business Directories

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Legend

- Site Boundary
- Buffer 100m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 20 40 60 80 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 September 2024

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

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Historical Business Directories

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	Gift Shop Supplies Mfrs &/or W/salers	Davmac International., 3 Smail St., Broadway. 2007	47618	1991	Premise Match	0m	On-site
	Gift Shop Supplies Mfrs &/or W/salers	Davmac International., 3 Smail St., Broadway. 2007	47619	1991	Premise Match	0m	On-site
	Gift Shop Supplies Mfrs &/or W/salers	Gempo Giftware Pty. Ltd., 3 Smail St., Broadway. 2007	47624	1991	Premise Match	0m	On-site
	Gift Shop Supplies Mfrs &/or W/salers	Webb Distributors (Universal) Pty. Ltd., 3 Small St., Broadway. 2007	47658	1991	Premise Match	0m	On-site
	PUBLISHERS.	Associated Business Publications, 104/3 Smail St., Broadway. 2007	78171	1986	Premise Match	0m	On-site
	ELEVATOR MFRS. &/OR INSTALLERS &/OR MAINTENANCE.	Elevators Pty. Ltd., 3 Small St., Broadway. 2007	28289	1986	Premise Match	0m	On-site
	IMPORTERS.	Garak Trading Co., 3 Smail St., Ultimo. 2007	47640	1986	Premise Match	0m	On-site
	IMPORTERS.	Hall, R. M. Pty. Ltd., 3 Smail St., Broadway. 2007	47664	1986	Premise Match	0m	On-site
	IMPORTERS.	John Down Agencies, 3 Smail St., Broadway. 2007	47719	1986	Premise Match	0m	On-site
	TYPESETTING SPECIALISTS.	Macabar Pty. Ltd., 3 Smail St., Broadway. 2007	96109	1986	Premise Match	0m	On-site
	HOBBY &/OR HANDICRAFT SUPPLIES.	Semco Pty. Ltd., 1st Fl., 3 Smail St., Broadway. 2007	46002	1986	Premise Match	0m	On-site
	GLASSWARE, CRYSTALWARE, IMPS, &/OR MFRS. &/OR W/SALERS.	Speering International, 402/3 Smail St., Broadway. 2007	39945	1986	Premise Match	0m	On-site
	KITCHENWARE - WHOLESALERS	Speering International, 402/3 Smail St., Broadway. 2007	50636	1986	Premise Match	0m	On-site
	SILVERWARE MFRS. &/OR IMPS. &/OR W/SALERS.	Speering International, 402/3 Smail St., Broadway. 2007	86931	1986	Premise Match	0m	On-site
	TOY IMPS. &/OR W/SALERS.	Speering International, 402/3 Smail St., Broadway. 2007	94662	1986	Premise Match	0m	On-site
	KITCHENWARE - WHOLESALERS	Vandelo (Aust) Pty. Ltd., 105/3 Smail St., Broadway. 2007	50637	1986	Premise Match	0m	On-site
	GLASSWARE, CRYSTALWARE, IMPS, &/OR MFRS. &/OR W/SALERS.	Whitmont, J. Pty Ltd., 3 Smail St., Broadway. 2007	39950	1986	Premise Match	0m	On-site
	KITCHENWARE &/OR HOLLOWARE MFRS. &/OR DISTS.	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007	50602	1986	Premise Match	0m	On-site
	IMPORTERS. (I0750)	Eagle Import Co., 3 Smail St., Broadway. 2007.	41526	1982	Premise Match	0m	On-site
	ELEVATOR MAINTENANCE SPECIALISTS. (E5160)	Elevators Pty. Ltd., 3 Smail St., Broadway. 2007.	26440	1982	Premise Match	0m	On-site
	ELEVATOR MFRS. &/OR INSTALLERS. (E5190)	Elevators Pty. Ltd., 3 Smail St., Broadway. 2007.	26454	1982	Premise Match	0m	On-site
	ARTISTS - COMMERCIAL &INDUSTRIAL. (A7385)	Monogram Art Service, 3 Smail St., Ultimo 2007.	3462	1982	Premise Match	0m	On-site
	TYPESETTERS - TRADE. (T8500)	Monogram Art Service, 3 Smail St., Ultimo. 2007.	82435	1982	Premise Match	0m	On-site
	HOBBY &/OR HANDICRAFT SUPPLIES. (H4250)	Semco Pty. Ltd., 1st. Fl, 3 Smail St., Broadway. 2007.	40190	1982	Premise Match	0m	On-site

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	GLASSWARE, CRYSTALWARE, IMPS. &/OR MFRS. &/OR W/SALERS. (G4540)	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007.	36917	1982	Premise Match	0m	On-site
	KITCHENWARE &/OR HOLLOWARE MFRS. &/OR DISTS. (K0550)	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007.	44331	1982	Premise Match	0m	On-site
	IMPORTERS.	Biggs. M. & Sons Pty. Ltd., 3 Smail St., Broadway. 2007	36737	1978	Premise Match	0m	On-site
	CARPET &/OR FLOOR COVERING IMPS &/OR W/SALERS.	Bond-Worth (Aust.) Pty. Ltd., 3 Smail St., Broadway. 2007	11396	1978	Premise Match	0m	On-site
	CARPET &/OR FLOOR COVERING MFRS. &/OR IMPS. &/OR DISTS.	Bond-Worth (Aust.) Pty. Ltd., 3 Smail St., Broadway. 2007	11445	1978	Premise Match	0m	On-site
	ELEVATOR MAINTENANCE SPECIALISTS.	Elevators Pty. Ltd., 3 Smail St., Broadway. 2007	23442	1978	Premise Match	0m	On-site
	ELEVATOR MFRS. &/OR INSTALLERS.	Elevators Pty. Ltd., 3 Smail St., Broadway. 2007	23459	1978	Premise Match	0m	On-site
	CLOTHING - FROCKS & SUITS MFRS. &/OR W/SALERS.	Freeman. M. Agencies Pty. Ltd., 3 Smail St., Broadway. 2007	14729	1978	Premise Match	0m	On-site
	ENGINEERS-CONSULTING.	Gibson Engineering (Div. of Baker Perkins Pty. Ltd), 3 Smail St.	24067	1978	Premise Match	0m	On-site
	FOUNDRY SUPPLIES - MACHINERY MFRS. &/OR IMPS. &/OR DISTS.	Gibson Engineering (Div. of Baker Perkins Pty. Ltd.) 3 Smail St.,	29826	1978	Premise Match	0m	On-site
	ENGINEERS-FOUNDRY.	Gibson Engineering (Div. of Baker Perkins Pty. Ltd.), 3 Smail St.,	24771	1978	Premise Match	0m	On-site
	HOBBY &/OR HANDICRAFT SUPPLIES.	Semco Pty. Ltd., 1st Fl., 3 Smail St, Broadway. 2007	35663	1978	Premise Match	0m	On-site
	GLASSWARE, CRYSTALWARE IMPS. &/OR MFRS. &/OR W/SALERS.	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007	33187	1978	Premise Match	0m	On-site
	KITCHENWARE &/OR HOLLOWARE MFRS. &/OR DISTS.	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007	39346	1978	Premise Match	0m	On-site
	TOY IMPS. &/OR W/SALERS.	Williams, C. Agencies Pty. Ltd, 3 Smail St, Broadway. 2007	71817	1978	Premise Match	0m	On-site
	MANUFACTURERS AGENTS.	Williams, C. Agencies Pty. Ltd., 3 Smail St., Broadway. 2007	41513	1978	Premise Match	0m	On-site
	EXPORTERS.	Bata Shoe Co. of Aust. Pty. Ltd., 3 Smail St., Broadway. 2007	30958	1975	Premise Match	0m	On-site
	IMPORTERS.	Bata Shoe Co. of Aust. Pty. Ltd., 3 Smail St., Broadway. 2007	43501	1975	Premise Match	0m	On-site
	CARPET &/OR FLOOR COVERING MFRS. &/OR IMPS. &/OR DISTS.	Bond-Worth Aust. Pty. Ltd., 3 Smail St., Broadway 2007	13368	1975	Premise Match	0m	On-site
	CARPET &/OR FLOOR COVERING IMPS &/OR W/SALERS.	Bond-Worth Aust. Pty. Ltd., 3 Smail St., Broadway. 2007	13309	1975	Premise Match	0m	On-site
	IMPORTERS.	Briggs. M. & Sons Pty. Ltd., 3 Smail St., Broadway. 2007	43530	1975	Premise Match	0m	On-site
	TYPESETTERS-TRADE	City & Suburban Litho-Typesetters Pty. Ltd., 3 Smail St., Broadway. 2007	85342	1975	Premise Match	0m	On-site
	ELEVATOR MAINTENANCE SPECIALISTS.	Elevators Pty. Ltd., 3 Smail St., Broadway. 2007	27110	1975	Premise Match	0m	On-site
	CLOTHING - FROCKS & SUITS MFRS. &/OR W/SALERS.	Freeman, M. Agencies Pty. Ltd., 3 Smail St., Broadway. 2007	16983	1975	Premise Match	0m	On-site
	POSTER SPECIALISTS.	Koala-Australia Imports Pty. Ltd., 3 Smail St., Broadway. 2007	68919	1975	Premise Match	0m	On-site
	KITCHENWARE &/OR HOLLOWARE MFRS. &/OR DISTS. .	Whitmont J. Pty Ltd., 3 Smail St., Broadway. 2007	46461	1975	Premise Match	0m	On-site
	GLASSWARE, CRYSTALWARE, IMPS &/OR MFRS. &/OR W/SALERS.	Whitmont, J. Pty. Ltd., 3 Smail St., Broadway. 2007.	38576	1975	Premise Match	0m	On-site
	TOY IMPS. &/ORW/SALERS.	Williams, C. Agencies, 3 Smail St., Broadway. 2007	84524	1975	Premise Match	0m	On-site

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MANUFACTURERS AGENTS.	Williams, C. Agencies., 3 Smail St., Broadway. 2007.	49055	1975	Premise Match	0m	On-site
2	Gift Shop Supplies Mfrs &/or W/salers	Nationwide Importers of Aust Pty. Ltd., 43 Mountain St., Broadway. 2007	47639	1991	Premise Match	0m	On-site
	FILTER MFRS. &/OR DISTS.	Eliza Tinsley (Aust) Pty. Ltd., 43 Mountain St., Broadway. 2007	32690	1986	Premise Match	0m	On-site
	TAPE - ADHESIVE - MFRS. &/OR IMPS. &/OR DISTS.	Eliza Tinsley (Aust) Pty. Ltd., 43 Mountain St., Broadway. 2007	92078	1986	Premise Match	0m	On-site
	ABRASIVE MERCHANTS.	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007	92	1986	Premise Match	0m	On-site
	ENGINEERS SUPPLIES	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007	31408	1986	Premise Match	0m	On-site
	FILTRATION SUPPLIERS.	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007	32743	1986	Premise Match	0m	On-site
	INSULATING MATERIALS MFRS. &/OR DISTS. &/OR SUPPLIERS.	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007	48588	1986	Premise Match	0m	On-site
	ADHESIVES MFRS. &/OR DISTS.	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway.2007	1346	1986	Premise Match	0m	On-site
	ADHESIVES MFRS. &/OR DISTS.(A1110)	Eliza Tinsley (Aust) Pty. Ltd., 43 Mountain St., Broadway. 2007.	1212	1982	Premise Match	0m	On-site
	ASBESTOS CEMENT PRODUCTS MFRS. &/OR DISTS. (A7650)	Eliza Tinsley (Aust) Pty. Ltd., 43 Mountain St., Broadway. 2007.	3557	1982	Premise Match	0m	On-site
	FILTER MFRS. &/OR DISTS. (F1825)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St, Broadway. 2007.	30531	1982	Premise Match	0m	On-site
	FILTRATION SUPPLIERS. (F1850)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St, Broadway. 2007.	30578	1982	Premise Match	0m	On-site
	ENGINEERS SUPPLIES. (E8370)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St, Broadway.2007.	29442	1982	Premise Match	0m	On-site
	ABRASIVE MERCHANTS &/OR DISTS. (A0245)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007.	92	1982	Premise Match	0m	On-site
	ADHESIVES - TAPE MFRS. &/OR DISTS. (A1230)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007.	1255	1982	Premise Match	0m	On-site
	INSULATING MATERIALS MFRS.&/OR DISTS. &/OR SUPPLIERS.(I3660)	Eliza Tinsley (Aust.) Pty. Ltd., 43 Mountain St., Broadway. 2007.	42461	1982	Premise Match	0m	On-site
	ASBESTOS MFRS. &/OR SUPPLIERS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St. Broadway. 2007	3386	1978	Premise Match	0m	On-site
	ADHESIVES-TAPE MFRS. &/OR DISTS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway 2007	1155	1978	Premise Match	0m	On-site
	ABRASIVE MERCHANTS &/OR DISTS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	68	1978	Premise Match	0m	On-site
	ADHESIVES MFRS. &/OR DISTS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	1116	1978	Premise Match	0m	On-site
	ENGINEERS SUPPLIES	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	26541	1978	Premise Match	0m	On-site
	FILTER MFRS. &/OR DISTS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	27610	1978	Premise Match	0m	On-site
	FILTRATION SUPPLIERS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	27659	1978	Premise Match	0m	On-site
	INSULATING MATERIALS MFRS. &/OR DISTS. &/OR SUPPLIERS.	Eliza Tinsley (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	37803	1978	Premise Match	0m	On-site
	FELT MFRS. &/OR W/SALERS.	Tinsley Eliza (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway. 2007	31401	1975	Premise Match	0m	On-site
	FILTER MFRS. &/OR DISTS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway 2007	31844	1975	Premise Match	0m	On-site
	ABRASIVE MERCHANTS &/OR DISTS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	82	1975	Premise Match	0m	On-site
	ADHESIVES MFRS. &/OR DISTS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	877	1975	Premise Match	0m	On-site
	ASBESTOS CLOTH SUPPLIERS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	3100	1975	Premise Match	0m	On-site
	FILTRATION SUPPLIERS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	31872	1975	Premise Match	0m	On-site

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
2	WELDING EQUIPMENT &/OR SUPPLIES MFRS. &/OR DISTS.	Tinsley, Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	87233	1975	Premise Match	0m	On-site
	ASBESTOS MFRS. &/OR SUPPLIERS.	Tinsley. Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	3109	1975	Premise Match	0m	On-site
	INSULATING MATERIALS MFRS. &/OR DISTS. &/OR SUPPLIERS.	Tinsley. Eliza (NSW) Pty. Ltd., 43 Mountain St., Broadway. 2007	44745	1975	Premise Match	0m	On-site
	ASBESTOS CLOTH SUPPLIERS (A555)	Tinsley, Eliza (N.S.W.) Pty. Ltd, 43 Mountain St., Broadway	262538	1970	Premise Match	0m	On-site
	FELT MFRS./W'SALERS (F085)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway	302208	1970	Premise Match	0m	On-site
	WELDING EQUIPMENT & SUPPLIES MFRS. &/OR DISTS	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43 Mountain St., Broadway	374154	1970	Premise Match	0m	On-site
	ASBESTOS MFRS. &/OR SUPPLIERS (A570)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St, Broadway	262553	1970	Premise Match	0m	On-site
	ABRASIVE DISTRIBUTORS &/OR MERCHANTS (A020)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	258403	1970	Premise Match	0m	On-site
	ADHESIVE DISTRIBUTORS &/OR WHOLESALERS (A115)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	259696	1970	Premise Match	0m	On-site
	FILTRATION SUPPLIERS (F175)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	302809	1970	Premise Match	0m	On-site
	INSULATING MATERIAL SUPPLIERS(I480)	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	319884	1970	Premise Match	0m	On-site
	Asbestos Mfrs. &/or Suppliers	Tinsley, Eliza (N.S.W.) Pty. Ltd ., 43-49 Mountain St., Broadway	47158	1965	Premise Match	0m	On-site
	ABRASIVE DISTRIBUTORS &/OR MERCHANTS	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	43311	1965	Premise Match	0m	On-site
	Adhesive Distributors &/or Wholesalers	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	44579	1965	Premise Match	0m	On-site
	Filtration Suppliers	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	86182	1965	Premise Match	0m	On-site
	Insulating Material Suppliers	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	104027	1965	Premise Match	0m	On-site
	Leather/Grindery Merch.	Tinsley, Eliza Pty. Ltd., 43 Mountain St., Broadway	107448	1965	Premise Match	0m	On-site
	FILTRATION SUPPLIERS	Tinsley Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	310424	1961	Premise Match	0m	On-site
	ABRASIVE DISTRIBUTORS &/OR MERCHANTS	Tinsley Eliza (NSW) Pty Ltd 43-49 Mountain St., Broadway	264515	1961	Premise Match	0m	On-site
	ABRASIVE DISTRIBUTORS &/OR MERCHANTS	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	264516	1961	Premise Match	0m	On-site
	FILTRATION SUPPLIERS	Tinsley, Eliza (N.S.W.) Pty. Ltd., 43-49 Mountain St., Broadway	310425	1961	Premise Match	0m	On-site
	MOTOR BODY BUILDERS' SUPPLIES	Tinsley, Eliza Pty. Ltd., 43 Mountain St., Broadway	344262	1961	Premise Match	0m	On-site
	FRAME MANUFACTURERS	Connolly J. Ltd. (Steel, Aluminium and Bronze), 43-49 Mountain St., Broadway	48016	1950	Premise Match	0m	On-site
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Connolly, J. Ltd., 43 Mountain St., Broadway	40584	1950	Premise Match	0m	On-site
	METAL WINDOW FRAME MANUFACTURERS	Connolly, J. Ltd., 43 Mountain St., Broadway	76128	1950	Premise Match	0m	On-site
	METAL WORKERS-GENERAL	Connolly, J. Ltd., 43 Mountain St., Broadway	76140	1950	Premise Match	0m	On-site
	TOOL MAKERS	Connolly, J. Ltd., 43 Mountain St., Broadway	109093	1950	Premise Match	0m	On-site
	VICE MANUFACTURERS	Connolly, J. Ltd., 43 Mountain St., Broadway	112000	1950	Premise Match	0m	On-site
	WINDOW FRAME MANUFACTURERS	Connolly, J. Ltd., 43 Mountain St., Broadway	113437	1950	Premise Match	0m	On-site
	SAFES & STRONGROOM DOOR MANUFACTURERS	Connolly, J. Ltd., 43-49 Mountain St., Broadway	100126	1950	Premise Match	0m	On-site
	STEEL WINDOW FRAME MANUFACTURERS	Connolly, J. Pty. Ltd., 43 Mountain St., Broadway	105328	1950	Premise Match	0m	On-site
3	EXPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St. Broadway. 2007	27015	1978	Premise Match	0m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	CARPET &/OR FLOOR COVERING IMPS &/OR W/SALERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	11432	1978	Premise Match	0m	South East
	CONDIMENT MFRS. & DISTS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	16051	1978	Premise Match	0m	South East
	FISH IMPORTERS &/OR DISTS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	27947	1978	Premise Match	0m	South East
	FOOD EXPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	28823	1978	Premise Match	0m	South East
	FOOD IMPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	28921	1978	Premise Match	0m	South East
	IMPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	37181	1978	Premise Match	0m	South East
	PRODUCE MERCHANTS-WHOLESALE.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	59971	1978	Premise Match	0m	South East
	CARPET &/OR FLOOR COVERING IMPS &/OR W/SALERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	13351	1975	Premise Match	0m	South East
	COFFEE IMP, ROASTER &/OR MERCHANTS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	18221	1975	Premise Match	0m	South East
	CONDIMENT MFRS. & DISTS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	18616	1975	Premise Match	0m	South East
	EXPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	31190	1975	Premise Match	0m	South East
	FISH IMPORTERS &/OR DISTS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	32239	1975	Premise Match	0m	South East
	FOOD EXPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	33381	1975	Premise Match	0m	South East
	FOOD IMPORTERS	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	33511	1975	Premise Match	0m	South East
	IMPORTERS.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	43998	1975	Premise Match	0m	South East
	PRODUCE MERCHANTS., W/SALE.	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway. 2007	70471	1975	Premise Match	0m	South East
	CARPET & FLOOR COVERING IMPS. &/OR WHOLESALERS (C123)	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway	277611	1970	Premise Match	0m	South East
	CONDIMENT MFRS. &/OR DISTS.(C611)	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway	285349	1970	Premise Match	0m	South East
	PRODUCE MERCH.-W'SALE (P858)	Waters Trading Co. Pty. Ltd., 51 Mountain St., Broadway	352926	1970	Premise Match	0m	South East
	EXPORTERS (E835)	Waters Trading Co. Pty. Ltd., 51-55 Mountain St., Broadway	301906	1970	Premise Match	0m	South East
	FISH IMPORTS/EXPORTS &/OR DISTS.(F240)	Waters Trading Co. Pty. Ltd., 51-55 Mountain St., Broadway	303261	1970	Premise Match	0m	South East
	FOOD EXPORTERS (F400)	Waters Trading Co. Pty. Ltd., 51-55 Mountain St., Broadway	304802	1970	Premise Match	0m	South East
	FOOD IMPORTERS (F405)	Waters Trading Co. Pty. Ltd., 51-55 Mountain St., Broadway	304876	1970	Premise Match	0m	South East
	IMPORTERS (I200)	Waters Trading Co. Pty. Ltd., 51-55 Mountain St., Broadway	318849	1970	Premise Match	0m	South East
	Condiment Mfrs. &/or Dists.	Waters Trading Co. Pty. Ltd., 51 Mountain St.	70021	1965	Premise Match	0m	South East
	Exporters	Waters Trading Co. Pty. Ltd., 51 Mountain St.	85275	1965	Premise Match	0m	South East
	Importers	Waters Trading Co. Pty. Ltd., 51 Mountain St.	103051	1965	Premise Match	0m	South East
	Merchants/Importers	Waters Trading Co. Pty. Ltd., 51 Mountain St.	114011	1965	Premise Match	0m	South East
	Produce Merch. - W'Sale	Waters Trading Co. Pty. Ltd., 51 Mountain St.	136970	1965	Premise Match	0m	South East
	Carpet & Floor Covering Imps. &/Wholesalers	Waters Trading Co. Pty. Ltd., 51-55 Mountain St.	62374	1965	Premise Match	0m	South East
	Fish Imports. &/or Dists.	Waters Trading Co. Pty. Ltd., 51-55 Mountain St.	86629	1965	Premise Match	0m	South East
	Millers/Gristers	Waters Trading Co. Pty. Ltd., 51-55 Mountain St.	115972	1965	Premise Match	0m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	TEXTILE WHOLESALERS	Waters Traders Co. Ltd., 51-55 Mountain St., Broadway	108189	1950	Premise Match	0m	South East
	MILLERS & GRISTERS	Waters Trading Co. Ltd. (Rice), 51 Mountain St., Broadway	78347	1950	Premise Match	0m	South East
	MANUFACTURERS' AGENTS	Waters Trading Co. Ltd., 51 Mountain St., Broadway	71911	1950	Premise Match	0m	South East
	EXPORTERS	Waters Trading Co. Ltd., 51-55 Mountain St.	43187	1950	Premise Match	0m	South East
	BARLEY & PEA MILLERS	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	6060	1950	Premise Match	0m	South East
	CARPET & FLOOR COVERING IMPORTERS &/OR WHOLESALERS	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	18100	1950	Premise Match	0m	South East
	FOOD IMPORTERS	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	46487	1950	Premise Match	0m	South East
	FURNISHINGS-SOFT-MANUFACTURERS &/OR WHOLESALERS	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	52227	1950	Premise Match	0m	South East
	IMPORTERS	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	64064	1950	Premise Match	0m	South East
	PRODUCE MERCHANTS-WHOLESALE	Waters Trading Co. Ltd., 51-55 Mountain St., Broadway	95899	1950	Premise Match	0m	South East
	FOOD MANUFACTURERS-CEREAL	Waters Trading Co., 51 Mountain St., Broadway	46505	1950	Premise Match	0m	South East
	MERCHANTS & IMPORTERS	Waters Trading Co., 51 Mountain St., Broadway	75710	1950	Premise Match	0m	South East
4	Exporters	Jack Y M & Co Pty Ltd, 66 Bay St., Broadway 2007	45133	1991	Premise Match	6m	West
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Jack, Y M & Co Pty Ltd., 66 Bay St., Broadway 2007	37498	1986	Premise Match	6m	West
	EXPORTERS.	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	31755	1986	Premise Match	6m	West
	IMPORTERS.	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	47713	1986	Premise Match	6m	West
	FURNITURE-CANE &/OR WICKER-MFRS. &/OR DISTS.	Jack., Y M & Co Pty Ltd., 66 Bay St., Broadway 2007	36869	1986	Premise Match	6m	West
	EXPORTERS. (E9270)	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	29782	1982	Premise Match	6m	West
	FURNITURE-CANE &/OR WICKER MFRS. &/OR DISTS. (F7375)	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007.	34438	1982	Premise Match	6m	West
	FURNITURE-GENERAL-MFRS.&/OR W/SALERS. (F7675)	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007.	35030	1982	Premise Match	6m	West
	IMPORTERS. (I0750)	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007.	41617	1982	Premise Match	6m	West
	TRANSISTOR MFRS. &/OR DISTS.	Australian General Electric Ltd, 66 Bay St, Ultimo. 2007	72133	1978	Premise Match	6m	West
	IMPORTERS.	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	36950	1978	Premise Match	6m	West
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Jack. Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	31617	1978	Premise Match	6m	West
	EXPORTERS.	Jack. Y.M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	26902	1978	Premise Match	6m	West
	STEAM TURBINE MFRS.	Australian General Electric Ltd, 66 Bay St, Ultimo 2007	80382	1975	Premise Match	6m	West
	INSTRUMENTS ELECTIC MFRS. &/OR DISTS.	Australian General Electric Ltd., 66 Bay St, Ultimo. 2007	44337	1975	Premise Match	6m	West
	METER &/OR METER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Australian General Electric Ltd., 66 Bay St., Ultimo. 2007	53111	1975	Premise Match	6m	West
	CONCRETE ADDITIVES-COLOURING-WATER PROFING ETC.MFRS &/OR DISTS	Hodgsons Dye Agencies Pty. Ltd., 66 Bay St., Broadway. 2007	18318	1975	Premise Match	6m	West
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Jack, Y. M. & Co. Pty. Ltd., 66 Bay St., Broadway. 2007	36729	1975	Premise Match	6m	West

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4	DUST COLLECTION EQUIPMENT MANUFACTURERS (D800)	Van Gelder, J. P. & Co Pty. Ltd., 66 Bay St., Broadway	292867	1970	Premise Match	6m	West
	CRUSHING MACHINE MFRS. &/OR DISTRIBUTORS (C765)	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	286427	1970	Premise Match	6m	West
	ELECTRONICS-INDUSTRIAL CONTROL EQUIPMENT MFRS.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	296540	1970	Premise Match	6m	West
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	299726	1970	Premise Match	6m	West
	ENGINEERS-MINING (E685)	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	300280	1970	Premise Match	6m	West
	GRINDING/PULVERISING MACHINERY MANUFACTURERS (G645)	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	312122	1970	Premise Match	6m	West
	MACHINERY MFRS. (M035)	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	324347	1970	Premise Match	6m	West
	PACKING MACHINERY MFRS. & DISTRIBUTORS	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	345884	1970	Premise Match	6m	West
	SCALE & WEIGHING MACHINE MFRS., DISTS. &/OR IMPORTS.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	359412	1970	Premise Match	6m	West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.(F360)	Van Gelder, J.P.& Co. Pty. Ltd., 66 Bay St., Broadway	304562	1970	Premise Match	6m	West
	Electronics - Industrial Control Equipment Mfrs.	Van Gelder, J. P. & Co . Pty. Ltd., 66 Bay St., Broadway	80120	1965	Premise Match	6m	West
	Dust Collection Equipment Manufacturers	Van Gelder, J. P. & Co Pty. Ltd., 66 Bay St., Broadway	76652	1965	Premise Match	6m	West
	Air Conditioning Units & Machinery Mfrs.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	45716	1965	Premise Match	6m	West
	Crushing Machine Mfrs. &/or Distributors	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	71175	1965	Premise Match	6m	West
	Engineers - Mining	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	83486	1965	Premise Match	6m	West
	Engineers General &/or Mfrg. &/or Mechanical	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	82975	1965	Premise Match	6m	West
	Flour Milling Machinery Mfrs. &/or Dists.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	87943	1965	Premise Match	6m	West
	Machinery Manufacturers	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	108760	1965	Premise Match	6m	West
	Packing Machinery Mfrs./ Distributors	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	130380	1965	Premise Match	6m	West
	Scale & Weighing Machine Mfrs. Dists. &/or Imports.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	142640	1965	Premise Match	6m	West
	Engineers - Electrical	Van Gelder, J.P. P. Co. Pty. Ltd., 66 Bay St., Broadway	81598	1965	Premise Match	6m	West
	Scale/Weighing Machine Hirers	Wedderburn, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	142612	1965	Premise Match	6m	West
	DUST COLLECTION EQUIPMENT MANUFACTURERS	Van Gelder J P & Co Pty Ltd 66 Bay St., Broadway	299585	1961	Premise Match	6m	West
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Van Gelder J P & Co Pty Ltd 66 Bay St., Broadway	307158	1961	Premise Match	6m	West
	GRINDING/PULVERISING MACHINERY MANUFACTURERS	Van Gelder J P & Co Pty Ltd 66 Bay St., Broadway	320035	1961	Premise Match	6m	West
	MILLING ENGINEERS	Van Gelder J P & Co Pty Ltd 66 Bay St., Broadway	340187	1961	Premise Match	6m	West
	PACKING MACHINERY MFRS./ DISTRIBUTORS	Van Gelder J P & Co Pty Ltd 66 Bay St., Broadway	355391	1961	Premise Match	6m	West
	CRUSHING MACHINE MFRS. &/OR DISTRIBUTORS	Van Gelder J P & Go Pty Ltd 66 Bay St., Broadway	293847	1961	Premise Match	6m	West
	MACHINERY MFRS.	Van Gelder J P & Go Pty Ltd 66 Bay St., Broadway	332716	1961	Premise Match	6m	West
	SCALE & WEIGHING MACHINE MFRS., DISTS. &/OR IMPORTS.	Van Gelder J P & Go Pty Ltd 66 Bay St., Broadway	248131	1961	Premise Match	6m	West

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4	ELECTRONICS-INDUSTRIAL CONTROL EQUIPMENT MFRS.	Van Gelder, J. P. & Co Pty. Ltd., 66 Bay St., Broadway	303803	1961	Premise Match	6m	West
	CRUSHING MACHINE MFRS. &/OR DISTRIBUTORS	Van Gelder, J. p. & Co. Pty. Ltd., 66 Bay St., Broadway	293848	1961	Premise Match	6m	West
	DUST COLLECTION EQUIPMENT MANUFACTURERS	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	299586	1961	Premise Match	6m	West
	ENGINEERS-FLOUR MILLING	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	306014	1961	Premise Match	6m	West
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	307159	1961	Premise Match	6m	West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	312180	1961	Premise Match	6m	West
	GRINDING/PULVERISING MACHINERY MANUFACTURERS	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	320036	1961	Premise Match	6m	West
	MACHINERY MFRS.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	332717	1961	Premise Match	6m	West
	SCALE & WEIGHING MACHINE MFRS., DISTS. &/OR IMPORTS.	Van Gelder, J. P. & Co. Pty. Ltd., 66 Bay St., Broadway	248132	1961	Premise Match	6m	West
	PACKING MACHINERY MFRS./ DISTRIBUTORS	Van Gelder, J. P.& Co. Pty. Ltd., 66 Bay St., Broadway	355392	1961	Premise Match	6m	West
	GRINDING & PULVERISING MACHINERY MFRS.	Van Gelder, J. P. and Co. Ltd., 66 Bay St.	55262	1950	Premise Match	6m	West
	PACKING MACHINERY MANUFACTURERS &/OR DISTRIBUTORS	Van Gelder, J. P. and Co. Ltd., 66 Bay St.	90551	1950	Premise Match	6m	West
	ENGINEERS-FLOUR MILLING	Van Gelder, J. P. and Co. Pty. Ltd., 66 Bay St.	40308	1950	Premise Match	6m	West
	DUST COLLECTION EQUIPMENT MFRS.	Van Gelder, J. P. and Co. Pty. Ltd., 66 Bay St., Broadway	36014	1950	Premise Match	6m	West
	FLOUR MILLING MACHINERY	Van Gelder, J. P. and Co. Pty. Ltd., 66 Bay St., Broadway	46358	1950	Premise Match	6m	West
	MACHINERY MANUFACTURERS	Van Gelder, J. P. and Co. Pty. Ltd., 66 Bay St., Glebe	69996	1950	Premise Match	6m	West
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Van Gelder,. J. P. and Co. Pty. Ltd.,. 66 Bay St., Glebe	41370	1950	Premise Match	6m	West
5	ELECTRICAL SUPPLIES &/OR APPLIANCES - MFRS. (E3780)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	25628	1982	Premise Match	6m	South West
	ELECTRONIC EQUIPMENT MFRS.&/OR DISTS. (E4770)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	26124	1982	Premise Match	6m	South West
	ENGINEERS - ELECTRICAL. (E6780)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	27257	1982	Premise Match	6m	South West
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS.&/OR IMPS. &/OR DISTS. (T7160)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	81599	1982	Premise Match	6m	South West
	TRANSISTOR MFRS. &/OR DISTS.(T7175)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	81635	1982	Premise Match	6m	South West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.(X0200)	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007.	85523	1982	Premise Match	6m	South West
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/OR HIRERS.(D1050)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	19007	1982	Premise Match	6m	South West
	DIAMONDS-INDUSTRIAL-SUPPLIERS. (D2650)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	21363	1982	Premise Match	6m	South West
	ELECTRIC GENERATING EQUIPMENT MFRS. &/OR IMPS.&/OR DISTS. (E1560)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	24722	1982	Premise Match	6m	South West
	ELECTRIC LAMP (BED, DESK, STANDARD ETC.) MFRS &/OR DISTS. (E1830)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	24751	1982	Premise Match	6m	South West
	ELECTRIC LIGHT FITTINGS (SHADES. BRACKETS, ETC) MFRS.&/OR DISTS. (E1980)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	24791	1982	Premise Match	6m	South West

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5	ELECTRIC MOTOR MFRS. &/OR DISTS. (E2370)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	25010	1982	Premise Match	6m	South West
	ELECTRONIC INDUSTRIAL CONTROL EQUIPMENT MFRS. (E4792)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	26273	1982	Premise Match	6m	South West
	GENERATOR MFRS. &/OR DISTS.(G2900)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	36003	1982	Premise Match	6m	South West
	INSTRUMENTS - ELECTRIC - MFRS.&/OR DISTS. (I2840)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	42124	1982	Premise Match	6m	South West
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTS. (I2900)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	42156	1982	Premise Match	6m	South West
	LOCOMOTIVE MFRS. &/OR IMPS., (L6550)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	45596	1982	Premise Match	6m	South West
	METER &/OR METER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.(M2860)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	51989	1982	Premise Match	6m	South West
	STEAM TURBINE MFRS. (S5080)	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007.	76774	1982	Premise Match	6m	South West
	FLUORESCENT LIGHTING SPECIALISTS. (F4375)	Australian General Electric Ltd., 86 Bay St., Ultimo.2007.	31719	1982	Premise Match	6m	South West
	ELECTRIC LIGHT FITTINGS (SHADES, BRACKETS, ETC) MFRS. &/OR DISTS.	Australian General Electric Ltd, 86 Bay St, Ultimo. 2007	21758	1978	Premise Match	6m	South West
	INSTRUMENTS-INDUSTRIAL-MFRS. &/OR DISTS.	Australian General Electric Ltd, 86 Bay St, Ultimo. 2007	37489	1978	Premise Match	6m	South West
	LOCOMOTIVE MFRS. &/OR IMPS.	Australian General Electric Ltd, 86 Bay St, Ultimo. 2007	40581	1978	Premise Match	6m	South West
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Australian General Electric Ltd, 86 Bay St, Ultimo. 2007	72101	1978	Premise Match	6m	South West
	ELECTRICAL SUPPLIES &/OR APPLIANCES-MFRS.	Australian General Electric Ltd. 86 Bay St., Ultimo. 2007	22647	1978	Premise Match	6m	South West
	DATA PROCESSING EQUIPMENT MFRS &/OR DISTS. &/OR HIRERS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	17149	1978	Premise Match	6m	South West
	DIAMONDS-INDUSTRIAL-SUPPLIERS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	18845	1978	Premise Match	6m	South West
	ELECTRIC MOTOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	21972	1978	Premise Match	6m	South West
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	23132	1978	Premise Match	6m	South West
	ENGINEERS-ELECTRICAL.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	24309	1978	Premise Match	6m	South West
	FLUORESCENT LIGHTING SPECIALISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	28717	1978	Premise Match	6m	South West
	GENERATOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	32695	1978	Premise Match	6m	South West
	INSTRUMENTS - ELECTRIC - MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	37460	1978	Premise Match	6m	South West
	METER &/OR METER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	45749	1978	Premise Match	6m	South West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo 2007	75383	1978	Premise Match	6m	South West
	ELECTRIC GENERATING EQUIPMENT MFRS., &/OR IMPS., &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	21702	1978	Premise Match	6m	South West
	ELECTRIC LAMP (BED, DESK, STANDARD ETC.) MFRS &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	21730	1978	Premise Match	6m	South West
	ELECTRONICS-INDUSTRIAL CONTROL EQUIPMENT MFRS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	23248	1978	Premise Match	6m	South West
	STEAM TURBINE MFRS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	67982	1978	Premise Match	6m	South West
	CLOTHING - BLOUSES MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	14582	1978	Premise Match	6m	South West

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5	CLOTHING - FROCKS & SUITS MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	14830	1978	Premise Match	6m	South West
	CLOTHING - SPORTSWEAR MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	15418	1978	Premise Match	6m	South West
	CLOTHING-GENERAL MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	14953	1978	Premise Match	6m	South West
	CLOTHING-MATERNITY,WEAR MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	15124	1978	Premise Match	6m	South West
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Australian General Electric Ltd. 86 Bay St, Broadway, 2007	26758	1975	Premise Match	6m	South West
	ELECTRONICS-INDUSTRIAL CONTROL EQUIPMENT MFRS.	Australian General Electric Ltd. 86 Bay St. Broadway 2007	26884	1975	Premise Match	6m	South West
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	26771	1975	Premise Match	6m	South West
	ELECTRONICS-INDUSTRIAL CONTROL EQUIPMENT MFRS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	26892	1975	Premise Match	6m	South West
	LOCOMOTIVE MFRS. &/OR IMPS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007	47913	1975	Premise Match	6m	South West
	FLUORESCENT LIGHTING SPECIALISTS.	Australian General Electric Ltd., 86 Bay St, Ultimo. 2007,	33245	1975	Premise Match	6m	South West
	ELECTRICAL SUPPLIES &/OR APPLIANCES-MFRS.	Australian General Electric Ltd., 86 Bay St. Ultimo. 2007	26147	1975	Premise Match	6m	South West
	INSTRUMENTS – INDUSTRIAL MFRS. &/OR DISTS	Australian General Electric Ltd., 86 Bay St., Broadway. 2007	44365	1975	Premise Match	6m	South West
	TRANSISTOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Broadway. 2007	84874	1975	Premise Match	6m	South West
	TURBINES.,GAS.	Australian General Electric Ltd., 86 Bay St., Broadway. 2007	85333	1975	Premise Match	6m	South West
	GENERATOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo, 2007	37905	1975	Premise Match	6m	South West
	ELECTRIC GENERATING EQUIPMENT MFRS., &/OR IMPS, &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	25255	1975	Premise Match	6m	South West
	ELECTRIC LAMP (BED, DESK, STANDARD ETC.) MFRS &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	88138	1975	Premise Match	6m	South West
	ELECTRIC LIGHT FITTINGS (SHADES, BRACKETS, ETC) MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	88139	1975	Premise Match	6m	South West
	ELECTRIC MOTOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	25418	1975	Premise Match	6m	South West
	INSTRUMENTS – INDUSTRIAL MFRS. &/OR DISTS	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	44377	1975	Premise Match	6m	South West
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	84838	1975	Premise Match	6m	South West
	TRANSISTOR MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	84875	1975	Premise Match	6m	South West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	Australian General Electric Ltd., 86 Bay St., Ultimo. 2007	88012	1975	Premise Match	6m	South West
	CLOTHING - BLOUSES MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St. Broadway. 2007	16792	1975	Premise Match	6m	South West
	CLOTHING - FROCKS & SUITS MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	17085	1975	Premise Match	6m	South West
	CLOTHING - GENERAL MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	17247	1975	Premise Match	6m	South West
	CLOTHING-MATERNITY WEAR MFRS. &/OR W/SALERS.	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	17450	1975	Premise Match	6m	South West
	CLOTHING-SPORTSWEAR LADIES MFRS.&/OR W/SALERS	Pasadena Pty. Ltd., 86 Bay St., Broadway. 2007	17838	1975	Premise Match	6m	South West
	Confectioners - Manufacturing &/or Wholesale	Ennever & Appleton, 86 Bay St., Broadway	70045	1965	Premise Match	6m	South West
	Confectioners - Manufacturing &/or Wholesale	Hertford Management Pty. Ltd., 86 Bay St., Broadway	70060	1965	Premise Match	6m	South West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
5	CONFECTIONERS-MANUFACTURING &/OR WHOLESALE	Ennever & Appleton, 86 Bay St., Broadway	292600	1961	Premise Match	6m	South West
	CHOCOLATE MANUFACTURERS	Ennever and Appleton, 86 Bay St.	22783	1950	Premise Match	6m	South West
	CONFECTIONERS-MANUFACTURING &/OR WHOLESALE	Ennever and Appleton, 86-90 Bay St., Ultimo	28564	1950	Premise Match	6m	South West
6	PUBLISHERS	Collier MacMillan Australia., 80 Bay St.	70992	1975	Premise Match	6m	South West
	WAREHOUSEMEN (W040)	Arrow Shirts Pty. Ltd., 76 Bay St., Ultimo	372934	1970	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Shirt & Pyjama	Arrow Shirts Pty. Ltd., 82 Bay St., Ultimo	68148	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Underwear	Arrow Shirts Pty. Ltd., 82 Bay St., Ultimo	68459	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Ladies' Coats & Costumes	Colonial Sales Corp. Pty. Ltd., 82 Bay St., Ultimo	67380	1965	Premise Match	6m	South West
	Manufacturers' Agents	Colonial Sales Corporation Ltd., 82 Bay St., Ultimo	109378	1965	Premise Match	6m	South West
	Warehousemen	Colonial Sales Corporation Pty. Ltd., 82 Bay St., Ultimo	155719	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Blouses	Pelaco Ltd., 76 Bay St., Ultimo	66894	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Ladies' Skirts	Pelaco Ltd., 76 Bay St., Ultimo	67917	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Collars & Ties, Etc.	Pelaco Ltd., 76-84 Bay St., Ultimo	66941	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Men's & Boys' Wear	Pelaco Ltd., 76-84 Bay St., Ultimo	68061	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Sportswear	Pelaco Ltd., 76-84 Bay St., Ultimo	68398	1965	Premise Match	6m	South West
	Clothing Mfrs. &/or W'salers - Underwear	Pelaco Ltd., 76-84 Bay St., Ultimo	68548	1965	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-SHIRT & PYJAMA	Arrow Shirts Pty. Ltd., 82 Bay St., Ultimo	290721	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	Arrow Shirts Pty. Ltd., 82 Bay St., Ultimo	290945	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-LADIES' COATS & COSTUMES	Colonial Sales Corp. Pty. Ltd., 82 Bay St., Ultimo	289888	1961	Premise Match	6m	South West
	MANUFACTURERS' AGENTS	Colonial Sales Corporation Ltd., 82 Bay St., Ultimo	333168	1961	Premise Match	6m	South West
	WAREHOUSEMEN	Colonial Sales Corporation Pty. Ltd., 82 Bay St., Ultimo	261305	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-BLOUSES	Pelaco Ltd., 76 Bay St., Ultimo	289228	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-LADIES' SKIRTS	Pelaco Ltd., 76 Bay St., Ultimo	290498	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-COLLARS & TIES, ETC.	Pelaco Ltd., 76-84 Bay St., Ultimo	289290	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-MEN'S & BOYS' WEAR	Pelaco Ltd., 76-84 Bay St., Ultimo	290635	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	Pelaco Ltd., 76-84 Bay St., Ultimo	291046	1961	Premise Match	6m	South West
	CLOTHING MFRS. &/OR WHOLESALERS-SPORTSWEAR	Pelaco Ltd., 76-84 Bay St., Ultimo	291192	1961	Premise Match	6m	South West
	SEWING MACHINE MOTORS-MANUFACTURERS &/OR DISTRIBUTORS	Gemco Pty. Ltd. (Clutch Brake), 76 Bay St., Ultimo	101480	1950	Premise Match	6m	South West
	SEWING MACHINE MANUFACTURERS &/OR DISTRIBUTORS-TRADE	Gemco Pty. Ltd. (Power), 76 Bay St., Ultimo	101463	1950	Premise Match	6m	South West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
6	CLOTH CUTTING MACHINES MANUFACTURERS & DEALERS	Gemco Pty. Ltd., 76 Bay St., Ultimo	23077	1950	Premise Match	6m	South West
	INDIVIDUAL POWER BENCHING	Gemco Pty. Ltd., 76 Bay St., Ultimo	64273	1950	Premise Match	6m	South West
	SEWING MACHINE DEALERS	Gemco Pty. Ltd., 76-84 Bay St.	101419	1950	Premise Match	6m	South West
	CLOTHING MANUFACTURERS &/OR WHOLESALERS-COLLARS & TIES	Pelaco Ltd. 76-84 Bay St., Ultimo	23142	1950	Premise Match	6m	South West
	CLOTHING MFRS. &/OR WHOLESALERS SHIRT & PYJAMA	Pelaco Ltd., Sales and Warehouse, Reg. Office, 76-84 Bay St., Ultimo	24169	1950	Premise Match	6m	South West
7	Air Compressor Mfrs. &/or Dists.	Air Compressors Pty. Ltd., 68 Bay St., Broadway	45600	1965	Premise Match	6m	West
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTRIBUTORS	Pix T.V. Components Pty. Ltd., 68-74 Bay St., Broadway	303759	1961	Premise Match	6m	West
	RADIO &/OR T.V. DISTRIBUTORS-WHOLESALE	Pix T.V. Components Pty. Ltd., 68-74 Bay St., Broadway	363781	1961	Premise Match	6m	West
	TELEVISION EQUIPMENT IMPORTS., MFRS. &/OR DISTS.	Pix T.V. Components Pty. Ltd., 68-74 Bay St., Broadway	255950	1961	Premise Match	6m	West
	RADIO &/OR TELEVISION COMPONENT PARTS MFRS.	Pix T.V. Components, 68 Bay St.	363849	1961	Premise Match	6m	West
	RADIO COMPONENT PARTS DEALERS	Pix T.V. Components, 68 Bay St.	364554	1961	Premise Match	6m	West
	ELECTRICAL SUPPLIES/APPLIANCES-WHOLESALE	Pix-T.V. Components Pty. Ltd., 68 Bay St., Broadway	303602	1961	Premise Match	6m	West
8	Leather Goods Mfrs &/or W/salers &/or Suppliers	Buxton Leather Goods (Aust) Pty. Ltd., 39 Mountain St., Broadway.2007	96777	1991	Premise Match	20m	North
	Leather Goods Mfrs &/or W/salers &/or Suppliers	Tatra Industries Pty Ltd. Buxton Leather., 39 Mountain St., Broadway. 2007	50725	1991	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS. &/OR SUPPLIERS.	Buxton Leather Goods (Aust.) Pty. Ltd., 39 Mountain St., Broadway. 2007	51500	1986	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS. &/OR SUPPLIERS.	Tatra Industries Pty. Ltd., 39 Mountain St., Broadway. 2007	51536	1986	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS. (L3350)	Buxton Leather Goods (Aust.) Pty. Ltd., 39 Mountain St., Broadway. 2007.	45142	1982	Premise Match	20m	North
	MANCHESTER MFRS. &/OR W/SALERS. (M0600)	Joseph, E. & N. Pty. Ltd., 35 Mountain St., Broadway. 2007.	46027	1982	Premise Match	20m	North
	CLOTHING - KNITTED GOODS MFRS. &/OR W/SALERS. (C5169)	Roo Knitting Mills Pty. Ltd., 35 Mountain St., Broadway. 2007.	16827	1982	Premise Match	20m	North
	KNITTED GOODS MFRS. &/OR KNITTING MILLS. (K0750)	Roo Knitting Mills Pty. Ltd., 35 Mountain St., Broadway. 2007.	44392	1982	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS. (L3350)	Tatra Industries Pty. Ltd., 39 Mountain St., Broadway. 2007.	45176	1982	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS.	Buxton Leather Goods (Aust.) Pty. Ltd., 39 Mountain St., Broadway. 2007	40060	1978	Premise Match	20m	North
	CLOTHING - KNITTED GOODS MFRS. &/OR W/SALERS.	Roo Knitting Mills Pty. Ltd., 35 Mountain St., Broadway. 2007	15055	1978	Premise Match	20m	North
	KNITTED GOODS MFRS. &/OR KNITTING MILLS.	Roo Knitting Mills Pty. Ltd., 35 Mountain St., Broadway. 2007	39415	1978	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS.	Tatra Leather Goods Ltd., 39 Mountain St., Broadway. 2007	40095	1978	Premise Match	20m	North
	LEATHER GOODS MFRS. &/OR W/SALERS.	Buxton Leather Goods Aust. Pty. Ltd., 39 Mountain St., Broadway	47226	1975	Premise Match	20m	North
	CLOTHING - KNITTED GOODS MFRS. &/OR W/SALER&	Roo Knitting Mills, 35 Mountain St., Broadway. 2007	17378	1975	Premise Match	20m	North
	KNITTED GOODS MFRS. &/OR KNITTING MILLS.	Roo Knitting Mills., 35 Mountain St., Broadway. 2007	46534	1975	Premise Match	20m	North
	PRODUCE MERCHANTS-WHOLESALE	Schute, Bell, Badgery, Lumhy Ltd., 35 Mountain St.	95882	1950	Premise Match	20m	North
9	PHOTOGRAPHERS COMMERCIAL &/OR INDUSTRIAL.	Baxter, Phillip Studios, 44 Mountain Rd., Ultimo. 2007	72809	1986	Premise Match	20m	East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
9	COIR FIBRE IMPS.&/OR DISTS.	Brown & Bureau Ltd., 38 Mountain St., Broadway. 2007	18226	1975	Premise Match	20m	East
	STEEL EXPORTERS.	Brown & Bureau Ltd., 38 Mountain St., Broadway. 2007	80423	1975	Premise Match	20m	East
	WEEDICIDE MFRS. &/OR IMPS. &/OR DISTS.	Brown & Bureau Ltd., 38 Mountain St., Broadway. 2007	86735	1975	Premise Match	20m	East
	FERTILIZER MFRS. &/OR SUPPLIERS.	Brown & Dureau Ltd. 38 Mountain St., Broadway. 2007	31501	1975	Premise Match	20m	East
	FOOD EXPORTERS.	Brown & Dureau Ltd., 38 Mountain St, Broadway 2007	33352	1975	Premise Match	20m	East
	AGRICULTURAL CHEMICALS MFRS. &/OR DISTS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	1304	1975	Premise Match	20m	East
	BUILDERS SUPPLIERS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	9184	1975	Premise Match	20m	East
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	14455	1975	Premise Match	20m	East
	EXPORTERS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	30972	1975	Premise Match	20m	East
	FISH IMPORTERS &/OR DISTS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	32216	1975	Premise Match	20m	East
	FOOD PRODUCTS MFRS. &/OR DISTS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	33637	1975	Premise Match	20m	East
	MINING AGENTS.	Brown & Dureau Ltd., 38 Mountain St, Broadway. 2007	54140	1975	Premise Match	20m	East
	IMPORTERS.	Brown & Dureau Ltd., 38 Mountain St. Broadway. 2007	43535	1975	Premise Match	20m	East
	FOOD IMPORTERS	Brown & Dureau Ltd., 38 Mountain St., Broadway 2007	33469	1975	Premise Match	20m	East
	CONDIMENT MFRS. & DISTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	18600	1975	Premise Match	20m	East
	METAL MERCHANTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	52764	1975	Premise Match	20m	East
	MINING MACHINERY &/OR EQUIPMENT IMPS. &/OR DISTS. &/OR MFRS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	54242	1975	Premise Match	20m	East
	PAINT-DRY COLOURS-PIGMENT MFRS. &/OR DISTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	65281	1975	Premise Match	20m	East
	SCRAP METAL MERCHANTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	76117	1975	Premise Match	20m	East
	SHELLAC IMPS. &/OR W/SALERS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	77012	1975	Premise Match	20m	East
	STEEL IMPORTERS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	80692	1975	Premise Match	20m	East
	TEXTILE YARN IMPORTERS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007	82979	1975	Premise Match	20m	East
	MANUFACTURERS AGENTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007.	48632	1975	Premise Match	20m	East
	MARBLE &/OR GRANITE MERCHANTS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007.	49100	1975	Premise Match	20m	East
	MEAT EXPORTERS.	Brown & Dureau Ltd., 38 Mountain St., Broadway. 2007.	49488	1975	Premise Match	20m	East
	MANUFACTURERS REPRESENTATIVES.	Brown & Dureau Ltd., 38-44 Mountain St., Sydney. 2000.	49073	1975	Premise Match	20m	East
	COAL MECHANIZATION EQUIPMENT & WASHING PLANTS	Brown & Durssu Ltd., 38 Mountain St., Broadway. 2007	18163	1975	Premise Match	20m	East
	PLASTIC GOODS IMP &/OR DISTS.	Brown Dureau Ltd., 38 Mountain St., Broadway. 2007	67840	1975	Premise Match	20m	East
	TEXTILE MACHINERY MFRS. &/OR DISTRIBUTORS	Brown & Dureau Ltd, 38 Mountain St.	368136	1970	Premise Match	20m	East
	CHEMICAL IMPORTERS &/OR DISTRIBUTORS (C265)	Brown & Dureau Ltd., 38 Mountain St.	279194	1970	Premise Match	20m	East
	CHEMICAL-HEAVY-SUPPLIERS (C262)	Brown & Dureau Ltd., 38 Mountain St.	279581	1970	Premise Match	20m	East
	CHINA, & CROCKERY MFRS., IMPS. &/OR WHOLESALERS	Brown & Dureau Ltd., 38 Mountain St.	281325	1970	Premise Match	20m	East

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9	CLOCK IMPS. &/OR DISTS. (C398)	Brown & Dureau Ltd., 38 Mountain St.	282019	1970	Premise Match	20m	East
	COAL MECHANIZATION EQUIP.(C497)	Brown & Dureau Ltd., 38 Mountain St.	284792	1970	Premise Match	20m	East
	CONDIMENT MFRS. &/OR DISTS.(C611)	Brown & Dureau Ltd., 38 Mountain St.	285327	1970	Premise Match	20m	East
	CUTLERY IMPS.&/OR W'SALERS (C789)	Brown & Dureau Ltd., 38 Mountain St.	286681	1970	Premise Match	20m	East
	FACTORY REPRESENTATIVES (F025)	Brown & Dureau Ltd., 38 Mountain St.	301982	1970	Premise Match	20m	East
	FISH IMPORTS/EXPORTS &/OR DISTS.(F240)	Brown & Dureau Ltd., 38 Mountain St.	303232	1970	Premise Match	20m	East
	FOOD EXPORTERS (F400)	Brown & Dureau Ltd., 38 Mountain St.	304752	1970	Premise Match	20m	East
	FOOD IMPORTERS (F405)	Brown & Dureau Ltd., 38 Mountain St.	304816	1970	Premise Match	20m	East
	JEWELLERS-COSTUME-MFRS. &/OR DISTRIBUTORS (J030)	Brown & Dureau Ltd., 38 Mountain St.	321401	1970	Premise Match	20m	East
	LEATHER GOODS MFRS. &/OR WHOLESALERS (L400)	Brown & Dureau Ltd., 38 Mountain St.	322942	1970	Premise Match	20m	East
	MACHINE TOOL MFRS./IMPORTERS/DISTRIBUTORS (M020)	Brown & Dureau Ltd., 38 Mountain St.	323976	1970	Premise Match	20m	East
	MACHINERY MERCH./IMPORTERS(M045)	Brown & Dureau Ltd., 38 Mountain St.	324130	1970	Premise Match	20m	East
	MANUFACTURERS' AGENTS (M112)	Brown & Dureau Ltd., 38 Mountain St.	324717	1970	Premise Match	20m	East
	MARBLE/GRANITE MERCH. (M120)	Brown & Dureau Ltd., 38 Mountain St.	325461	1970	Premise Match	20m	East
	MEAT EXPORTERS (M188)	Brown & Dureau Ltd., 38 Mountain St.	325929	1970	Premise Match	20m	East
	MINING AGENTS (M384)	Brown & Dureau Ltd., 38 Mountain St.	331666	1970	Premise Match	20m	East
	MINING MACHINERY & EQUIPMENT IMPORTERS, DISTRIBUTORS &/OR MANUFACTURERS	Brown & Dureau Ltd., 38 Mountain St.	331756	1970	Premise Match	20m	East
	PAINT-DRY COLOURS/PIGMENT-MFRS/DISTRIBUTORS (P 020)	Brown & Dureau Ltd., 38 Mountain St.	346488	1970	Premise Match	20m	East
	SHELLAC IMPORTERS &/OR WHOLESALERS (S239)	Brown & Dureau Ltd., 38 Mountain St.	360829	1970	Premise Match	20m	East
	STEEL EXPORTERS (S670)	Brown & Dureau Ltd., 38 Mountain St.	365137	1970	Premise Match	20m	East
	STEEL IMPORTERS (S679)	Brown & Dureau Ltd., 38 Mountain St.	365435	1970	Premise Match	20m	East
	STEEL MERCHANTS-GENERAL (S694)	Brown & Dureau Ltd., 38 Mountain St.	365561	1970	Premise Match	20m	East
	TEXTILE YARN IMPORTERS (T290)	Brown & Dureau Ltd., 38 Mountain St.	368424	1970	Premise Match	20m	East
	TILE MFRS. &/OR DISTS.-FLOOR & WALL	Brown & Dureau Ltd., 38 Mountain St.	368648	1970	Premise Match	20m	East
	TOOL IMPORTS. &/OR DISTS.	Brown & Dureau Ltd., 38 Mountain St.	369483	1970	Premise Match	20m	East
	TOOL WHOLESALERS (T490)	Brown & Dureau Ltd., 38 Mountain St.	369826	1970	Premise Match	20m	East
	TOY IMPORTERS &/OR WHOLESALERS(T540)	Brown & Dureau Ltd., 38 Mountain St.	370328	1970	Premise Match	20m	East
	WEEDICIDE MFRS &/OR IMPS &/OR DISTS	Brown & Dureau Ltd., 38 Mountain St.	373396	1970	Premise Match	20m	East
	WOODWORK MACHINERY IMPORTS. &/OR DISTRIBUTORS	Brown & Dureau Ltd., 38 Mountain St.	375097	1970	Premise Match	20m	East
	PENCILS-PROPELLING-MFRS./SUPPLIERS (P232)	Brown & Dureau Ltd., 38 Mountain St.,	347524	1970	Premise Match	20m	East
	PEN-FOUNTAIN &/OR BALL POINT MFRS. &/OR IMPS. (P225)	Brown & Dureau Ltd., 38 Mountain St.,	347530	1970	Premise Match	20m	East

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9	PLASTIC GOODS IMPORTERS & DISTRIBUTORS (P560)	Brown & Dureau Ltd., 38 Mountain St.,	349581	1970	Premise Match	20m	East
	BAKERS' & PASTRYCOOKS' SUPPLIES (B075)	Brown & Dureau Ltd., Dureau House., 38 Mountain St.	264479	1970	Premise Match	20m	East
	EXPORTERS (E835)	Brown & Dureau Ltd., Dureau Hse, 38 Mountain St.	301518	1970	Premise Match	20m	East
	MANUFACTURERS' REPRESENTATIVES	BROWN & Dureau LTD., DUREAU HSE, 38-44 MOUNTAIN ST., P.O. BOX 3894, SYDNEY, 2001	325441	1970	Premise Match	20m	East
	BUILDERS' SUPPLIERS (B814)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	271257	1970	Premise Match	20m	East
	ELECTRICAL INSULATION & INSULATORS MFRS. &/OR IMP. &/OR DISTRIBUTORS (E310)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	295454	1970	Premise Match	20m	East
	GARDEN TOOL MFRS., IMPORTERS &/OR DISTS. (G070)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	310384	1970	Premise Match	20m	East
	GLASSWARE & CRYSTALWARE IMPORTS.&/OR W'SALERS (G300)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	311264	1970	Premise Match	20m	East
	GRINDING MACHINES-PRECISION-MFRS. &/OR DISTS. (G640)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	312080	1970	Premise Match	20m	East
	IMPORTERS (I200)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	318131	1970	Premise Match	20m	East
	JEWELLERS-MANUFACTURING-W'SALERS &/OR IMPORTS. (J050)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	321524	1970	Premise Match	20m	East
	LACE IMPORTERS &/OR WHOLESALERS (L030)	Brown & Dureau Ltd., Dureau Hse., 38 Mountain St.	322315	1970	Premise Match	20m	East
	ENGINE IMPORTERS &/OR DISTRIBUTORS (E435)	Brown & Dureau Ltd., Dureou Hse., 38 Mountain St.	296979	1970	Premise Match	20m	East
	COIR FIBRE IMPORT. &/OR DIST.(C526)	Brown & Dureau Pty. Ltd., 38 Mountain St.	284883	1970	Premise Match	20m	East
	ELECTRIC CLOCK IMPORTERS &/OR DISTRIBUTORS (E070)	Brown & Dureau Pty. Ltd., 38 Mountain St.	293454	1970	Premise Match	20m	East
	HOTEL/MOTEL EQUIPMENT/SUPPLIES(H680)	Brown & Dureau Pty. Ltd., 38 Mountain St.	316977	1970	Premise Match	20m	East
	METAL MERCHANTS (M260)	Brown & Dureau Pty. Ltd., 38 Mountain St.	329773	1970	Premise Match	20m	East
	RUBBER MFRS/ MATERIALS SUPPLIERS(R495)	Brown & Dureau Pty. Ltd., 38 Mountain St.	358148	1970	Premise Match	20m	East
	TEXTILE MANUFACTURERS (T255)	Brown & Dureau Pty. Ltd., 38 Mountain St.	368186	1970	Premise Match	20m	East
	TOOL MAKERS (T480)	Brown & Dureau Pty. Ltd., 38 Mountain St.	369590	1970	Premise Match	20m	East
	TRACTOR IMPORTS. &/OR MFRS. &/OR DISTS.	Brown & Dureau Pty. Ltd., 38 Mountain St.	370473	1970	Premise Match	20m	East
	TRAVEL GOODS MFRS.(T650)	Brown & Dureau Pty. Ltd., 38 Mountain St.	371202	1970	Premise Match	20m	East
	WEAVERS (W125)	Brown & Dureau Pty. Ltd., 38 Mountain St.	373355	1970	Premise Match	20m	East
	PLASTIC MFRS.' MATERIALS SUPPLIERS(P588)	Brown & Dureau., 38 Mountain St.,	349964	1970	Premise Match	20m	East
	FERTILIZER IMPORTERS &/OR DISTRIBUTORS (F110)	Brown & Oureau Ltd., 38 Mountain St.	302341	1970	Premise Match	20m	East
	FOOD PRODUCTS MFRS. &/OR DISTS.(F432)	Brown and Dureau Pty. Ltd., 38 Mountain St.	305027	1970	Premise Match	20m	East
	FOUNDRY SUPPLIES-METALS (F565)	Brown and Dureau Pty. Ltd., 38 Mountain St.	306222	1970	Premise Match	20m	East
	PIPES/PIPE FITTINGS MFRS. &/OR DISTRIBUTORS (P508)	Brown and Dureau Pty. Ltd., 38 Mountain St.	349081	1970	Premise Match	20m	East
	STARCH MANUFACTURERS (S502)	Brown and Dureau Pty. Ltd., 38 Mountain St.	364229	1970	Premise Match	20m	East
	PEN MANUFACTURERS &/OR IMPORTERS (P224)	Brown and Dureau Pty. Ltd., 38 Mountain St.,	347499	1970	Premise Match	20m	East

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9	HAND TOOL MANUFACTURERS &/OR DISTRIBUTORS	Brown J, Dureau Ltd., Dureau Hse., 38 Mountain St.	314653	1970	Premise Match	20m	East
	AGRICULTURAL CHEMICALS-IMPS. &/OR DISTS.	Brown-Dureau Ltd., Dureau Hse., 38 Mountain St.	260477	1970	Premise Match	20m	East
	HARDWARE MERCHANTS-WHOLESALE (H260)	Brown-Dureau Ltd., Dureau Hse., 38 Mountain St.	315455	1970	Premise Match	20m	East
	CHEMICALS-TECHNICAL-SUPPLIERS (C274)	own & Dureau Pty. Ltd., 38 Mountain St.	279617	1970	Premise Match	20m	East
	IMPORTERS (I200)	Rubin, H. H. Pty. Ltd., 38 Mountain St.	318698	1970	Premise Match	20m	East
	LEATHER GOODS MFRS. &/OR WHOLESALERS (L400)	Rubin, H. H. Pty. Ltd., 38 Mountain St.	323008	1970	Premise Match	20m	East
	MANUFACTURERS' AGENTS (M112)	Rubin, H. H. Pty. Ltd., 38 Mountain St.	325261	1970	Premise Match	20m	East
	TRAVEL GOODS WHOLESALERS (T660)	Rubin, H.H.Pty. Ltd., 38 Mountain St.	371338	1970	Premise Match	20m	East
	CARPET & FLOOR COVERING IMPS. &/OR WHOLESALERS	Waters Trading Co. Ltd., 38-44 Mountain St.	284252	1961	Premise Match	20m	East
	PRODUCE MERCH.-W'SALE	Waters Trading Co. Pty. Ltd., 38 Mountain St., Broadway	362983	1961	Premise Match	20m	East
	BARLEY & PEA MILLERS	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	271338	1961	Premise Match	20m	East
	CONDIMENT MFRS. &/OR DISTS.	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	292566	1961	Premise Match	20m	East
	EXPORTERS	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	309448	1961	Premise Match	20m	East
	IMPORTERS	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	326751	1961	Premise Match	20m	East
	MERCHANTS/IMPORTERS	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	337770	1961	Premise Match	20m	East
	MILLERS/GRISTERS	Waters Trading Co. Pty. Ltd., 38-44 Mountain St.	339804	1961	Premise Match	20m	East
10	OPTICAL SUPPLIES MFRS. &/OR W/SALERS.	Polaroid Australia Pty Ltd, 2 Smail St, Broadway 2007	54933	1978	Premise Match	20m	North
	PHOTOGRAPHIC &/OR MOVIE CAMERA REPAIRS.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	56796	1978	Premise Match	20m	North
	PHOTOGRAPHIC DEVELOPING, PRINTING &/OR COLOURING SERVICES.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	56698	1978	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPS.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	56738	1978	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT-MFRS.&/OR DISTS.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	56775	1978	Premise Match	20m	North
	PHOTOGRAPHIC SUPPLIES.	Polaroid Australia Pty. Ltd., 2 Small St., Broadway. 2007	56832	1978	Premise Match	20m	North
	PHOTOGRAPHIC &/OR MOVIE CAMERA REPAIRS.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	66944	1975	Premise Match	20m	North
	PHOTOGRAPHIC DEVELOPING, PRINTING &/OR COLOURING SERVICES.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	66826	1975	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPS.	Polaroid Australia Pty. Ltd., 2 Smail St., Broadway. 2007	66875	1975	Premise Match	20m	North
	OPTICAL SUPPLIES MFRS. &/OR W/SALERS.	Polaroid Australia Pty. Ltd., 2 Small St., Broadway. 2007	64821	1975	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT-MFRS. &/OR DISTS.	Polaroid Australia Pty. Ltd., 2 Small St., Broadway. 2007	66920	1975	Premise Match	20m	North
	PHOTOGRAPHIC SUPPLIES.	Polaroid Australia Pty. Ltd., 2 Small st., Broadway. 2007	66989	1975	Premise Match	20m	North
	OPTICAL SUPPLIES-MFRG. &/OR WHOLESALE (O 260)	Polaroid Aust. Pty. Ltd., 2 Smail St., Broadway	345252	1970	Premise Match	20m	North
	PHOTOGRAPHIC DEVELOPING,PRINTING/COLOURING SERVICES (P288)	Polaroid Australia Pty. Ltd., 2-12 Smail St., Broadway	348179	1970	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT MFRS. &/OR DISTS. (P294)	Polaroid Australia Pty. Ltd., 2-12 Smail St., Broadway	348298	1970	Premise Match	20m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
10	PHOTOGRAPHIC SUPPLIES (P300)	Polaroid Australia Pty. Ltd., 2-12 Smail St., Broadway	348383	1970	Premise Match	20m	North
	PHOTOGRAPHIC/MOVIE CAMERA REPAIRS (P296)	Polaroid Australia Pty. Ltd., 2-12 Smail St., Broadway	348427	1970	Premise Match	20m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPORTERS (P292)	Polaroid Australia Pty. Lttd., 2-12 Smail St., Broadway	348240	1970	Premise Match	20m	North
	Hospital Equipment Mfrs. &/or Suppliers	Young, R, Pty. Ltd., 2-12 Smail St., Broadway	100802	1965	Premise Match	20m	North
	Warehousemen	Young, Robert Pty. Ltd., 2-12 Smail St., Broadway	155793	1965	Premise Match	20m	North
	HAT & CAP MANUFACTURERS &/OR WHOLESALERS	Austral Hat & Cap Factory Pty. Ltd., 6 Small St., Broadway	323809	1961	Premise Match	20m	North
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Motor Repairing & Welding Pty. Ltd., 2 -4 Smail St., Broadway	306809	1961	Premise Match	20m	North
	ENGINEERS-INDUSTRIAL	Motor Repairing & Welding Pty. Ltd., 2 -4 Smail St., Broadway	307495	1961	Premise Match	20m	North
	MOTOR SPARE PARTS MFRS. &/OR WHOLESALERS	Motor Repairing & Welding Pty. Ltd., 2 -4 Smail St., Broadway	351896	1961	Premise Match	20m	North
	WELDERS-ELECTRIC &/OR OXY	Motor Repairing & Welding Pty. Ltd., 2 -4 Smail St., Broadway	262321	1961	Premise Match	20m	North
	MOTOR WHEEL REPAIRERS/SPECIALISTS	Motor Repairing & Welding Pty. Ltd., 2 -4 Small St., Broadway	352447	1961	Premise Match	20m	North
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Perdriau, J. A. Pty. Ltd, 2-4 Smail St., Broadway	306895	1961	Premise Match	20m	North
	HAT &/OR CAP MFRS. &/OR WHOLESALERS	Austral Hat and Cap Factory., 6 Small St., Broadway	61688	1950	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS	Motor Repairing and Welding Pty. Ltd., 2 Smail St., Broadway	84112	1950	Premise Match	20m	North
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Motor Repairing and Welding Pty. Ltd., 2-4 Smail St, Broadway	41044	1950	Premise Match	20m	North
	WELDERS-ELECTRIC &/OR OXY	Motor Repairing and Welding Pty. Ltd., 2-4 Smail St., Broadway	112963	1950	Premise Match	20m	North
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Nielsen, C. P. and R. Pty. Ltd., 8-12 Smail St., Broadway	46872	1950	Premise Match	20m	North
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Perdriau, J. A. Pty. Ltd., 2-4 Smail St., Broadway	41108	1950	Premise Match	20m	North
11	PLASTIC GOODS MFRS. &/OR DISTS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	74465	1986	Premise Match	21m	East
	PLASTIC MFRS. &/OR MOULDERS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	74655	1986	Premise Match	21m	East
	PLASTIC MFRS. &/OR MOULDERS.(P6080)	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007.	64887	1982	Premise Match	21m	East
	PLASTIC GOODS MFRS. (P5860)	Ellen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007.	64725	1982	Premise Match	21m	East
	CARRIERS DEPOTS - RECEIVING&/OR DESPATCH. (C2175)	Leask Storage, 46 Mountain St., Broadway. 2007.	13898	1982	Premise Match	21m	East
	SAW BLADES-BAND, CIRCULAR,- MFRS. &/OR IMPS. &/OR DISTS.(S0885)	Lyne Engineering Company, 46 Mountain St., Broadway. 2007.	73139	1982	Premise Match	21m	East
	PLASTIC GOODS MFRS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	57670	1978	Premise Match	21m	East
	PLASTIC MFRS. &/OR MOULDERS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	57867	1978	Premise Match	21m	East
	PLASTIC GOODS MFRS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	67913	1975	Premise Match	21m	East
	PLASTIC MFRS. &/OR MOULDERS.	Elfen Plastics Pty. Ltd., 46 Mountain St., Broadway. 2007	68111	1975	Premise Match	21m	East
	AUTOMATIC SLOT MACHINES MFRS. &/OR DISTS.	Hunter Electronics Pty. Ltd., 46 Mountain St., Broadway. 2007	3680	1975	Premise Match	21m	East
	PHOTO COPYING SERVICES.	Kays Secretarial Services., 46 Mountain St., Broadway. 2007	66498	1975	Premise Match	21m	East

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11	CARRIERS DEPOTS-RECEIVING &/OR DESPATCH.	Leask Storage, 46 Mountain St., Broadway. 2007	13930	1975	Premise Match	21m	East
	SAW MFRS. &/OR IMPS. &/OR DISTS.	Lyne Engineering Company., 46 Mountain St., Broadway. 2007	75693	1975	Premise Match	21m	East
	Lawn Mowers - Motor Powered - Importers, Distributors &/or Manufacturers	Malleys Ltd., 50 Mountain St., Broadway	107246	1965	Premise Match	21m	East
	REFRIGERATOR MFRS.-DOMESTIC-ELECTRIC	Mai leys Ltd., 50 Mountain St., Broadway	245826	1961	Premise Match	21m	East
	SANITARYWARE MANUFACTURERS &/OR DISTRIBUTORS	Mai leys Ltd., 50 Mountain St., Broadway	247784	1961	Premise Match	21m	East
	WASHING MACHINE SALES/SERVICE	Mai leys Ltd., 50 Mountain St., Broadway	261530	1961	Premise Match	21m	East
	WASHING MACHINE MFRS.	Mailleys Ltd., 50 Mountain St., Broadway	261471	1961	Premise Match	21m	East
	GALVANISING & TINNING	Malley's Ltd., 50 Mountain St.	318452	1961	Premise Match	21m	East
	BATH & SINK HEATERS-LIQUID FUEL-MFRS. & DISTS.	Malley's Ltd., 50 Mountain St., Broadway	271753	1961	Premise Match	21m	East
	DAIRY FACTORY SUPPLIES	Malley's Ltd., 50 Mountain St., Broadway	294335	1961	Premise Match	21m	East
	ELECTRICAL CONTRACTORS-LICENSED	Malleys Limited, 50 Mountain St.	302214	1961	Premise Match	21m	East
	DUST COLLECTION EQUIPMENT MANUFACTURERS	Malleys Ltd., 50 Mountain St.	299577	1961	Premise Match	21m	East
	ROOM HEATERS-LIQUID FUEL-MFRS./DISTRIBUTORS	Malleys Ltd., 50 Mountain St.	246807	1961	Premise Match	21m	East
	STAINLESS STEEL FABRICATORS	Malleys Ltd., 50 Mountain St.	252660	1961	Premise Match	21m	East
	BUILDERS' HARDWARE-MFRS. &/OR DISTRIBUTORS	Malleys Ltd., 50 Mountain St., Broadway	277917	1961	Premise Match	21m	East
	COPPERS-FUEL-MANUFACTURERS &/OR DISTRIBUTORS	Malleys Ltd., 50 Mountain St., Broadway	293179	1961	Premise Match	21m	East
	COPPERSMITHS	Malleys Ltd., 50 Mountain St., Broadway	293200	1961	Premise Match	21m	East
	DAIRY UTENSILS-MANUFACTURERS &/OR DISTRIBUTORS	Malleys Ltd., 50 Mountain St., Broadway	294406	1961	Premise Match	21m	East
	HARDWARE MANUFACTURERS	Malleys Ltd., 50 Mountain St., Broadway	323613	1961	Premise Match	21m	East
	RANGES-ELECTRIC-MFRS.	Malleys Ltd., 50 Mountain St., Broadway	364767	1961	Premise Match	21m	East
	SHEET METAL WORKERS	Malleys Ltd., 50 Mountain St., Broadway	249342	1961	Premise Match	21m	East
	VENTILATING EQUIPMENT MFRS. &/OR DISTRIBUTORS	Malleys Ltd., 50 Mountain St., Broadway	260939	1961	Premise Match	21m	East
	BUILDERS' SUPPLIERS	Malley's Ltd., 50 Mountain St., Broadway	11831	1950	Premise Match	21m	East
	DAIRY FACTORY SUPPLIES	Malley's Ltd., 50 Mountain St., Broadway	30104	1950	Premise Match	21m	East
	FAN & BLOWER MFRS. &/OR DISTRIBUTORS	Malley's Ltd., 50 Mountain St., Broadway	43292	1950	Premise Match	21m	East
	PLUMBERS' SUPPLIERS	Malleys Ltd. 50 Mountain St., Broadway	93379	1950	Premise Match	21m	East
	BATH HEATERS	Malleys Ltd., 50 Mountain St., Broadway	6415	1950	Premise Match	21m	East
	BUILDERS' HARDWARE MANUFACTURERS &/OR DISTRIBUTORS	Malleys Ltd., 50 Mountain St., Broadway	11626	1950	Premise Match	21m	East
	COPPERSMITHS	Malleys Ltd., 50 Mountain St., Broadway	28999	1950	Premise Match	21m	East
	DAIRY MACHINERY MFRS. &/OR DEALERS	Malleys Ltd., 50 Mountain St., Broadway	30130	1950	Premise Match	21m	East
	HARDWARE DEALERS &/OR IRONMONGERS	Malleys Ltd., 50 Mountain St., Broadway	61208	1950	Premise Match	21m	East

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11	PAINT, VARNISH, OILS & COLOUR MERCHANTS	Malleys Ltd., 50 Mountain St., Broadway	90793	1950	Premise Match	21m	East
	SHEET METAL WORKERS	Malleys Ltd., 50 Mountain St., Broadway	101754	1950	Premise Match	21m	East
12	KITCHENWARE &/OR HOLLOWARE MFRS. &/OR DISTS.	Rena-Ware Distributors Pty. Ltd., 60 Bay St., Ultimo. 2007	50594	1986	Premise Match	21m	North West
	MOTOR WHEEL REPAIRERS/SPECIALISTS (M756)	West's Wheel Works., 60 Bay St., Broadway.	342785	1970	Premise Match	21m	North West
	Motor Wheel Repairers/Specialists	West's Wheel Works, 60 Bay St., Broadway	127389	1965	Premise Match	21m	North West
	MOTOR WHEEL REPAIRERS/SPECIALISTS	West's Wheel Works, 60 Bay St., Broadway.	352464	1961	Premise Match	21m	North West
	WHEELS-MFRS. &/OR DISTRIBUTORS WHEELWRIGHTS	West's Wheel Works, 60 Bay St., Broadway	113266	1950	Premise Match	21m	North West
	WHEELS-MFRS. &/OR DISTRIBUTORS WHEELWRIGHTS	West's Wheel Works, 60 Bay St., Glebe	113267	1950	Premise Match	21m	North West
	MOTOR WHEEL REPAIRERS & SPECIALISTS	Wests Wheel Works, 60-64 Bay St.	87160	1950	Premise Match	21m	North West
13	Missions/Religious Bodies	Hammond's Social Services, St. Barnabas Church, Broadway	116458	1965	Premise Match	22m	South East
	MISSIONS/RELIGIOUS BODIES	Hammond's Social Services, St. Barnabas Church, Broadway	340379	1961	Premise Match	22m	South East
	MISSIONS & RELIGIOUS BODIES	Father and Son Welfare Movement of Australasia (J. Robson, Director), St. Barnabas Church Bldg., Broadway	79185	1950	Premise Match	22m	South East
14	Furniture Importers	Casard Distributors, 2/28 Mountain St., Ultimo 2007	46862	1991	Premise Match	28m	North East
	Furniture Mfrs &/or W/salers Office	Forsyth, Level 3, 22-36 Mountain St., Broadway. 2007	47219	1991	Premise Match	28m	North East
	Welders	Motor Repairing & Welding Pty Ltd, 16 Smail St, Broadway 2007	66067	1991	Premise Match	28m	North East
	Engineers General	Perdriau J A Pty Ltd, 16 Small St., Broadway 2007	44263	1991	Premise Match	28m	North East
	Kitchenware &/or Holloware Mfrs &/or Dists	Raco Homewares, 3rd., Fl., 22 Mountain St., Ultimo. 2007	50371	1991	Premise Match	28m	North East
	FURNITURE IMPORTERS.	Casard Distributors, 2/28 Mountain St., Ultimo 2007	37628	1986	Premise Match	28m	North East
	MANUFACTURERS AGENTS.	Minox (Aust.) Pty. Ltd., 20 Smail St., Broadway. 2007	52622	1986	Premise Match	28m	North East
	ENGINEERS – INDUSTRIAL.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	30595	1986	Premise Match	28m	North East
	MOTOR WHEEL REPAIRERS &/OR SPECIALISTS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	68610	1986	Premise Match	28m	North East
	TRAILER &/OR SEMI-TRAILER EQUIPMENT &/OR SPARE PARTS MFRS. &/OR IMPS. &/OR DISTS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	94932	1986	Premise Match	28m	North East
	ENGINEERS – FACTORY MAINTENANCE.	Motor Repairing & Welding Pty. Ltd., 16 Small St., Broadway. 2007	29595	1986	Premise Match	28m	North East
	ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL.	Motor Repairing & Welding Pty. Ltd., 16 Small St., Broadway. 2007	30185	1986	Premise Match	28m	North East
	WELDERS - ELECTRIC &/OR OXY.	Motor Repairing & Welding Pty. Ltd., 16 Small St., Broadway. 2007	98686	1986	Premise Match	28m	North East
	ENGINEERS – INDUSTRIAL.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	30598	1986	Premise Match	28m	North East
	ENGINEERS – FACTORY MAINTENANCE.	Perdriau, J. A. Pty. Ltd., 16 Small St., Broadway. 2007	29597	1986	Premise Match	28m	North East
	ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL.	Perdriau, J. A. Pty. Ltd., 16 Small St., Broadway. 2007	30238	1986	Premise Match	28m	North East
	ENGINEERS-DESIGNING.	Perdriau, J. A. Pty. Ltd., 16 Small St., Broadway. 2007	29049	1986	Premise Match	28m	North East

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14	WELDERS - ELECTRIC &/OR OXY.	Perdriau, J. A. Pty. Ltd., 16 Small St., Broadway. 2007	98700	1986	Premise Match	28m	North East
	MANUFACTURERS AGENTS, (M0800)	Minox (Aust.) Pty. Ltd., 20 Smail St., Broadway. 2007.	46292	1982	Premise Match	28m	North East
	ENGINEERS - FACTORY MAINTENANCE. (E6900)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway, 2007.	27692	1982	Premise Match	28m	North East
	ENGINEERS - INDUSTRIAL (E7320)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	28666	1982	Premise Match	28m	North East
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL. (E7140)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	28227	1982	Premise Match	28m	North East
	MOTOR SPARE PARTS MFRS. &/OR W/SALERS. (M7860)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	59406	1982	Premise Match	28m	North East
	MOTOR WHEEL REPAIRERS &/OR SPECIALISTS. (M8540)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	59949	1982	Premise Match	28m	North East
	TRAILER &/OR SEMI-TRAILER SPARE PART MFRS. &/OR DISTS.(T6875)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	81542	1982	Premise Match	28m	North East
	WELDERS - ELECTRIC &/OR OXY.(W3160)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007.	84206	1982	Premise Match	28m	North East
	ENGINEERS - DESIGNING. (E6690)	Perdriau, J. A. Pty, Ltd., 16 Smail St., Broadway. 2007.	27183	1982	Premise Match	28m	North East
	ENGINEERS - FACTORY MAINTENANCE. (E6900)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007.	27695	1982	Premise Match	28m	North East
	ENGINEERS - INDUSTRIAL (E7320)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007.	28668	1982	Premise Match	28m	North East
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL. (E7140)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007.	28277	1982	Premise Match	28m	North East
	WELDERS - ELECTRIC &/OR OXY.(W3160)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007.	84219	1982	Premise Match	28m	North East
	CARRIERS &/OR CARTAGE CONTRACTORS - MASTER.	Green. T. S. & Co. Pty. Ltd., 20 Smail St., Broadway. 2007	12000	1978	Premise Match	28m	North East
	MOTOR SPARE PARTS MFRS.&/OR W/SALERS.	Motor Repairing & Welding Pty Ltd, 16 Smail St, Broadway 2007	52943	1978	Premise Match	28m	North East
	MOTOR WHEEL REPAIRERS &/OR SPECIALISTS.	Motor Repairing & Welding Pty Ltd, 16 Smail St, Broadway 2007	53338	1978	Premise Match	28m	North East
	TRAILER &/OR SEMI TRAILER SPARE PART MFRS. &/OR DISTS.	Motor Repairing & Welding Pty. Ltd, 16 Smail St, Broadway. 2007	72056	1978	Premise Match	28m	North East
	ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	25282	1978	Premise Match	28m	North East
	ENGINEERS-FACTORY MAINTENANCE.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	24731	1978	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	25744	1978	Premise Match	28m	North East
	WELDERS-ELECTRIC &/OR OXY.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	74285	1978	Premise Match	28m	North East
	ENGINEERS-DESIGNING.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	24232	1978	Premise Match	28m	North East
	ENGINEERS-FACTORY MAINTENANCE.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	24734	1978	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	25746	1978	Premise Match	28m	North East
	WELDERS-ELECTRIC &/OR OXY.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	74302	1978	Premise Match	28m	North East
	ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Perdriau. J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	25329	1978	Premise Match	28m	North East
	FURNISHINGS - SOFT - MFRS. &/OR W/SALERS.	Wilson, A. G. Pty. Ltd., 28 Mountain St., Broadway. 2007	31095	1978	Premise Match	28m	North East
	PLASTIC MFRS. MATERIAL SUPPLIES.	Brown & Dureau Ltd., 36 Mountain St., Broadway. 2007	68005	1975	Premise Match	28m	North East
	TEXTILE MACHINERY MFRS. &/OR DISTS.	Brown & Dureau Ltd., 36 Mountain St., Broadway. 2007	82803	1975	Premise Match	28m	North East

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14	CARRIERS &/OR CARTAGE CONTRACTORS - MASTER.	Green, T. S. & Co. Pty. Ltd., 20 Smail St., Broadway. 2007.	13849	1975	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway 2007	29726	1975	Premise Match	28m	North East
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	29232	1975	Premise Match	28m	North East
	ENGINEERS-FACTORY MAINTENANCE	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	28607	1975	Premise Match	28m	North East
	MOTOR WHEEL REPAIRERS &/OR SPECIALISTS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	62886	1975	Premise Match	28m	North East
	TRAILER &/OR SEMI TRAILER SPARE PART MFRS &/OR DISTS	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	84799	1975	Premise Match	28m	North East
	WELDERS., Electric &/OR OXY.	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway. 2007	87006	1975	Premise Match	28m	North East
	MOTOR SPARE PARTS MFRS. &/OR W/SALERS.	Motor Repairing & Welding Pty. Ltd., 16 Small St., Broadway. 2007	62468	1975	Premise Match	28m	North East
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Perdriau J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	29286	1975	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL	Perdriau, J. A. Pty. Ltd., 16 Smail St, Broadway. 2007	29728	1975	Premise Match	28m	North East
	ENGINEERS-DESIGNING	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	28023	1975	Premise Match	28m	North East
	ENGINEERS-FACTORY MAINTENANCE	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	28611	1975	Premise Match	28m	North East
	WELDERS., Electric &/OR OXY.	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway. 2007	87033	1975	Premise Match	28m	North East
	FURNISHINGS - SOFT - MFRS. &/OR W/SALERS.	Wilson, A. G. Pty. Ltd., 28 Mountain St., Broadway. 2007	36168	1975	Premise Match	28m	North East
	CARRIERS & CARTAGE CONTRACTORS-MASTER (C147)	Green, T. S. & Co. Pty. Ltd., 20 Smail St., Broadway	278480	1970	Premise Match	28m	North East
	HAULAGE CONTRACTORS (H323)	Green, T. S. & Co. Pty. Ltd., 20 Smail St., Broadway	315637	1970	Premise Match	28m	North East
	ROAD TRANSPORT SERVICES-N.S.W.(R385)	Green, T. S. & Co. Pty. Ltd., 20 Smail St., Broadway	357600	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Broadway	338296	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Ultimo	338297	1970	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL (E655)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway	300063	1970	Premise Match	28m	North East
	MOTOR ENGINE RECONDITIONERS(M624)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway	337042	1970	Premise Match	28m	North East
	MOTOR SPARE PARTS MFRS. &/OR WHOLESALERS (M732)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway	342186	1970	Premise Match	28m	North East
	MOTOR WHEEL REPAIRERS/SPECIALISTS (M756)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway	342767	1970	Premise Match	28m	North East
	WELDERS-ELECTRIC &/OR OXY	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway,	373846	1970	Premise Match	28m	North East
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Broadway.	299404	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Perdriau, J. A. Pty. Ltd., 16 Smail St. Broadway	338410	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Perdriau, J. A. Pty. Ltd., 16 Smail St. Ultimo	338409	1970	Premise Match	28m	North East
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway	299487	1970	Premise Match	28m	North East
	ENGINEERS-INDUSTRIAL (E655)	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway	300066	1970	Premise Match	28m	North East
	WELDERS-ELECTRIC &/OR OXY	Perdriau, J. A. Pty. Ltd., 16 Smail St., Broadway	373895	1970	Premise Match	28m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	Cosmetic Mfrs. &/or W'salers	Helena Rubinstein Pty. Ltd., 28 Mountain St., Broadway	70722	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Ultimo	123477	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Sydney	122057	1965	Premise Match	28m	North East
	Motor Engine Reconditioners	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Ultimo	121927	1965	Premise Match	28m	North East
	Motor Spare Parts Mfrs. &/or Wholesalers	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Ultimo	126800	1965	Premise Match	28m	North East
	Motor Wheel Repairers/Specialists	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Ultimo	127374	1965	Premise Match	28m	North East
	Engineers - Industrial	Motor Repairing & Welding Pty. Ltd., 16 Small St., Ultimo	83304	1965	Premise Match	28m	North East
	Engineers General &/or Mfrg. &/or Mechanical	Motor Repairing & Welding Pty. Ltd., 16 Small St., Ultimo	82670	1965	Premise Match	28m	North East
	Engineers - Industrial	Perdriau J. A. Pty. Ltd., 16 Small St., Ultimo	83307	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Perdriau, J. A. Pty. Ltd., 16 Smail St. Ultimo	123479	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Perdriau, J. A. Pty. Ltd., 16 Smail St., Sydney	122061	1965	Premise Match	28m	North East
	Engineers General &/or Mfrg. &/or Mechanical	Perdriau, J. A. Pty. Ltd., 16 Small St., Ultimo	82748	1965	Premise Match	28m	North East
	Welders - Electric &/or Oxy	Perdriau, J. A. Pty. Ltd., 16 Small St., Ultimo	156732	1965	Premise Match	28m	North East
	CLOTHING MFRS. &/OR W'SALERS-GENERAL	Cadon Clothing Pty. Ltd., 28-36 Mountain St., Broadway	289385	1961	Premise Match	28m	North East
	COSMETIC MFRS. &/OR W'SALERS	Helena Rubinstein Pty. Ltd., 28 Mountain St., Broadway	293377	1961	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing &. Welding Pty. Ltd., 16 Smail St. BROADWAY	347750	1961	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Perdriau, J. A. Pty. Ltd., 16 Small St., BROADWAY	347896	1961	Premise Match	28m	North East
	CLOTHING MANUFACTURERS &/OR WHOLESALERS-MEN'S & BOYS	Cadon Clothing Pty. Ltd., 28 Mountain St., Broadway	23627	1950	Premise Match	28m	North East
	TAILORS-MANUFACTURING	Cadon Clothing Pty. Ltd., 28 Mountain St., Broadway	106846	1950	Premise Match	28m	North East
	CLOTHING MFRS. &/OR WHOLESALERS-GENERAL	Cadon Clothing Pty. Ltd., 28-36 Mountain St., Broadway	24729	1950	Premise Match	28m	North East
	LEATHER GOODS MFRS. &/OR WHOLESALERS	Golden Arrow Leather Goods Co., 28 Mountain St., Broadway	68123	1950	Premise Match	28m	North East
	TRAVEL GOODS MANUFACTURERS	Golden Arrow Leather Goods Co., 28 Mountain St., Broadway	110423	1950	Premise Match	28m	North East
	TRAVEL GOODS MANUFACTURERS	Golden Arrow Leather Goods Co., 28-36 Mountain St., Broadway (Near Grace Bros.)	110424	1950	Premise Match	28m	North East
	LEATHER GOODS MFRS. &/OR WHOLESALERS	Golden Arrow Leather Goods Co., Showroom & Factory: 28-36 Mountain St., Broadway (Near Grace Bros)	68124	1950	Premise Match	28m	North East
	HANDBAG MFRS. &/OR WHOLESALERS	Golden Arrow Leathergoods Co., 28-36 Mountain St., Broadway	60667	1950	Premise Match	28m	North East
	HANDBAG MFRS. &/OR WHOLESALERS	Golden Arrow Leathergoods Co., Showroom & Factory 28-36 Mountain St., Broadway (Near Grace Bros.)	60668	1950	Premise Match	28m	North East
	GLOVE MANUFACTURERS-FASHION	Murany Glove Co., 28-36 Mountain St., Broadway	54724	1950	Premise Match	28m	North East
	GLOVE MANUFACTURERS-INDUSTRIAL	Plotkin, S., 28 Mountain St., Broadway	54740	1950	Premise Match	28m	North East
	SPORTS GOODS MANUFACTURERS	Plotkin, S., 28 Mountain St., Broadway	104326	1950	Premise Match	28m	North East
	SPORTS GOODS MANUFACTURERS	Plotkin, S., 28 Mountain St., Broadway	104325	1950	Premise Match	28m	North East
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Plymouth Shoe Co., 26-28 Mountain St., Broadway	46889	1950	Premise Match	28m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Plymouth Shoe Co., 28-36 Mountain St., Broadway	46890	1950	Premise Match	28m	North East
	WOODWORKING MACHINERY MANUFACTURERS	Veneer and Woodworker Supply Co., 28-36 Mountain St., Broadway	114213	1950	Premise Match	28m	North East
	VENEER MANUFACTURERS &/OR MERCHANTS	Veneer and Woodworkers Supply Co., 28-36 Mountain St., Broadway	111878	1950	Premise Match	28m	North East
	WOODWORKERS' SUPPLIES	Veneer and Woodworkers Supply Co., 28-36 Mountain St., Broadway	114165	1950	Premise Match	28m	North East
15	BISCUIT MFRS. MACHINERY.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	5994	1986	Premise Match	54m	South West
	CARDBOARD BOX MAKING MACHINERY MFRS. &/OR DISTS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	12306	1986	Premise Match	54m	South West
	CONVEYOR &/OR CONVEYING EQUIP. MFRS. &JOR IMPS. &/OR DISTS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	20309	1986	Premise Match	54m	South West
	ENGINEERS – FLOUR MILLING.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	29629	1986	Premise Match	54m	South West
	ENGINEERS – GENERAL &/ OR MANUFACTURING &/ OR MECHANICAL.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	30034	1986	Premise Match	54m	South West
	ENGINEERS – HYDRAULIC.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	30538	1986	Premise Match	54m	South West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	33994	1986	Premise Match	54m	South West
	FOOD PROCESSING MACHINERY MFRS. &/OR DEALERS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	34286	1986	Premise Match	54m	South West
	GRINDING &/OR PULVERISING MACHINERY MFRS. &/OR DISTS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	40407	1986	Premise Match	54m	South West
	MATERIAL HANDLING EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	53094	1986	Premise Match	54m	South West
	PACKAGING &/OR PACKING SPECIALISTS.,.	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037	71264	1986	Premise Match	54m	South West
	ENGINEERS- FLOUR MILLING. (E6990)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St, Glebe. 2037.	27725	1982	Premise Match	54m	South West
	FOOD PROCESSING MACHINERY MFRS. &/OR DEALERS. (F4900)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St, Glebe. 2037.	31972	1982	Premise Match	54m	South West
	BISCUIT MFRS. MACHINERY. (B2600)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	6886	1982	Premise Match	54m	South West
	CARDBOARD BOX MAKING MACHINERY MFRS. &/OR DISTS.(C1545)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	13189	1982	Premise Match	54m	South West
	CONVEYOR &/OR CONVEYING EQUIP. MFRS. &/OR IMPS. &/OR DISTS. (C7710)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	17994	1982	Premise Match	54m	South West
	ENGINEERS - HYDRAULIC. (E7260)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	28600	1982	Premise Match	54m	South West
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL. (E7140)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	28074	1982	Premise Match	54m	South West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS. (F4250)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	31685	1982	Premise Match	54m	South West
	GRINDING &/OR PULVERISING MACHINERY MFRS. &/OR DISTS.(G7650)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	37320	1982	Premise Match	54m	South West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
15	MATERIAL HANDLING EQUIPMENT MFRS. IMPS. &/OR DISTS. (M1500)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	46714	1982	Premise Match	54m	South West
	PACKAGING &/OR PACKING SPECIALISTS. (P0040)	Henry Simon Australia, (Simon Hydraulics), Simon House, 40 Francis St., Glebe. 2037.	62178	1982	Premise Match	54m	South West
	ENGINEERS-HYDRAULIC.	Henry Simon Aust, & Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St, Glebe	25691	1978	Premise Match	54m	South West
	CONVEYORS &/OR CONVEYING EQUIP. MFRS. &/OR IMPS. &/OR DISTS.	Henry Simon Aust, 40 Francis St, Glebe	16251	1978	Premise Match	54m	South West
	CARDBOARD BOX MAKING MACHINERY MFRS. &/OR DISTS.	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd, 40 Francis St, Glebe	11349	1978	Premise Match	54m	South West
	FOOD PROCESSING MACHINERY MFRS. &/OR DEALERS.	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd, 40 Francis St, Glebe	28962	1978	Premise Match	54m	South West
	MATERIAL HANDLING EQUIPMENT MFRS	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd, 40 Francis St, Glebe.	41838	1978	Premise Match	54m	South West
	ENGINEERS-FLOUR MILLING.	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St, Glebe	24766	1978	Premise Match	54m	South West
	GRINDING &/OR PULVERISING MACHINERY MFRS. &/OR DISTS.	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St, Glebe	33623	1978	Premise Match	54m	South West
	BISCUIT MFRS. MACHINERY.	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St., Glebe	5889	1978	Premise Match	54m	South West
	ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Henry Simon Aust, A Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St., Glebe	25134	1978	Premise Match	54m	South West
	PACKAGING &/OR PACKING SPECIALISTS.	Henry Simon Aust., A Div. of Simon Engineering (Aust) Pty. Ltd., 40 Francis St., Glebe. 2037	55227	1978	Premise Match	54m	South West
	FLOUR MILLING MACHINERY MFRS.&/OR DISTS.	Henry Simon Aust., A Div. of Simon Engineering (Aust.) Pty. Ltd., 40 Francis St, Glebe	28673	1978	Premise Match	54m	South West
	ENGINEERS-HYDRAULIC.	Henry Simon Australia "Simon House", Francis Street, Glebe.	25658	1978	Premise Match	54m	South West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.	Simon Henry Pty Ltd., 40 Francis St., Glebe. 2037.	33200	1975	Premise Match	54m	South West
	BISCUIT MFRS. MACHINERY.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	6300	1975	Premise Match	54m	South West
	CARDBOARD BOX MAKING MACHINERY MFRS. &/OR DISTS.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	13267	1975	Premise Match	54m	South West
	CONVEYORS &/OR CONVEYING EQUIP. MFRS. &/OR IMPS. &/OR DISTS.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	18860	1975	Premise Match	54m	South West
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	29385	1975	Premise Match	54m	South West
	ENGINEERS-FLOUR MILLING.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	28647	1975	Premise Match	54m	South West
	PACKAGING &/OR PACKING SPECIALISTS	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037	65185	1975	Premise Match	54m	South West
	ENGINEERS-HYDRAULIC.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037.	29703	1975	Premise Match	54m	South West
	MATERIAL HANDLING EQUIPMENT MFRS.	Simon, Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037.	49442	1975	Premise Match	54m	South West
	GRINDING &/OR PULVERISING MACHINERY MFRS. &/OR DISTS.	Simon, Henry (Aust.) Pty., Ltd., 40 Francis St., Glebe. 2037	39102	1975	Premise Match	54m	South West
	FOOD PROCESSING MACHINERY MFRS. &/OR DEALERS.	Simon. Henry (Aust.) Pty. Ltd., 40 Francis St., Glebe. 2037.	33550	1975	Premise Match	54m	South West
	BISCUIT MFRS.' MACHINERY (B360)	Simon Henry (Aust.) Ltd., Francis St., Glebe	267029	1970	Premise Match	54m	South West

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15	ENGINEERS-FLOUR MILLING (E595)	Simon Henry (Aust.) Ltd., Francis St., Glebe	298744	1970	Premise Match	54m	South West
	ENGINEERS-LIFTING/HANDLING(E670)	Simon Henry (Aust.) Ltd., Francis St., Glebe	300128	1970	Premise Match	54m	South West
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.(F360)	Simon, H. (Aust.) Ltd., Francis St., Glebe	304560	1970	Premise Match	54m	South West
	CARDBOARD BOX-MAKING MACHINERY MFRS(C114)	Simon, Henry (Aust) Ltd., Francis St., Glebe	277516	1970	Premise Match	54m	South West
	FOOD PROCESSING MACH. MFRS./DEALERS (F425)	Simon, Henry (Aust) Ltd., Francis St., Glebe	304927	1970	Premise Match	54m	South West
	CONVEYORS & CONVEYING EQUIP.MANUFACTURERS (C639)	Simon, Henry (Aust.) Ltd., Francis St., Glebe	285731	1970	Premise Match	54m	South West
	ELECTRICAL SWITCHBOARD MANUFACTURERS (E335)	Simon, Henry (Aust.) Ltd., Francis St., Glebe	296250	1970	Premise Match	54m	South West
	ELECTRONIC EQUIPMENT MFRS.&/OR DISTRIBUTORS (E355)	Simon, Henry (Aust.) Ltd., Francis St., Glebe	296444	1970	Premise Match	54m	South West
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Simon, Henry (Aust.) Ltd., Francis St., Glebe	299610	1970	Premise Match	54m	South West
	GRINDING/PULVERISING MACHINERY MANUFACTURERS (G645)	Simon, Henry (Aust.) Ltd., Francis St., Glebe	312119	1970	Premise Match	54m	South West
	MATERIAL-HANDLING EQUIP. MANUFACTURERS	Simon, Henry (Aust.) Ltd., Francis St., Glebe	325880	1970	Premise Match	54m	South West
	PACKING MACHINERY MFRS. & DISTRIBUTORS	Simon, Henry (Aust.) Ltd., Francis St., Glebe	345878	1970	Premise Match	54m	South West
	STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Simon Henry (Aust.) Ltd., Simon Hse., Francis St., Glebe	149009	1965	Premise Match	54m	South West
	Biscuit Mfrs. Machinery	Simon, H. (Aust.) Ltd., Francis St., Glebe	51566	1965	Premise Match	54m	South West
	Cardboard Box - Making Machinery Mfrs.	Simon, H. (Aust.) Ltd., Francis St., Glebe	62232	1965	Premise Match	54m	South West
	Conveyors & Conveying Equip. Manufacturers	Simon, H. (Aust.) Ltd., Francis St., Glebe	70457	1965	Premise Match	54m	South West
	Engineers - Factory Main - Tenace	Simon, H. (Aust.) Ltd., Francis St., Glebe	81981	1965	Premise Match	54m	South West
	Engineers - Lifting/Handling	Simon, H. (Aust.) Ltd., Francis St., Glebe	83361	1965	Premise Match	54m	South West
	Engineers General &/or Mfrg. &/or Mechanical	Simon, H. (Aust.) Ltd., Francis St., Glebe	82863	1965	Premise Match	54m	South West
	Flour Milling Machinery Mfrs. &/or Dists.	Simon, H. (Aust.) Ltd., Francis St., Glebe	87942	1965	Premise Match	54m	South West
	Food Processing Mach. Mfrs./Dealers	Simon, H. (Aust.) Ltd., Francis St., Glebe	88311	1965	Premise Match	54m	South West
	Grinding/Pulverising Machinery Mfrs.	Simon, H. (Aust.) Ltd., Francis St., Glebe	96111	1965	Premise Match	54m	South West
	DRY CLEANERS, PRESSERS / DYERS	Grace Bros. Pty. Ltd., Broadway	299125	1961	Premise Match	54m	South West
	CARDBOARD BOX & CARTON MANUFACTURERS	Simon, H. (Aust.) Ltd., Francis St., Glebe	284029	1961	Premise Match	54m	South West
	CONVEYORS & CONVEYING EQUIP. MANUFACTURERS	Simon, H. (Aust.) Ltd., Francis St., Glebe	292994	1961	Premise Match	54m	South West
	ENGINEERS-FLOUR MILLING	Simon, H. (Aust.) Ltd., Francis St., Glebe	306012	1961	Premise Match	54m	South West
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Simon, H. (Aust.) Ltd., Francis St., Glebe	307023	1961	Premise Match	54m	South West
	ENGINEERS-LIFTING/HANDLING	Simon, H. (Aust.) Ltd., Francis St., Glebe	307546	1961	Premise Match	54m	South West
	FOOD PROCESSING MACH. MFRS./DEALERS	Simon, H. (Aust.) Ltd., Francis St., Glebe	312486	1961	Premise Match	54m	South West
	GRINDING/PULVERISING MACHINERY MANUFACTURERS	Simon, H. (Aust.) Ltd., Francis St., Glebe	320030	1961	Premise Match	54m	South West

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15	DRY CLEANERS, PRESSERS & DYERS	Grace Bros. Pty. Ltd., Broadway	35269	1950	Premise Match	54m	South West
	GRINDING & PULVERISING MACHINERY MFRS.	Simon, H. (Aust.) Ltd., Grose St., Glebe	55259	1950	Premise Match	54m	South West
	ENGINEERS-FLOUR MILLING	Simon, Henry Aust. Ltd., Grose St., Glebe	40306	1950	Premise Match	54m	South West
	FLOUR MILLING MACHINERY	Simon, Henry Ltd., Grose St., Glebe	46356	1950	Premise Match	54m	South West
16	FURNITURE-CONTEMPORARY MFRS. &/W/SALERS.	Fuetron Furniture Pty. Ltd., 31 Bay St., Glebe. 2037	31302	1978	Premise Match	54m	West
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Fuetron Furniture Pty. Ltd., 31 Bay St., Glebe. 2037	31599	1978	Premise Match	54m	West
	DRAFTING EQUIPMENT IMPORTERS &/OR SUPPLIERS (D520)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	290198	1970	Premise Match	54m	West
	DRAWING OFFICE SUPPLIES (D543)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	290733	1970	Premise Match	54m	West
	GAUGE MANUFACTURERS &/OR IMPORTERS (G140)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	310523	1970	Premise Match	54m	West
	INSTRUMENT REPAIRERS (I360)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319340	1970	Premise Match	54m	West
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTRIBUTORS	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319559	1970	Premise Match	54m	West
	INSTRUMENTS - MEASURING - MFRS &/OR IMPS. &/OR DISTS.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319390	1970	Premise Match	54m	West
	INSTRUMENTS-NAUTICAL-DISTRIBUTORS (I415)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319617	1970	Premise Match	54m	West
	INSTRUMENTS-OPTICAL-MFRS.(I420)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319626	1970	Premise Match	54m	West
	INSTRUMENTS-PRECISION-MFRS. &/OR DISTRIBUTORS	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319645	1970	Premise Match	54m	West
	INSTRUMENTS-SCIENTIFIC-IMPORTERS, MANUFACTURERS &/OR DISTRIBUTORS	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319713	1970	Premise Match	54m	West
	INSTRUMENTS-SURVEYING, GEODETIC/GEOPHYSICAL-DIST.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	319787	1970	Premise Match	54m	West
	THERMOMETER IMPORTERS &/OR DISTRIBUTORS (T315)	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe, 2307.	368519	1970	Premise Match	54m	West
	CHEMISTS-MANUFACTURING &/OR WHOLESALE	Hudson's Eumenthol Chemical Co Pty Ltd, 31 Bay St, Glebe	279873	1970	Premise Match	54m	West
	SOFTGOODS MFRS. &/OR IMPS. &/OR W/SALERS.	Kennard & Kennard, 84 Greek St., Glebe	362184	1970	Premise Match	54m	West
	ELECTRIC MOTORS-DEALERS &/OR WHOLESALERS (E210)	Lawrence, E. E. and Co., 35a Bay St., Glebe	294223	1970	Premise Match	54m	West
	METAL MERCHANTS (M260)	Ward, G. Distributors Pty. Ltd., 67 Francis St., Broadway	329817	1970	Premise Match	54m	West
	Drafting Equipment Importers &/or Suppliers	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	74843	1965	Premise Match	54m	West
	Drawing Office Supplies	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	75422	1965	Premise Match	54m	West
	Gauge Mfrs. &/or Importers	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	94682	1965	Premise Match	54m	West
	Instrument Repairers	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103553	1965	Premise Match	54m	West
	Instruments - Industrial - Mfrs. &/or Distributors	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103674	1965	Premise Match	54m	West
	Instruments - Measuring - Imports. &/or Dists.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103740	1965	Premise Match	54m	West
	Instruments - Nautical - Distributors	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103786	1965	Premise Match	54m	West
	Instruments - Optical - Mfrs.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103794	1965	Premise Match	54m	West
	Instruments - Precision - Mfrs. &/or Distributors	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103810	1965	Premise Match	54m	West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
16	Instruments - Scientific - Importers, Mfrs. &/or Dists.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103866	1965	Premise Match	54m	West
	Instruments - Surveying, Geodetic/Geophysical - Dist.	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	103933	1965	Premise Match	54m	West
	THERMOMETER IMPORTERS &/OR DISTRIBUTORS	Esdaile, E. & Sons Pty. Ltd., 31 Bay St., Glebe	151349	1965	Premise Match	54m	West
	Chemists - Manufacturing &/or Wholesale	Hudson's Eumenthol Chemical Co. Pty. Ltd., 31 Bay St., Glebe	64536	1965	Premise Match	54m	West
	SOFTGOODS IMPORTERS &/OR WHOLESALERS	Kennard & Kennard, 84 Greek St., Glebe	145375	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - Baby &/or Children's Wear	Kennard and Kennard, 84 Greek St., Glebe	66750	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - General	Kennard and Kennard, 84 Greek St., Glebe	67091	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - Men's & Boys' Wear	Kennard and Kennard, 84 Greek St., Glebe	68033	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - Shirt & Pyjama	Kennard and Kennard, 84 Greek St., Glebe	68203	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - Underwear	Kennard and Kennard, 84 Greek St., Glebe	68522	1965	Premise Match	54m	West
	Manchester Manufacturers/Wholesalers	Kennard and Kennard, 84 Greek St., Glebe	109059	1965	Premise Match	54m	West
	Clothing Mfrs. &/or W'salers - Ladies' Dresses & Gowns	Kennard and Kennard,. 84 Greek St., Glebe	67629	1965	Premise Match	54m	West
	Electric Motors - Dealers &/or Wholesalers	Lawrence, E. E. and Co., 35a Bay St., Glebe	78002	1965	Premise Match	54m	West
	STEEL ROOFING MFRS./DISTS.	Ward George Pty. Ltd., 67 Francis St., Glebe	148563	1965	Premise Match	54m	West
	Metal Merchants	Ward, G. Distributors Pty. Ltd., 67 Francis St., Broadway	114302	1965	Premise Match	54m	West
	Builders & Contractors	Ward, G. Pty. Ltd., 67 Francis St., Glebe	55694	1965	Premise Match	54m	West
	Joinery Manufacturers	Ward, G. Pty. Ltd., 67 Francis St., Glebe	106609	1965	Premise Match	54m	West
	Musical Instrument Repairers/Reconditioners	Ward, G. Pty. Ltd., 67 Francis St., Glebe	127881	1965	Premise Match	54m	West
	Roofing Material Mfrs. &/or Distributors	Ward, G. Pty. Ltd., 67 Francis St., Glebe	141178	1965	Premise Match	54m	West
	Builders & Contractors - (M.M.B.A.)	Ward, George Pty. Ltd., 67 Francis St. Glebe	54727	1965	Premise Match	54m	West
	Painters, Paperhangers/Decorators	Ward, George Pty. Ltd., 67 Francis St., Glebe	131216	1965	Premise Match	54m	West
	Roofing Contractors/Repairers	Ward, George Pty. Ltd., 67 Francis St., Glebe	141130	1965	Premise Match	54m	West
	SHOP/OFFICE FITTERS	Ward, George Pty. Ltd., 67 Francis St., Glebe	144688	1965	Premise Match	54m	West
	CHEMISTS-MANUFACTURING &/OR WHOLE SALE	Hudson’s Eumenthol Chemical Co Pty Ltd, 31 Bay St, Glebe	287132	1961	Premise Match	54m	West
	CONFECTIONERS-MANUFACTURING &/OR WHOLESALE	Hudson’s Eumenthol Chemical Co. Pty. Ltd., 31 Bay St., Glebe	292620	1961	Premise Match	54m	West
	EUCALYPTUS OIL DISTILLERS	Hudsons Eumenthol Chemical Co. Ltd., 31 Bay St., Glebe	308952	1961	Premise Match	54m	West
	CHEMICAL MANUFACTURERS &/OR DISTRIBUTORS	Hudsons Eumenthol Chemical Co. Pty. Ltd., 31 Bay St., Glebe	286629	1961	Premise Match	54m	West
	JEWELLERS—MANUFACTURING—W’ SALERS &/OR IMPORTS	Kennard & Kennard, 81 Greek St., Glebe	329588	1961	Premise Match	54m	West
	JEWELLERS-COSTUME-MFRS., W'SALERS &/OR IMPORTS	Kennard & Kennard, 84 Greek St., Glebe	328925	1961	Premise Match	54m	West
	SOFTGOODS IMPORTERS &/OR WHOLESALERS	Kennard & Kennard, 84 Greek St., Glebe	251013	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W’SALERS-BABY &/OR CHILDREN’S WEAR	Kennard and Kennard, 84 Greek St., Glebe	289070	1961	Premise Match	54m	West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
16	CLOTHING MFRS. &/OR W'SALERS-GENERAL	Kennard and Kennard, 84 Greek St., Glebe	289489	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W'SALERS-LADIES' DRESSES & GOWNS	Kennard and Kennard, 84 Greek St., Glebe	290161	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W'SALERS-MEN'S & BOYS' WEAR	Kennard and Kennard, 84 Greek St., Glebe	290602	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W'SALERS-SHIRT & PYJAMA	Kennard and Kennard, 84 Greek St., Glebe	290785	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	Kennard and Kennard, 84 Greek St., Glebe	291011	1961	Premise Match	54m	West
	MANCHESTER MANUFACTURERS/WHOLESALERS	Kennard and Kennard, 84 Greek St., Glebe	332848	1961	Premise Match	54m	West
	TOY IMPORTERS &/OR WHOLESALERS	Kennard and Kennard, 84 Greek St., Glebe	258703	1961	Premise Match	54m	West
	CLOTHING MFRS. &/OR W'SALERS-WATERPROOF	Kennard and Kennard., 84 Greek St., Glebe	291125	1961	Premise Match	54m	West
	HANDLE MANUFACTURERS &/OR WHOLESALERS	Kennard Bros. Ltd. (Tool), 15-31 Francis St., Glebe	322976	1961	Premise Match	54m	West
	BROOM & BRUSH-SWEEPING-WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	276043	1961	Premise Match	54m	West
	KITCHENWARE WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	330339	1961	Premise Match	54m	West
	ELECTRIC MOTORS-DEALERS &/OR WHOLESALERS	Lawrence, E. E. and Co., 35a Bay St., Glebe	301097	1961	Premise Match	54m	West
	BUILDERS & CONTRACTORS-(M.M.B.A.)	Ward George Pty Ltd., 67 Francis St., Glebe	277746	1961	Premise Match	54m	West
	METAL MERCHANTS	Ward, G. Distributors Pty. Ltd., 67 Francis St., Broadway	338094	1961	Premise Match	54m	West
	BUILDERS & CONTRACTORS	Ward, G. Pty. Ltd., 67 Francis St., Glebe	276708	1961	Premise Match	54m	West
	ROOFING CONTRACTORS/REPAIRERS	Ward, G., 67 Francis St., Glebe	246673	1961	Premise Match	54m	West
	BUILDERS & CONTRACTORS-(M.M.B.A.)	Ward, George Pty. Ltd 67 Francis St Glebe	277747	1961	Premise Match	54m	West
	PAINTERS, PAPERHANGERS/DECORATORS	Ward, George Pty. Ltd., 67 Francis St., Glebe	356465	1961	Premise Match	54m	West
	ROOFING CONTRACTORS/REPAIRERS	Ward, George Pty. Ltd., 67 Francis St., Glebe	246674	1961	Premise Match	54m	West
	SHOP/OFFICE FITTERS	Ward, George Pty. Ltd., 67 Francis St., Glebe	250156	1961	Premise Match	54m	West
	CHEMISTS-MANUFACTURING & WHOLESALE	Hudson's Eumenthol Coy. Pty. Ltd., 31 Bay St., Glebe	70528	1950	Premise Match	54m	West
	EUCALYPTUS OIL DISTILLERS	Hudsons Eumenthol Chemical Co. Ltd., 31 Bay St., Glebe	42657	1950	Premise Match	54m	West
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Ilford Shoes Pty. Ltd., 45 Francis St., Glebe	46832	1950	Premise Match	54m	West
	CLOTHING MFRS. &/OR WHOLESALERS SHIRT & PYJAMA	Kennard and Kennard, 64 Greek St., Glebe	24149	1950	Premise Match	54m	West
	CLOTHING MANUFACTURERS &/OR WHOLESALERS-LADIES' DRESSES & GOWNS	Kennard and Kennard, 84 Greek St., Glebe	23393	1950	Premise Match	54m	West
	CLOTHING MANUFACTURERS &/OR WHOLESALERS-MEN'S & BOYS	Kennard and Kennard, 84 Greek St., Glebe	23669	1950	Premise Match	54m	West
	CLOTHING MFRS. &/OR WHOLESALERS LADIES' MANTLES	Kennard and Kennard, 84 Greek St., Glebe	23918	1950	Premise Match	54m	West
	CLOTHING MFRS. &/OR WHOLESALERS UNDERWEAR	Kennard and Kennard, 84 Greek St., Glebe	24338	1950	Premise Match	54m	West
	CLOTHING MFRS. &/OR WHOLESALERS-BABIES & CHILDREN'S	Kennard and Kennard, 84 Greek St., Glebe	24537	1950	Premise Match	54m	West

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16	CLOTHING MFRS. &/OR WHOLESALERS-GENERAL	Kennard and Kennard, 84 Greek St., Glebe	24902	1950	Premise Match	54m	West
	CLOTHING MFRS. &/OR WHOLESALERS-WATERPROOF	Kennard and Kennard, 84 Greek St., Glebe	25224	1950	Premise Match	54m	West
	MANCHESTER MFRS. &/OR WHOLESALERS	Kennard and Kennard, 84 Greek St., Glebe	70249	1950	Premise Match	54m	West
	TOY DEALERS-WHOLESALE	Kennard and Kennard, 84 Greek St., Glebe	109702	1950	Premise Match	54m	West
	HANDLE MANUFACTURERS &/OR WHOLESALERS	Kennard Bros. Ltd. (Tool), 15-31 Francis St., Glebe	60796	1950	Premise Match	54m	West
	ALUMINIUMWARE DISTRIBUTORS & WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	1693	1950	Premise Match	54m	West
	BROOM & BRUSH-SWEEPING-WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	11506	1950	Premise Match	54m	West
	CHINA & CROCKERY IMPORTERS &/OR WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	22229	1950	Premise Match	54m	West
	GLASSWARE & CRYSTALWARE IMPORTERS &/OR WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	54684	1950	Premise Match	54m	West
	HARDWARE MERCHANTS-WHOLESALE	Kennard Bros. Ltd., 15-31 Francis St., Glebe	61623	1950	Premise Match	54m	West
	KITCHENWARE WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	67084	1950	Premise Match	54m	West
	MERCHANTS & IMPORTERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	75265	1950	Premise Match	54m	West
	MOP MANUFACTURERS &/OR WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	81447	1950	Premise Match	54m	West
	TOOL WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	109248	1950	Premise Match	54m	West
	TRAVEL GOODS-WHOLESALERS	Kennard Bros. Ltd., 15-31 Francis St., Glebe	110597	1950	Premise Match	54m	West
	CHINA & CROCKERY IMPORTERS &/OR WHOLESALERS	Kennard Bros., 15-31 Francis St.,	22230	1950	Premise Match	54m	West
	ALUMINIUMWARE DISTRIBUTORS & WHOLESALERS	Kennard Bros., 15-31 Francis St., Glebe	1694	1950	Premise Match	54m	West
	BROOM & BRUSH-SWEEPING-WHOLESALERS	Kennard Bros., 15-31 Francis St., Glebe	11507	1950	Premise Match	54m	West
	HARDWARE MERCHANTS-WHOLESALE	Kennard Bros., 15-31 Francis St., Glebe	61624	1950	Premise Match	54m	West
	KITCHENWARE WHOLESALERS	Kennard Bros., 15-31 Francis St., Glebe	67085	1950	Premise Match	54m	West
	MERCHANTS & IMPORTERS	Kennard Bros., 15-31 Francis St., Glebe	75267	1950	Premise Match	54m	West
	MOP MANUFACTURERS &/OR WHOLESALERS	Kennard Bros., 15-31 Francis St., Glebe	81448	1950	Premise Match	54m	West
	TOOL HANDLE WHOLESALERS	Kennard Bros., 15-31 Francis St., Glebe	109046	1950	Premise Match	54m	West
	ELECTRIC MOTOR INSTALLATION & MAINTENANCE SPECIALISTS	Lawrence, E. E. and Co., 35a Bay St., Glebe	36903	1950	Premise Match	54m	West
	ELECTRIC MOTORS-DEALERS &/OR WHOLE SALERS	Lawrence, E. E. and Co., 35a Bay St., Glebe	36997	1950	Premise Match	54m	West
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	T. and J. Shoe Ltd., 45 Francis St., Glebe	46933	1950	Premise Match	54m	West
17	Dye &/or Dyestuff Mfrs &/or Imps &/or Dists	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St. Broadway 2007	41766	1991	Premise Match	55m	North West
	PAINT - DRY COLOURS &/OR PIGMENT - MFRS. &/OR IMPS. &/OR SUPPLIERS.	Hodgsons Dye Agencies Pty. Ltd, 56 Bay St., Broadway. 2007	71461	1986	Premise Match	55m	North West
	CHEMICAL MFRS. &/OR IMPS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	13669	1986	Premise Match	55m	North West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	CONCRETE ADDITIVES COLOURING-WATER PROOFING ETC. MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	19694	1986	Premise Match	55m	North West
	DYE &/OR BLEACH MFRS. &/OR IMPS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	25709	1986	Premise Match	55m	North West
	IMPORTERS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	47686	1986	Premise Match	55m	North West
	MANUFACTURERS AGENTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	52570	1986	Premise Match	55m	North West
	DYE &/OR BLEACH MFRS. &/OR IMPS. &/OR DISTS. (D9500)	Hodgsons Dye Agencies Pty. Ltd, 56 Bay St., Broadway. 2007.	24230	1982	Premise Match	55m	North West
	CEMENT ADDITIVES MFRS. &/OR DISTS. (C3090)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	14146	1982	Premise Match	55m	North West
	CHEMICAL MFRS. &/OR IMPS.&/OR DISTS. (C3855)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	14442	1982	Premise Match	55m	North West
	CONCRETE ADDITIVES-COLOURING - WATER PROOFING ETC. MFRS. &/OR DISTS. (C6535)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	17484	1982	Premise Match	55m	North West
	IMPORTERS. (I0750)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	41593	1982	Premise Match	55m	North West
	MANUFACTURERS AGENTS, (M0800)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	46238	1982	Premise Match	55m	North West
	PAINT-DRY COLOURS-PIGMENT MFRS. &/OR DISTS. (P0340)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	62353	1982	Premise Match	55m	North West
	CONCRETE WATERPROOFING&/OR COLOURING OXIDES MFRS.CC7155)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway. 2007.	17750	1982	Premise Match	55m	North West
	CONCRETE WATERPROOFING &/OR COLOURING OXIDES MFRS.	Hodgsons Dye Agencies Pty. Ltd. 56-58 Bay St., Broadway, 2007	16034	1978	Premise Match	55m	North West
	CEMENT ADDITIVES MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	12286	1978	Premise Match	55m	North West
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	12578	1978	Premise Match	55m	North West
	CONCRETE ADDITIVES-COLOURING - WATER PROOFING ETC. MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	15797	1978	Premise Match	55m	North West
	DYE &/OR BLEACH MFRS. &/OR IMPS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	21175	1978	Premise Match	55m	North West
	IMPORTERS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	36919	1978	Premise Match	55m	North West
	MANUFACTURERS AGENTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	41304	1978	Premise Match	55m	North West
	PAINT-DRY COLOURS-PIGMENT MFRS.&/OR DISTS	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	55377	1978	Premise Match	55m	North West
	CEMENT ADDITIVES MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway, 2007	12272	1978	Premise Match	55m	North West
	CEMENT ADDITIVES MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd. 56-58 Bay St., Broadway, 2007	14200	1975	Premise Match	55m	North West
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St, Broadway. 2007	14541	1975	Premise Match	55m	North West
	DYE &/OR BLEACH MFRS. &/OR IMPS &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	24656	1975	Premise Match	55m	North West
	IMPORTERS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	43725	1975	Premise Match	55m	North West
	PAINT-DRY COLOURS-PIGMENT MFRS. &/OR DISTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007	65288	1975	Premise Match	55m	North West
	MANUFACTURERS AGENTS.	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway. 2007.	48795	1975	Premise Match	55m	North West
	CONCRETE WATERPROOFING &/OR COLOURING OXIDES MFRS.	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway. 2007	18598	1975	Premise Match	55m	North West

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17	CHEMICAL MANUFACTURERS &/OR DISTRIBUTORS (C268)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway	279407	1970	Premise Match	55m	North West
	PAINT-DRY COLOURS/PIGMENT-MFRS/DISTRIBUTORS (P 020)	Hodgsons Dye Agencies Pty. Ltd., 56 Bay St., Broadway.	346500	1970	Premise Match	55m	North West
	CHEMICAL IMPORTERS &/OR DISTRIBUTORS (C265)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	279234	1970	Premise Match	55m	North West
	CONCRETE WATERPROOFING & COLOURING OXIDES MFRS. (C605)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	285298	1970	Premise Match	55m	North West
	DYE & BLEACH MANUFACTURERS,IMPORTS. &/OR DISTS.(D820)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	292884	1970	Premise Match	55m	North West
	IMPORTERS (I200)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	318399	1970	Premise Match	55m	North West
	MANUFACTURERS' AGENTS (M112)	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	324973	1970	Premise Match	55m	North West
	Fibre & Fibre Goods Mfrs. &/or Distributors	Duro (N.S.W.) Pty. Ltd., 58a Bay St., Broadway	85801	1965	Premise Match	55m	North West
	Leather Goods Mfrs. &/or Wholesalers	Duro (N.S.W.) Pty. Ltd., 58a Bay St., Broadway	107493	1965	Premise Match	55m	North West
	Plastic Goods Manufacturers	Duro (N.S.W.) Pty. Ltd., 58a Bay St., Broadway	133899	1965	Premise Match	55m	North West
	Travel Goods Mfrs.	Duro (N.S.W.) Pty. Ltd., 58a Bay St., Broadway	154004	1965	Premise Match	55m	North West
	Travel Goods Wholesalers	Duro (N.S.W.) Pty. Ltd., 58a Bay St., Broadway	154129	1965	Premise Match	55m	North West
	Chemical Importers &/or Distributors	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	64020	1965	Premise Match	55m	North West
	Chemists - Industrial	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	64412	1965	Premise Match	55m	North West
	Concrete Waterproofing & Colouring Oxides Mfrs.	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	69979	1965	Premise Match	55m	North West
	Dye & Bleach Manufacturers Imports. &/or Dists.	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	76670	1965	Premise Match	55m	North West
	Importers	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	102620	1965	Premise Match	55m	North West
	Manufacturers' Agents	Hodgsons Dye Agencies Pty. Ltd., 56-58 Bay St., Broadway	109595	1965	Premise Match	55m	North West
	Merchants/Importers	Hodgsons Dye Agencies Pty. Ltd., Bay St.	113790	1965	Premise Match	55m	North West
	Paint - Dry Colours/Pigment - Manufacturers/Distributors	Hodgsons Dye Agencies Pty. Ltd., Bay St.	130427	1965	Premise Match	55m	North West
	BAKING POWDER MFRS.	McKenzie, J. F. and Co. Pty. Ltd., 56 Bay St.	271107	1961	Premise Match	55m	North West
	JELLY CRYSTAL MFRS.	McKenzie, J. F. and Co. Pty. Ltd., 56 Bay St.	328938	1961	Premise Match	55m	North West
	COFFEE ESSENCE MFRS.	McKenzie, Jas. and Co. Pty. Ltd., 56-58 Bay St., Glebe	291990	1961	Premise Match	55m	North West
	MERCHANTS/IMPORTERS	McKenzie, Jas. F. & Co. Pty. Ltd., 56-58 Bay St., Broadway	337576	1961	Premise Match	55m	North West
	MILLERS/GRISTERS	McKenzie, Jas. F. & Co. Pty. Ltd., 56-58 Bay St., Broadway	339796	1961	Premise Match	55m	North West
	OATMEAL/ROLLED OATS MFRS:	McKenzie, Jas. F. & Co. Pty. Ltd., 56-58 Bay St., Broadway	354267	1961	Premise Match	55m	North West
	SALINE POWDER MFRS.	McKenzie, Jas. F. & Co. Pty. Ltd., 56-58 Bay St., Broadway	247305	1961	Premise Match	55m	North West
	BAKING POWDER MANUFACTURERS	McKenzie, J. F. and Co. Pty. Ltd, 56 Bay St.	5559	1950	Premise Match	55m	North West
	JELLY CRYSTAL MANUFACTURERS	McKenzie, J. F. and Co. Pty. Ltd., 56 Bay St.	65549	1950	Premise Match	55m	North West
	SALINE POWDER MANUFACTURERS	McKenzie, Jas, and Co. Pty. Ltd., 56-58 Bay St., Broadway	100175	1950	Premise Match	55m	North West
	MILLERS & GRISTERS	McKenzie, Jas. and Co. Pty. Ltd. (Rice), 56-58 Bay St., Glebe	78340	1950	Premise Match	55m	North West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	RICE MILLERS	McKenzie, Jas. and Co. Pty. Ltd., 56-58 Bay St., Broadway	99522	1950	Premise Match	55m	North West
	COFFEE ESSENCE MANUFACTURERS	McKenzie, Jas. and Co. Pty. Ltd., 56-58 Bay St., Glebe	25601	1950	Premise Match	55m	North West
	OARS MANUFACTURED TO OWN SPECIFICATION	McKenzie, Jas. and Co. Pty. Ltd., 56-58 Bay St., Glebe	89405	1950	Premise Match	55m	North West
	MERCHANTS & IMPORTERS	McKenzle, Jas. and Co. Pty. Ltd., 56-58 Bay St., Glebe	75386	1950	Premise Match	55m	North West
18	PLASTIC GOODS MFRS.	B & S. Industries Pty. Ltd., 33 Mountain St., Broadway. 2007	57648	1978	Premise Match	55m	North
	KNITTED GOODS MFRS. &/OR KNITTING MILLS.	B.& S. Industries Pty. Ltd., 33 Mountain St., Broadway. 2007	39375	1978	Premise Match	55m	North
	DYERS &/OR BLEACHERS-TRADE.	Sydney Dyes & Bleachers Pty. Ltd., 33 Mountain St., Broadway. 2007	21198	1978	Premise Match	55m	North
	PLASTIC GOODS MFRS.	B & S, Industries Pty Ltd., 33 Mountain St., Broadway. 2007	67887	1975	Premise Match	55m	North
	BAG &/OR SACK MFRS.	B. & S. Industries Pty. Ltd., 33 Mountain St., Broadway. 2007	4017	1975	Premise Match	55m	North
	KNITTED GOODS MFRS. &/OR KNITTING MILLS.	B. & S. industries Pty. Ltd., 33 Mountain St., Broadway. 2007	46486	1975	Premise Match	55m	North
	LEATHER GOODS MFRS. &/OR WHOLESALERS (L400)	Aristocrat Leathergoods Pty. Ltd., 33 Mountain St., Broadway	322934	1970	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS(M6S6)	Gillies, D. H., 33 Mountain St., Broadway	337864	1970	Premise Match	55m	North
	Buildings	Athlone House, 33 Mountain St., Ultimo	56667	1965	Premise Match	55m	North
	Motor Service Stations - Petrol, Oil, Etc.	Gillies, D. H. & Son, 33 Mountain St. Sydney	125333	1965	Premise Match	55m	North
	Motor Garages & Engineers	Gillies, D. H., 33 Mountain St., Broadway, Sydney	122042	1965	Premise Match	55m	North
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Gillies, D. H. & Son, 33 Mountain St. Broadway	350604	1961	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS	Gillies, D. H., 33 Mountain St., Broadway	347226	1961	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS	Gillies, D. H., 33 Mountain St., Broadway	83801	1950	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL, Etc.	Gillies, D., 33 Mountain St., Broadway	85992	1950	Premise Match	55m	North
	TOILET PREPARATIONS MANUFACTURERS	Lambert Pharmacal Co. (Aust.) Pty. Ltd., 33 Mountain St.	108943	1950	Premise Match	55m	North
	TOOTH BRUSH MANUFACTURERS	Lambert Pharmacal Co. (Aust.) Pty. Ltd., 33 Mountain St.	109275	1950	Premise Match	55m	North
	CHEMISTS-MANUFACTURING & WHOLESALE	Lambert Pharmacal Co. Pty. Ltd., 33 Mountain St., Broadway	70551	1950	Premise Match	55m	North
	ANTISEPTIC MANUFACTURERS	Lambert Pharmacal Co., 33 Mountain St., Broadway	1923	1950	Premise Match	55m	North
	TOOTH PASTE MANUFACTURERS	Lambert Pharmacal Company, 33 Mountain St., Broadway	109284	1950	Premise Match	55m	North
	SKIN & HIDE MERCHANTS	Schute,. Bell, Badgery, Lumby Ltd., Bulk Store, 33 Mountain St., Broadway	102958	1950	Premise Match	55m	North
19	Motor Panel Beaters &/or Spray Painters	Gilkesons Auto Services, 11 Small St Broadway 2007	54405	1991	Premise Match	58m	East
	Photo Engravers	Graphic Arts Engraving, 11 Small St., Broadway. 2007	57196	1991	Premise Match	58m	East
	PHOTO ENGRAVERS.	Graphic Arts Engraving, 11 Smail St., Broadway. 2007	72779	1986	Premise Match	58m	East
	TYPESETTING SPECIALISTS.	Graphic Arts Engraving, 11 Smail St., Broadway. 2007	96103	1986	Premise Match	58m	East
	WIRE ROPE MERCHANTS. (W6760)	Wire Rope Services Pty. Ltd., 11 Smail St, Ultimo. 2007.	85206	1982	Premise Match	58m	East
	WIRE ROPE MFRS. &/OR SPLICERS. (W6720)	Wire Rope Services Pty. Ltd., 11 Smail St., Ultimo. 2007.	85193	1982	Premise Match	58m	East
	WIRE ROPE MERCHANTS.	Wire Rope Services Pty. Ltd., 11 Smail St., Ultimo. 2007	75077	1978	Premise Match	58m	East
	WIRE ROPE MFRS. &/OR SPLICERS.	Wire Rope Services Pty. Ltd., 11 Smail St., Ultimo. 2007	75058	1978	Premise Match	58m	East

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19	WIRE ROPE MFRS. &/OR SPLICERS.	Wire Rope Services Pty. Ltd., 11 Smail St., Ultimo. 2007	87584	1975	Premise Match	58m	East
	WIRE ROPE MERCHANTS.	Wire Rope Services Pty. Ltd., 11 Small St., Ultimo. 2007	87614	1975	Premise Match	58m	East
	WIRE ROPE MFRS. &/OR SPLICERS.	Wire Rope Services Pty. Ltd., 11 Small St., Ultimo. 2007	87596	1975	Premise Match	58m	East
	FOOTWEAR MFRS., REPAIRERS &/OR SUPPLIERS	Caddy, J, Pattern Service., 11 Smail St., Broadway	305211	1970	Premise Match	58m	East
	PHOTO ENGRAVERS (P256)	GRAPHIC ARTS ENGRAVING PTY. LTD., 11 SMAIL St., BROADWAY, 2007	347708	1970	Premise Match	58m	East
	PHOTO ENGRAVERS (P256)	Graphic Arts Engraving Pty. Ltd., 11 Smail St., Broadway.	347709	1970	Premise Match	58m	East
	PRINTED CIRCUIT MFRS. (P780)	Graphic Arts Engraving Pty. Ltd., 11 Smail St., Broadway.	351610	1970	Premise Match	58m	East
	PRINTED CIRCUIT MFRS. (P780)	GRAPHIC ARTS PRINTED COMPONENTS., 11 SMAIL St., BROADWAY, 2007	351611	1970	Premise Match	58m	East
	WIRE ROPE MERCHANTS (W340)	Wire Rope Services Pty. Ltd, 11 Smail St, Ultimo.	374878	1970	Premise Match	58m	East
	WIRE ROPE MFRS. &/OR SPLICERS	Wire Rope Services Pty. Ltd., 11 Smail St, Ultimo	374890	1970	Premise Match	58m	East
	OPTICAL ENGINEERS	Australian Optical Co. Pty. Ltd., 11 Smail St., Ultimo	129750	1965	Premise Match	58m	East
	OPTICAL SUPPLIES - MFRG &/OR WHOLESALE	Australian Optical Co. Pty. Ltd., 11 Smail St., Ultimo	129757	1965	Premise Match	58m	East
	Footwear Mfrs. - Boots/Shoes	Caddy, J. Pattern Service, 11 Small St., Ultimo	88593	1965	Premise Match	58m	East
	Footwear Mfrs. - Children's/Infants'	Caddy, J. Pattern Service, 11 Small St., Ultimo	88690	1965	Premise Match	58m	East
	Footwear Mfrs. - Sandals	Caddy, J. Pattern Service, 11 Small St., Ultimo	88775	1965	Premise Match	58m	East
	Footwear Mfrs. - Skating	Caddy, J. Pattern Service, 11 Small St., Ultimo	88798	1965	Premise Match	58m	East
	Footwear Mfrs., Repairers &/or Suppliers	Caddy, J. Pattern Service, 11 Small St., Ultimo	88736	1965	Premise Match	58m	East
	Photo Engravers	Graphic Arts Engraving Pty. Ltd., 11 Small St., Broadway	132221	1965	Premise Match	58m	East
	STEREOTYPERS—METAL, PLASTIC, RUBBER	Sinclair Stereo Service Pty. Ltd., 11 Small St., Ultimo	148658	1965	Premise Match	58m	East
	Typesetters - Trade	Sinclair Type Setting Pty. Ltd., 11 Small St., Ultimo	154278	1965	Premise Match	58m	East
	PHOTO ENGRAVERS	Graphic Arts Engraving Pty Ltd 11 Small St., Broadway	357458	1961	Premise Match	58m	East
	PHOTO ENGRAVERS	Graphic Arts Engraving Pty. Ltd., 11 Small St., Broadway	357459	1961	Premise Match	58m	East
	LEATHER/GRINDERY MERCH.	Kennon & Sons (N.S.W.) Pty. Ltd., 11 Small St., Ultimo	331240	1961	Premise Match	58m	East
	TANNERS/LEATHER MFRS.	Kennon & Sons (N.S.W.) Pty. Ltd., 11 Small St., Ultimo	255357	1961	Premise Match	58m	East
	LEATHER GOODS RETAILERS	Kennon, J. & Sons (N.S.W.) Pty. Ltd., 11 Small St., Ultimo	331195	1961	Premise Match	58m	East
	SKIN/HIDE MERCHANTS	Kennon, J. & Sons N.S.W. Pty. Ltd., 11 Small St., Ultimo	250692	1961	Premise Match	58m	East
	STEREOTYPERS-METAL, PLASTIC, RUBBER	Sinclair Stereo Service Pty Ltd 11 Small St., Ultimo	253960	1961	Premise Match	58m	East
	STEREOTYPERS-METAL, PLASTIC, RUBBER	Sinclair Stereo Service Pty. Ltd., 11 Small St., Ultimo	253961	1961	Premise Match	58m	East
	TYPESETTERS-TRADE	Sinclair Type Setting Pty Ltd 11 Small St., Ultimo	259819	1961	Premise Match	58m	East
	TYPESETTERS-TRADE	Sinclair Type Setting Pty. Ltd., 11 Small St., Ultimo	259820	1961	Premise Match	58m	East
	SKIN & HIDE MERCHANTS	Kennon and Sons (N.S.W.) Pty. Ltd., 11 Small St., Broadway	102933	1950	Premise Match	58m	East
	LEATHER & GRINDERY MERCHANTS	Kennon and Sons (N.S.W.) Pty. Ltd., 11 Small St., Ultimo	67990	1950	Premise Match	58m	East

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20	Corset Manufacturers	Dowd Associates Pty. Ltd., 13-15 Small St.	70663	1965	Premise Match	72m	East
	CORSET MANUFACTURERS	Dowd Associates Pty. Ltd., 13-15 Small St.	293299	1961	Premise Match	72m	East
	CLOTHING MFRS. &/OR W'SALERS-LADIES' SKIRTS	Scamp Pty. Ltd., 15 Smail St., Broadway	290504	1961	Premise Match	72m	East
	CLOTHING MFRS. &/OR W'SALERS-BLOUSES	Scamp Pty. Ltd., 15 Small St., Broadway	289236	1961	Premise Match	72m	East
	CLOTHING MFRS. &/OR WHOLESALERS SPORTSWEAR	Scamp Pty. Ltd., 15 Smail St., Broadway	24247	1950	Premise Match	72m	East
	CLOTHING MFRS. &/OR WHOLESALERS-GENERAL	Scamp Pty. Ltd., 15 Smail St., Broadway	25050	1950	Premise Match	72m	East
	CLOTHING MFRS. &/OR WHOLESALERS SPORTSWEAR	Turner Parachute Pty. Ltd. (The), 15 Smail St., Broadway	24261	1950	Premise Match	72m	East
	CLOTHING MFRS. &/OR WHOLESALERS-BABIES & CHILDREN'S	Turner Parachute Pty. Ltd. (The), 15 Smail St., Broadway	24614	1950	Premise Match	72m	East
21	FILM EQUIP MFRS	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway. 2007	27501	1978	Premise Match	73m	South East
	FILM LABORATORIES &/OR PROCESSORS	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway. 2007	27513	1978	Premise Match	73m	South East
	FILM LABORATORIES &/OR PROCESSORS.	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway 2007	31715	1975	Premise Match	73m	South East
	FILM EQUIP MFRS.	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway. 2007	31702	1975	Premise Match	73m	South East
	FILM EQUIPMENT IMPORTERS &/OR DISTRIBUTORS (F135)	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway, 2007	302630	1970	Premise Match	73m	South East
	FILM LABORATORIES/PROCESSORS (F150)	Permafilm Aust. Pty. Ltd., 63 Mountain St., Broadway, 2007	302657	1970	Premise Match	73m	South East
	Importers	Calandra (N.S.W.) Pty. Ltd., 63 Mountain St., Broadway	102393	1965	Premise Match	73m	South East
	Food Importers	Calandra (N.S.W.) Pty. Ltd.,. 63 Mountain St., Broadway	88209	1965	Premise Match	73m	South East
	ENGINEERS SUPPLIES	Hobbs, F. and Co. (Packings), 63 Mountain St., Broadway	39690	1950	Premise Match	73m	South East
	CORK & CORKWOOD MERCHANTS	Hobbs, F. and Co., 63 Mountain St., Broadway	29048	1950	Premise Match	73m	South East
	ENGINEERS SUPPLIES-ASBESTOS PACKING	Hobbs, F. and Co., 63 Mountain St., Broadway	39770	1950	Premise Match	73m	South East
	CORK & CORKWOOD MANUFACTURERS	Industrial Gasket Co., 63 Mountain St., Broadway	29036	1950	Premise Match	73m	South East
	CORK & CORKWOOD MERCHANTS	Industrial Gasket Co., 63 Mountain St., Broadway	29049	1950	Premise Match	73m	South East
	GASKET MANUFACTURERS	Industrial Gasket Co., 63 Mountain St., Broadway	54137	1950	Premise Match	73m	South East
22	Photographic Equipment &/or Supplies Mfrs &/or Imps &/or Dists	Kennedy C.R. & Co. Pty. Ltd., 29 Mountain St., Ultimo. 2007	57470	1991	Premise Match	74m	North
	PHOTOGRAPHIC EQUIPMENT &/OR IMPS. &/OR DISTS.	Kennedy, C. R. & Co. Pty. Ltd., 29 Mountain St., Broadway. 2007	73214	1986	Premise Match	74m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS	Kennedy, C. R. (Sales) Pty. Ltd, 29 Mountain St., Broadway. 2007.	63742	1982	Premise Match	74m	North
	CHEMICAL MFRS. &/OR IMPS.&/OR DISTS. (C3855)	Kennedy, C. R. (Sales) Pty. Ltd., 29 Mountain St., Broadway. 2007	14454	1982	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Chloride Batteries Australia Ltd., 29 Mountain St., Broadway. 2007	4511	1978	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Exide Batteries. 29 Mountains. Broadway. 2007	4516	1978	Premise Match	74m	North
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS.	Kennedy. C. R. (Sales) Pty. Ltd., 29 Mountain St., Broadway. 2007	12592	1978	Premise Match	74m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPS.	Kennedy. C. R. (Sales) Pty. Ltd., 29 Mountain St., Broadway. 2007	56723	1978	Premise Match	74m	North

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22	BATTERY MFRS. &/OR DISTS.	Masse Batteries, 29 Mountain St., Broadway. 2007	4532	1978	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Vesta Batteries, 29 Mountain St., Broadway. 2007	4548	1978	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Chloride Batteries Australia Ltd., 29 Mountain St., Broadway. 2007	4706	1975	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Exide Batteries, 29 Mountain St., Broadway. 2007	4715	1975	Premise Match	74m	North
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS	Kennedy, C. R. Sales Pty. Ltd., 29 Mountain St., Broadway. 2007	14552	1975	Premise Match	74m	North
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPS.	Kennedy, C. R. Sales Pty. Ltd., 29 Mountain St., Broadway. 2007	66861	1975	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Masse Batteries, 29 Mountain St., Broadway. 2007	4733	1975	Premise Match	74m	North
	BATTERY MFRS. &/OR DISTS.	Vesta Batteries, 29 Mountain St., Broadway. 2007	4752	1975	Premise Match	74m	North
	ELECTRIC FURNACE MFRS.&/OR DISTRIBUTORS (E130)	Australian Electric Furnace Co. Pty. Ltd., 29 Mountain St., Broadway	293652	1970	Premise Match	74m	North
	FURNACE MANUFACTURERS (F678)	Australian Electric Furnace Co. Pty. Ltd., 29 Mountain St., Broadway	308395	1970	Premise Match	74m	North
	AUTOMATIC CONTROL EQUIPMENT IMPS. &/OR DISTS	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	263886	1970	Premise Match	74m	North
	BOILER PLANT IMPS. &/OR DISTS.(B495)	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	267838	1970	Premise Match	74m	North
	BOILERMAKERS (B510)	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	267928	1970	Premise Match	74m	North
	BRICK, PIPE & TILE MFRS.' MACHINERY (B718)	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	269649	1970	Premise Match	74m	North
	ENGINEERS-FURNACE/COMBUSTION (E605)	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	298780	1970	Premise Match	74m	North
	PICTURE THEATRE EQUIPMENT &/OR SUPPLIES (P348)	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	348803	1970	Premise Match	74m	North
	Electric Furnace Mfrs. &/or Distributors	Australian Electric Furnace Co. Pty. Ltd., 29 Mountain St., Broadway	77443	1965	Premise Match	74m	North
	Furnace Mfrs.	Australian Electric Furnace Co. Pty. Ltd., 29 Mountain St., Broadway	92567	1965	Premise Match	74m	North
	BOILERMAKERS	Hudson & West Pty, Ltd. , 29 Mountain St., Broadway	52360	1965	Premise Match	74m	North
	Boiler Plant Imps. &/Or Dists.	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	52272	1965	Premise Match	74m	North
	Engineers General &/or Mfrg. &/or Mechanical	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	82487	1965	Premise Match	74m	North
	Picture Theatre Equipment &/or Supplies	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	133141	1965	Premise Match	74m	North
	ELECTRIC FURNACE MFRS. &/OR DISTRIBUTORS	Australian Electrical Furnace Co Pty Ltd., 29 Mountain St., Broadway.	300469	1961	Premise Match	74m	North
	ELECTRIC FURNACE MFRS. &/OR DISTRIBUTORS	Australian Electrical Furnace Co. Pty. Ltd., 29 Mountain St., Broadway.	300448	1961	Premise Match	74m	North
	ENGINEERS-GENERAL/MFRG./ MECHANICAL	Hudson & West Pty. Ltd., 29 Mountain St., Broadway	306599	1961	Premise Match	74m	North
	BOILERMAKERS	Hudson &West Pty. Ltd., 29 Mountain St., Broadway	273940	1961	Premise Match	74m	North
	CONTRACTORS-GENERAL	Ward, George Pty. Ltd., 29 Mountain St., Broadway	292908	1961	Premise Match	74m	North
	MUSICAL INSTRUMENT REPAIRERS/RECONDITIONERS	Ward, George Pty. Ltd., 29 Mountain St., Broadway	352828	1961	Premise Match	74m	North
	ENGINEERS-PRECISION	Gillies, F, 31 Mountain St, Broadway	41855	1950	Premise Match	74m	North
	DIE & PRESS TOOL MAKERS	Gillies, F., 31 Mountain St., Broadway	32694	1950	Premise Match	74m	North
	TOOL MAKERS	Gillies, F., 31 Mountain St., Broadway	109124	1950	Premise Match	74m	North

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22	KNITTED GOODS MFRS. & KNITTING MILLS	Goulburn Knitting Mills (1947) Pty. Ltd., 31 Mountain St.	67230	1950	Premise Match	74m	North
	COTTON TEXTILE & PIECE GOODS MFRS.	Goulburn Knitting Mills Pty. Ltd., 29-31 Mountain St., Broadway	29328	1950	Premise Match	74m	North
	RUBBER GOODS MANUFACTURERS	Reversible Belts and Mats Pty. Ltd., 29 -31 Mountain St., Broadway	99809	1950	Premise Match	74m	North
	BELTING MANUFACTURERS	Reversible Belts and Mats Pty. Ltd., Factory, 29-31 Mountain St., Broadway	8139	1950	Premise Match	74m	North
	MATTING MFRS. &/OR WHOLESALERS	Reversible Belts and Mats Pty. Ltd., Factory, 29-31 Mountain St., Broadway	72181	1950	Premise Match	74m	North
23	CLOTHING MFRS. &/OR W'SALERS-KNITTED GOODS	Moon Ray Mills Pty. Ltd., 52 Bay St., Broadway	282675	1970	Premise Match	74m	North West
	KNITTING MILLS (K095)	Moonray Mills Pty. Ltd., 52 Bay St., Broadway	322201	1970	Premise Match	74m	North West
	YARN MANUFACTURERS (Y020)	Moonray Mills Pty. Ltd., 52 Bay St., Broadway	375633	1970	Premise Match	74m	North West
	CLOTHING MFRS &/OR W/SALERS - BLOUSES	Pasadena Pty. Ltd., 52 Bay St., Broadway	282250	1970	Premise Match	74m	North West
	CLOTHING MFRS. & W'SALERS-MATERNITY WEAR (C457).	Pasadena Pty. Ltd., 52 Bay St., Broadway	282090	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W/SALERS. - SPORTSWEAR	Pasadena Pty. Ltd., 52 Bay St., Broadway	283690	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS - LADIES' COATS & COSTUMES	Pasadena Pty. Ltd., 52 Bay St., Broadway	282810	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS - LADIES' SKIRTS	Pasadena Pty. Ltd., 52 Bay St., Broadway	283223	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-GENERAL (C438)	Pasadena Pty. Ltd., 52 Bay St., Broadway	282499	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-INDUSTRIAL	Pasadena Pty. Ltd., 52 Bay St., Ultimo	282579	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W/SALERS. - BABY &/OR CHILDRENS WEAR	Reliable Clothing Co. Pty. Ltd., 52 Bay St.	282260	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W/SALERS. - SPORTSWEAR	Reliable Clothing Co. Pty. Ltd., 52 Bay St., Broadway	283699	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	Reliable Clothing Co. Pty. Ltd., 52 Bay St., Broadway	283829	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W/SALERS. - SHIRT &/OR PYJAMA	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	283527	1970	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-GENERAL (C438)	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	282506	1970	Premise Match	74m	North West
	PRINTERS-LITHOGRAPHIC (OFFSET)(P810)	Snelling Printing Works Pty. Ltd. (The)., 52 Bay St., Broadway	352732	1970	Premise Match	74m	North West
	PRINTERS-LETTERPRESS (P806)	Snelling Printing Works Pty. Ltd. (The)., 52 Bay St., Broadway.	352352	1970	Premise Match	74m	North West
	Clothing Mfrs. & W'salers - Maternity Wear	Pasadena Pty. Ltd., 52 Bay St., Ultimo	67950	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Industrial	Pasadena Pty. Ltd., 52 Bay St., Ultimo	67205	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Ladies' Dresses & Gowns	Pasadena Pty. Ltd., 52 Bay St., Ultimo	67701	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Ladies' Skirts	Pasadena Pty. Ltd., 52 Bay St., Ultimo	67915	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Sportswear	Pasadena Pty. Ltd., 52 Bay St., Ultimo	68396	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Blouses	Pasadena Pty. Ltd., 52-54 Bay St., Ultimo	66892	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Baby &/or Children's Wear	Reliable Clothing Co. Pty. Ltd., 52 Bay St.	66791	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Sportswear	Reliable Clothing Co. Pty. Ltd., 52 Bay St., Broadway	68404	1965	Premise Match	74m	North West

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23	Clothing Mfrs. &/or W'salers - Underwear	Reliable Clothing Co. Pty. Ltd., 52 Bay St., Broadway	68555	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - General	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	67126	1965	Premise Match	74m	North West
	Clothing Mfrs. &/or W'salers - Shirt & Pyjama	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	68227	1965	Premise Match	74m	North West
	Printers - Letterpress	Snelling Printing Works Pty. Ltd., 52 Bay St., Broadway	136316	1965	Premise Match	74m	North West
	FOOTWEAR MFRS.- BOOTS/SHOES	Molloy and Grant, 52-54 Bay St., Broadway	312898	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-LADIES' DRESSES & GOWNS	Pasadena Pty. Ltd., 52 Bay St., Ultimo	290234	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-LADIES' SKIRTS	Pasadena Pty. Ltd., 52 Bay St., Ultimo	290496	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR WHOLESALERS-SPORTSWEAR	Pasadena Pty. Ltd., 52 Bay St., Ultimo	291188	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-BLOUSES	Pasadena Pty. Ltd., 52-54 Bay St., Ultimo	289225	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-BABY &/OR CHILDREN'S WEAR	Reliable Clothing Co. Pty. Ltd., 52 Bay St.	289111	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-GENERAL	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	289572	1961	Premise Match	74m	North West
	CLOTHING MFRS. &/OR W'SALERS-SHIRT & PYJAMA	Reliable Clothing Co. Pty. Ltd., 52-54 Bay St., Broadway	290811	1961	Premise Match	74m	North West
	PRINTERS-LETTERPRESS	Snelling Printing Works Pty. Ltd., 52 Bay St., Broadway	362446	1961	Premise Match	74m	North West
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	California Productions Ltd., 52 Bay St., Broadway	46748	1950	Premise Match	74m	North West
	NEWSPAPERS & PERIODICALS	Countrywoman In N.S.W. (The), 52 Bay St., Broadway	88673	1950	Premise Match	74m	North West
	CLOTHING MFRS. &/OR WHOLESALERS SHIRT & PYJAMA	Greenwood's Textile Co. Pty. Ltd., 52-54 Bay St., Broadway	24133	1950	Premise Match	74m	North West
	WAREHOUSEMEN	Greenwood's Textile Co. Pty. Ltd., 52-54 Bay St., Broadway	112182	1950	Premise Match	74m	North West
	MERCHANTS & IMPORTERS	Greenwood's Textile Co. Pty. Ltd., 52-54 Bay St., Broadway	75122	1950	Premise Match	74m	North West
	FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Molloy and Grant, 52-54 Bay St., Broadway	46864	1950	Premise Match	74m	North West
	BOOKBINDERS	Snelling Printing Works Pty. Ltd., 52 Bay St., Broadway	9277	1950	Premise Match	74m	North West
	PRINTERS-GENERAL	Snelling Printing Works Pty. Ltd., 52 Bay St., Broadway	95190	1950	Premise Match	74m	North West
	PRINTERS-GENERAL	Snelling Printing Works Pty. Ltd., 52 Bay St., Broadway	95165	1950	Premise Match	74m	North West
24	MOTOR TRIMMERS.	Ryan, R, 36 Glebe St, Glebe 2037	53295	1978	Premise Match	78m	North West
	UPHOLSTERERS.	Ryan, R., 36 Glebe St., Glebe. 2037	73146	1978	Premise Match	78m	North West
	ASPHALT & ASPHALTERS.	Armstrong Asphalt Pty. Ltd., 15 Franklin St., Glebe. 2037	3118	1975	Premise Match	78m	North West
	MOTOR CHASSIS STRAIGHTENERS &/OR REPAIRERS &/OR SPECIALISTS.	Baber R. Motors., 50 Glebe St., Glebe. 2037.	57645	1975	Premise Match	78m	North West
	WELDERS., Electric &/OR OXY.	Baber, R. Motors, 50 Glebe St., Glebe. 2037	86783	1975	Premise Match	78m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Baber, R. Motors., 50 Glebe St., Glebe. 2037	58399	1975	Premise Match	78m	North West
	MOTOR PAINTERS.	Baber, R. Motors., 50 Glebe St., Glebe. 2037	59967	1975	Premise Match	78m	North West
	MOTOR PANEL BEATERS.	Baber, R. Motors., 50 Glebe St., Glebe. 2037	60603	1975	Premise Match	78m	North West

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
24	METAL PRESSERS &/OR STAMPERS.	Belmont Metal Stamping Co. Pty. Ltd., 2 Glebe St., Glebe. 2037	52858	1975	Premise Match	78m	North West
	SHOP & OR/OFFICE FITTERS	Brier, W. F. Pty. Ltd., 61 Bay St., Glebe. 2037	77378	1975	Premise Match	78m	North West
	UPHOLSTERERS.	Ryan, R., 36 Glebe St., Glebe. 2037	85823	1975	Premise Match	78m	North West
	MOTOR TRIMMERS.	Ryan. R., 36 Glebe St., Glebe. 2037	62835	1975	Premise Match	78m	North West
	WELDERS-ELECTRIC &/OR OXY	Baber, R. Motors, 50 Glebe St, Glebe	373454	1970	Premise Match	78m	North West
	MOTOR CHASSIS STRAIGHTENERS &/OR REPAIRERS/SPECIALISTS (M574)	Baber, R. Motors., 50 Glebe St., Glebe	336476	1970	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS(M6S6)	Baber, R. Motors., 50 Glebe St., Glebe	337259	1970	Premise Match	78m	North West
	MOTOR PAINTERS (M672)	Baber, R. Motors., 50 Glebe St., Glebe	339109	1970	Premise Match	78m	North West
	MOTOR PANEL BEATERS (M680)	Baber, R. Motors., 50 Glebe St., Glebe	339833	1970	Premise Match	78m	North West
	TELEVISION EQUIPMENT IMPORTS., MFRS. &/OR DISTS.	E.A.S. Manufacturing Pty. Ltd., 15 Franklin St., Glebe	367643	1970	Premise Match	78m	North West
	TELEVISION SET MANUFACTURERS/DISTRIBUTORS (T155)	E.A.S. Manufacturing Pty. Ltd., 15 Franklin St., Glebe	367704	1970	Premise Match	78m	North West
	ELECTROPLATERS (E370)	Electronic Coatings Pty. Ltd., 11 Franklin St., Glebe	296595	1970	Premise Match	78m	North West
	ENAMELLERS (E431)	Electronic Coatings Pty. Ltd., 11 Franklin St., Glebe	296874	1970	Premise Match	78m	North West
	PLASTIC COATING SPECIALISTS MATERIAL, ETC.	Electronic Coatings Pty. Ltd., 11 Franklyn St., Glebe	349329	1970	Premise Match	78m	North West
	Motor Garages & Engineers	Baber, R. Motors, 50 Glebe St. Glebe	122695	1965	Premise Match	78m	North West
	Motor Chassis Straighteners &/or Repairers/Specialists	Baber, R. Motors, 50 Glebe St., Glebe	121291	1965	Premise Match	78m	North West
	Motor Painters	Baber, R. Motors, 50 Glebe St., Glebe	123697	1965	Premise Match	78m	North West
	Motor Panel Beaters	Baber, R. Motors., 50 Glebe St., Glebe	124424	1965	Premise Match	78m	North West
	Welders - Electric &/or Oxy	Baber, R. Motors., 50 Glebe St., Glebe	156250	1965	Premise Match	78m	North West
	Enamellers	Industrial Plating Co, Pty. Ltd., 11 Franklin St., Glebe	80452	1965	Premise Match	78m	North West
	Road - Making Contractors	N.S.W, Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	140738	1965	Premise Match	78m	North West
	Tile Fixers - Floor/Wall	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St. Glebe	151443	1965	Premise Match	78m	North West
	Asphalt & Asphalters	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	47178	1965	Premise Match	78m	North West
	Bitumen & Bituminous Products	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	51588	1965	Premise Match	78m	North West
	Floor Covering - Industrial - Specialists	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	87383	1965	Premise Match	78m	North West
	Paving Contractors	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	131936	1965	Premise Match	78m	North West
	TENNIS COURT CONSTRUCTION CONTRACTORS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	150622	1965	Premise Match	78m	North West
	Tile Mfrs. &/or Dists. - Floor & Wall	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	151532	1965	Premise Match	78m	North West
	Floor Layers	N.S.W. Asphalte Co. Pty. Ltd., 15 Franklin St., Glebe	87410	1965	Premise Match	78m	North West
	DAMPCOURSE MFRS.	N.S.W. Asphalte Co., 15 Franklin St., Glebe	71675	1965	Premise Match	78m	North West
	Insulating Material Suppliers	Sheard, R. & Co., 61 Bay St., Glebe	104024	1965	Premise Match	78m	North West
	Builders & Contractors	Sheard, R. & G., 61 Bay St., Glebe	55613	1965	Premise Match	78m	North West

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24	Carpenters	Sheard, R. & G., 61 Bay St., Glebe	62288	1965	Premise Match	78m	North West
	Cool Room Builders	Sheard, R. & G., 61 Bay St., Glebe	70490	1965	Premise Match	78m	North West
	Cork & Corkboard Mfrs. &/or Merchants	Sheard, R. & G., 61 Bay St., Glebe	70618	1965	Premise Match	78m	North West
	FEATHER PROCESSORS	Australian Feather Mills Pty. Ltd., Rear 38 Glebe St., Glebe	309767	1961	Premise Match	78m	North West
	FEATHER DUSTER MFRS. &/OR DIST.	Australian Feather Mills Pty. Ltd., Rear 38-42 Glebe St., Glebe	309765	1961	Premise Match	78m	North West
	MOTOR TOWING SERVICES	Baber, R., 36 Glebe St., Glebe	352065	1961	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS	Baber, Ron, Rear 36 Glebe St. GLEBE	346577	1961	Premise Match	78m	North West
	MOTOR PAINTERS	Baber, Ron, Rear 36 Glebe St., Glebe	348632	1961	Premise Match	78m	North West
	MOTOR PANEL BEATERS	Baber, Ron, Rear 36 Glebe St., Glebe	349359	1961	Premise Match	78m	North West
	MOTOR WRECKERS	Baber, Ron, Rear 36 Glebe St., Glebe	352475	1961	Premise Match	78m	North West
	WELDERS-ELECTRIC &/OR OXY	Baber, Ron, Rear 36 Glebe St., Glebe	261887	1961	Premise Match	78m	North West
	CARPENTERS	Gilchrist, J., 61 Bay St., Glebe	284107	1961	Premise Match	78m	North West
	COOL ROOM BUILDERS	Gilchrist, J., 61 Bay St., Glebe	293073	1961	Premise Match	78m	North West
	INSULATING MATERIAL SUPPLIERS	Gilchrist, J., 61 Bay St., Glebe	327598	1961	Premise Match	78m	North West
	JOINERY MANUFACTURERS	Gilchrist, J., 61 Bay St., Glebe	329851	1961	Premise Match	78m	North West
	FURNITURE-TUBULAR STEEL-MFRS. &/OR W'SALERS	Glebe Ornament Iron & Steel Furniture Mfrs., 11-13 Franklin St., Glebe	318299	1961	Premise Match	78m	North West
	ANODISERS	Industrial Plating Co. Pty. Ltd., 11 Franklin St., Glebe	267919	1961	Premise Match	78m	North West
	ELECTROPLATERS	Industrial Plating Co. Pty. Ltd., 11 Franklin St., Glebe	303905	1961	Premise Match	78m	North West
	FURNITURE-TUBULAR STEEL-MFRS. &/OR W'SALERS	Industrial Plating Co. Pty. Ltd., 11 Franklin St., Glebe	318304	1961	Premise Match	78m	North West
	ASPHALT & ASPHALTERS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	268962	1961	Premise Match	78m	North West
	BITUMEN & BITUMINOUS PRODUCTS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	273147	1961	Premise Match	78m	North West
	FLOOR LAYERS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	311535	1961	Premise Match	78m	North West
	ROAD-MAKING CONTRACTORS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	246524	1961	Premise Match	78m	North West
	TENNIS COURT CONSTRUCTION CONTRACTORS	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	256076	1961	Premise Match	78m	North West
	TILE MFRS. &/OR DISTS.-FLOOR & WALL	N.S.W. Asphalt Co. Pty. Ltd., 15 Franklin St., Glebe	256990	1961	Premise Match	78m	North West
	DAMPCOURSE MFRS.	N.S.W. Asphalt Co., 15 Franklin St., Glebe	294417	1961	Premise Match	78m	North West
	MOTOR TRIMMERS	Ryan, H. A., Rear 36 Glebe St., Glebe	352353	1961	Premise Match	78m	North West
	MOTOR PAINTERS	Ryan, H. A., Rear 36 Glebe St., Glebe.	349148	1961	Premise Match	78m	North West
	MOTOR PANEL BEATERS	Ryan, H. A., Rear 36 Glebe St., Glebe.	349932	1961	Premise Match	78m	North West
	MOTOR SPARE PARTS DEALERS—RETAIL	Wattle Spare Parts, 45 Bay St., Broadway	351783	1961	Premise Match	78m	North West
	MOTOR WRECKERS	Wattle Spare Parts, 45 Bay St., Broadway	352542	1961	Premise Match	78m	North West
	CHAIR MANUFACTURERS	Allison Furniture Co., 15 Franklin St., Glebe	20796	1950	Premise Match	78m	North West
	FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Allison Furniture Co., 15 Franklin St., Glebe	52610	1950	Premise Match	78m	North West

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24	UPHOLSTERERS	Allison Furniture Co., 15 Franklin St., Glebe	111122	1950	Premise Match	78m	North West
	FEATHER PROCESSORS	Australian Feather Mills, 36 Glebe St., Glebe	43558	1950	Premise Match	78m	North West
	TAXI TRUCK OPERATORS	Broadway Taxi Truck, 40 Glebe St., Glebe	107198	1950	Premise Match	78m	North West
	COACH & HORSE DRAWN VEHICLE BUILDERS	Fitch, L., 36 Glebe St., Glebe	25476	1950	Premise Match	78m	North West
	MOTOR BODY BUILDERS	Fitch, L., 36 Glebe St., Glebe	82074	1950	Premise Match	78m	North West
	SHEET METAL WORKERS	Fulham, C., 6 Glebe St., Glebe	101706	1950	Premise Match	78m	North West
	FURNITURE MANUFACTURERS-TUBULAR STEEL	Glebe Ornament Iron and Steel Furniture Mfrs., 11-13 Franklin St., Glebe	53109	1950	Premise Match	78m	North West
	ORNAMENTAL IRON & STEEL WORKERS	Glebe Ornamental Iron & Steel Furniture Mfg., 11-13 Franklin St., Glebe	90364	1950	Premise Match	78m	North West
	METAL PRESSERS & STAMPERS	Glebe Ornamental Iron and Steel (Furniture Manufacturers), 11-13 Franklin St., Glebe	75969	1950	Premise Match	78m	North West
	ART & ORNAMENTAL METAL WORKERS	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	2615	1950	Premise Match	78m	North West
	BLACKSMITHS	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	8315	1950	Premise Match	78m	North West
	DIE & PRESS TOOL MAKERS	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	32697	1950	Premise Match	78m	North West
	ENGINEERS-STRUCTURAL	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	42426	1950	Premise Match	78m	North West
	STEEL FURNITURE MANUFACTURERS	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	105190	1950	Premise Match	78m	North West
	WELDERS-ELECTRIC &/OR OXY	Glebe Ornamental Iron and Steel Furniture Manufacturers, 11-13 Franklin St., Glebe	112806	1950	Premise Match	78m	North West
	ORNAMENTAL IRON & STEEL WORKERS	Glebe Ornamental Iron and Steel Furniture Mfg., 11-13 Franklin St., Glebe	90365	1950	Premise Match	78m	North West
	FENCE & GATE MANUFACTURERS	Glebe Ornamental Iron and Steel Furniture Mfrs., 11 Franklin St., Glebe	43626	1950	Premise Match	78m	North West
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Glebe Ornamental Iron and Steel Furniture Mfrs., 11-13 Franklin St., Glebe	40744	1950	Premise Match	78m	North West
	ASPHALT & ASPHALTERS	N.S.W. Asphalt Co., 15 Franklin St., Glebe	3084	1950	Premise Match	78m	North West
	ASPHALT DAMPCOURSE SUPPLIERS & LAYERS	N.S.W. Asphalt Co., 15 Franklin St., Glebe	3091	1950	Premise Match	78m	North West
	ASPHALT MANUFACTURERS	N.S.W. Asphalt Co., 15 Franklin St., Glebe	3092	1950	Premise Match	78m	North West
	ASPHALTING CONTRACTORS	N.S.W. Asphalt Co., 15 Franklin St., Glebe	3095	1950	Premise Match	78m	North West
	BITUMEN & BITUMINOUS SUPPLIES	N.S.W. Asphalt Co., 15 Franklin St., Glebe	8251	1950	Premise Match	78m	North West
	FLOOR LAYERS	N.S.W. Asphalte Co. (Industrial), 15 Franklin St., Glebe	45586	1950	Premise Match	78m	North West
	FLOORING MATERIALS SPECIALISTS	N.S.W. Asphalte Co. 15 Franklin St, Glebe	45671	1950	Premise Match	78m	North West
	CONCRETE TILES-ROOF	N.S.W. Asphalte Co., 15 Franklin St., Glebe	28420	1950	Premise Match	78m	North West
	CONCRETE TILES-ROOF	N.S.W. Asphalte Co., 15 Franklin St., Glebe	28421	1950	Premise Match	78m	North West
	DAMPCOURSE MANUFACTURERS	N.S.W. Asphalte Co., 15 Franklin St., Glebe	30182	1950	Premise Match	78m	North West
	FLOOR LAYERS	N.S.W. Asphalte Co., 15 Franklin St., Glebe	45587	1950	Premise Match	78m	North West

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24	ROAD MAKING CONTRACTORS	N.S.W. Asphalte CO., 15 Franklin St., Glebe	99586	1950	Premise Match	78m	North West
	TENNIS COURT CONSTRUCTION CONTRACTORS	N.S.W. Asphalte Co., 15 Franklin St., Glebe	107661	1950	Premise Match	78m	North West
	TILE MANUFACTURERS-ROOFING-CONCRETE	N.S.W. Asphalte Co., 15 Franklin St., Glebe	108316	1950	Premise Match	78m	North West
25	Footwear Mfrs. - Children's/Infants'	Clarks Australia Ltd., 213-219 Broadway	88691	1965	Premise Match	78m	South West
	Footwear Mfrs. - Boots/Shoes	Clarks Australia Ltd., 2nd Floor, 213-219 Broadway	88599	1965	Premise Match	78m	South West
	Duplicating/Typing Specs.	Howard Hamilton & Co., Grace Bros. Bldg., 213-219 Broadway	76507	1965	Premise Match	78m	South West
	FOOTWEAR MFRS.-BOOTS/SHOES	Clarks Australia Ltd., 2nd Floor, 213-219 Broadway	312828	1961	Premise Match	78m	South West
	ELECTRIC FURNACE MFRS. &/OR DISTRIBUTORS	Hudson & West Pty. Ltd., 213-219 Broadway	300458	1961	Premise Match	78m	South West
	CHEMISTS-PHARMACEUTICAL	Maxwell, R. H. (Grace Bros. Building), 223 Broadway	21785	1950	Premise Match	78m	South West
26	FURNISHINGS-SOFT-MFRS. &/OR W/SALERS.	Trans World Textiles Australia, 23 Mountain St., Broadway. 2007	36640	1986	Premise Match	88m	North
	MANCHESTER MFRS. &/OR W/SALERS.	Trans World Textiles Australia, 23 Mountain St., Broadway. 2007	52393	1986	Premise Match	88m	North
	TEXTILE IMPS. &/OR W/SALERS.	Trans World Textiles Australia, 23 Mountain St., Broadway. 2007	92956	1986	Premise Match	88m	North
	DRESS FABRIC IMPS. &/OR W/SALERS. (D7100)	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007.	22308	1982	Premise Match	88m	North
	FURNISHINGS-SOFT-MFRS.&/OR W/SALERS. (F7230)	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007.	34250	1982	Premise Match	88m	North
	MANCHESTER MFRS. &/OR W/SALERS. (M0600)	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007.	46046	1982	Premise Match	88m	North
	DRESS FABRIC IMPS. &/OR W/SALERS.	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007	19771	1978	Premise Match	88m	North
	FURNISHINGS - SOFT - MFRS. &/OR W/SALERS.	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007	31093	1978	Premise Match	88m	North
	MANCHESTER MFRS. &/OR W/SALERS.	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007	41071	1978	Premise Match	88m	North
	DRESS FABRIC IMPS. &/OR W/SALERS	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007	22790	1975	Premise Match	88m	North
	FURNISHINGS - SOFT - MFRS. &/OR W/SALERS.	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007	36166	1975	Premise Match	88m	North
	MANCHESTER MFRS. &/OR W/SALERS.	Trans World Textiles Pty. Ltd., 23 Mountain St., Broadway. 2007.	48479	1975	Premise Match	88m	North
	Clothing Mfrs. &/or W'salers - Knitted Goods	Bystra Knitting Mills Pty. Ltd., 25 Mountain St., Broadway	67239	1965	Premise Match	88m	North
	Handkerchief Mfrs.	Heaney, Thomas & Sons Pty. Ltd., 23 Mountain St., Broadway	98936	1965	Premise Match	88m	North
	Buildings	Kelly House., 23 Mountain St. Sydney	56959	1965	Premise Match	88m	North
	Buildings	Mountain House., 25 Mountain St., Ultimo	57042	1965	Premise Match	88m	North
	ADVERTISING NOVELTY MFRS.	Ace Welded Plastics Company, 25-27 Mountain St., Ultimo	266560	1961	Premise Match	88m	North
	PLASTIC GOODS MFRS.	Ace Welded Plastics Company, 25-27 Mountain St., Ultimo	359207	1961	Premise Match	88m	North
	LEATHER GOODS MFRS. &/OR WHOLESALERS	Aristocrat Products Pty. Limited, 25 Mountain St., Ultimo	331011	1961	Premise Match	88m	North
	CLOTHING MFRS. &/OR W'SALERS-KNITTED GOODS	Bystra Knitting Mills, 25 Mountain St., Broadway	289659	1961	Premise Match	88m	North
	HANDKERCHIEF MFRS.	Heaney Thomas & Sons Pty Ltd 23 Mountain St., Broadway	322947	1961	Premise Match	88m	North
	ART NEEDLEWORK MFRS. &/OR WHOLESALERS	Heaney, Thomas & Sons Pty. Ltd., 23 Mountain St., Broadway	268722	1961	Premise Match	88m	North
	CLOTHING MFRS. &/OR W'SALERS-BABY &/OR CHILDREN'S WEAR	Heaney, Thomas & Sons Pty. Ltd., 23 Mountain St., Broadway	289048	1961	Premise Match	88m	North

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26	HANDKERCHIEF MFRS.	Heaney, Thomas & Sons Pty. Ltd., 23 Mountain St., Broadway	322948	1961	Premise Match	88m	North
	NAPERY SPECIALISTS	Heaney, Thomas & Sons Pty. Ltd., 23 Mountain St., Broadway	352981	1961	Premise Match	88m	North
	CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	K.M.G. Knitting Mills Pty. Ltd., 25 Mountain St., Broadway	291008	1961	Premise Match	88m	North
	CLOTHING MFRS. &/OR WHOLESALERS-GENERAL	Excelsior Clothing Co., 25 Mountain St., Broadway	24806	1950	Premise Match	88m	North
	CLOTHING MANUFACTURERS &/OR WHOLESALERS-MEN'S & BOYS	Excelsior Clothing Co., 25-27 Mountain St., Broadway	23654	1950	Premise Match	88m	North
	CLOTHING MFRS. &/OR WHOLESALERS LADIES' MANTLES	Excelsior Clothing Co., 25-27 Mountain St., Broadway	23882	1950	Premise Match	88m	North
	HANDKERCHIEF MANUFACTURERS	Heaney, Thomas & Co., 23 Mountain St., Broadway	60755	1950	Premise Match	88m	North
	HANDKERCHIEF MANUFACTURERS	Heaney, Thomas and Co., 23 Mountain St., Broadway	60756	1950	Premise Match	88m	North
	NAPERY SPECIALISTS	Heaney, Thos. and Co., 23 Mountain St., Broadway	87741	1950	Premise Match	88m	North
	CLOTHING MFRS. &/OR WHOLESALERS UNDERWEAR	K.M.G. Knitting Mills Pty. Ltd., 25 Mountain St., Broadway	24335	1950	Premise Match	88m	North
	KNITTED GOODS MFRS. & KNITTING MILLS	K.M.G. Knitting Mills Pty. Ltd., 25 Mountain St., Broadway	67247	1950	Premise Match	88m	North
27	IMPORTERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St, Broadway. 2007	47936	1986	Premise Match	92m	North
	CHINA &/OR CROCKERY MFRS. &/OR IMPS &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	15149	1986	Premise Match	92m	North
	FIREWORKS MFRS. &/OR W/SALERS &/OR RETAILERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	33029	1986	Premise Match	92m	North
	HOBBY &/OR HANDICRAFT SUPPLIES.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	46014	1986	Premise Match	92m	North
	TOY IMPS. &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	94673	1986	Premise Match	92m	North
	TRAVEL GOODS - WHOLESALE.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	95845	1986	Premise Match	92m	North
	IMPORTERS.	Wong, K. & Co., 50 Bay St., Broadway. 2007	47987	1986	Premise Match	92m	North
	FIREWORKS MFRS. &/OR W/SALERS &/OR RETAILERS. (F2450)	Trans World Agency & Importing Pty. Ltd., 50 Bay St, Broadway. 2007.	30833	1982	Premise Match	92m	North
	CHINA &/OR CROCKERY MFRS.&/OR IMPS &/OR W/SALERS.(C4290)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007.	15987	1982	Premise Match	92m	North
	HOBBY &/OR HANDICRAFT SUPPLIES. (H4250)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007.	40205	1982	Premise Match	92m	North
	IMPORTERS. (I0750)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007.	41839	1982	Premise Match	92m	North
	TOY IMPS. &/OR W/SALERS. (T6225)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007.	81307	1982	Premise Match	92m	North
	TRAVEL GOODS - WHOLESALE(T7550)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007.	82300	1982	Premise Match	92m	North
	IMPORTERS. (I0750)	Wong, K. & Co., 50 Bay St., Broadway. 2007.	41879	1982	Premise Match	92m	North
	FIREWORKS MFRS. &/OR W/SALERS &/OR RETAILERS.	Trans Work Agency & Importing Pty. Ltd., 50 Bay St, Broadway. 2007	27902	1978	Premise Match	92m	North
	CHINA &/OR CROCKERY MFRS. &/OR IMPS &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd, 50 Bay St, Broadway. 2007	14135	1978	Premise Match	92m	North
	IMPORTERS.	Trans World Agency & Importing Pty. Ltd, 50 Bay St, Broadway. 2007	37164	1978	Premise Match	92m	North
	TOY IMPS. &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd, 50 Bay St, Broadway. 2007	71812	1978	Premise Match	92m	North
	TRAVEL GOODS W/SALERS.	Trans World Agency & Importing Pty. Ltd, 50 Bay St, Broadway. 2007	72585	1978	Premise Match	92m	North

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
27	TOY IMPS. &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd, 50 Bay St, Broadway.2007	71760	1978	Premise Match	92m	North
	HOBBY &/OR HANDICRAFT SUPPLIES.	Trans World Agency & Importing Pty. Ltd., 50 Bay St, Broadway. 2007	35669	1978	Premise Match	92m	North
	IMPORTERS.	Wong, K. & Co., 50 Bay St., Broadway. 2007	37203	1978	Premise Match	92m	North
	HANDBAG MFRS. &/OR W/SALERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St. Broadway. 2007	41147	1975	Premise Match	92m	North
	HOBBY &/OR HANDICRAFT SUPPLIES.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	42149	1975	Premise Match	92m	North
	TOY IMPS. &/ORW/SALERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	84454	1975	Premise Match	92m	North
	TOY IMPS. &/ORW/SALERS.	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway. 2007	84519	1975	Premise Match	92m	North
	IMPORTERS.	Wong. K. & Co., 50 Bay St., Broadway. 2007	44022	1975	Premise Match	92m	North
	IMPORTERS (I200)	Trans World Agency & Importing Pty. Ltd., 50 Bay St, Broadway	318819	1970	Premise Match	92m	North
	EXPORTERS (E835)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	301888	1970	Premise Match	92m	North
	FIREWORKS SUPPLIERS &/OR SPECIALISTS (F215)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	303185	1970	Premise Match	92m	North
	FURNITURE-NURSERY-MFRS.&/OR WHOLESALERS (F760)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	309795	1970	Premise Match	92m	North
	HOBBY/HANDCRAFTS SUPPLIES(H440)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	316322	1970	Premise Match	92m	North
	TOY IMPORTERS &/OR WHOLESALERS(T540)	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	370400	1970	Premise Match	92m	North
	CHINA, & CROCKERY MFRS., IMPS. &/OR WHOLESALERS	Transworld Agency & Importing Pty. Ltd., 50 Bay St., Bdwy	281382	1970	Premise Match	92m	North
	IMPORTERS (I200)	Wong, K. & Co., 50 Bay St., Broadway	318883	1970	Premise Match	92m	North
	Exporters	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	85257	1965	Premise Match	92m	North
	Fireworks Suppliers &/or Specialists	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	86558	1965	Premise Match	92m	North
	Furniture - Nursery - Mfrs. &/or Wholesalers	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	93855	1965	Premise Match	92m	North
	Hobby/Handcrafts Supplies	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	100339	1965	Premise Match	92m	North
	Importers	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	103022	1965	Premise Match	92m	North
	Toy Importers &/or Wholesalers	Trans World Agency & Importing Pty. Ltd., 50 Bay St., Broadway	153242	1965	Premise Match	92m	North
28	Tyre Dealers &/or Retreaders &/or Vulcanisers	Goodyear Tyre Service, 461 Wattle St Ultimo 2007	65273	1991	Premise Match	99m	North East
	Motor Panel Beaters &/or Spray Painters	Scientific Motor Body Works, 451 Wattle St Broadway 2007	54778	1991	Premise Match	99m	North East
	MOTOR BRAKE SERVICES.	Better Brakes Pty, Ltd., 473 Wattle St., Broadway. 2007	61516	1986	Premise Match	99m	North East
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS.	Goodyear Tyre Service, 461 Wattle St., Ultimo. 2007	96355	1986	Premise Match	99m	North East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway. 2007	66733	1986	Premise Match	99m	North East
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS.	Wattle Street Tyre Service, 449 Wattle St., Broadway. 2007	96461	1986	Premise Match	99m	North East
	MOTOR BRAKE SERVICES. (M5240)	Better Brakes Pty. Ltd., 467 Wattle St., Broadway. 2007.	54392	1982	Premise Match	99m	North East
	TYRE DEALERS &/ORRETREADERS &/OR VULCANISERS. (T8830)	Goodyear Tyre Service, 461 Wattle St., Ultimo. 2007.	82648	1982	Premise Match	99m	North East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway. 2007.	58694	1982	Premise Match	99m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
28	TYRE DEALERS &/ORRETREADERS &/OR VULCANISERS. (T8830)	Wattle Street Tyre Service, 449 Wattle St., Broadway. 2007.	82753	1982	Premise Match	99m	North East
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway.	72956	1978	Premise Match	99m	North East
	MOTOR PANEL BEATERS	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway.	52342	1978	Premise Match	99m	North East
	MOTOR PAINTERS.	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway. 2007	51661	1978	Premise Match	99m	North East
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS	Wattle Street Tyre Service, 449 Wattle St., Broadway,	72992	1978	Premise Match	99m	North East
	TYRE DEALERS, RETREADERS &/OR VULCANIZERS,	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway.	85606	1975	Premise Match	99m	North East
	MOTOR PAINTERS.	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway.	60409	1975	Premise Match	99m	North East
	MOTOR PANEL BEATERS.	Scientific Motor Body Works Pty. Ltd., 451 Wattle St., Broadway.	61101	1975	Premise Match	99m	North East
	TYRE DEALERS, RETREADERS &/OR VULCANIZERS,	Wattle Street Tyre Service, 449 Wattle St., Broadway.	85658	1975	Premise Match	99m	North East
	TYRE DEALERS, RETREADERS & VULCANIZERS	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway	371733	1970	Premise Match	99m	North East
	TYRE/TUBE DEALERS (T760)	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway	371909	1970	Premise Match	99m	North East
	BATTERY SALES & SERVICE (B230)	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway & Branches	265377	1970	Premise Match	99m	North East
	MOTOR ELECTRICIANS (M620)	Speedo Electric Co Pty. Ltd., 451 Wattle St., Broadway	336959	1970	Premise Match	99m	North East
	ARMATURE WINDERS (A465)	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	262264	1970	Premise Match	99m	North East
	BATTERY DISTRIBUTORS (B190)	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	265254	1970	Premise Match	99m	North East
	BATTERY SALES & SERVICE (B230)	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	265390	1970	Premise Match	99m	North East
	INSTRUMENTS-AUTOMOTIVE-SPECIALISTS (I380)	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	319485	1970	Premise Match	99m	North East
	MOTOR PARKING STATIONS (M688)	Wattle Service Station., 479 Wattle St., Ultimo	340631	1970	Premise Match	99m	North East
	TYRE/TUBE DEALERS (T760)	Wattle Street Tyre Service, 449 Wattle St., Ultimo	371955	1970	Premise Match	99m	North East
	Instruments - Automotive - Specialists	Auto Exchange Service Pty. Ltd., 451 Wattle St., Broadway	103594	1965	Premise Match	99m	North East
	Motor Electricians	Auto Exchange Service Pty. Ltd., 451 Wattle St., Broadway	121674	1965	Premise Match	99m	North East
	Tyre Dealers, Retreaders & Vulcanizers	Motor Tyre Service Pty. Ltd, 461 Wattle St, Broadway	154745	1965	Premise Match	99m	North East
	Motor Accessories - Dealers	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway	119568	1965	Premise Match	99m	North East
	Tyre/Tube Dealers	Motor Tyre Service Pty. Ltd., 461 Wattle St., Broadway,	154546	1965	Premise Match	99m	North East
	Armature Winders	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	46921	1965	Premise Match	99m	North East
	Motor Electricians	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway	121828	1965	Premise Match	99m	North East
	Tyre/Tube Dealers	Wattle Street Tyre Service, 449 Wattle St., Ultimo	154603	1965	Premise Match	99m	North East
	MOTOR ELECTRICIANS	Auto Xchange Service Pty. Ltd., 451 Wattle St., Broadway	345976	1961	Premise Match	99m	North East
	MOTOR GARAGES & ENGINEERS	Carter, C., 449 Wattle St. Ultimo	346835	1961	Premise Match	99m	North East
	TYRE RETREAD./VULCANIZERS	Motor Tyre Service Pty. Ltd., 461-471 Wattle St., Ultimo	260084	1961	Premise Match	99m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
28	TYRE/TUBE DEALERS	Motor Tyre Service Pty. Ltd., 469-471 Wattle St., Ultimo	260285	1961	Premise Match	99m	North East
	ARMATURE WINDERS	Speedo Electric Co Pty Ltd 451 Wattle St., Broadway	268677	1961	Premise Match	99m	North East
	MOTOR ELECTRICIANS	Speedo Electric Co Pty Ltd 451 Wattle St., Broadway	346171	1961	Premise Match	99m	North East
	ARMATURE WINDERS	Speedo Electric Co. Pty. Ltd., 451 Wattie St., Broadway.	268678	1961	Premise Match	99m	North East
	BATTERY SERVICE STATIONS	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway.	272080	1961	Premise Match	99m	North East
	INSTRUMENTS—AUTOMOTIVE-SPECIALISTS	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway.	327260	1961	Premise Match	99m	North East
	MOTOR ELECTRICIANS	Speedo Electric Co. Pty. Ltd., 451 Wattle St., Broadway.	346172	1961	Premise Match	99m	North East
	TYRE RETREAD./VULCANIZERS	Wattle Street Tyre Service, 449 Wattle St., Ultimo	260129	1961	Premise Match	99m	North East
	TYRE/TUBE DEALERS	Wattle Street Tyre Service, 449 Wattle St., Ultimo	260345	1961	Premise Match	99m	North East
	TYRE & TUBE DEALERS	Advanx Tyre and Rubber Co. Pty. Ltd., 449 Wattle St., Ultimo	110781	1950	Premise Match	99m	North East
	TYRE & TUBE MFRS. &/OR DISTRIBUTORS	Advanx Tyre and Rubber Co. Pty. Ltd., 449 Wattle St., Ultimo	110905	1950	Premise Match	99m	North East
	TYRE RETREADERS & VULCANISERS	Advanx Tyre and Rubber Co. Pty. Ltd., 449 Wattle St., Ultimo	110933	1950	Premise Match	99m	North East
	WELDERS-ELECTRIC &/OR OXY	Carter, C., 449 Wattle St., Ultimo	112703	1950	Premise Match	99m	North East
	CARRIERS & CARTAGE CONTRACTORS (MASTER)	Cavanough, H., 469 Wattle St., Ultimo	20132	1950	Premise Match	99m	North East
	LIME & CEMENT MERCHANTS	Morrissey, L., 449 Wattle St., Ultimo	69090	1950	Premise Match	99m	North East
	CONCRETE GOODS MANUFACTURERS	Thomson, J. B., 449 Wattle St., Ultimo	28371	1950	Premise Match	99m	North East
	LANDSCAPE GARDENERS	Thomson, J. B., 449 Wattle St., Ultimo	67499	1950	Premise Match	99m	North East
	BOTTLE MERCHANTS & EXCHANGES	Union Bottle Coy., 467 Wattle St., Broadway	10959	1950	Premise Match	99m	North East
	CARRIERS & CARTAGE CONTRACTORS	Whitehead, H. S. and Co., 479 Wattle St., Ultimo	20053	1950	Premise Match	99m	North East
	CARRIERS & CARTAGE CONTRACTORS (MASTER)	Whitehead, H. S. and Co., 479 Wattle St., Ultimo	20347	1950	Premise Match	99m	North East

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Business Directory Records 1950-1991
Road or Area Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
29	CAN & DRUM MANUFACTURERS	Consumers Canister Works, Mountain St.	283501	1961	Road Match	0m
	HOT WATER SYSTEMS-ELECTRIC-MFRS. &/OR DISTS.	Malleys Ltd., Mountain St., Broadway	324953	1961	Road Match	0m
	SEWING MACHINE REPAIRERS	Singer Sewing Machine Co., Mountain St., Broadway	101508	1950	Road Match	0m
	SEWING MACHINE DEALERS	Singer Sewing Machine Co., Mountain Street, Broadway	101445	1950	Road Match	0m
	MOTOR ACCESSORIES-DEALER	Ward, H., Mountain St., Ultimo	81830	1950	Road Match	0m
30	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Gilkesons Auto Services, Bay St., Ultimo. 2007	66332	1986	Road Match	34m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Gilkesons Auto Services, Bay St., Ultimo. 2007.	58326	1982	Road Match	34m
	Nurserymen	Bay Street Nursery, Bay St., Glebe	129047	1965	Road Match	34m
	Clothing Mfrs. &/or W'salers - Collars & Ties, Etc.	Jayson Traurig Bros. Pty. Ltd., 6th Floor, Grace Bros. Women's Store, Bay St., Broadway	66931	1965	Road Match	34m
	Clothing Mfrs. &/or W'salers - Shirt & Pyjama	Jayson Traurig Bros. Pty. Ltd., 6th Flr., Grace Bros. Women's Store, Bay St., Broadway	68197	1965	Road Match	34m
	FURNITURE REMOVALISTS/STORAGE	Mercantile Free Stores, Bay St., Glebe	317122	1961	Road Match	34m
	TRANSPORT SERVICES-INTERSTATE	Bailey, Trevor, City Depot, Amors Free Stores, Bay St., Ultimo	110211	1950	Road Match	34m
	CARRIERS & CARTAGE CONTRACTORS	Wong, S. and Sons, Bay St., Ultimo	20081	1950	Road Match	34m
31	OFFICE MACHINE REPAIRS	Stott & Morley N.S.W. Pty. Ltd., Francis St., Broadway	129401	1965	Road Match	54m
	ELECTRICAL CONTRACTORS-LICENSED	Simon-Carves (Aust.) Pty. Ltd, 16 Francis St., Glebe	302515	1961	Road Match	54m
32	Carriers & Cartage Contractors - Master	Green, T. S. & Co. Pty. Ltd., Greek St., Glebe	62702	1965	Road Match	57m
	CARRIERS & CARTAGE CONTRACTORS-MASTER	Green, T. S. & Co., Greek St., Glebe	285662	1961	Road Match	57m
33	PHOTOGRAPHERS—AERIAL	Grace Studio, Grose St., Broadway	357531	1961	Road Match	72m
	PHOTOGRAPHERS—COMMRCL.	Grace Studio, Grose St., Broadway	357595	1961	Road Match	72m
	FLOUR MILLING MACHINERY MFRS. &/OR DISTS.	Simon, H. (Aust.) Ltd., Grose St., Glebe	312179	1961	Road Match	72m
	CANNERS & CANNED FOOD SPECIALISTS	Christie, A. E., Grose St., Glebe	17498	1950	Road Match	72m
	PHOTOGRAPERS-COMMERCIAL	Searle, Edward, Grose St., Broadway	91674	1950	Road Match	72m
	PHOTOGRAPHERS-PORTRAIT	Searle, Edward, Grose St., Broadway	92000	1950	Road Match	72m
34	TOURS-MOTOR SERVICES.	Grace Bros. Travel, Broadway	71522	1978	Road Match	92m
	TEA MERCHANTS & PACKERS	Oriental Tea Co. Ltd., P.O. Box 12, Broadway	107588	1950	Road Match	92m

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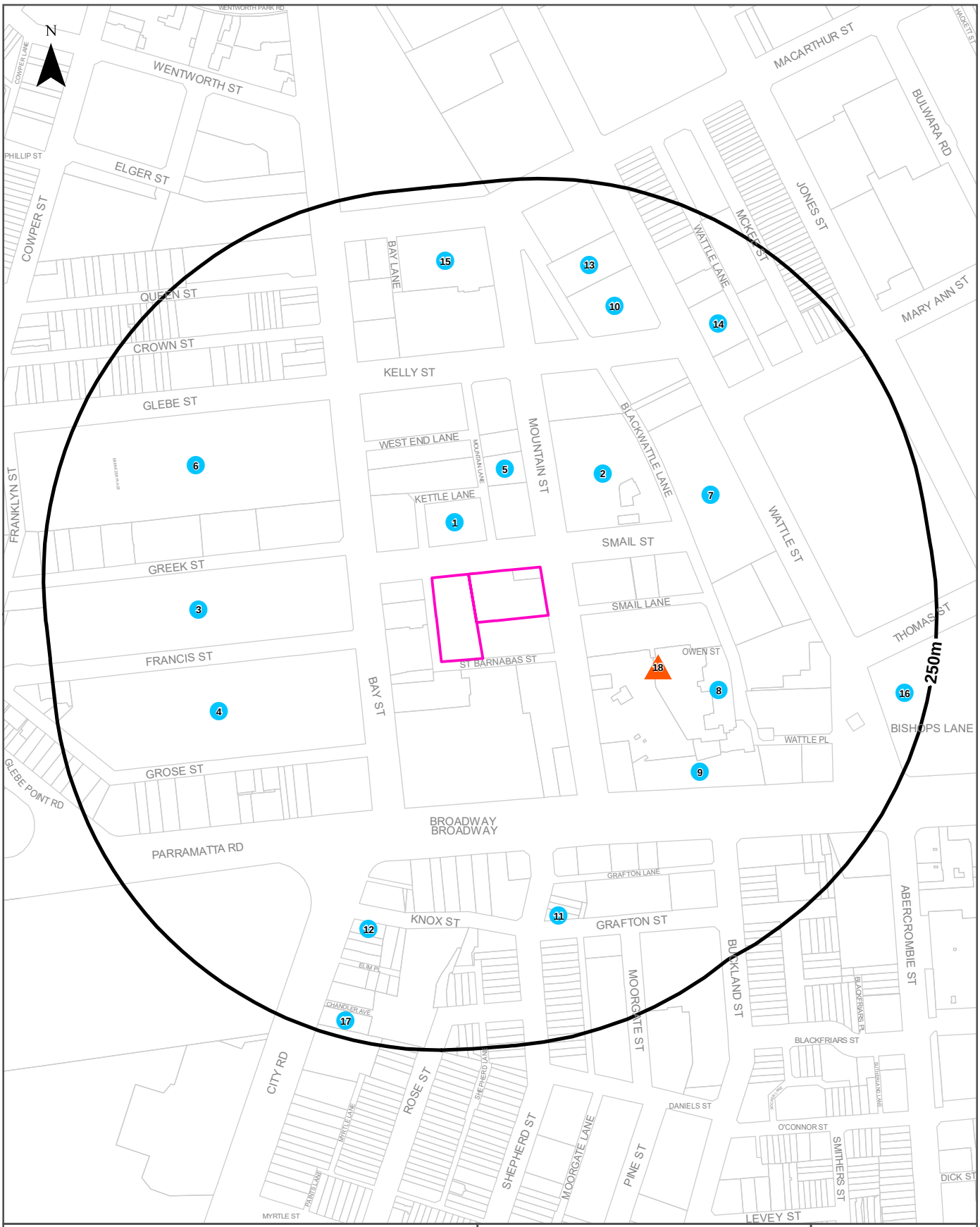
Dry Cleaners, Motor Garages & Service Stations

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Legend

- Site Boundary
- Buffer 250m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 40 80 120 160 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 September 2024

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

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Historical Business Directories

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES & ENGINEERS	Motor Repairing & Welding Pty. Ltd., 2 Smail St., Bdwy	13387	1959	Premise Match	20m	North
	MOTOR GARAGE/ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 2 Smail St., Broadway	4622	1958	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 2 Smail St., Broadway	61169	1956	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 2 Smail St., Broadway	49730	1954	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 2 Smail St., Broadway	31981	1952	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS	Motor Repairing and Welding Pty. Ltd., 2 Smail St., Broadway	84112	1950	Premise Match	20m	North
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing And Welding Pty. Ltd., 2 Smail St., Broadway	22653	1948-49	Premise Match	20m	North
2	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Small St., Ultimo	13169	1972	Premise Match	28m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	13170	1972	Premise Match	28m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty Ltd., 16 Smail St., Broadway	56408	1971	Premise Match	28m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	62822	1971	Premise Match	28m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	62823	1971	Premise Match	28m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St., Broadway	56409	1971	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Broadway	338296	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Ultimo	338297	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Perdriau, J. A. Pty. Ltd., 16 Smail St. Broadway	338410	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Perdriau, J. A. Pty. Ltd., 16 Smail St. Ultimo	338409	1970	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Broadway	37683	1969	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	47270	1969	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Broadway	37684	1969	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	47271	1969	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing & Welding Pty. Ltd., 16 Smail St Broadway	21113	1968	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	30697	1968	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Perdriau J. A. Pty. Ltd., 16 Smail St Broadway	21114	1968	Premise Match	28m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
2	MOTOR GARAGES & ENGINEERS	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	30698	1968	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Broadway	6683	1967	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	11119	1967	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Broadway	6684	1967	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	11120	1967	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	60845	1966	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St.	55475	1966	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Sydney	55479	1966	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	60846	1966	Premise Match	28m	North East
	Motor Garages & Engineers	Motor Repairing & Welding Pty. Ltd., 16 Smail St. Ultimo	123477	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Motor Repairing & Welding Pty. Ltd., 16 Smail St., Sydney	122057	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Perdriau, J. A. Pty. Ltd., 16 Smail St. Ultimo	123479	1965	Premise Match	28m	North East
	Motor Garages & Engineers	Perdriau, J. A. Pty. Ltd., 16 Smail St., Sydney	122061	1965	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing & Welding Pty. Ltd., 16 Smail St Sydney	43253	1964	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	48752	1964	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Perdriau J. A. Pty. Ltd., 16 Smail St Sydney	43259	1964	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	48753	1964	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Sydney	28644	1962	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Motor Repairing & Welding Pty. Ltd., 16 Smail St Ultimo	33541	1962	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Sydney	28651	1962	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS.	Perdriau J. A. Pty. Ltd., 16 Smail St Ultimo	33542	1962	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Motor Repairing &. Welding Pty. Ltd., 16 Smail St. BROADWAY	347750	1961	Premise Match	28m	North East
	MOTOR GARAGES & ENGINEERS	Perdriau, J. A. Pty. Ltd., 16 Small St., BROADWAY	347896	1961	Premise Match	28m	North East
3	DRY CLEANERS & PRESSERS.	Broadway Dry Cleaners, 35 Bay St., Glebe. 2037	53025	1988	Premise Match	54m	West
	DRY CLEANERS & PRESSERS.	Broadway Dry Cleaners., 35A Bay St., Broadway 2007	8500	1983	Premise Match	54m	West
4	DRY CLEANERS, PRESSERS/DYERS.	Grace Bros. Pty. Ltd., Broadway	24775	1962	Premise Match	54m	West
	DRY CLEANERS, PRESSERS / DYERS	Grace Bros. Pty. Ltd., Broadway	299125	1961	Premise Match	54m	West
	DRY CLEANERS, PRESSERS/DYERS	Grace Bros. Pty. Ltd., Broadway	10069	1959	Premise Match	54m	West
	DRY CLEANERS, PRESSERS & DYERS	Grace Bros. Pty. Ltd., Broadway	260	1958	Premise Match	54m	West
	DRY CLEANERS, PRESSERS & DYERS.	Grace Bros. Pty. Ltd., Broadway	54851	1956	Premise Match	54m	West
	DRY CLEANERS, PRESSERS & DYERS.	Grace Bros. Pty. Ltd., Broadway	44381	1954	Premise Match	54m	West
	DRY CLEANERS, PRESSERS & DYERS.	Grace Bros. Pty. Ltd., Broadway	36196	1953	Premise Match	54m	West
	DRY CLEANERS, PRESSERS & DYERS.	Grace Bros. Pty. Ltd., Broadway	27078	1952	Premise Match	54m	West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
4	DRY CLEANERS, PRESSERS & DYERS	Grace Bros. Pty. Ltd., Broadway	35269	1950	Premise Match	54m	West
5	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	7655	1972	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H., 33 Mountain St., Broadway	7391	1972	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	56407	1971	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H., 33 Mountain St., Broadway	55132	1971	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS(M6S6)	Gillies, D. H., 33 Mountain St., Broadway	337864	1970	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	37406	1969	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	37682	1969	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS	Gillies D. H. & Son., 33 Mountain St., Broadway	20857	1968	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	6414	1967	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS.	Gillies D. H., 33 Mountain St., Broadway, Sydney	55461	1966	Premise Match	55m	North
	Motor Service Stations - Petrol, Oil, Etc.	Gillies, D. H. & Son, 33 Mountain St. Sydney	125333	1965	Premise Match	55m	North
	Motor Garages & Engineers	Gillies, D. H., 33 Mountain St., Broadway, Sydney	122042	1965	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS	Gillies D. H. & Son., 33 Mountain St., Broadway	43238	1964	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Gillies, D. H. & Son., 33 Mountain St., Sydney	48869	1964	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	28616	1962	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Gillies D. H. & Son., 33 Mountain St., Sydney	37760	1962	Premise Match	55m	North
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Gillies, D. H. & Son, 33 Mountain St. Broadway	350604	1961	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS	Gillies, D. H., 33 Mountain St., Broadway	347226	1961	Premise Match	55m	North
	MOTOR GARAGES & ENGINEERS	Gillies D. H. & Son., 33 Mountain St., Broadway	13357	1959	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Gillies D. H. & Son., 33 Mountain St., Broadway	24021	1959	Premise Match	55m	North
	MOTOR GARAGE/ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	4164	1958	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL, ETC.	Gillies D. H. & Son., 33 Mountain St., Broadway	9537	1958	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	57702	1956	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	49313	1954	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	40042	1953	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies D. H. & Son., 33 Mountain St., Broadway	31682	1952	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS	Gillies, D. H., 33 Mountain St., Broadway	83801	1950	Premise Match	55m	North
	MOTOR SERVICE STATIONS-PETROL, Etc.	Gillies, D., 33 Mountain St., Broadway	85992	1950	Premise Match	55m	North
	MOTOR GARAGES &/OR ENGINEERS.	Gillies, D. H., 33 Mountain St., Broadway	22379	1948-49	Premise Match	55m	North

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5	MOTOR SERVICE STATIONS-PETROL, ETC.	Gillies, D., 33 Mountain St., Broadway	23278	1948-49	Premise Match	55m	North
6	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Baber. R. Motors., 50 Glebe St., Glebe 2037	25077	1976	Premise Match	78m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Baber, R. Motors., 50 Glebe St., Glebe. 2037	58399	1975	Premise Match	78m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Baber R. Motors., 50 Glebe St Glebe	12220	1972	Premise Match	78m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Baber R. Motors., 50 Glebe St Glebe	56831	1971	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS(M6S6)	Baber, R. Motors., 50 Glebe St., Glebe	337259	1970	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS.	Baber R. Motors., 50 Glebe St., Glebe	42246	1969	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS	Baber R. Motors., 50 Glebe St Glebe	25768	1968	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS.	Baber R. Motors., 50 Glebe St Glebe	10271	1967	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS.	Baber R. Motors., 50 Glebe St Glebe	56161	1966	Premise Match	78m	North West
	Motor Garages & Engineers	Baber, R. Motors, 50 Glebe St. Glebe	122695	1965	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS	Baber Ron Rear., 36 Glebe St Glebe	47961	1964	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS.	Baber Ron Rear., 36 Glebe St Glebe	29478	1962	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS	Baber, Ron, Rear 36 Glebe St. GLEBE	346577	1961	Premise Match	78m	North West
	MOTOR GARAGES & ENGINEERS.	Baber, Ron, Rear 36 Glebe St. Glebe	14142	1959	Premise Match	78m	North West
	MOTOR GARAGE/ENGINEERS.	Baber Ron., Rear 36 Glebe St., Glebe	580	1958	Premise Match	78m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Baber Ron Rear., 36 Glebe St Glebe	57204	1956	Premise Match	78m	North West
7	MOTOR GARAGES & ENGINEERS.	Carter C., 449 Wattle St Ultimo	33540	1962	Premise Match	99m	North East
	MOTOR GARAGES & ENGINEERS	Carter, C., 449 Wattle St. Ultimo	346835	1961	Premise Match	99m	North East
	MOTOR GARAGES & ENGINEERS.	Carter C., 449 Wattle St Ultimo	20058	1959	Premise Match	99m	North East
	MOTOR GARAGE/ENGINEERS.	Carter C., 449 Wattle St Ultimo	793	1958	Premise Match	99m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Carter C., 449 Wattle St Ultimo	57394	1956	Premise Match	99m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Carter C., 449 Wattle St Ultimo	49017	1954	Premise Match	99m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Speedo Electric Co Pty Ltd., 451 Wattle St Broadway	27401	1952	Premise Match	99m	North East
8	MOTOR GARAGES & SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	53983	1988	Premise Match	103m	East
	MOTOR GARAGES & SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	64450	1986	Premise Match	103m	East
	MOTOR GARAGES & SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	39445	1985	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	28033	1984	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway 2007	14450	1983	Premise Match	103m	East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
8	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007.	56507	1982	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	3070	1981	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007	52699	1980	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway. 2007.	41251	1979	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Century Motors Pty. Ltd., 3 Owen St., Broadway.	49781	1978	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS.	Century Motors Pty. Ltd., 3 Owen St Broadway	7654	1972	Premise Match	103m	East
	MOTOR GARAGES &/OR ENGINEERS.	Century Motors Pty. Ltd., 3 Owen St Broadway	56406	1971	Premise Match	103m	East
	MOTOR GARAGES & ENGINEERS(M6S6)	Century Motors Pty. Ltd., 3 Owen St. BROADWAY	337556	1970	Premise Match	103m	East
	MOTOR GARAGES & ENGINEERS.	Century Motors Pty. Ltd., 3 Owen St Broadway	37681	1969	Premise Match	103m	East
	MOTOR GARAGES & ENGINEERS	Century Motors Pty. Ltd., 3 Owen St Broadway	21112	1968	Premise Match	103m	East
	MOTOR GARAGES & ENGINEERS.	Century Motors Pty. Ltd., 3 Owen St Broadway	6682	1967	Premise Match	103m	East
	MOTOR GARAGES & ENGINEERS.	Century Motors Pty. Ltd., 3 Owen St Ultimo	55454	1966	Premise Match	103m	East
	Motor Garages & Engineers	Century Motors. Pty. Ltd., 3 Owen St., Ultimo, Sydney	122037	1965	Premise Match	103m	East
9	DRY CLEANERS, PRESSERS & DYERS.	Jenkins Fred C. & Son., 163 Broadway	44399	1954	Premise Match	109m	South East
	DRY CLEANERS, PRESSERS & DYERS.	Jenkins Fred C. & Son., 163 Broadway	36217	1953	Premise Match	109m	South East
10	MOTOR GARAGES & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	25512	1993	Premise Match	152m	North East
	Motor Garages & Service Stations	Ultimo Auto Port, 389 Wattle St., Ultimo 2007	53969	1991	Premise Match	152m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	18352	1990	Premise Match	152m	North East
	MOTOR GARAGE & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	5683	1989	Premise Match	152m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	64160	1988	Premise Match	152m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	65654	1986	Premise Match	152m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	45777	1985	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007	34340	1984	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port., 389 Wattle St., Ultimo 2007	21780	1983	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Ultimo Auto Port, 389 Wattle St., Ultimo. 2007.	57781	1982	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Alma Port., 389 Wattle St., Ultimo 2007	8359	1981	Premise Match	152m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
10	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port., 389 Wattle St., Ultimo. 2007	59046	1980	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port., 389 Wattle St., Ultimo. 2007.	46545	1979	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port, 389 Wattle St., Ultimo.	51030	1978	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ultimo Auto Port., 389 Wattle St., Ultimo 2007	35128	1976	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Ultimo Auto Port. 389 Wattle St., Ultimo.	59711	1975	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS.	G.B. Auto Port (The), 389 Wattle St., Ultimo	13168	1972	Premise Match	152m	North East
	MOTOR GARAGES &/OR ENGINEERS.	G.B. Auto Port (The), 389 Wattle St., Ultimo	62821	1971	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	G.B. Auto Port (The), 389 Wattle St. Ultimo	337839	1970	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	G.B. Auto Port (The), 389 Wattle St. Ultimo	337840	1970	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS.	G.B. Auto Port (The)., 389 Wattle St Ultimo	47269	1969	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS	G.B. Auto Port (The)., 389 Wattle St Ultimo	30696	1968	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS.	G.B. Auto Port (The)., 389 Wattle St Ultimo	11118	1967	Premise Match	152m	North East
	MOTOR GARAGES & ENGINEERS.	G.B Auto Port (The)., 389 Wattle St Ultimo	60844	1966	Premise Match	152m	North East
	Motor Garages & Engineers	Palmers Auto Service, 389 Wattle St. Ultimo	123478	1965	Premise Match	152m	North East
11	MOTOR GARAGES & ENGINEERS.	Klein H. A., 10 Shepherd St., Sydney	28636	1962	Premise Match	166m	South
	MOTOR GARAGES & ENGINEERS	Klein, H. A., 10 Shepherd St., SYDNEY	347519	1961	Premise Match	166m	South
	MOTOR GARAGES & ENGINEERS	Klein H. A., 10 Shepherd St Sydney	13376	1959	Premise Match	166m	South
	MOTOR GARAGE/ENGINEERS.	Klein H. A., 10 Shepherd St	4413	1958	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS.	Klein H. A., 10 Shepherd St	57933	1956	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS.	Klein H. A., 10 Shepherd St	49534	1954	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS.	Klein H. A., 10 Shepherd St	40235	1953	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS.	Klein H. A., 10 Shepherd St	31838	1952	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS	Klein, H. A., 10 Shepherd St.	83963	1950	Premise Match	166m	South
	MOTOR GARAGES &/OR ENGINEERS.	Klein H. A., 10 Shepherd St	22527	1948-49	Premise Match	166m	South
12	DRY CLEANERS, PRESSERS & DYERS	Du Monde Dry Cleaners., 8 City Rd Chippendale	226	1958	Premise Match	173m	South
	DRY CLEANERS, PRESSERS & DYERS.	Mckenzie D. F., 8 City Rd Chippendale	54898	1956	Premise Match	173m	South
13	MOTOR GARAGES & ENGINEERS	Palmers Auto Service., 369 Wattle St Ultimo	48754	1964	Premise Match	174m	North
14	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle Street Service Station, 478 Wattle St., Ultimo. 2007	27861	1984	Premise Match	175m	North East

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Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle Street Service Station, 478 Wattle St., Ultimo. 2007	65753	1983	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	BP Wattle Street Service Station, 478 Wattle St., Ultimo. 2007.	56323	1982	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle Street Service Station., 478 Wattle St., Ultimo. 2007	64002	1981	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle St. Service Station., 478 Wattle St., Ultimo. 2007	51507	1980	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle St. Service Station., 478 Wattle St., Ultimo. 2007.	41110	1979	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle St. Service Station. 478 Wattle St., Ultimo.	49644	1978	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Wattle St. Service Station., 478 Wattle St., Ultimo 2007	25364	1976	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS.	BP Wattle St. Service Station, 478 Wattle St., Ultimo.	58561	1975	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St Ultimo	18236	1972	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Wattle Service Station., 478 Wattle St., Ultimo	13171	1972	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St., Ultimo	2653	1971	Premise Match	175m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Wattle Service Station., 478 Wattle St., Ultimo	62824	1971	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	BP Service Station, 490 Wattle St. Ultimo	340892	1970	Premise Match	175m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Wattle Service Station, 478 Wattle St. Ultimo	338847	1970	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St Ultimo	50822	1969	Premise Match	175m	North East
	MOTOR GARAGES & ENGINEERS.	Wattle Service Station., 478 Wattle St Ultimo	47272	1969	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St Ultimo	36909	1968	Premise Match	175m	North East
	MOTOR GARAGES & ENGINEERS	Willing & Sons Pty. Ltd., 478 Wattle St Ultimo	30699	1968	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St Ultimo	20373	1967	Premise Match	175m	North East
	MOTOR GARAGES & ENGINEERS.	Willing & Sons Pty. Ltd., 478 Wattle St Ultimo	11121	1967	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Service Station., 490 Wattle St., Ultimo	1875	1966	Premise Match	175m	North East
	MOTOR GARAGES & ENGINEERS.	Willing & Sons Pty. Ltd., 478 Wattle St Ultimo	60847	1966	Premise Match	175m	North East
	Motor Service Stations - Petrol, Oil, Etc.	Willing & Sons Pty. Ltd., 478 Wattle St. Ultimo	126212	1965	Premise Match	175m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Willing & Sons Pty. Ltd., 478 Wattle St, Ultimo	52469	1964	Premise Match	175m	North East

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15	MOTOR GARAGES & ENGINEERS.	Larry's Auto Service., 1 Mountain St Broadway Sydney	28639	1962	Premise Match	181m	North
	MOTOR GARAGES & ENGINEERS	Larry's Auto Service, 1 Mountain St., Broadway	347552	1961	Premise Match	181m	North
	MOTOR GARAGES & ENGINEERS	Larry's Auto Service., 1 Mountain St., Broadway	13380	1959	Premise Match	181m	North
	MOTOR GARAGE/ENGINEERS.	Larry's Auto Service., 1 Mountain St Broadway	4436	1958	Premise Match	181m	North
	MOTOR GARAGES &/OR ENGINEERS.	Larry's Auto Service., 1 Mountain St Broadway	57951	1956	Premise Match	181m	North
	MOTOR GARAGES &/OR ENGINEERS.	Larry's Auto Service., 1 Mountain St Broadway	49559	1954	Premise Match	181m	North
	MOTOR GARAGES &/OR ENGINEERS.	Larry's Auto Service, 1 Mountain St., Broadway	40255	1953	Premise Match	181m	North
	MOTOR GARAGES &/OR ENGINEERS.	Larry's Auto Service., 1 Mountain St Broadway	31858	1952	Premise Match	181m	North
	MOTOR GARAGES &/OR ENGINEERS	Larry's Auto Service, 1 Mountain St., Broadway	83987	1950	Premise Match	181m	North
	MOTOR SERVICE STATIONS-PETROL, Etc.	Larry's Auto Service., 1 Mountain St., Broadway	86132	1950	Premise Match	181m	North
16	DRY CLEANERS, PRESSERS &/OR DYERS	Immaculate Dry Cleaners-81 Broadway.	51100	1971	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS.	Immaculate Dry Cleaners Pty. Ltd., 247-249 Jones St, Ultimo	44393	1954	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS.	Immaculate Dry Cleaners Pty. Ltd., 81 George St Broadway	36212	1953	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS.	Immaculate Dry Cleaners Pty. Ltd., 81 George St Broadway	27099	1952	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS	Immaculate Dry Cleaners, 81 Broadway	35302	1950	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS	Jones, Dry Cleaners Pty. Ltd. 103 Broadway	35355	1950	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS.	Immaculate Dry Cleaners., 81 Broadway	17190	1948-49	Premise Match	208m	East
	DRY CLEANERS, PRESSERS & DYERS.	Jones Dry Cleaners Pty. Ltd., 103 Broadway	17242	1948-49	Premise Match	208m	East
17	DRY CLEANERS, PRESSERS & DYERS.	California Pressing Service., 22 City Rd	44323	1954	Premise Match	233m	South
	DRY CLEANERS, PRESSERS & DYERS.	California Pressing Service., 22 City Rd	36132	1953	Premise Match	233m	South

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Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
18	MOTOR GARAGES &/OR ENGINEERS.	Cousins A., Owen St Broadway	57495	1956	Road Match	37m
	MOTOR GARAGES &/OR ENGINEERS.	Cousins A., Owen St Broadway	49117	1954	Road Match	37m

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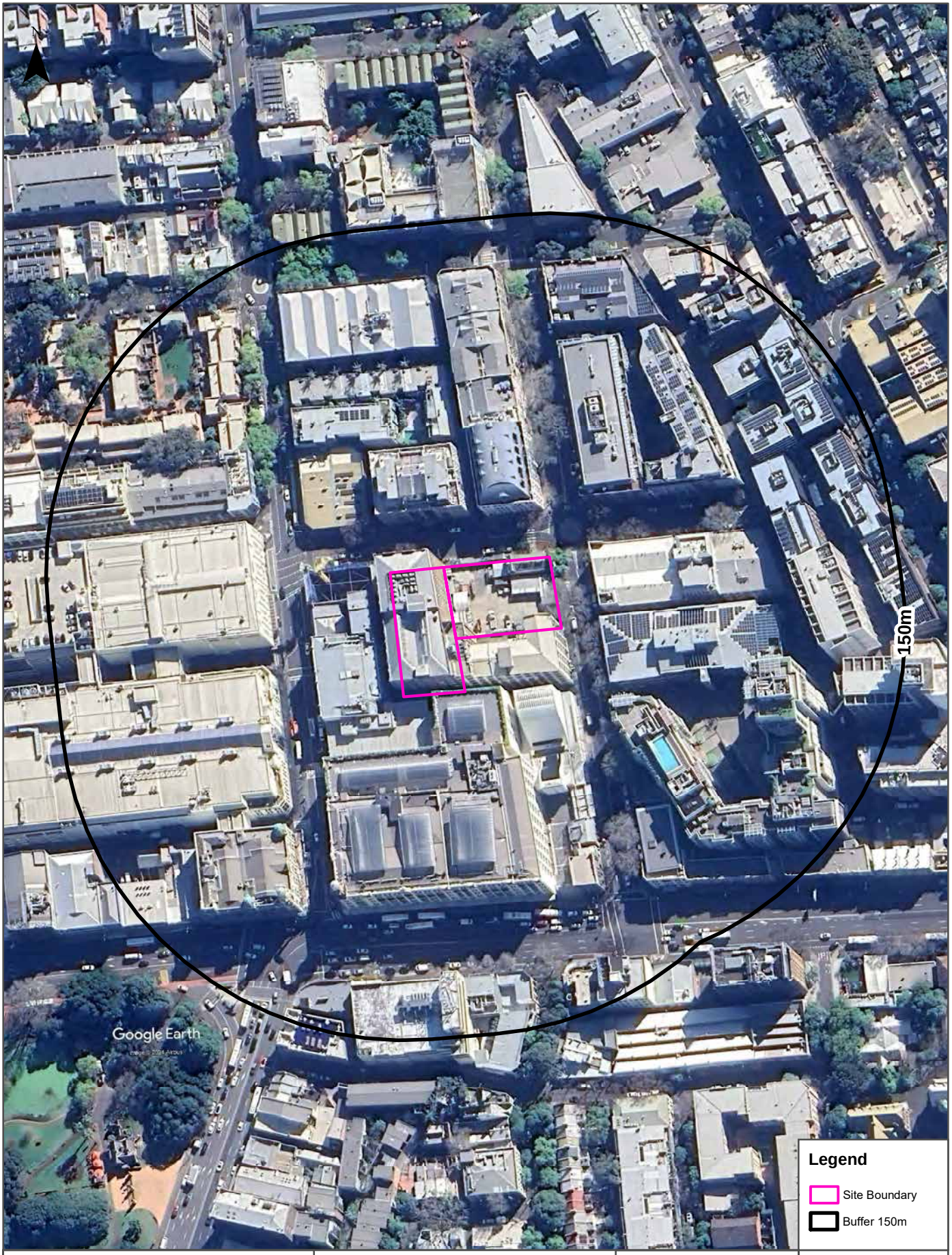
Aerial Imagery 2024

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale:
0 25 50 75 100
Meters

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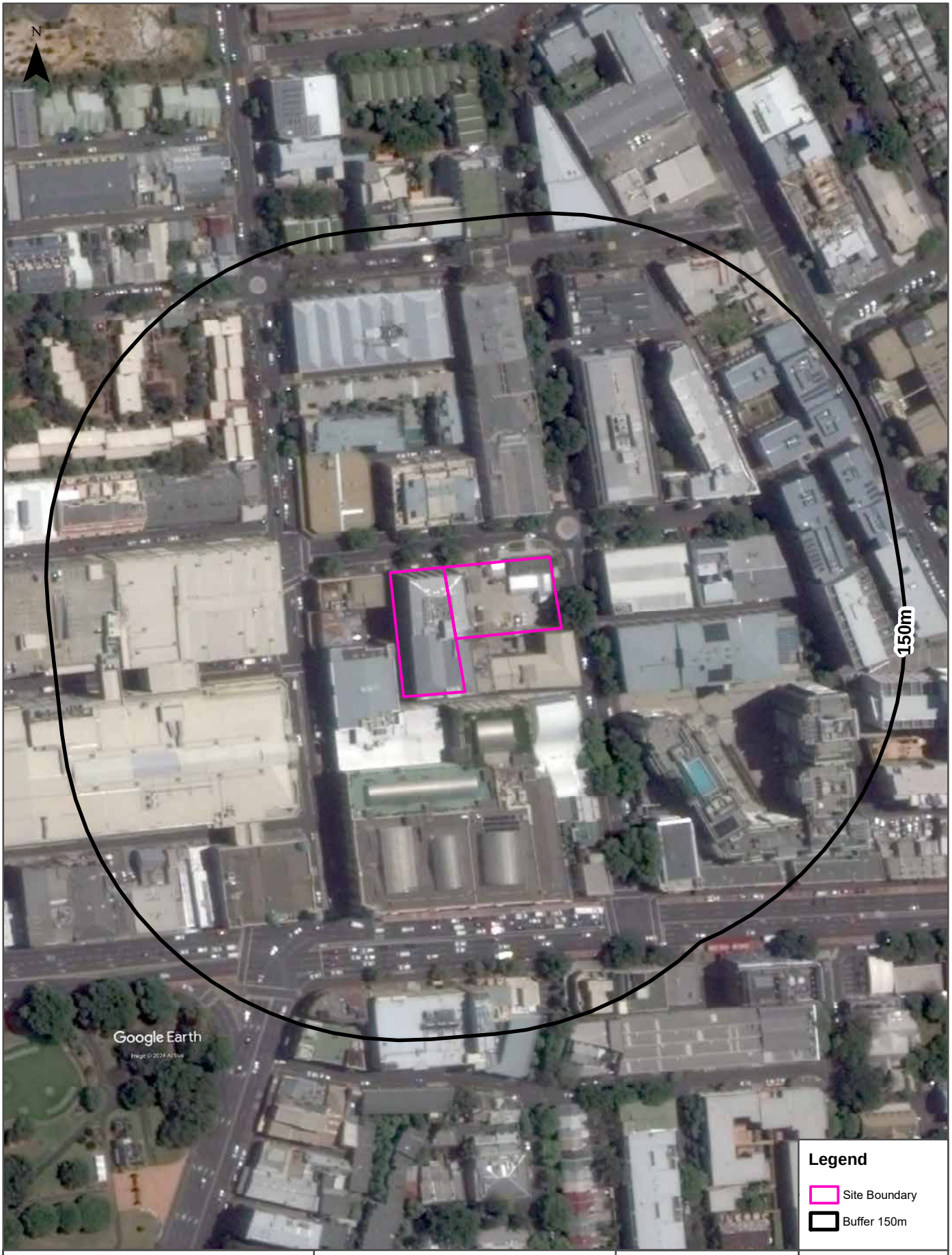
Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 2014

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



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Meters

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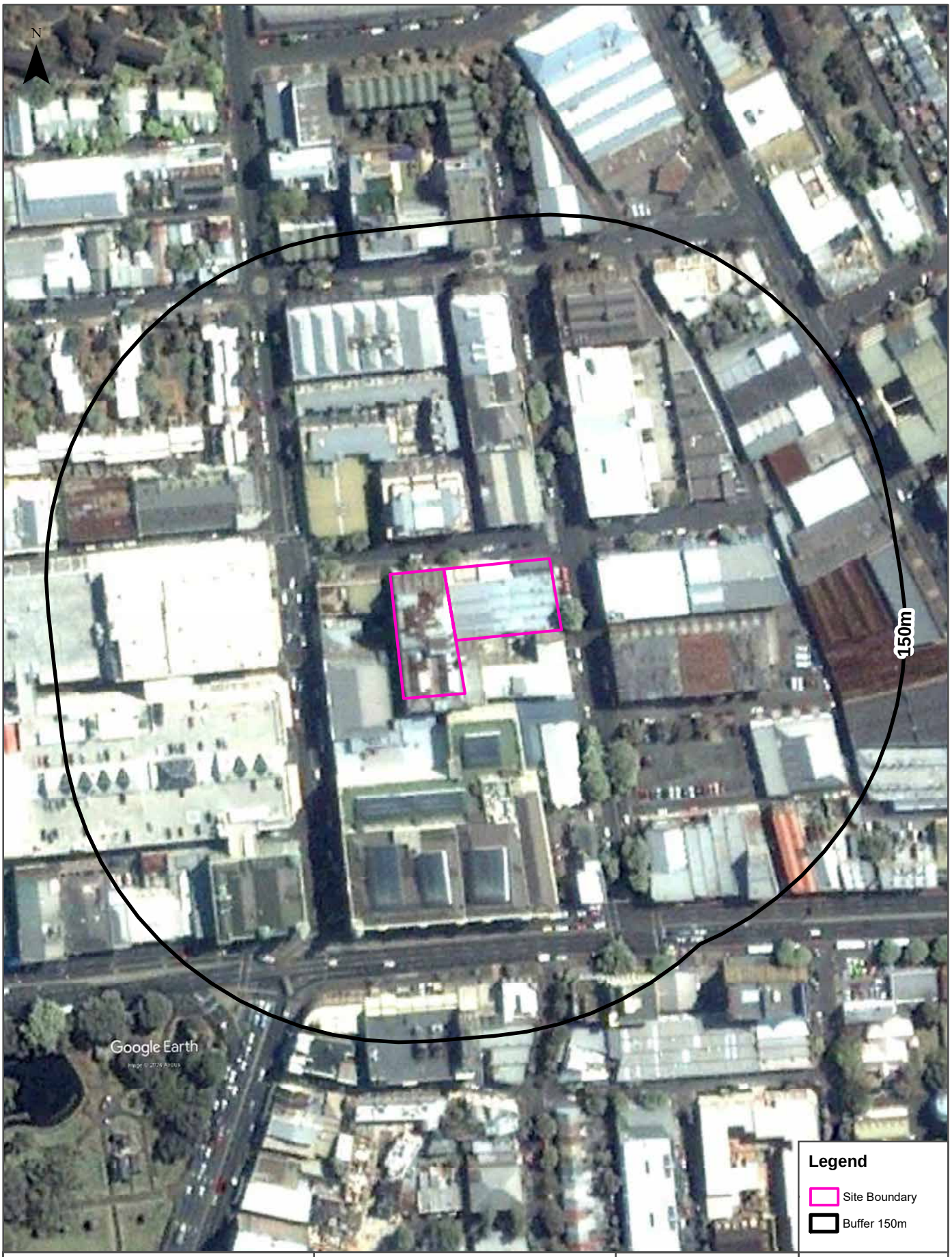
Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 2000

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale:
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Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 1994

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Scale:	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024
0 25 50 75 100 Meters	542		

Aerial Imagery 1991

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Scale:	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024

0 25 50 75 100 Meters

543

Aerial Imagery 1986

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 September 2024
0 25 50 75 100 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

544

Aerial Imagery 1982

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Data Sources: Aerial Imagery:
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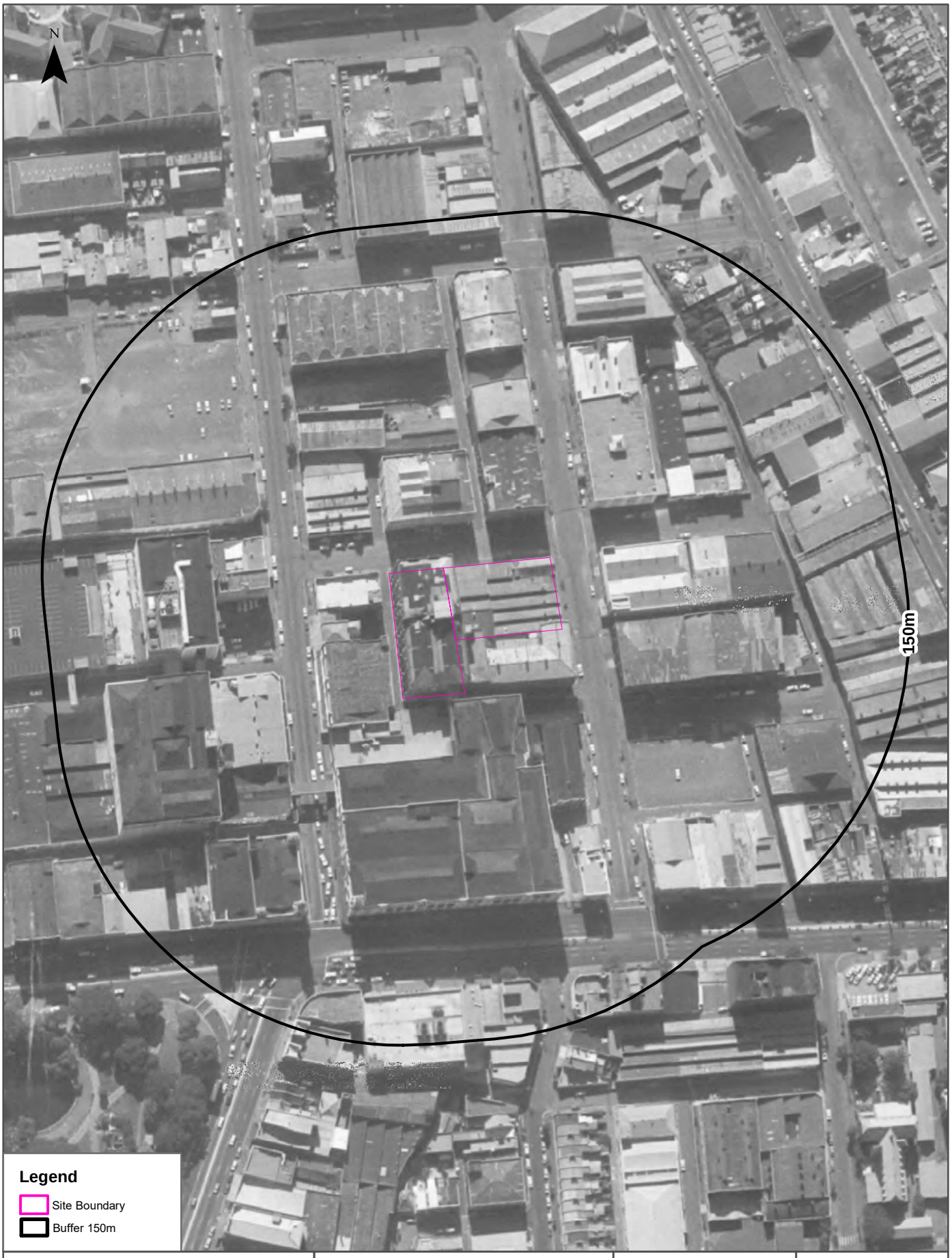
Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

545

Aerial Imagery 1978

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale:	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024
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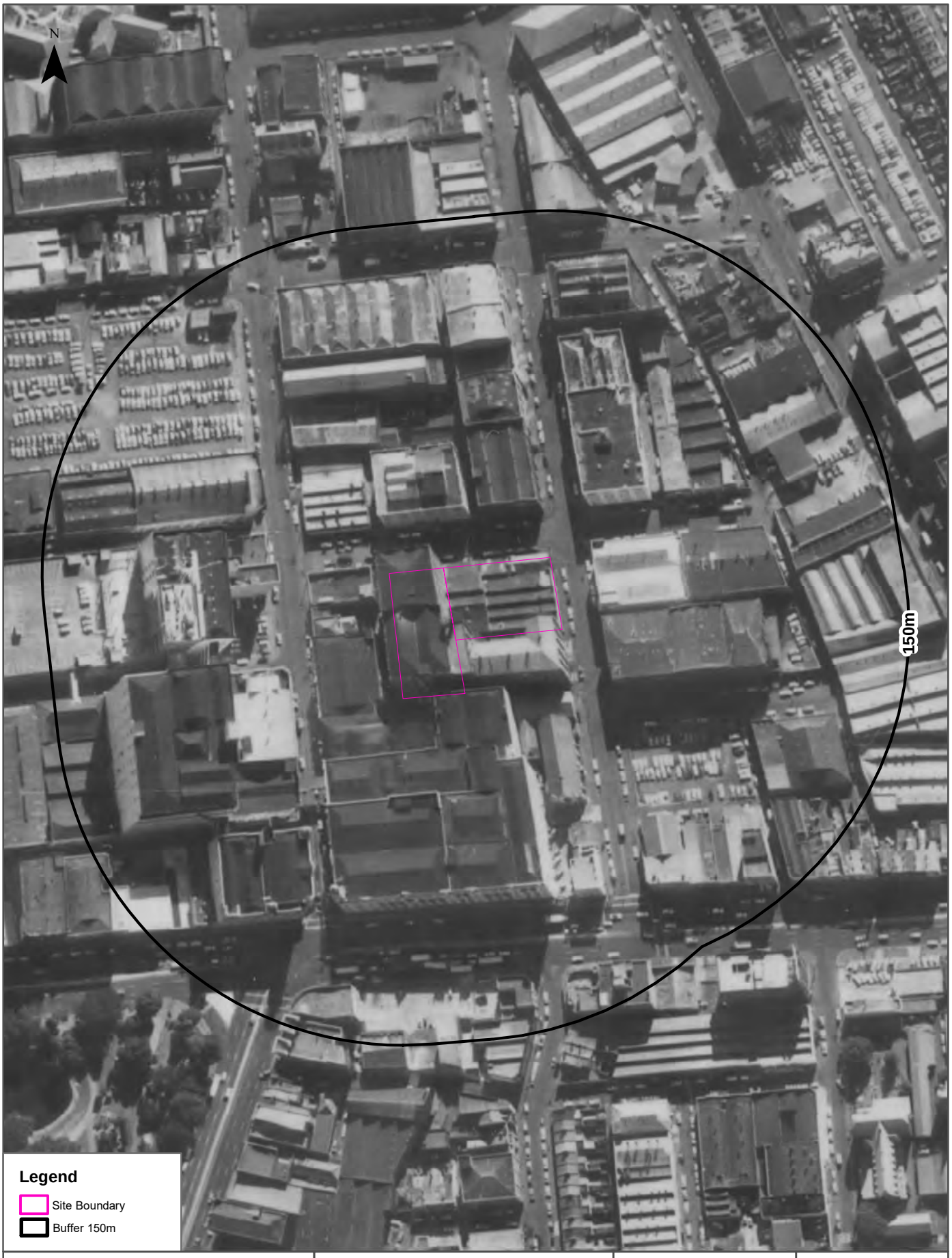
Aerial Imagery 1970

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Data Sources: Aerial Imagery:
© NSW Department of Customer Service

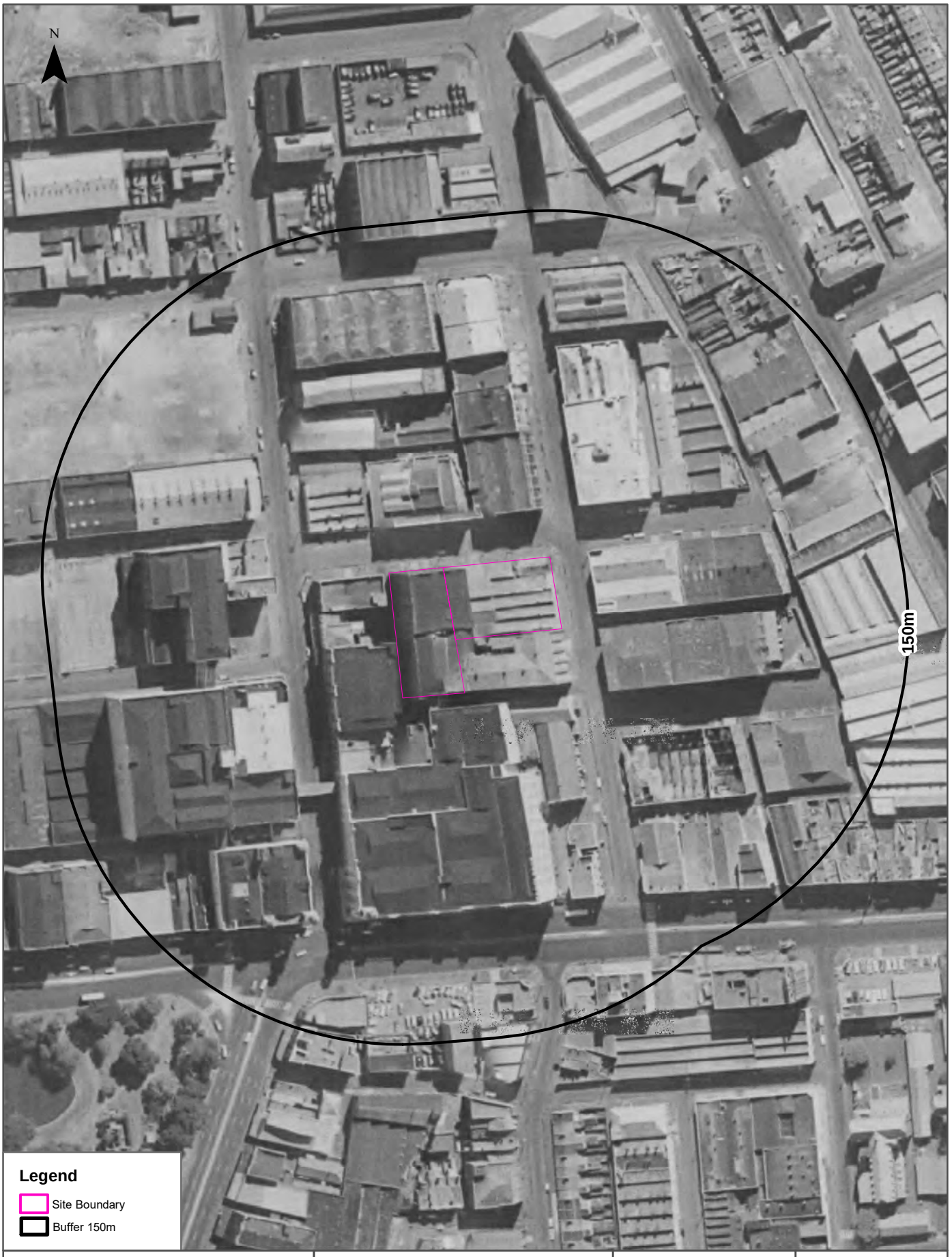
Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

547

Aerial Imagery 1965

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Data Sources: Aerial Imagery:
© NSW Department of Customer Service

548

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 1961

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Scale:
0 25 50 75 100
Meters

Data Sources: Aerial Imagery:
© NSW Department of Customer Service

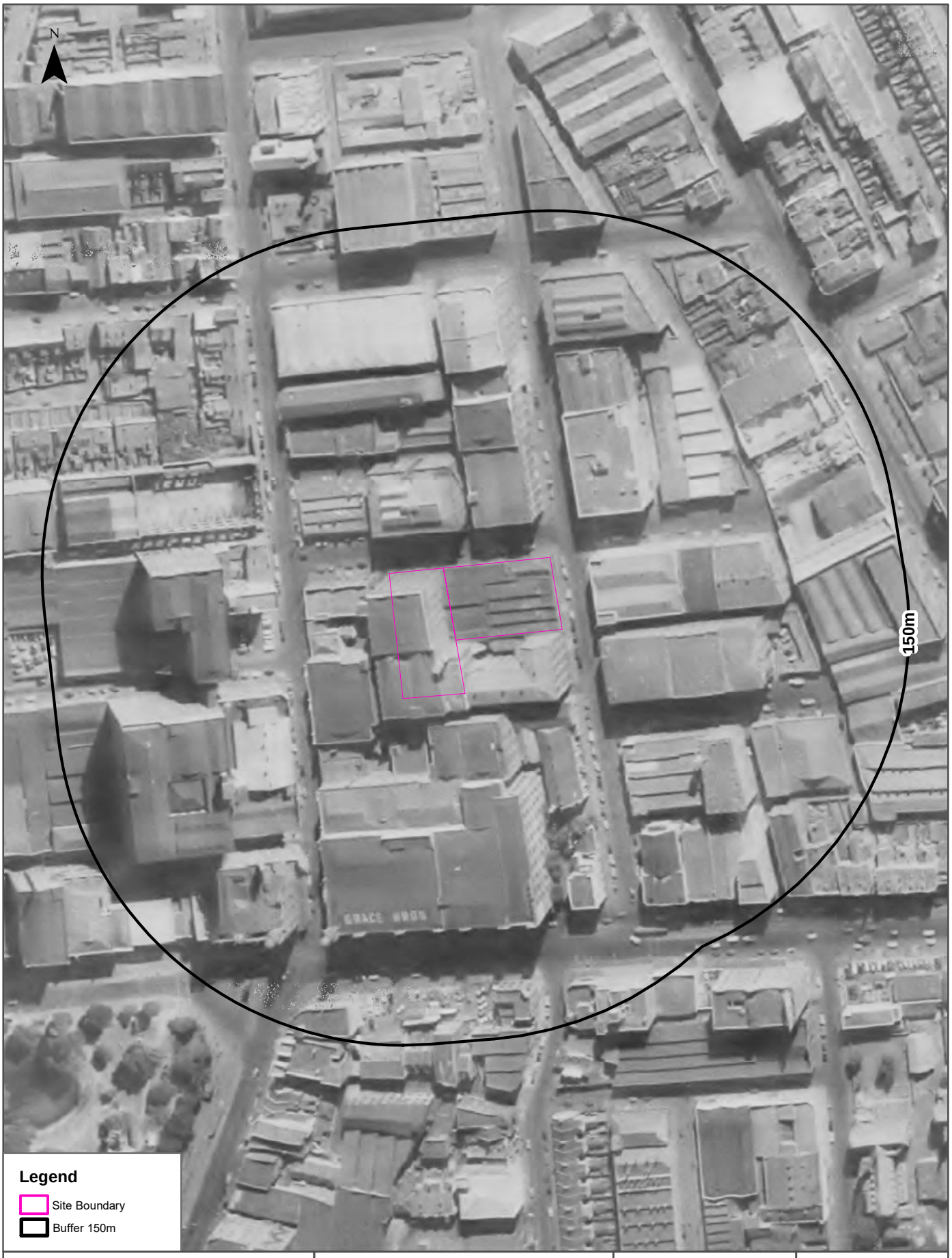
549

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 1955, 1956

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale:
0 25 50 75 100
Meters

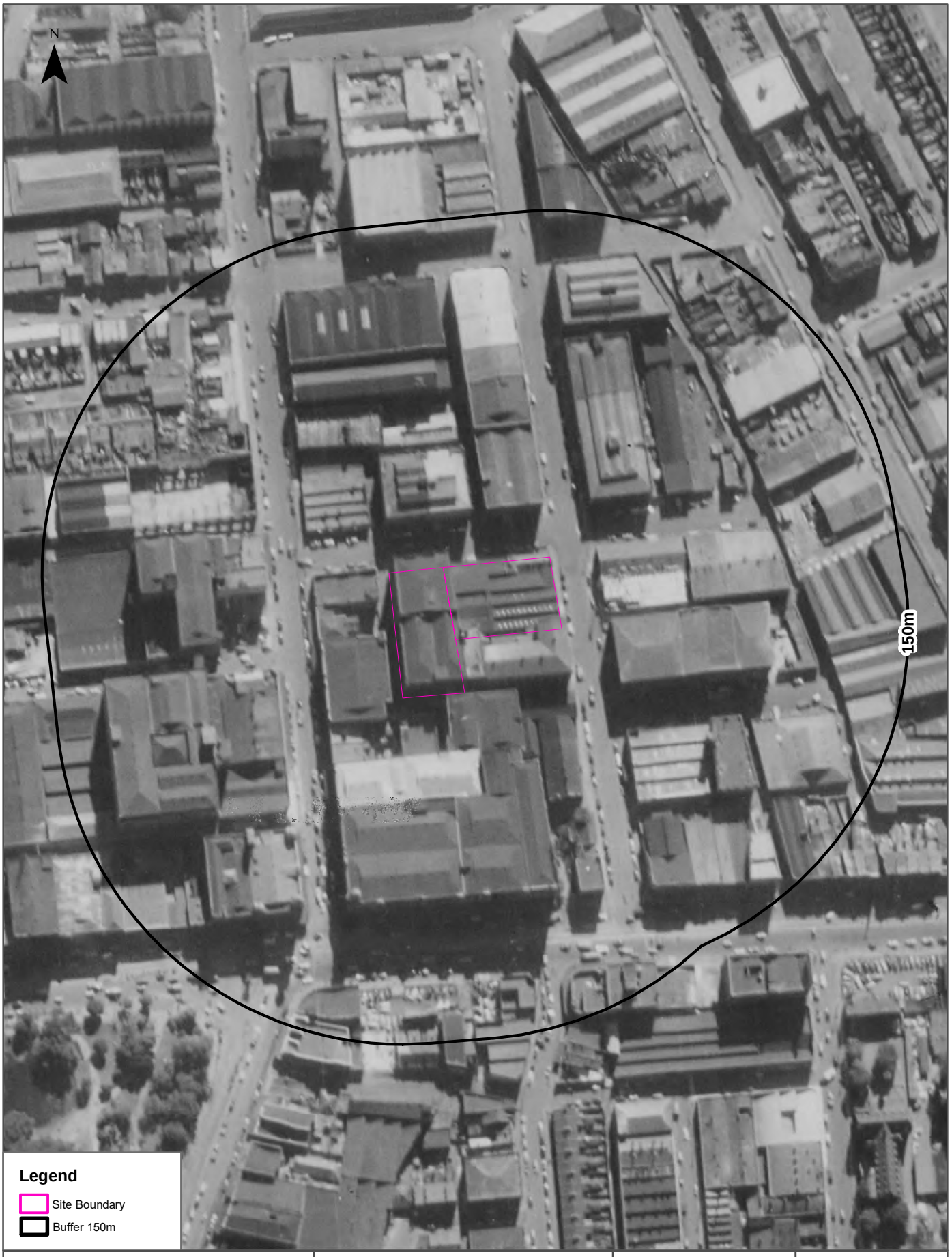
Data Sources: Aerial Imagery:
© NSW Department of Customer Service
550

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Aerial Imagery 1951

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Data Sources: Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

551

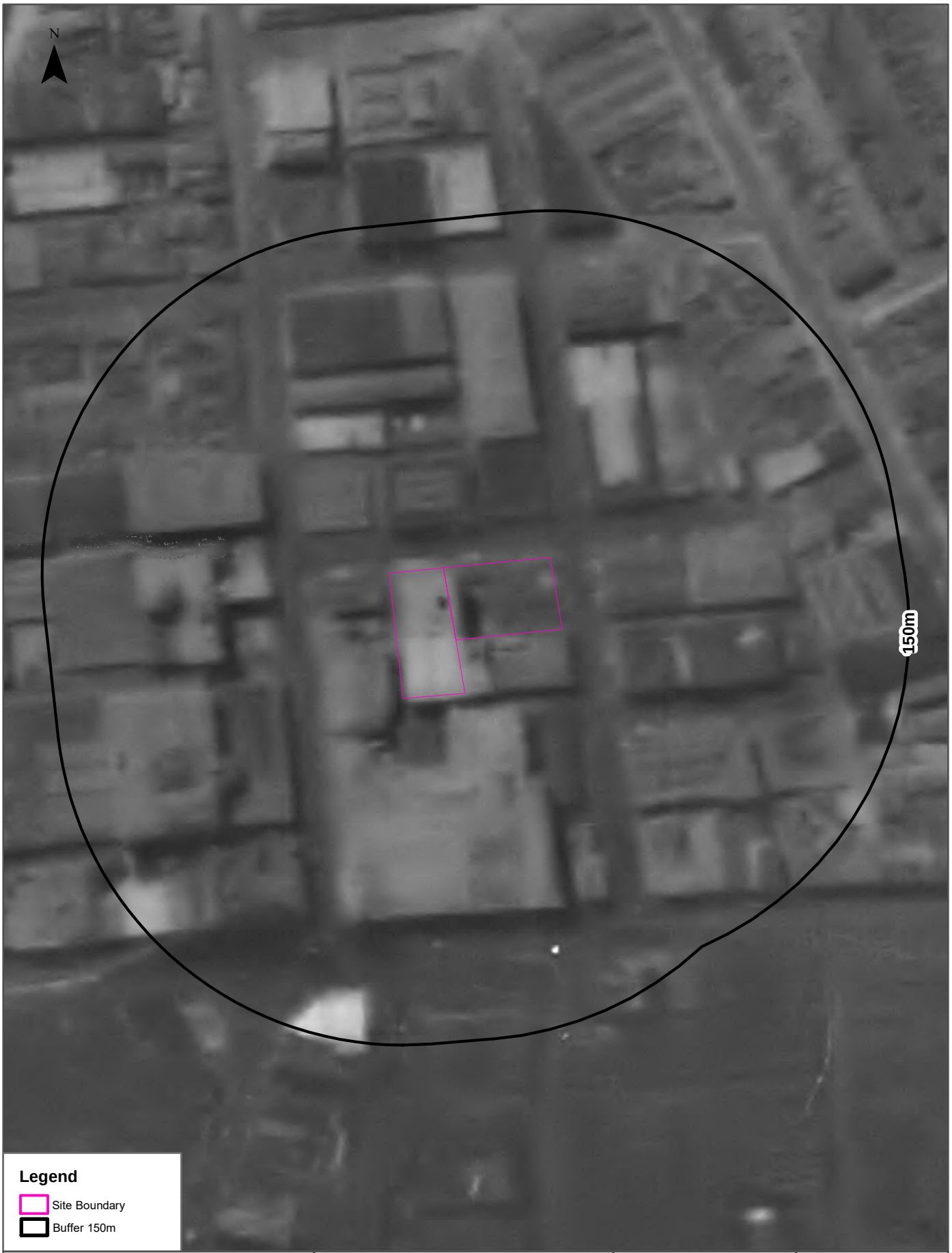
Aerial Imagery 1943

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 September 2024
0 25 50 75 100 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	
	552		

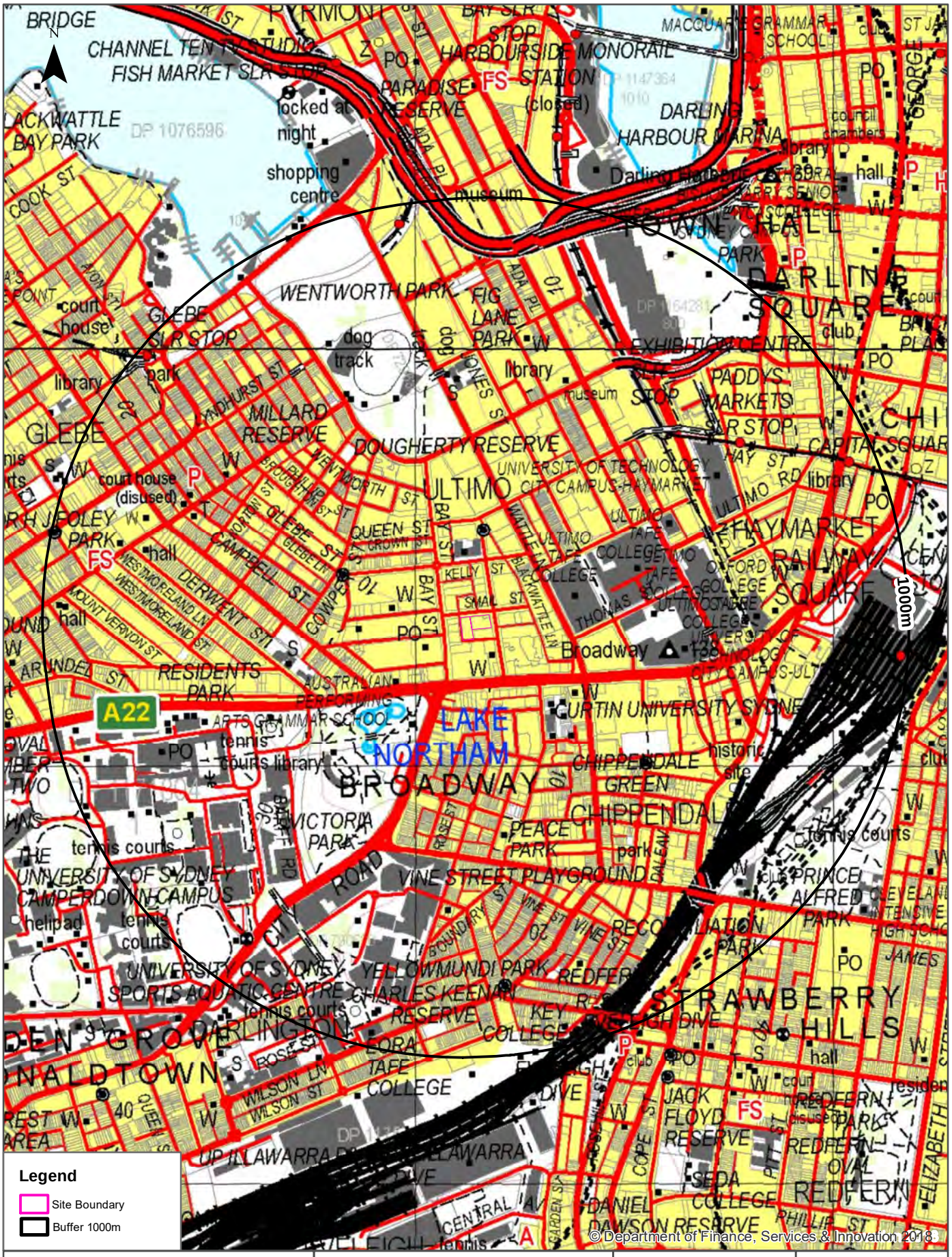
Aerial Imagery 1930

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Topographic Map 2015

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale: 0 140 280 420 560 Meters

Data Sources: Topographic Map Data © NSW Land and Property Information

554

Coordinate System: GDA 1994 MGA Zone 56

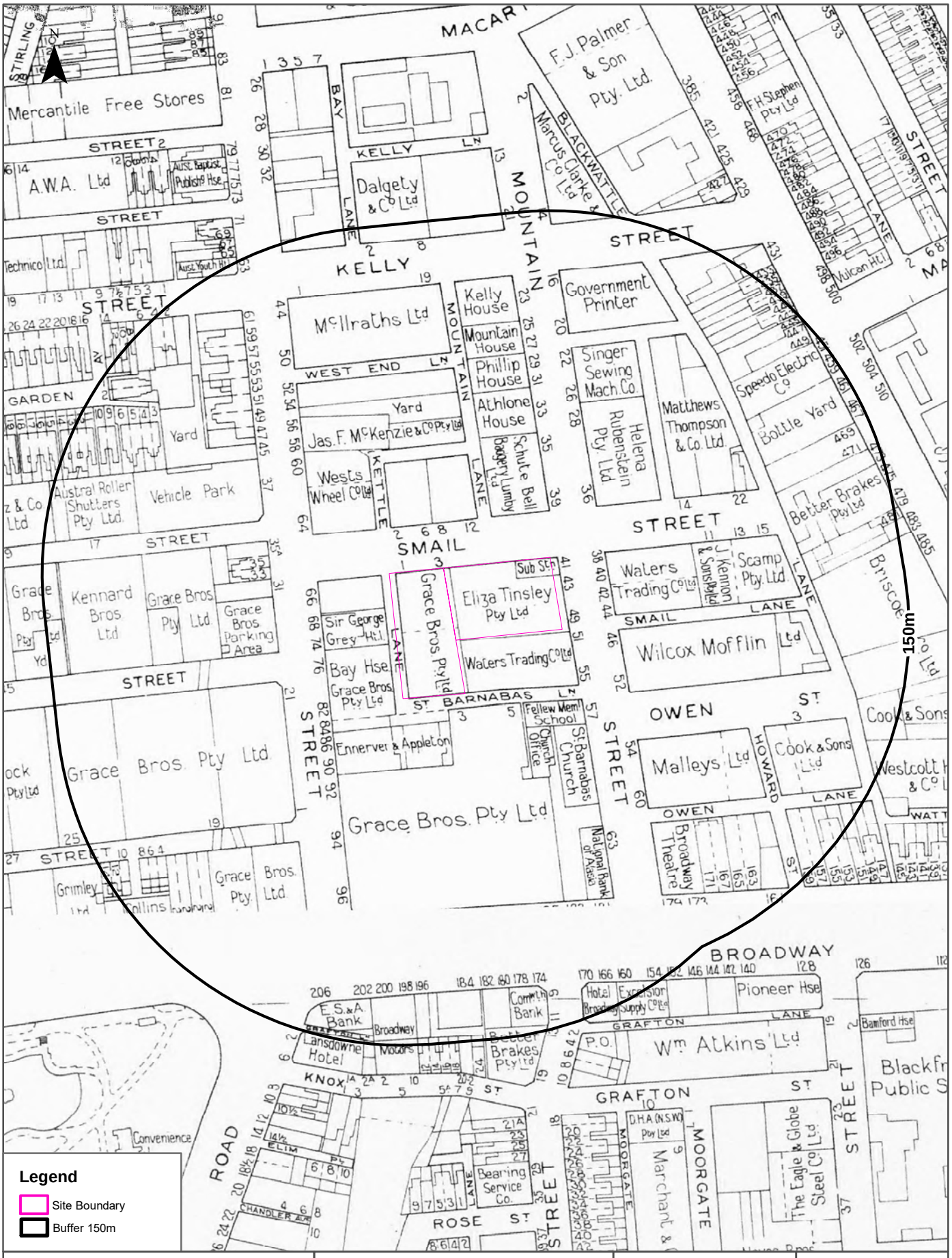
Date: 19 September 2024

Historical Map 1975

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Historical Map 1956

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Lotsearch Pty Ltd ABN 89 600 168 018

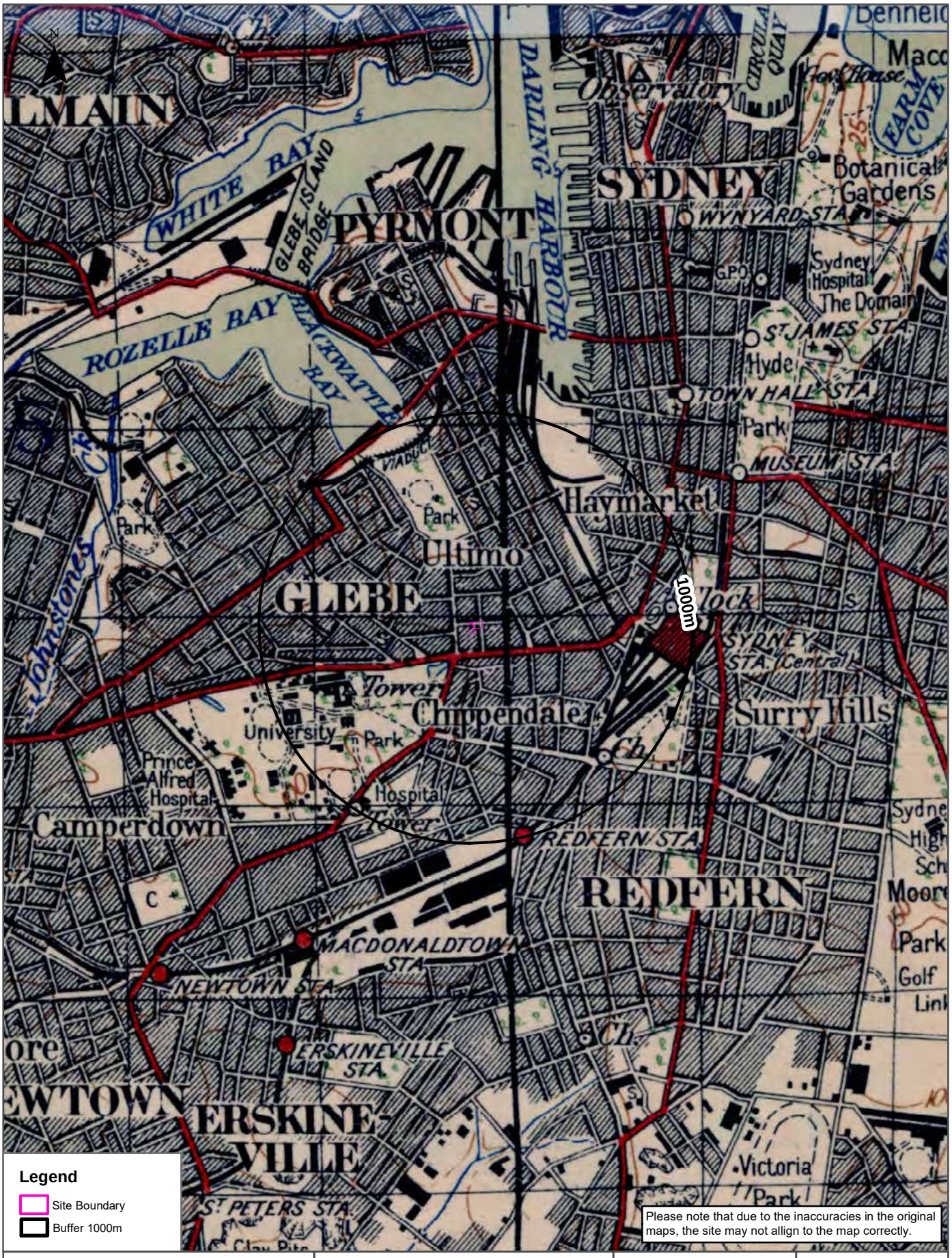
Historical Map 1938 - 1950

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Lotsearch Pty Ltd ABN 89 600 168 018

Historical Map c.1936

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Scale: 0 290 580 870 1,160 Meters

Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

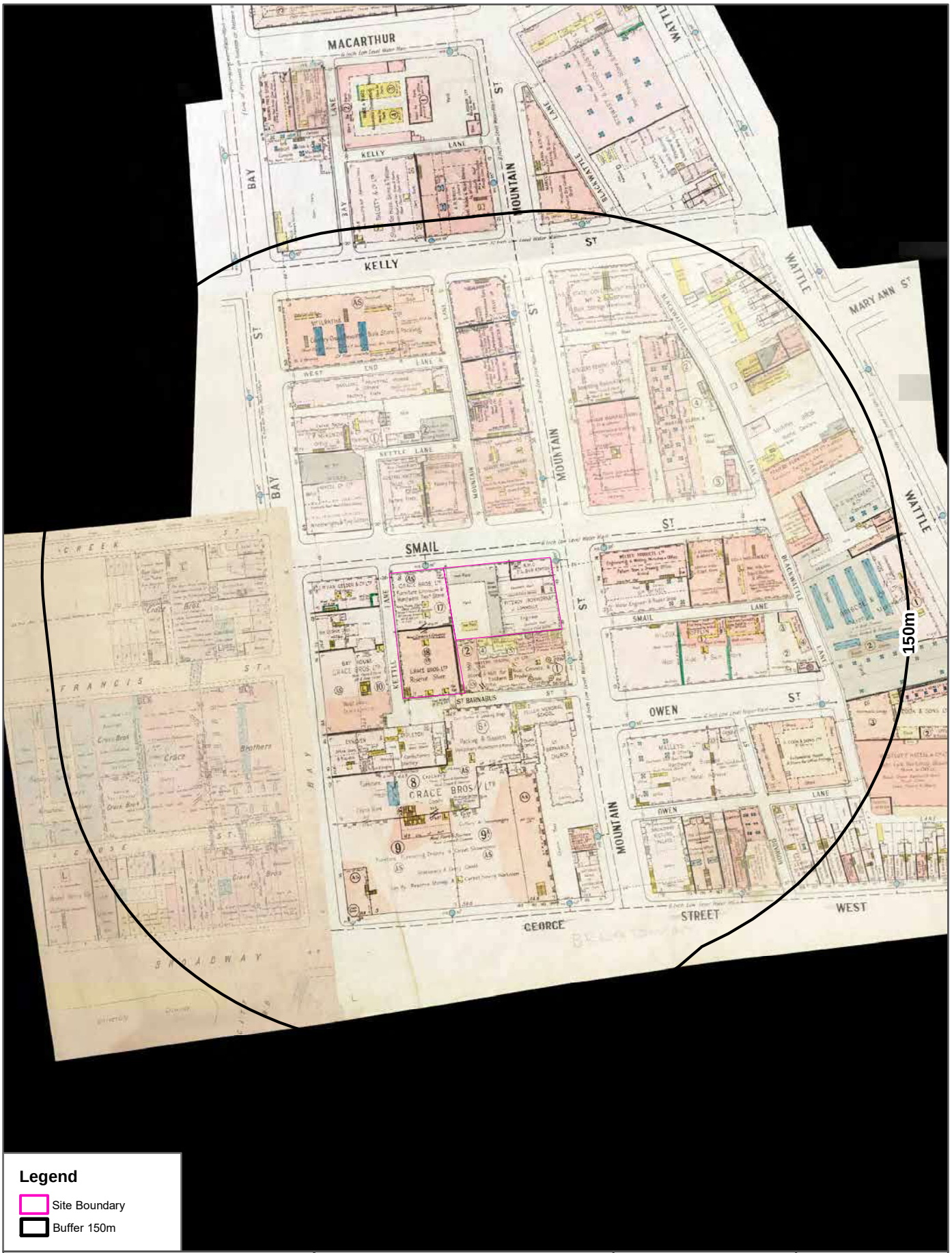
558

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

Historical Map 1917 - 1939

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Legend

- Site Boundary
- Buffer 150m

Scale: 0 25 50 75 100 Meters	Data Sources: Fire Underwriters' Plans Council of the City of Sydney 559	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024

Topographic Features

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

SYDNEY HARBOUR
PYRMONT
WESTERN DISTRIBUTOR
BANK STREET
PYRMONT BRIDGE ROAD
ADA PLACE
PYRMONT STREET
MURRAY STREET
WHEAT ROAD
KENT STREET
CLARENCE STREET
YORK STREET
CITY CIRCLE
EASTERN SUBURBS RAILWAY
CROSS CITY TUNNEL
TOWN HALL
BATHURST STREET
HARBOUR STREET
SUSSEX STREET
NORTHSHORE RAILWAY
PIER STREET
GOULBURN STREET
CHINATOWN
HAY STREET
ULTIMO ROAD
QUAY STREET
PITT STREET
RAILWAY SQUARE
CENTRAL
GEORGE STREET
LEE STREET
CHALMERS STREET
BUCKINGHAM STREET
ELIZABETH LANE
REDFERN STREET
TURNER STREET
PHILLIP STREET
DOUGLAS STREET
ELIZABETH STREET
JAMES STREET
WELLS STREET
LAWSON STREET
ILLAWARRA RAILWAY
EVELEIGH STREET
CLEVELAND STREET
CHIPPENDALE
IVY STREET
IVY LANE
SHEPHERD STREET
RENWICK STREET
COPE STREET
GIBBONS STREET
CITY ROAD
MAZE CRESCENT
FISHER ROAD
EASTERN AVENUE
BARFF ROAD
ROSE STREET
PINE STREET
PINE LANE
O'CONNOR STREET
REGENT STREET
AIRPORT LINE
1000m
THOMAS STREET
MARY ANN STREET
THE GOODS LINE
HACKETT STREET
JONES STREET
WILLIAM HENRY STREET
HARRIS STREET
DARLING DRIVE
BULWARA ROAD
FIG STREET
WATTLE STREET
SYDNEY LIGHT RAIL
WENTWORTH PARK ROAD
BELLEVUE STREET
DARGHAN LANE
DARGHAN STREET
DARLING STREET
BROUGHTON STREET
BROUGHAM LANE
BRIDGE ROAD
FORSYTH STREET
TAYLOR STREET
FERRY ROAD
GLEBE POINT ROAD
GLEBE
ULTIMO
BAY STREET
COWPER STREET
MITCHELL STREET
BLACKWATTLE LANE
MOUNTAIN STREET
GLEBE STREET
GREEK STREET
FRANCIS STREET
ST JOHNS ROAD
DERWENT LANE
DERWENT STREET
MT VERNON LANE
CATHERINE STREET
ARUNDEL STREET
BROADWAY
PARRAMATTA ROAD
LAKE NORTHAM
SCIENCE ROAD
UNIVERSITY PLACE
MANNING ROAD
THE UNIVERSITY OF SYDNEY
PHYSICS ROAD
WESTERN AVENUE
CARILLON AVENUE
DARLINGTON ROAD
DARLINGTON
CAMPBELL STREET
KING STREET
QUEEN ST
FORBES ST
ABERCROMBIE STREET
WILSON LANE
LANDER STREET
GOLDEN GROVE
639095
553283
553272
664706
633929
654483
654484
647649
640992
553062
639094
529850
529754
661858
553276
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553277
666661
579968
553064
663692
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530284
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654498
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553250
553251

Topographic Features

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
553285	Place Of Worship	ANGLICAN CHURCH	55m	South East
553194	Post Office	BROADWAY POST OFFICE	93m	South West
579257	Urban Place	BROADWAY	134m	South West
662527	Shopping Centre	BROADWAY SHOPPING CENTRE	141m	West
641185	Combined Primary-Secondary School	INTERNATIONAL GRAMMAR SCHOOL	154m	North
530290	Place Of Worship	CHURCH OF SCIENTOLOGY	166m	West
632684	High School	AUSTRALIAN PERFORMING ARTS GRAMMAR SCHOOL	190m	South West
553270	TAFE College	ULTIMO TAFE COLLEGE	208m	East
654497	Community Facility	PETER FORSYTH AUDITORIUM	245m	West
553284	Place Of Worship	CATHOLIC CHURCH	253m	South East
529787	Child Care Centre	UNIVERSITY OF TECHNOLOGY CITY CAMPUS-BLACKFRIARS	254m	South East
579256	Suburb	ULTIMO	266m	North
552467	Manmade Waterbody	LAKE NORTHAM	283m	South West
662150	Park	ROBYN KEMMIS RESERVE	291m	West
553268	TAFE College	ULTIMO TAFE COLLEGE	369m	East
648655	Embassy	CONSULATE OF BELGIUM	375m	South East
663248	Nursing Home	THE BENEVOLENT SOCIETY	398m	North West
553180	Swimming Pool	VICTORIA PARK POOL	417m	South West
640817	Primary School	GLEBE PUBLIC SCHOOL	422m	West
553193	Park	PEACE PARK	425m	South
642762	Park	CHIPPENDALE GREEN	445m	South East
553269	University	UNIVERSITY OF TECHNOLOGY CITY CAMPUS-ULTIMO	464m	East
654495	Community Facility	PINE STREET CREATIVE ARTS CENTRE	473m	South
529851	Park	DOUGHERTY RESERVE	478m	North West
553267	TAFE College	ULTIMO TAFE COLLEGE	482m	North East
663692	High School	WESTBOURNE COLLEGE SYDNEY	484m	North East
579255	Suburb	CHIPPENDALE	484m	South East
553190	Park	VICTORIA PARK	493m	South West
553179	Sports Court	TENNIS COURTS	504m	South West
530289	Library	FISHER LIBRARY SYDNEY UNIVERSITY	557m	South West
640992	Primary School	ULTIMO PUBLIC SCHOOL	571m	North

Map Id	Feature Type	Label	Distance	Direction
647649	Library	ULTIMO LIBRARY	578m	North
654484	Community Facility	ULTIMO COMMUNITY CENTRE	592m	North
553195	Park	Park	608m	South East
553063	Park	MILLARD RESERVE	608m	North West
553197	Park	VINE STREET PLAYGROUND	612m	South
553271	Museum	POWERHOUSE MUSEUM	627m	North East
632689	University	CURTIN UNIVERSITY SYDNEY	630m	East
634112	TAFE College	ULTIMO TAFE COLLEGE	633m	East
553062	Dog Track	WENTWORTH PARK GREYHOUND TRACK	636m	North
553266	University	UNIVERSITY OF TECHNOLOGY CITY CAMPUS-HAYMARKET	638m	North East
596617	Community Facility	THE HARRY BURLAND ACTIVITY CLUB	648m	South
529853	Place Of Worship	UNITING CHURCH	659m	North West
654483	Swimming Pool	IAN THORPE AQUATIC CENTRE	666m	North East
633929	Place Of Worship	UNITING CHURCH	668m	North
529854	Park	RESIDENTS PARK	669m	West
579225	Suburb	HAYMARKET	675m	East
648893	Transport Interchange	RAILWAY SQUARE BUS INTERCHANGE	679m	East
664706	Park	FIG LANE PARK	696m	North
553282	Historic Site	MORTUARY STATION	697m	South East
555590	Railway Station	EXHIBITION CENTRE SLR STOP	713m	North East
529852	Police Station	GLEBE POLICE STATION	713m	North West
636696	Court House	GLEBE COURT HOUSE	717m	North West
553064	Railway Station	PADDYS MARKETS SLR STOP	727m	North East
579226	Urban Place	RAILWAY SQUARE	738m	East
553278	Place Of Worship	LUTHERAN CHURCH	739m	East
661858	Urban Place	DARLING SQUARE	748m	North East
553191	Post Office	SYDNEY UNIVERSITY POST OFFICE	770m	West
596503	Community Facility	ST JOHNS CHURCH HALL	771m	West
633737	Place Of Worship	ANGLICAN CHURCH	791m	West
553283	Park	WENTWORTH PARK	798m	North
553272	Park	FIG LANE PARK	800m	North
662167	Historic Site	AMBULANCE SERVICE HISTORIC SITE	805m	East
553279	Place Of Worship	ANGLICAN CHURCH	809m	East
654496	Community Facility	REDFERN COMMUNITY CENTRE	818m	South
553196	Park	YELLOWMUNDI PARK	825m	South
553183	Sports Court	TENNIS COURTS	825m	South West
634601	Retirement Village	ST JOHN'S VILLAGE	832m	West

Map Id	Feature Type	Label	Distance	Direction
553061	Fire Station	GLEBE FIRE STATION	834m	West
553218	Place Of Worship	ORTHODOX CHURCH	851m	South East
530284	Park	DR H J FOLEY PARK	860m	West
553280	Community Facility	SYDNEY CITY YOUTH HOSTEL ASSOCIATION	861m	East
663141	Railway Station	HAYMARKET LIGHT RAIL STOP	866m	East
579968	Urban Place	CHINATOWN	870m	North East
553217	Education Facility	ST ANDREWS GREEK ORTHODOX THEOLOGICAL COLLEGE	879m	South East
553216	Club	JENSEN'S TENNIS CENTRE	887m	South East
553214	Sports Court	TENNIS COURTS	894m	South East
553189	Sports Centre	UNIVERSITY OF SYDNEY SPORTS AQUATIC CENTRE	919m	South
553188	Sports Court	TENNIS COURTS	925m	South
579258	Suburb	GLEBE	931m	North West
553198	Park	CHARLES KEENAN RESERVE	934m	South
553068	Railway Station	CAPITOL SQUARE SLR STOP	934m	North East
666490	Railway Station	CENTRAL RAILWAY STATION	934m	East
529754	Tourist Attraction	CHINESE GARDEN OF FRIENDSHIP	938m	North East
555518	Park	BOOLER MEMORIAL PLAYGROUND	945m	West
654498	Community Facility	GLEBE NEIGHBOURHOOD SERVICE CENTRE	947m	West
643231	High School	KEY COLLEGE	951m	South
530287	Sports Field	ST PAULS OVAL	951m	South West
639095	Railway Station	WENTWORTH PARK SLR STOP	953m	North
663421	Urban Place	EQUALITY GREEN	958m	South East
596264	Community Facility	GLEBE TOWN HALL	962m	West
634111	TAFE College	EORA TAFE COLLEGE	964m	South
529850	Park	Park	965m	North West
553277	Place Of Worship	CATHOLIC CHURCH	965m	North East
579252	Suburb	DARLINGTON	967m	South
666600	Railway Station	REDFERN RAILWAY STATION	967m	South
639094	Railway Station	GLEBE SLR STOP	974m	North West
666598	Railway Station	CENTRAL SLR STOP	975m	East
553281	Post Office	HAYMARKET POST OFFICE	991m	East
666661	Railway Station	CHINATOWN LIGHT RAIL STOP	993m	North East
553276	Place Of Worship	BAPTIST CHURCH	998m	North East

Topographic Data Source: © Land and Property Information (2015)
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Topographic Features

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
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Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
150270459	Primary	Right of way	Variable	51m	North East
120112391	Primary	Undefined		204m	South
120106944	Primary	Undefined		682m	South East
120111834	Primary	Undefined		691m	South East
120114031	Primary	Undefined		838m	North West
120119489	Primary	Undefined		943m	North East

Easements Data Source: © Land and Property Information (2015)
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Topographic Features

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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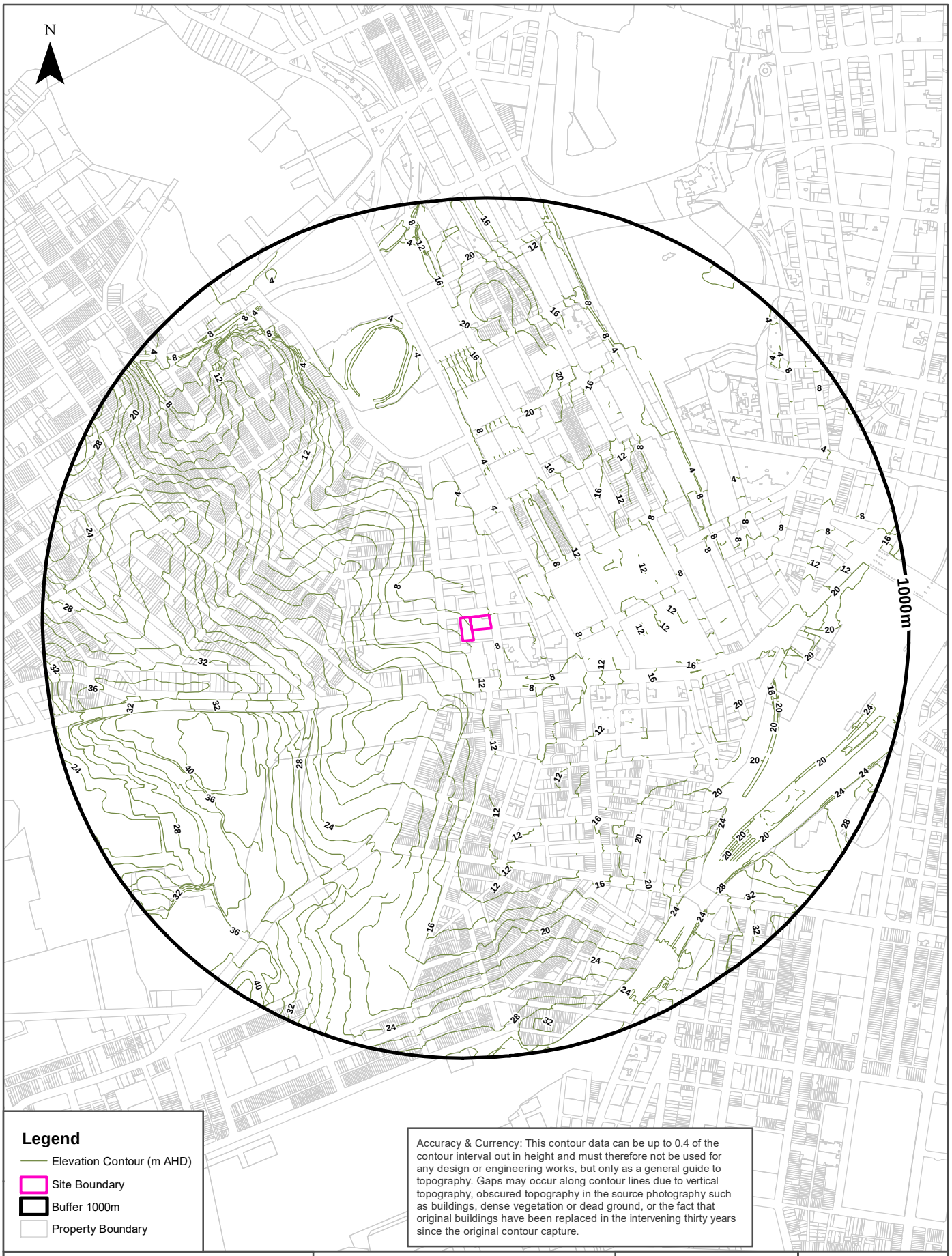
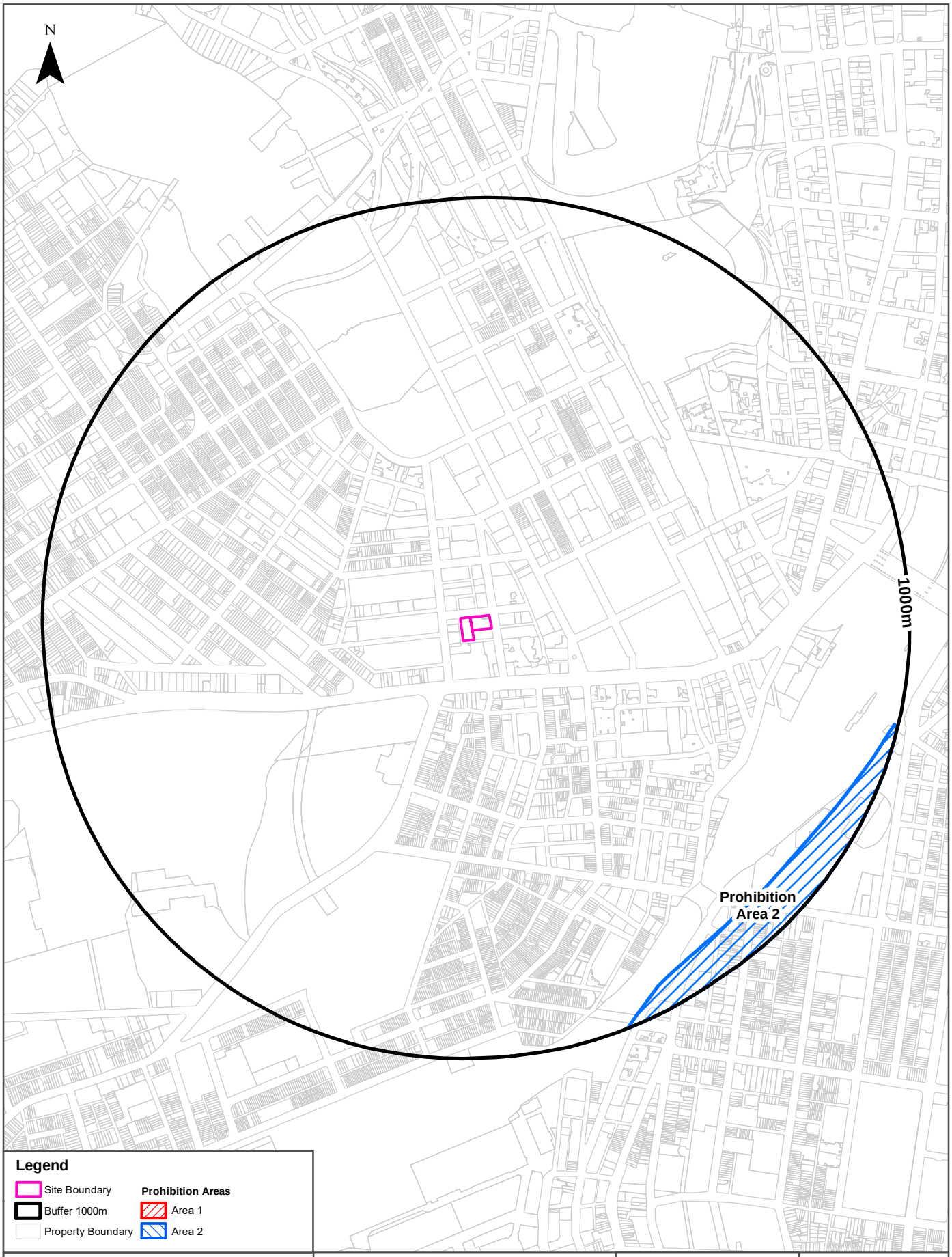
Elevation Contours (m AHD)

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

567

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 September 2024

Hydrogeology & Groundwater

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive highly productive aquifers	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

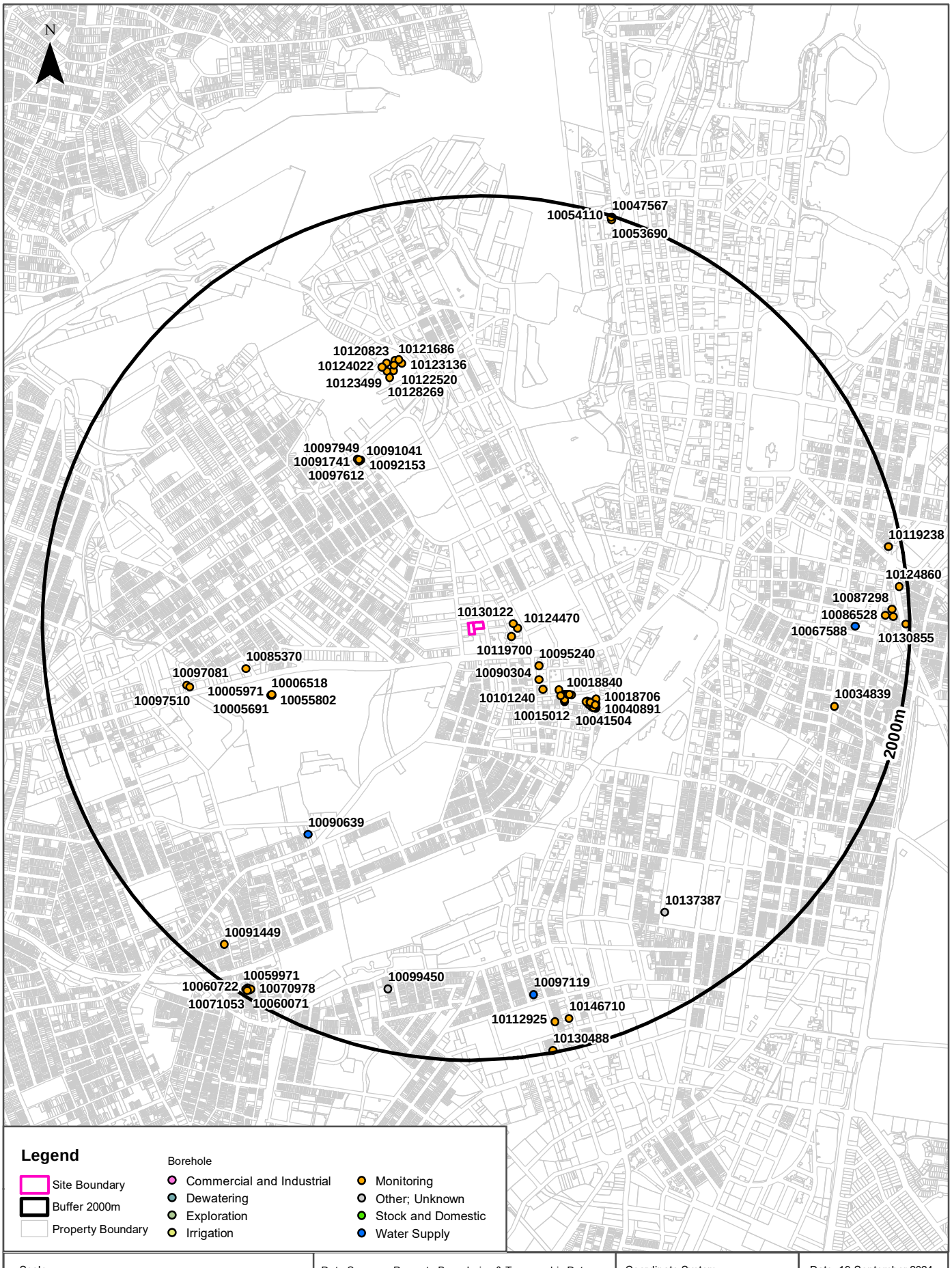
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
2	Groundwater cannot be used for: a. human consumption; b. consumption by animals; c. domestic purposes; d. any other purpose, except if the water is fit for purpose, or it is for remediation, temporary construction dewatering, testing or monitoring purposes.	902m	South East

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Hydrogeology & Groundwater

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10119700	GW109646	Monitoring	Unknown	03/05/2008	8.20		AHD	1258	1.000	5.93	135m	East
10130122	GW109649	Monitoring	Unknown	03/05/2008	7.20		AHD	869	1.000	2.95	139m	East
10124470	GW109648	Monitoring	Unknown	03/05/2008	6.20		AHD	1302	0.500	5.23	159m	East
10095240	GW109501	Monitoring	Unknown	01/03/2007	6.00		AHD			2.30	313m	South East
10090304	GW109502	Monitoring	Unknown	01/03/2007	6.40		AHD			2.18	355m	South East
10101240	GW109503	Monitoring	Unknown	01/03/2007	5.20		AHD			2.24	400m	South East
10021162	GW113861	Monitoring	Functional	30/07/2003	6.50		AHD				458m	South East
10043749	GW113880	Monitoring	Functional	20/08/2004	5.00		AHD				482m	South East
10018940	GW113871	Monitoring	Functional	08/11/2003	6.00		AHD				491m	South East
10019726	GW113870	Monitoring	Functional	07/11/2003	4.80		AHD				493m	South East
10014393	GW113869	Monitoring	Functional	29/07/2003	6.00		AHD				497m	South East
10016953	GW113868	Monitoring	Functional	18/02/2014	3.70		AHD				499m	South East
10018840	GW113872	Monitoring	Functional	16/09/2003	8.00		AHD				499m	South East
10018321	GW113867	Monitoring	Functional	22/07/2003	3.50		AHD				502m	South East
10015013	GW113866	Monitoring	Functional	18/02/2014	3.00		AHD				504m	South East
10046818	GW113876	Monitoring	Functional	25/07/2003	7.80		AHD				504m	South East
10021163	GW113865	Monitoring	Functional	21/07/2003	6.50		AHD				507m	South East
10018707	GW113864	Monitoring	Functional	22/07/2003	4.50		AHD				509m	South East
10018320	GW113863	Monitoring	Functional	16/09/2003	4.60		AHD				511m	South East
10052854	GW113877	Monitoring	Functional	28/07/2003	5.50		AHD				512m	South East
10015012	GW113862	Monitoring	Functional	28/07/2003	3.80		AHD				515m	South East
10041126	GW113878	Monitoring	Functional	07/11/2003	7.00		AHD				520m	South East
10067967	GW113887	Monitoring	Functional	05/10/2004	5.70		AHD				593m	South East
10058307	GW113888	Monitoring	Functional	05/10/2004	5.50		AHD				594m	South East
10117564	GW113858	Monitoring	Functional	19/09/2003	6.30		AHD				608m	South East
10021854	GW113859	Monitoring	Functional	15/09/2003	6.10		AHD				611m	South East
10124855	GW113857	Monitoring	Functional	23/07/2003	6.00		AHD				612m	South East
10058087	GW113889	Monitoring	Functional	05/10/2004	6.70		AHD				614m	South East
10047496	GW113886	Monitoring	Functional	01/10/2004	5.80		AHD				615m	South East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10047494	GW113879	Monitoring	Functional	25/07/2003	5.30		AHD				624m	South East
10043353	GW113873	Monitoring	Functional	26/07/2003	6.00		AHD				625m	South East
10047011	GW113874	Monitoring	Functional	19/09/2003	7.00		AHD				627m	South East
10043750	GW113884	Monitoring	Functional	20/08/2004	6.80		AHD				628m	South East
10044808	GW113875	Monitoring	Functional	30/07/2003	7.50		AHD				628m	South East
10100495	GW109500	Monitoring	Unknown	01/03/2007	4.80		AHD			2.30	628m	South East
10041504	GW113881	Monitoring	Functional	20/08/2004	6.10		AHD				629m	South East
10047495	GW113882	Monitoring	Functional	20/08/2004	6.10		AHD				634m	South East
10068400	GW113890	Monitoring	Functional	09/10/2005	6.00		AHD				637m	South East
10018706	GW113860	Monitoring	Functional	16/09/2003	6.50		AHD				638m	South East
10124948	GW113856	Monitoring	Functional	23/07/2003	6.20		AHD				638m	South East
10120160	GW113855	Monitoring	Functional	22/07/2003	5.00		AHD				640m	South East
10058255	GW113891	Monitoring	Functional	09/10/2005	6.80		AHD				642m	South East
10067968	GW113892	Monitoring	Functional	09/10/2005	7.00		AHD				644m	South East
10065448	GW113893	Monitoring	Functional	11/10/2005	8.50		AHD				647m	South East
10040891	GW113883	Monitoring	Functional	20/08/2004	6.10		AHD				648m	South East
10041505	GW113885	Monitoring	Functional	20/08/2004	7.00		AHD				648m	South East
10092153	GW110372	Monitoring	Unknown	24/04/2001	4.00		AHD			0.60	914m	North West
10097612	GW110371	Monitoring	Unknown	24/04/2001	4.00		AHD			0.70	914m	North West
10091041	GW110374	Monitoring	Unknown	24/04/2001	4.00		AHD				917m	North West
10097949	GW110370	Monitoring	Unknown	24/04/2001	4.00		AHD			0.60	920m	North West
10091741	GW110373	Monitoring	Unknown	24/04/2001	4.00		AHD			0.60	927m	North West
10055802	GW116422	Monitoring	Functioning	22/09/2017	5.30		AHD				970m	West
10005691	GW116421	Monitoring	Functioning	22/09/2017	5.30		AHD				971m	West
10005971	GW116421	Monitoring	Functioning	22/09/2017	5.30		AHD				971m	West
10006518	GW116424	Monitoring	Functioning	22/09/2017	5.00		AHD				973m	West
10085370	GW111408	Monitoring	Functional	05/02/2011	4.40		AHD			2.07	1060m	West
10090639	GW110247	Water Supply	Unknown	16/07/2009	210.00		AHD	4400	0.130	31.00	1207m	South West
10128269	GW111331	Monitoring	Functional	20/07/2010	6.00		AHD				1209m	North
10122520	GW114187	Monitoring	Functional	04/07/2013	6.00		AHD				1235m	North
10123499	GW111330	Monitoring	Functional	20/07/2010	4.00		AHD				1240m	North
10123136	GW114184	Monitoring	Functional	04/07/2013	6.00		AHD				1258m	North
10123076	GW114182	Monitoring	Functional	04/07/2013	11.55		AHD				1259m	North
10124022	GW111329	Monitoring	Functional	20/07/2010	6.00		AHD				1269m	North
10120823	GW114185	Monitoring	Functional	04/07/2013	3.00		AHD				1278m	North

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10121686	GW114183	Monitoring	Functional	04/07/2013	9.35		AHD				1280m	North
10123892	GW114186	Monitoring	Functional	04/07/2013	3.00		AHD				1280m	North
10097510	GW109230	Monitoring	Unknown	18/08/2008	1.80		AHD				1335m	West
10097081	GW109231	Monitoring	Unknown	18/08/2008	3.20		AHD				1348m	West
10137387	GW071907	Other	Functioning	15/05/2008	180.00	30.00	AHD	345	0.100	11.60	1584m	South East
10034839	GW102476	Monitoring	Unknown	01/01/1999	4.00		AHD				1690m	East
10099450	GW105938	Unknown	Unknown	20/05/2005			AHD				1709m	South
10097119	GW106192	Water Supply	Functioning	10/12/2004	6.00		AHD	Good	0.500	4.00	1717m	South
10067588	GW200690	Water Supply	Unknown	20/12/2007	6.00		AHD				1745m	East
10091449	GW105317	Monitoring	Unknown	21/03/2003	6.50		AHD			1.70	1855m	South West
10146710	GW114895	Monitoring	Functional	08/02/2013	6.00		AHD			4.20	1860m	South
10112925	GW115632	Monitoring	Functional	08/02/2013	6.50		AHD				1862m	South
10086528	GW109238	Monitoring	Unknown	19/08/2008	7.50		AHD	Fresh		4.59	1887m	East
10087298	GW109240	Monitoring	Unknown	20/08/2008	7.50		AHD	Fresh		5.67	1919m	East
10091739	GW109239	Monitoring	Unknown	19/08/2008	7.45		AHD	Fresh		4.57	1925m	East
10119238	GW112178	Monitoring	Functional	01/03/1999	30.00		AHD				1938m	East
10070978	GW109730	Monitoring	Unknown	28/08/2003	6.50		AHD	1000		1.00	1958m	South West
10059971	GW109729	Monitoring	Unknown	02/09/2003	6.00		AHD	1000		1.40	1960m	South West
10124860	GW112179	Monitoring	Functional	01/03/1999	30.00		AHD				1963m	East
10060071	GW109733	Monitoring	Unknown	05/09/2003	2.40		AHD	1000		1.40	1965m	South West
10060722	GW109731	Monitoring	Unknown	28/08/2003	6.00		AHD	1000		1.10	1971m	South West
10071053	GW109732	Monitoring	Unknown	02/09/2003	4.30		AHD	1000		1.50	1972m	South West
10053690	GW109087	Monitoring	Unknown	22/07/2008	8.50		AHD				1983m	North
10130855	GW112180	Monitoring	Functional	01/03/1999	30.00		AHD				1984m	East
10054110	GW109086	Monitoring	Unknown	22/07/2008	5.68		AHD				1992m	North
10130488	GW111958	Monitoring	Functional	27/04/2012	6.00		AHD			3.49	1992m	South
10047567	GW109085	Monitoring	Unknown	22/07/2008	5.68		AHD				1994m	North

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10119700	0.00m-0.80m FILL,LT GREY,SAND,CONCRETE,BRICK,METAL FRAG. 0.80m-2.80m SILTY CLAY,BROWN,GREY,MED PLASTICITY 2.80m-5.00m CLAYEY SAND,GREY/DARK GREY 5.00m-8.00m SILTY SAND,LT GREY/RED 8.00m-8.20m SANDSTONE,RED,BROWN,WEATHERED,CLAY BANDS	135m	East
10130122	0.00m-4.80m FILL,GREY,BROWN,GRAVEL,CLAY,SILT 4.80m-5.90m SILTY SAND,LT GREY,RED,MED COARSE GRAINED 5.90m-7.20m SANDSTONE RED BROWN,WEATHERED WITH CLAY BANDS	139m	East
10124470	0.00m-2.90m FILL,BROWN/GREY,LOOSE GRAVEL,CONCRETE,SAND 2.90m-4.90m SILTY CLAY,LT GREY,MOTT.BROWN HIGH PLASTICITY 4.90m-5.80m SILTY SAND,LT GREY,MED COURSE GRAINED 5.80m-6.20m SANDSTONE,RED,BROWN,WEATHERED,CLAY BANDS	159m	East
10092153	0.00m-2.20m FILL,SILTY CLAY 2.20m-2.70m SANDY CLAY 2.70m-3.30m SILT,SOFT BLACK 3.30m-4.00m SILTY SAND	914m	North West
10097612	0.00m-2.50m FILL,SANDY CLAY 2.50m-3.10m SILT,SATURATED BLACK 3.10m-4.00m SILTY SAND	914m	North West
10091041	0.00m-0.80m SILTY SAND WITH MINOR CLAY 0.80m-2.80m CLAYEY SAND,WITH MINOR GRAVEL 2.80m-4.00m SANDY CLAY WITH MINOR SHELLS	917m	North West
10097949	0.00m-2.10m FILL,SANDY CLAY 2.10m-3.30m SILT,BLACK 3.30m-3.50m SAND CLAYEY 3.50m-4.00m CLAY SANDY	920m	North West
10091741	0.00m-1.60m FILL,SANDY CLAY 1.60m-3.40m SILT,SATURATED BLACK 3.40m-3.70m SILTY SAND 3.70m-4.00m SANDY CLAY	927m	North West
10085370	0.00m-0.22m CONCRETE SLAB 0.22m-0.50m GRAVEL ROADBASE 0.50m-1.10m FILLING,GREY BROWN AND GREY,SILTY CLAY 1.10m-4.40m CLAY,GREY,SILTY WITH TRACE OF IRONSTONE,GRAVEL,DAMP	1060m	West
10090639	0.00m-2.00m CLAY BROWN 2.00m-4.50m CLAY GREY 4.50m-22.00m SHALE GREY 22.00m-23.00m SHALE SOFT 23.00m-33.00m SHALE HARD 33.00m-74.00m SANDSTONE GREY 74.00m-76.00m SANDSTONE AND QUARTZ FINE 76.00m-134.00m SANDSTONE GREY 134.00m-135.50m SANDSTONE QUARTZ FINE 135.50m-153.50m SANDSTONE GREY 153.50m-154.00m SANDSTONE QUARTZ FINE 154.00m-168.00m SANDSTONE GREY 168.00m-170.00m SANDSTONE SHALE BEDDING 170.00m-188.00m SANDSTONE GREY 188.00m-188.50m SANDSTONE QUARTZ 188.50m-210.00m SANDSTONE GREY	1207m	South West
10128269	0.00m-0.29m CONCRETE PAVEMENT 0.29m-2.20m FILL.SILTY SAND,SILTY GRAVEL 2.20m-5.30m SILTY SAND,SHELL FRAGMENTS 5.30m-6.00m SILTY CLAY,ORANGE BROWN	1209m	North
10123499	0.00m-0.19m CONCRETE PAVEMENT ALL OVER 0.19m-2.50m FILL.CLAYEY SAND,GRAVELLY 2.50m-4.00m SANDSTONE,LIGHT GREY	1240m	North
10124022	0.00m-0.15m (UNKNOWN) 0.15m-1.50m FILL,SILTY SAND 1.50m-6.00m SANDSTONE	1269m	North

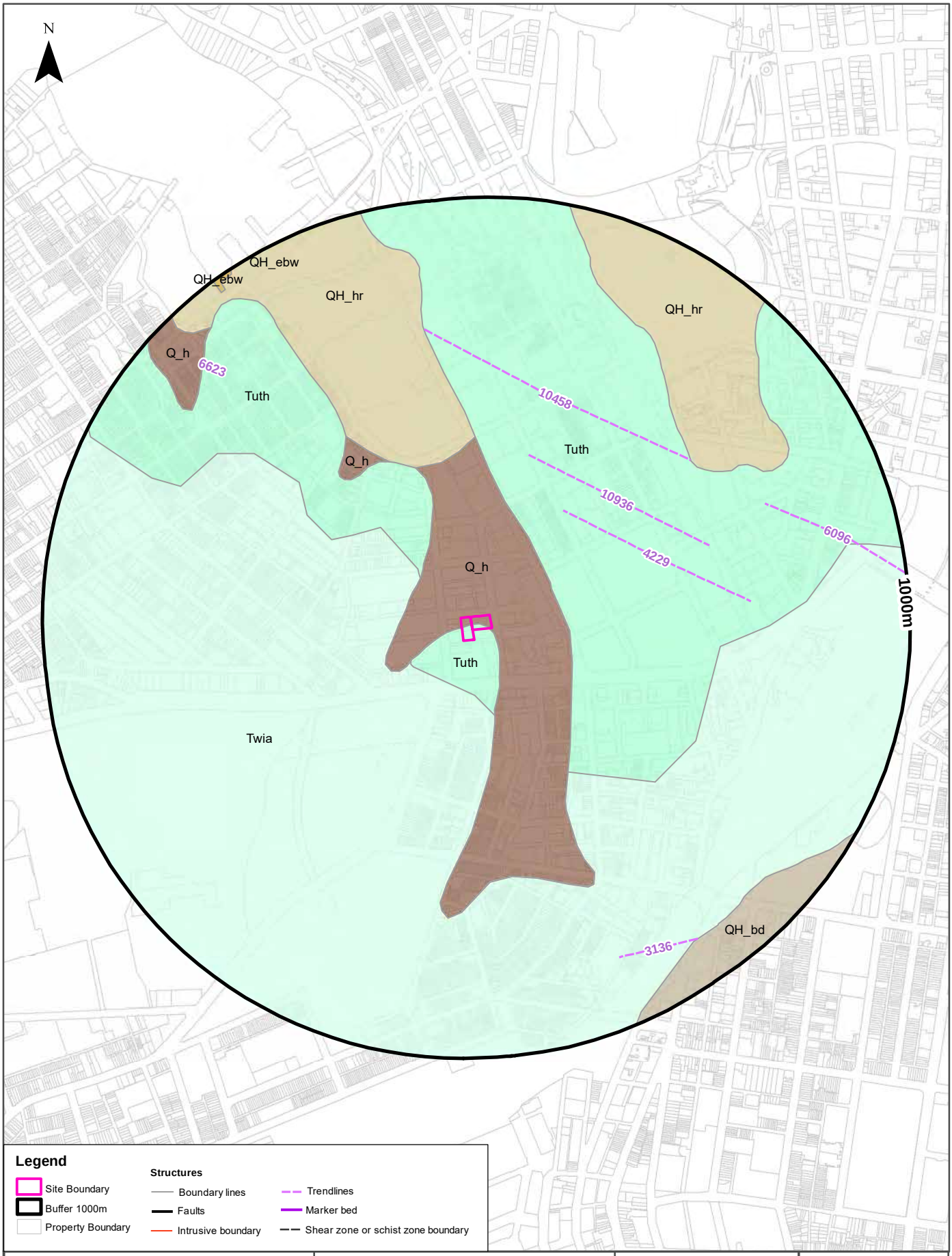
NGIS Bore ID	Drillers Log	Distance	Direction
10137387	0.00m-3.00m SANDY CLAY 3.00m-8.50m CLAY 8.50m-24.00m SHALE 24.00m-24.50m SANDSTONE GREY 24.50m-24.70m SANDSTONE GREY FRACTURED 24.70m-44.00m SANDSTONE GREY 44.00m-55.00m SANDSTONE QUARTZ 55.00m-55.50m SANDSTONE GREY FRACTURED 55.50m-82.00m SANDSTONE GREY 82.00m-85.00m SANDSTONE QUARTZ 85.00m-128.00m SANDSTONE GREY 128.00m-130.00m SANDSTONE QUARTZ 130.00m-138.00m SANDSTONE GREY 138.00m-154.00m SANDSTONE QUARTZ 154.00m-180.00m SANDSTONE GREY	1584m	South East
10097119	0.00m-0.30m topsoil 0.30m-2.20m sand, yellow 2.20m-2.30m rock, coffee 2.30m-4.50m sand, brown 4.50m-6.00m sand, grey	1717m	South
10091449	0.00m-1.10m FILL,SILTY, SANDY CLAY 1.10m-6.50m SILTY CLAY,HIGH PLASTICITY	1855m	South West
10146710	0.00m-0.15m CONCRETE 0.15m-1.20m FILL, SANDY CLAY WITH GRAVELS 1.20m-1.80m SAND YELLOW WHITE 1.80m-2.40m SAND YELLOW MEDIUM GRAINED 2.40m-2.90m SAND LIGHT BROWN MED. GRAINED 2.90m-6.00m SAND GREY WHITE BECOM. SATURATED AT4.5m	1860m	South
10086528	0.00m-0.10m ASHPHALT 0.10m-0.40m FILL,BRICK,SANDSTONE 0.40m-2.50m CLAY BROWN 2.50m-7.50m SHALE, RED/GREY	1887m	East
10087298	0.10m-0.20m CONCRETE 0.20m-0.50m FILL BROWN,GRAVEL,CLAY,GLASS,BRICK,SANDSTONE 0.50m-2.70m CLAY,RED, GREY,WHITE 2.70m-7.50m SHALE RED,WEATHERED, CLAY BANDS,MOIST	1919m	East
10091739	0.00m-0.10m ASHPHALT 0.10m-0.60m FILL BROWN,GRAVEL,CLAY 0.60m-2.90m CLAY BROWN ORANGE,RED,SILT MOIST 2.90m-7.45m SHALE RED,GREY, CLAY BANDS	1925m	East
10070978	0.00m-0.50m TOPSOIL 0.50m-1.00m CLAY ORANGE,MOIST,FIRM, MODERATE PLASTICITY 1.00m-1.50m CLAY,ORANGE/GREY,VERY STIFF,MODERATE PLASTICITY 1.50m-2.00m CLAY,ORANGE/GREY,VERY STIFF,MODERATE PLASTICITY 2.00m-3.00m CLAY,GREY,RED,VRY STIFF,NON PLASTIC,DAMP 3.00m-4.00m CLAY,GREY,RED,VRY STIFF,NON PLASTIC 4.00m-4.50m CLAY,GREY/RED,SOME GRAVEL,NON PLASTIC,DAMP 4.50m-5.00m CLAY,WATER AT4.5m 5.00m-5.50m CLAY,GRAVELLY,GREY/RED,WET,NON PLASTIC,HETEROGENOUS,STIFF 5.50m-6.50m CLAY,BROWN,GREY,WET,HOMOGENOUS	1958m	South West
10059971	0.00m-0.20m PAVERS,CONCRETE 0.20m-0.70m FILL,CLAY,SILTY SOIL, BROWN,BLACK,HARD IN GROUND,DRY,NO ODOUR 0.70m-1.80m CLAY,TIGHT,LIGHT BROWN,HIGH PLASTICITY,DRY,NO ODOUR 1.80m-3.00m CLAY,RED COLOUR,NO ODOUR,DRY 3.00m-4.00m CLAY,NO ODOUR,DRY 4.00m-6.00m CLAY,VERY HOMOGENEOUS	1960m	South West
10060071	0.00m-0.80m FILL,CLAY,SILTY SOIL,CEMENT,GRAVELS,HARD IN GROUND,DRY,NO ODOUR 0.80m-1.50m CLAY,BLACK/GREY SMEARING AND STAINING IN SOIL,HIGH PLASTICITY 1.50m-2.00m CLAY,NATURAL RED COLOURING BECOMING APPARAENT IN SOIL,DRY 2.00m-2.40m CLAY,RED SOIL COLOURING,NO ODOUR	1965m	South West
10060722	0.00m-0.50m TOPSOIL,BROWN,DRY,HETEROGENOUS 0.50m-1.00m FILL.SLAG,BLACK,RESIDUAL WHITE CLAY. 1.00m-1.50m CLAY,BROWN,RED,STIFF,NON PLASTIC,DAMP 1.50m-2.00m CLAY, RED/BROWN,STIFF,;NON PLASTIC 2.00m-2.50m CLAY,RED/GREY,STIFF,PLASTIC, DAMP 2.50m-3.00m CLAY,RED/GREY,STIFF,NON PLASTIC 3.00m-4.00m CLAY,RED/GREY,STIFF,NON PLASTIC 4.00m-5.00m CLAY,RED/GREY,STIFF,ON PLASTIC 5.00m-5.50m CLAY,VERY STIFF,NON PLASTIC. 5.50m-6.00m CLAY,BROWN,LOOSE,SOFT,MOIST	1971m	South West
10071053	0.00m-0.10m TOPSOIL,SILTY,BLACK,LOOSE,FINE GRAIN,DRY,NO ODOUR 0.10m-1.20m CLAY,LIGHT BROWN,STICKY,STIFF,HIGH PLASTICITY,NO ODOUR 1.20m-2.00m CLAY,RED,ORANGE,STIFF,MODERATE PLASTICITY,DRY,NO ODOUR 2.00m-3.30m CLAY BECOMING LESS PLASTIC,BRITTLE AND DRY WITH DEPTH 3.30m-4.30m CLAY,GREY,WITH IRONSTONE BANDS, SOFT, STIFF,HIGH PLASTICITY,GREY CLAY	1972m	South West

NGIS Bore ID	Drillers Log	Distance	Direction
10053690	0.00m-1.00m FILL,CLAY MIXED WITH COARSE GRAVEL 1.00m-1.50m FILL SAND MEDIUM GRAINED 1.50m-2.20m FILL,SILTY SAND,MOIST,FIRM WITH GRAVEL 2.20m-3.50m FILL,SAND MEDIUM GRAINED,GREY/BROWN 3.50m-4.00m FILL,SILTY SAND,MOIST,LOOSE TO FIRM 4.00m-4.50m FILL,CRUSHED SANDSTONE 4.50m-5.90m SAND MEDIUM TO FINE ,SILT BROWN,CLAY 5.90m-7.00m CLAY,HIGH PLASTICITY,WET,SHELLS 7.00m-8.50m SAND,FINE TO MEDIUM GRAINED,BEIGE	1983m	North
10054110	0.00m-0.50m FILL,MEDIUM TO COARSE 0.50m-1.00m FILL,SILTY SAND 1.00m-1.80m FILL,CLAYEY SAND FINE GRAINED 1.80m-2.00m FILL,GRAVELLY SAND 2.00m-3.20m FILL,SAND WITH SOME SILT 3.20m-3.80m FILL SILTY SAND 3.80m-4.50m FILL CLAY SILT SAND MIXTURE 4.50m-5.68m SAND,FINE TO MEDIUM GRAINED	1992m	North
10130488	0.00m-0.32m CONCRETE 0.32m-1.40m FILL, LOOSE,DARK GREY/BLACK CLAYEY SAND AND SANDSTONE 1.40m-6.00m SAND, LOOSE WHITE FINE GRAINED	1992m	South
10047567	0.00m-1.30m FILL,SILTY SAND MEDIUM TO COARSE 1.30m-2.10m FILL,SILT SAND CLAY MIXTURE 2.10m-2.20m FILL, SHINY GRAVEL ,BLACK SILT 2.20m-3.10m FILL,SILTY SAND BROWN RED 3.10m-4.00m FILL CLAY,GREY,BROWN,MOIST 4.00m-5.68m SAND,FINE TO MEDIUM	1994m	North

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



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Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Q_h	Anthropogenic deposits	Anthropocene deposits varying from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand-sized to clay matrix.	\Anthropogenic deposits\ \\\	Quaternary (base) to Now (top)	Anthropogenic material	0m
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone with minor shale and laminite lenses.	\Ungrouped Triassic units\\Hawkesbury Sandstone\\	Anisian (base) to Anisian (top)	Sandstone	0m
Twia	Ashfield Shale	Black to light grey shale and laminite.	\Wianamatta Group\ \Ashfield Shale\\	Middle Triassic (base) to Middle Triassic (top)	Shale	107m
QH_hr	Anthropogenic deposits - reclaimed estuarine areas	Natural surface elevation raised by placement of fill over former estuarine swamps and subaqueous estuarine margins (supratidal to subtidal zone); estuarine banks and islands formed from dredge spoil.	\Anthropogenic deposits\ \Anthropogenic deposits - reclaimed estuarine areas\\	Holocene (base) to Now (top)	Anthropogenic material	373m
QH_bd	Coastal deposits - dune facies	Marine-deposited and aeolian-reworked coastal sand dunes.	\Coastal deposits\ \Coastal deposits - dune facies\\	Holocene (base) to Now (top)	Sand	881m
QH_ebw	Estuarine basin and bay (subaqueous)	Clay, silt, shell, very fine- to fine-grained lithic-quartz (± carbonate) sand (fluvially- and/or marine-deposited).	\Estuarine deposits\ \Estuarine basin and bay \Estuarine basin and bay (subaqueous)\	Holocene (base) to Now (top)	Clastic sediment	966m

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
4229	Dyke or vein	Sydney 1:100,000 Geological Sheet	306m
10936	Dyke or vein	Sydney 1:100,000 Geological Sheet	384m
10458	Dyke or vein	Sydney 1:100,000 Geological Sheet	538m
6096	Dyke or vein	Sydney 1:100,000 Geological Sheet	710m
6623	Dyke or vein	Sydney 1:100,000 Geological Sheet	821m
3136	Dyke or vein	Sydney 1:100,000 Geological Sheet	835m
6622	Dyke or vein	Sydney 1:100,000 Geological Sheet	997m

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW
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Naturally Occurring Asbestos Potential

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Naturally Occurring Asbestos Potential

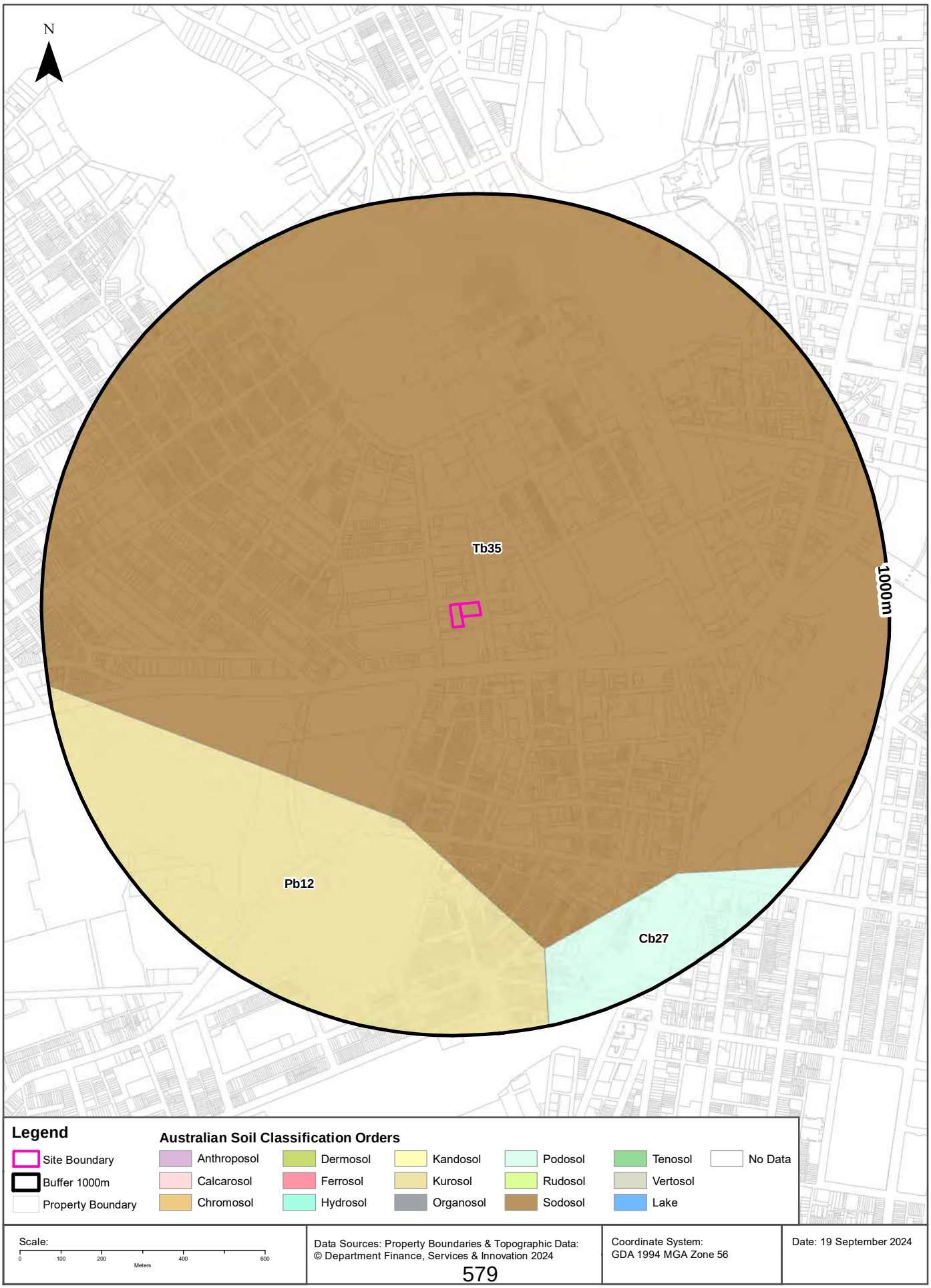
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Tb35	Sodosol	Dissected plateau remnants--flat to undulating ridge tops with moderate to steep side slopes: chief soils are hard acidic yellow and yellow mottled soils (Dy3.41), (Dy2.21), and (Dy2.41) and hard acidic red soils (Dr2.21); many shallow profiles occur and profile thickness varies considerably over short distances. Associated are: (Gn3.54), (Gn3.14), and possibly other (Gn3) soils; (Db1.2) soils on some ridges; (Dy5.81) soils in areas transitional to unit Mb2; soils common to unit Mb2; and eroded lateritic remnants. Small areas of other soils are likely. Flat ferruginous shale or sandstone fragments are common on and/or in and/or below the soils of this unit.	0m	On-site
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	486m	South West
Cb27	Podosol	Coastal sand plains and dunes, lagoons, and swampy areas: chief soils are leached sands (Uc2.3 and Uc2.2). Associated are dunes of siliceous sands (Uc1.2) and/or calcareous sands (Uc1.l) fringing the coastline; and swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Unit Cb27 has similarities with units Cb28 and Ca6.	783m	South East

Atlas of Australian Soils Data Source: CSIRO
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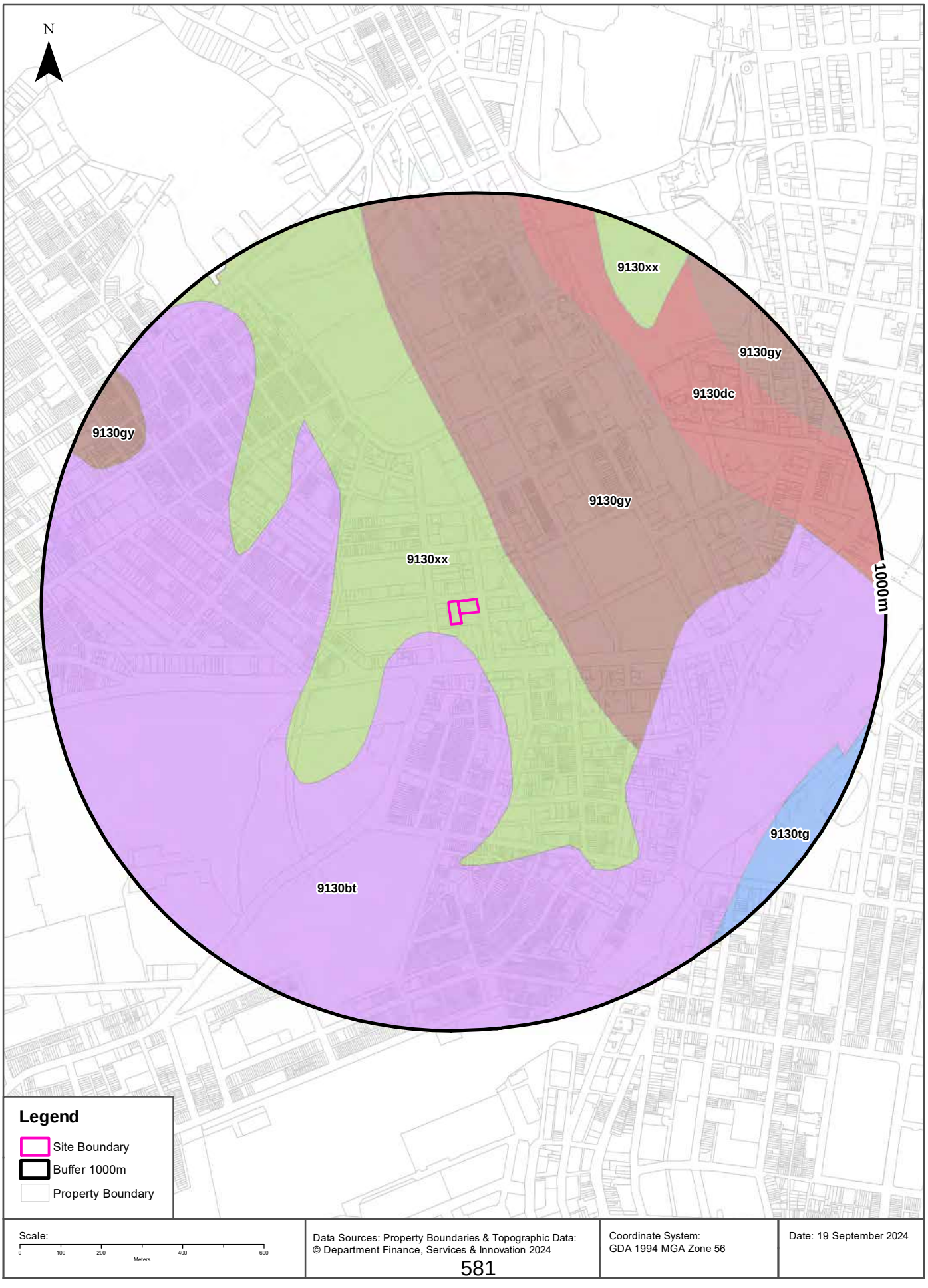
Soil Landscapes of Central and Eastern NSW

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Soil Landscapes of Central and Eastern NSW

Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9130xx	Disturbed Terrain	0m	On-site
9130bt	Blacktown	29m	South West
9130gy	Gymea	120m	North East
9130dc	Deep Creek	637m	North East
9130tg	Tuggerah	883m	South East

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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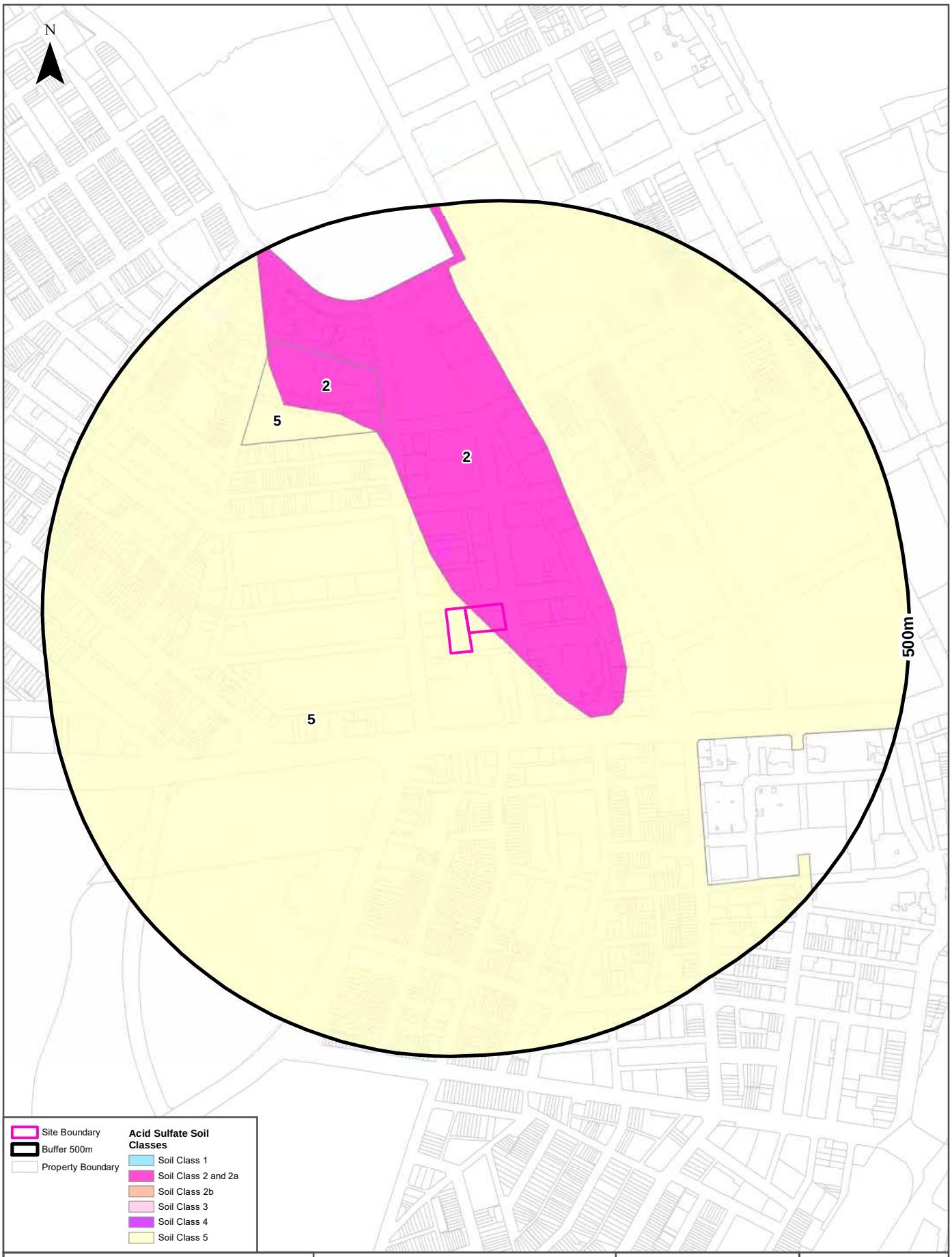
Acid Sulfate Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Acid Sulfate Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Sydney Local Environmental Plan 2012

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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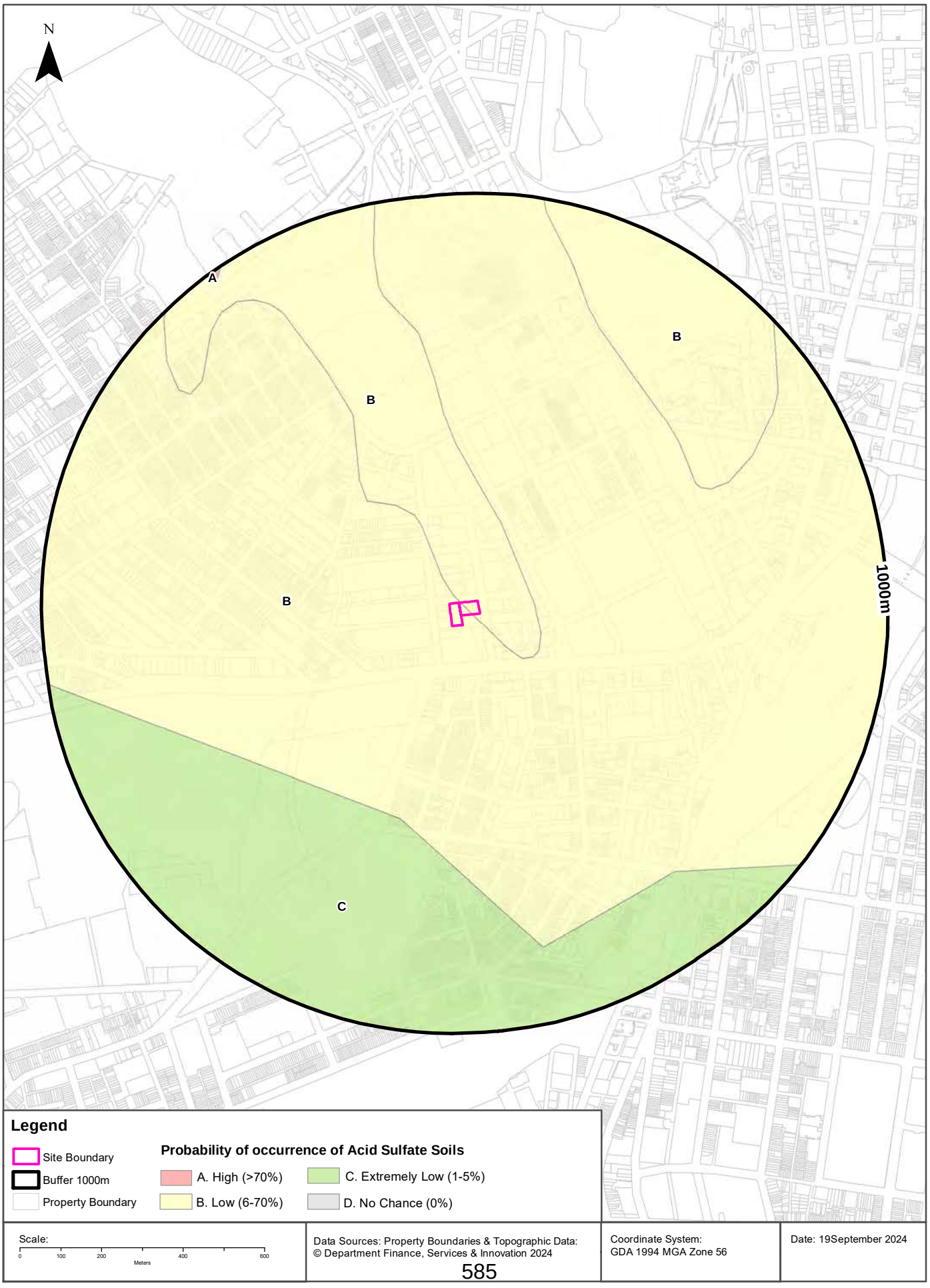
Atlas of Australian Acid Sulfate Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Acid Sulfate Soils

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m	On-site
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	487m	South
A	High Probability of occurrence. >70% chance of occurrence.	981m	North West

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
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Dryland Salinity

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)
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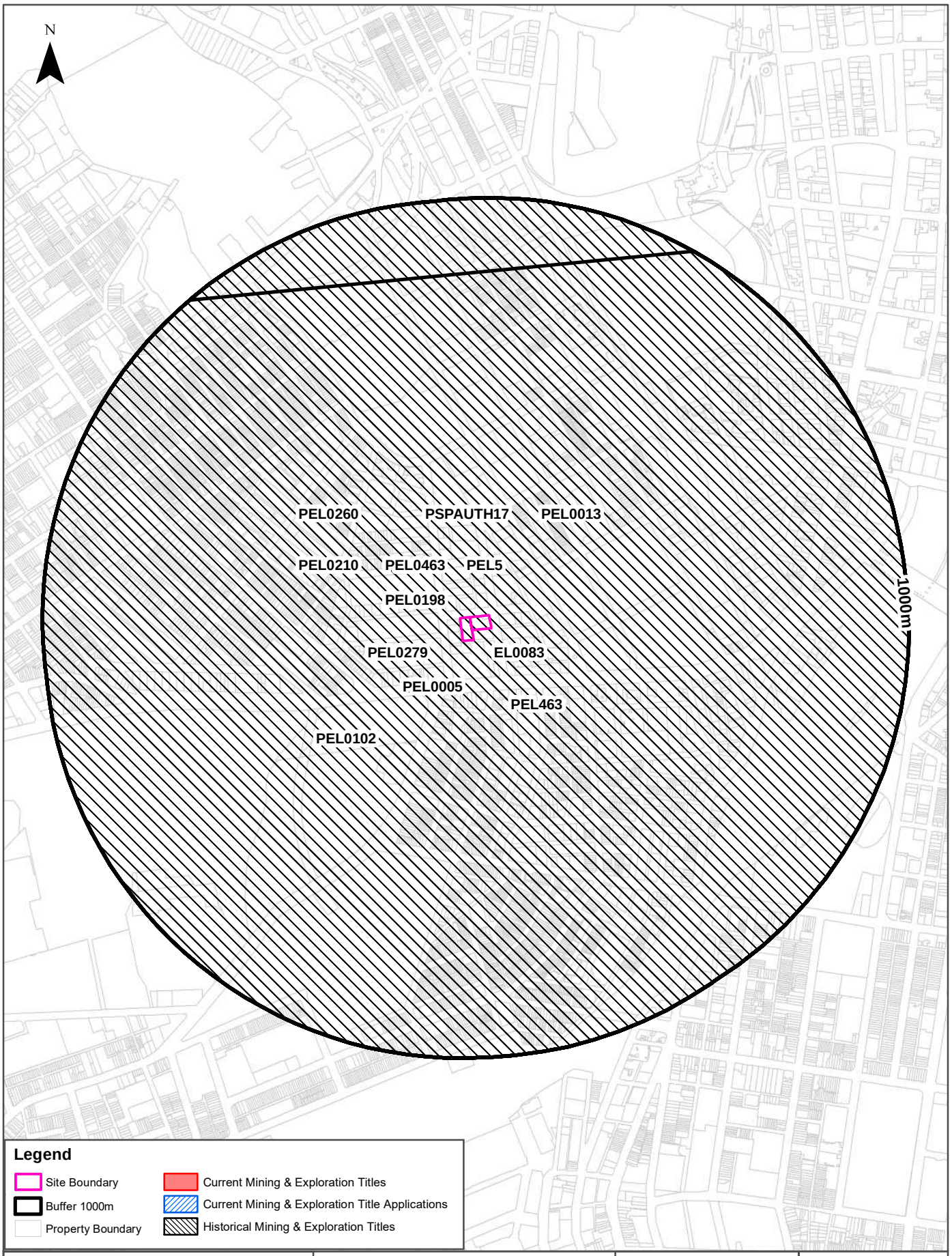
Mining & Exploration Titles

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Mining

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Historical Mining & Exploration Titles

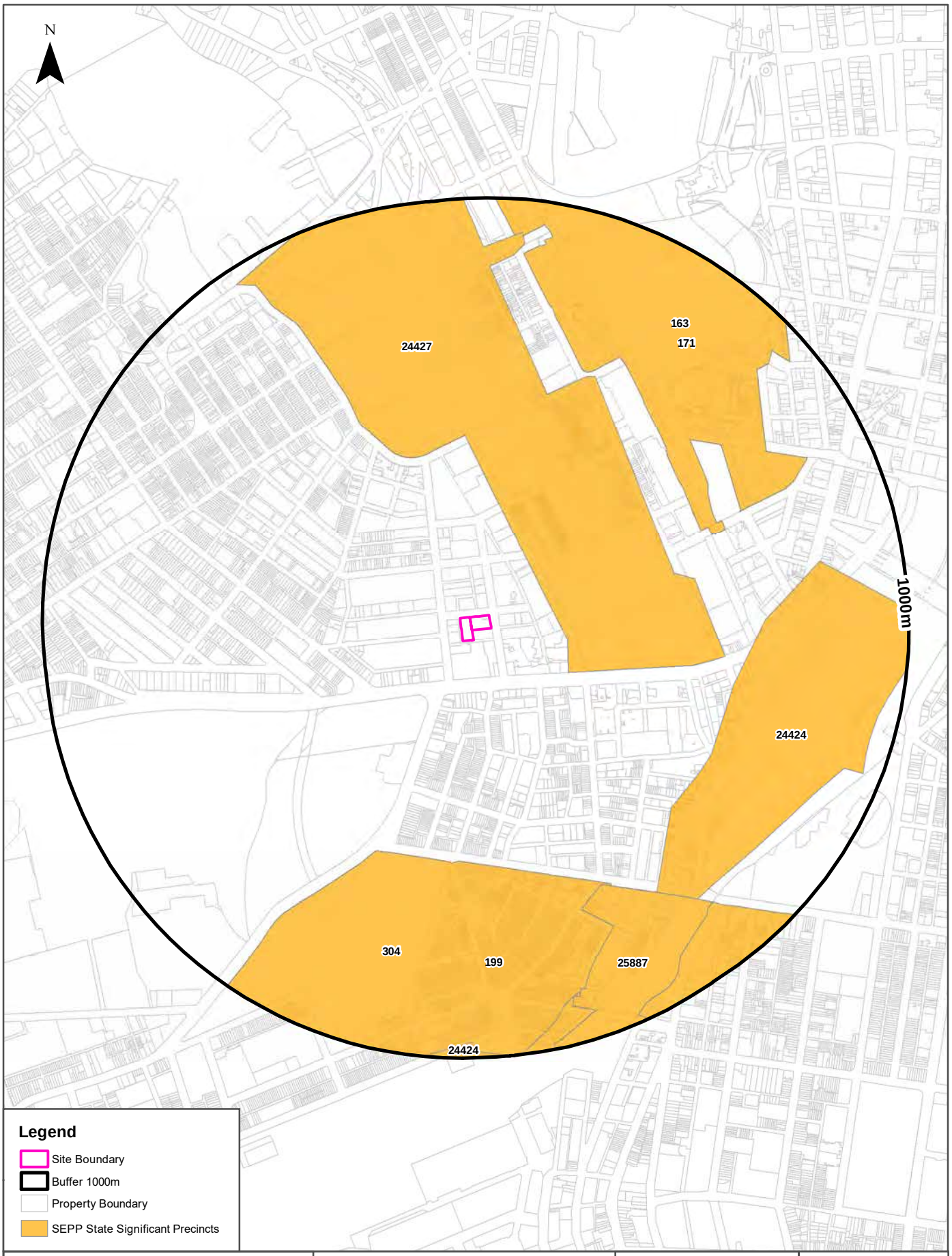
Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20150403	PETROLEUM	Petroleum	0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
EL0083	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
PEL0013	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20011210	MINERALS		0m	On-site
PEL0279	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	19910504	19931111	PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

SEPP State Significant Precincts

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2024

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 September 2024

State Environmental Planning Policy

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
24427	Bays Precinct	State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021	16/12/2022	08/09/2023	08/09/2023	State Environmental Planning Policy Amendment (Blackwattle Bay Precinct) 2022	140m	North
199	Redfern-Waterloo	State Environmental Planning Policy (Precincts - Central River City) 2021	02/12/2021	01/03/2022	01/03/2022		528m	South
304		State Environmental Planning Policy (Precincts - Central River City) 2021	02/12/2021	01/03/2022	01/03/2022		528m	South
163		State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021	02/12/2021	01/03/2022	01/03/2022		545m	North East
171	Darling Harbour	State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021	02/12/2021	01/03/2022	01/03/2022		545m	North East
24424	Bays Precinct	State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021	09/12/2022	09/12/2022	08/09/2023	State Environmental Planning Policy Amendment (Stage 1 Bays West Precinct) 2022	592m	South East
25887		State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021	15/12/2023	15/12/2023	15/12/2023	State Environmental Planning Policy Amendment (Redfern-North Eveleigh Paint Shop Sub-precinct) 2023	662m	South East

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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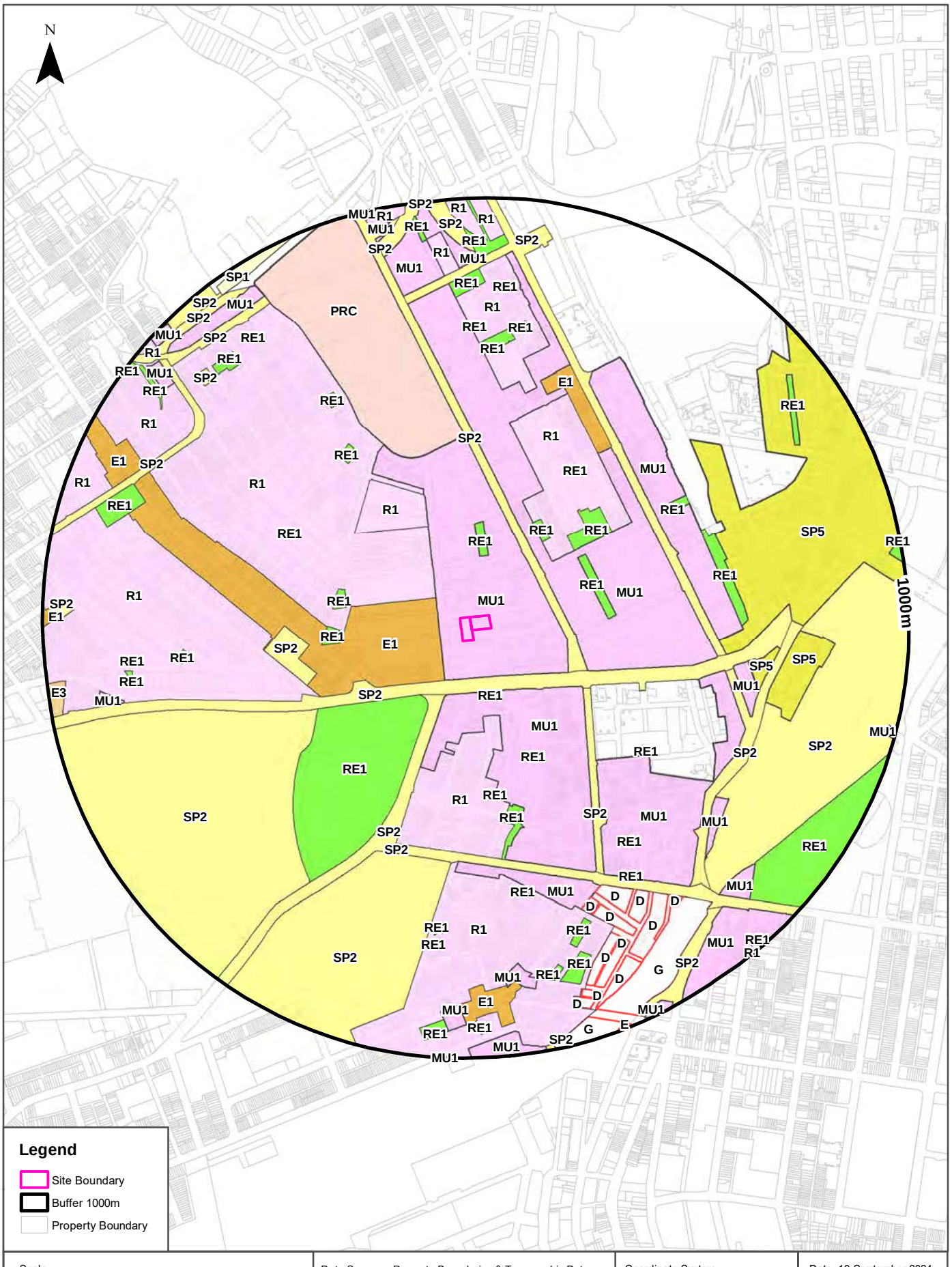
EPI Planning Zones

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Environmental Planning Instrument

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	0m	On-site
E1	Local Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	54m	West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		78m	North West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		92m	South
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	125m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		130m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		133m	South West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		140m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		143m	North
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	160m	North East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		164m	South West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		184m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		198m	North East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		216m	North East
R1	General Residential		Sydney Local Environmental Plan (Glebe Affordable Housing Project) 2011	01/07/2011	01/07/2011	01/07/2011		234m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		250m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		255m	North East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		262m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		273m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		280m	West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		306m	South East
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		359m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		366m	South
R1	General Residential		Sydney Local Environmental Plan 2012	12/01/2024	12/01/2024	12/01/2024	Map Amendment No 8	366m	West
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		384m	South West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		389m	North East
PRC	Public Recreation		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	09/12/2022	09/12/2022	08/09/2023	State Environmental Planning Policy Amendment (Stage 1 Bays West Precinct) 2022	398m	North
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	403m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		405m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		442m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		442m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		456m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		457m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	462m	North East
E1	Local Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	467m	North East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		502m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		506m	North East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	528m	South
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		528m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		528m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		540m	North

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP5	Metropolitan Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	544m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		545m	East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		569m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	585m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		592m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		594m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		602m	South
SP5	Metropolitan Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	618m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		625m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		653m	West
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		658m	South East
SP2	Infrastructure	Railways	Sydney Local Environmental Plan 2012	14/08/2020	14/08/2020	12/01/2024	State Environmental Planning Policy Amendment (Western Gateway Sub-precinct) 2020	669m	East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	670m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		670m	South East
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		676m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		677m	North
SP5	Metropolitan Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	678m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		686m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		688m	South

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		701m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		715m	South
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		715m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		717m	South
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		741m	South East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		760m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		767m	North
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		771m	South
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		773m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		780m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		780m	West
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	781m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		783m	North West
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	783m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		788m	South
G	Special Purposes Zone - Infrastructure		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		789m	South East
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		793m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		794m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		803m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		803m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		806m	North West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		820m	North

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E1	Local Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	822m	South
MU1	Mixed Use		Sydney Local Environmental Plan 2012	12/01/2024	12/01/2024	12/01/2024	Map Amendment No 8	823m	West
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		824m	North West
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	831m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	833m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		834m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		836m	North East
E1	Local Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	837m	North West
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		838m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		844m	South East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		846m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		854m	North
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	865m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	871m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		873m	North West
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		875m	South
SP2	Infrastructure	Railways	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		876m	North West
SP2	Infrastructure	Railways	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		884m	North
D	Business Zone - Mixed Use		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		886m	South

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	887m	North West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		895m	North
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		897m	North
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	901m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		905m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		908m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		914m	South
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	919m	North
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		926m	West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		935m	North West
MU1	Mixed Use		Sydney Local Environmental Plan 2012	15/12/2023	15/12/2023	12/01/2024	State Environmental Planning Policy Amendment (Redfern-North Eveleigh Paint Shop Sub-precinct) 2023	941m	South
G	Special Purposes Zone - Infrastructure		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	15/12/2023	15/12/2023	15/12/2023	State Environmental Planning Policy Amendment (Redfern-North Eveleigh Paint Shop Sub-precinct) 2023	942m	South
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	948m	North
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		951m	North
E3	Productivity Support		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	955m	West
E1	Local Centre		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	961m	West
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		962m	North West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP1	Special Activities	Sydney Fish Market	Sydney Local Environmental Plan 2012	08/09/2023	08/09/2023	12/01/2024	Map Amendment No 6	962m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		967m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	968m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		968m	East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	970m	North West
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	972m	South East
MU1	Mixed Use		Sydney Local Environmental Plan 2012	24/02/2023	26/04/2023	12/01/2024	State Environmental Planning Policy Amendment (Land Use Zones) 2023	977m	North
SP2	Infrastructure	Railways	Sydney Local Environmental Plan 2012	15/12/2023	15/12/2023	12/01/2024	State Environmental Planning Policy Amendment (Redfern-North Eveleigh Paint Shop Sub-precinct) 2023	977m	South
R1	General Residential		Sydney Local Environmental Plan 2012	18/02/2022	18/02/2022	12/01/2024	Amendment No 75	980m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		982m	North West
E	Business Zone - Commercial Core		State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021	02/12/2021	01/03/2022	15/12/2023		983m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/01/2024		994m	North

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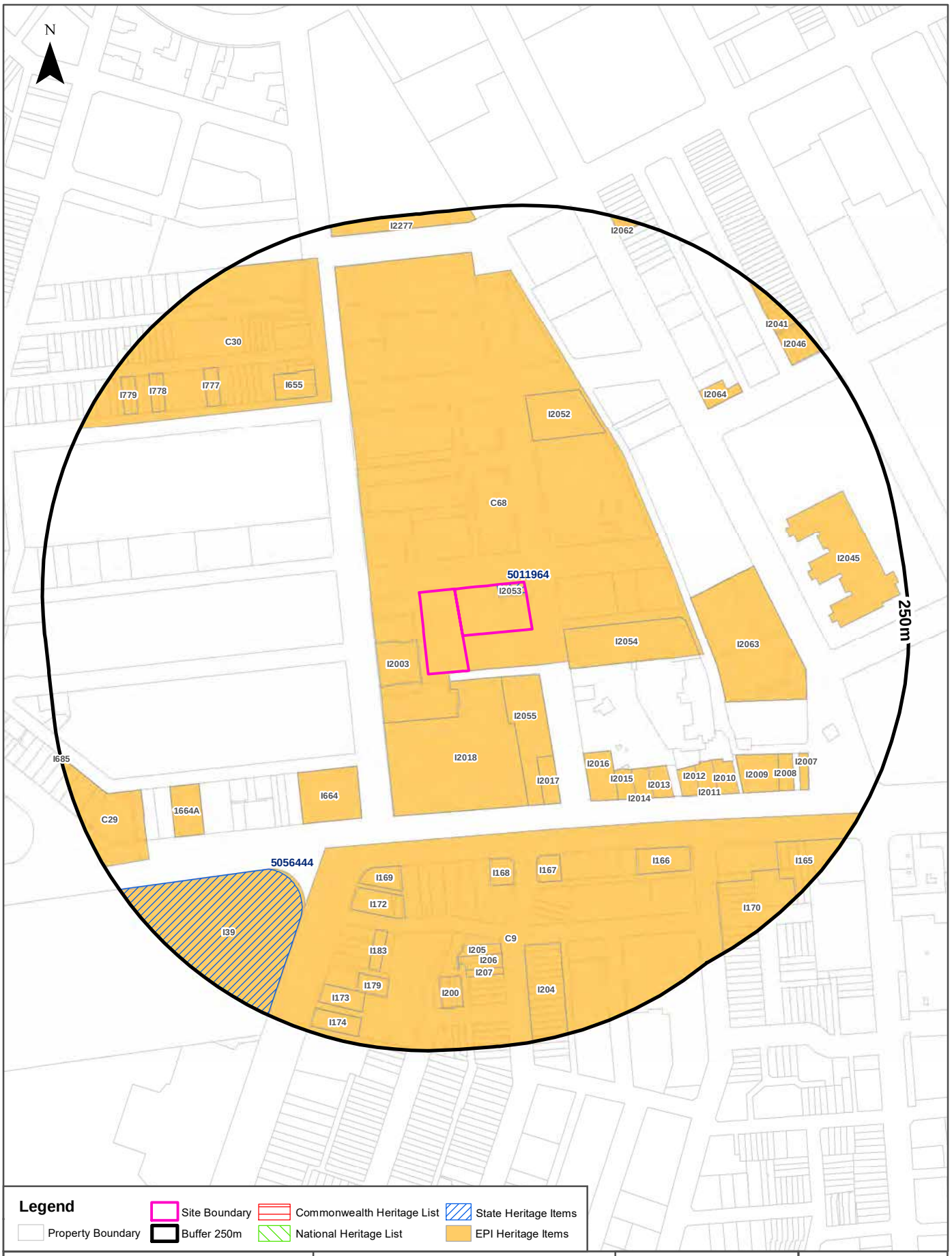
Heritage Items

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007



Legend

Property Boundary	Site Boundary	Commonwealth Heritage List	State Heritage Items
	Buffer 250m	National Heritage List	EPI Heritage Items

Scale:	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024 Heritage - NSW Crown Copyright - Planning & Environment	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 September 2024

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Heritage

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5011964	Substation	41 Mountain Street Ultimo	SYDNEY	02/04/1999	00934	3077	0m	On-site
5056444	The University of Sydney, University Colleges and Victoria Park	Corner of Parramatta and City Roads, Camperdown	SYDNEY	24/08/2018	01974	2734	164m	South West

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Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
C68	Mountain Street	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	0m	On-site
I2053	Electrical substation	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	0m	On-site

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I2003	Commercial building 'Bay House'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	5m	South West
I2018	Former commercial building 'Grace Bros Homewares'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	6m	South
I2054	Warehouse 'Wilcox Mofflin Ltd'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	20m	East
I2055	St Barnabas Anglican Church site	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	21m	South East
I2017	Former National Bank of Australia	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	73m	South East
I664	Former commercial building 'Grace Bros, Model & Moxham Store'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	78m	South West
I2016	Phoenician Club, former 'Broadway Theatre'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	89m	South East
I2052	Former Sydney Technical College School of Rural Studies	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	93m	North East
I2063	Former warehouse 'Briscoe & Co'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	107m	East
C9	Chippendale	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	109m	South
I2015	Commercial building (169-171 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	109m	South East
I2014	Commercial building (165-167 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	114m	South East
I2013	Commercial building (163 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	120m	South East
I168	Former Commonwealth Bank	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	126m	South
I169	Former English, Scottish & Australian Bank	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	129m	South
I167	Former Hotel Broadway	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	132m	South
I2012	Commercial building (157-159 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	134m	South East
I2011	Former commercial building 'Bishop's Stoves' (153-155 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	140m	South East
C30	Hughes	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	140m	North West
I2010	Commercial building (147-151 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	147m	South East
I655	Australian Youth Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	148m	North West
I172	Lansdowne Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	148m	South

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I2009	Commercial building	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	159m	South East
I166	Commercial building 'Pioneer House'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	161m	South East
I39	Victoria Park	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	162m	South West
I2064	Vulcan Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	167m	North East
1664A	Former International Harvester Company of America Warehouse and Showroom	Item - General	Local	Sydney Local Environmental Plan 2012	29/11/2019	29/11/2019	05/04/2024	169m	South West
I183	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	173m	South
I2045	Former School of Mechanical & Automotive Engineering, Sydney Technical College (Bu	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	176m	East
I777	House	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	181m	North West
I205	Terrace house (21A Shepherd Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	181m	South
I2008	Former Stonemason Arms Hotel (133-135 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	182m	South East
I204	Terrace group 'Clive Terraces'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	186m	South
I206	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	189m	South
I2007	Commercial building (129 Broadway)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	195m	South East
I207	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	198m	South
I200	Terrace group 'Rose Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	201m	South
I179	Former terrace group 'Coopers Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	203m	South
C29	Glebe Point Road	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	206m	South West
I778	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	207m	North West
I170	UTS Blackfriars Campus group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	208m	South East
I165	St Benedict's Church group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	215m	South East
I173	Remnant wall 'Coopers Cottages'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	216m	South
I779	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	222m	North West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I2046	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	228m	North East
I174	Former warehouse 'Grace Bros'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	232m	South
I2041	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	234m	North East
I2062	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	239m	North
I2277	Bay Street Depot former stables and factory	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	05/04/2024	240m	North
I685	Former commercial building 'Australian Gaslight Co Showroom'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	05/04/2024	249m	West

Heritage Data Source: NSW Crown Copyright - Planning & Environment
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Natural Hazards

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Bush Fire Prone Land

What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
No records in buffer		

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Site Boundary
ReportBuffer
Property Boundary
Ramsar Wetland

Native Vegetation

Alpine Complex
Arid Shrublands (Acacia sub-formation)
Arid Shrublands (Chenopod sub-formation)
Dry Sclerophyll Forests (Shrub/grass sub-formation)
Dry Sclerophyll Forests (Shrubby sub-formation)
Forested Wetlands
Freshwater Wetlands
Grasslands
Grassy Woodlands
Heathlands
Rainforests
Saline Wetlands
Semi-arid Woodlands (Grassy sub-formation)
Semi-arid Woodlands (Shrubby sub-formation)
Wet Sclerophyll Forests (Grassy sub-formation)
Wet Sclerophyll Forests (Shrubby sub-formation)
Non vegetated
Unattributed
Not classified
Other

Scale: 0 100 200 400 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

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Coordinate System: GDA 1994 MGA Zone 56

Date: 19 September 2024

Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
9576568	Not classified	(Not classified) Not classified	Not classified	0m	On-site

Native Vegetation Type Map : NSW Department of Planning and Environment 2022
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Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

Map ID	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Collaborative Australian Protected Areas Database - Terrestrial

Protected areas in terrestrial environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Collaborative Australian Protected Areas Database - Marine

Protected areas in marine environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Source: Collaborative Australian Protected Areas Database (CAPAD) 2022
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Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
N/A	No records in buffer					

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
N/A	No records in buffer					

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

1-3 Smail and 41-49 Mountain Streets, Ultimo, NSW 2007

NSW BioNet Species Sightings

Species sightings from the NSW BioNet Repository that have either a state or federal conservation status, or a sensitivity status, and are within 10 km of the site:
Note: This data does not include NSW Category 1 sensitive species.

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Crinia tinnula	Wallum Froglet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Not Sensitive	Endangered	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Category 2	Critically Endangered	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Sensitive	Not Listed	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Not Sensitive	Critically Endangered	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calonectris leucomelas	Streaked Shearwater	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Category 2	Vulnerable	Not Listed	
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Category 2	Vulnerable	Vulnerable	
Animalia	Aves	Certhionyx variegatus	Pied Honeyeater	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Not Sensitive	Vulnerable	Endangered	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Not Sensitive	Endangered	Vulnerable	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Not Sensitive	Endangered Population, Vulnerable	Not Listed	
Animalia	Aves	Erythrotriorchis radiatus	Red Goshawk	Category 2	Endangered	Endangered	
Animalia	Aves	Falco subniger	Black Falcon	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Grantiella picta	Painted Honeyeater	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Gygis alba	White Tern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Not Sensitive	Endangered	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Not Sensitive	Vulnerable	Endangered	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Manorina melanotis	Black-eared Miner	Not Sensitive	Critically Endangered	Endangered	
Animalia	Aves	Menura alberti	Albert's Lyrebird	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Motacilla flava	Yellow Wagtail	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Neophema chrysogaster	Orange-bellied Parrot	Category 3	Critically Endangered	Critically Endangered	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Sensitive	Not Listed	Critically Endangered	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Oceanites oceanicus	Wilson's Storm-Petrel	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Sensitive	Not Listed	Not Listed	CAMBA;JAMBA
Animalia	Aves	Phaethon rubricauda	Red-tailed Tropicbird	Not Sensitive	Vulnerable	Not Listed	CAMBA;JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Polytelis anthopeplus monarchoides	Regent Parrot (eastern subspecies)	Category 3	Endangered	Vulnerable	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Not Sensitive	Vulnerable	Endangered	
Animalia	Aves	Pterodroma nigripennis	Black-winged Petrel	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pterodroma solandri	Providence Petrel	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Stercorarius longicaudus	Long-tailed Jaeger	Not Sensitive	Not Listed	Not Listed	CAMBA;JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Not Sensitive	Endangered	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Sula dactylatra	Masked Booby	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche bulleri	Buller's Albatross	Not Sensitive	Not Listed	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Thalassarche cauta	Shy Albatross	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Thalassarche chrysostoma	Grey-headed Albatross	Not Sensitive	Not Listed	Endangered	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Not Sensitive	Critically Endangered	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	Meridolum maryae	Maroubra Woodland Snail	Not Sensitive	Endangered	Endangered	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Not Sensitive	Endangered	Not Listed	
Animalia	Mammalia	Aepyprymnus rufescens	Rufous Bettong	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur-seal	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Balaenoptera musculus	Blue Whale	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Not Sensitive	Vulnerable	Endangered	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Not Sensitive	Endangered	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Macrotis lagotis	Bilby	Not Sensitive	Extinct	Vulnerable	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Notomys cervinus	Fawn Hopping-mouse	Not Sensitive	Extinct	Not Listed	
Animalia	Mammalia	Notomys mitchellii	Mitchell's Hopping-mouse	Not Sensitive	Extinct	Not Listed	
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Not Sensitive	Endangered Population	Not Listed	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Physeter macrocephalus	Sperm Whale	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Pseudomys gracilicaudatus	Eastern Chestnut Mouse	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Pseudomys novaehollandiae	New Holland Mouse	Not Sensitive	Not Listed	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Not Sensitive	Endangered	Endangered	
Animalia	Reptilia	Diplodactylus platyurus	Eastern Fat-tailed Gecko	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	Eretmochelys imbricata	Hawksbill Turtle	Not Sensitive	Not Listed	Vulnerable	
Animalia	Reptilia	Hoplocephalus bitorquatus	Pale-headed Snake	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Pseudonaja modesta	Ringed Brown Snake	Not Sensitive	Endangered	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue-tongued Lizard	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Uvidicolus sphyrurus	Border Thick-tailed Gecko	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Reptilia	Varanus rosenbergi	Rosenberg's Goanna	Not Sensitive	Vulnerable	Not Listed	
Fungi	Flora	Camarophyllopsis kearneyi		Not Sensitive	Endangered	Not Listed	
Fungi	Flora	Hygrocybe anomala var. ianthinomarginata		Not Sensitive	Vulnerable	Not Listed	
Fungi	Flora	Hygrocybe aurantipes		Not Sensitive	Vulnerable	Not Listed	
Fungi	Flora	Hygrocybe austropratensis		Not Sensitive	Endangered	Not Listed	
Fungi	Flora	Hygrocybe collucera		Not Sensitive	Endangered	Not Listed	
Fungi	Flora	Hygrocybe griseoramosa		Not Sensitive	Endangered	Not Listed	
Fungi	Flora	Hygrocybe lanecovensis		Not Sensitive	Endangered	Not Listed	
Fungi	Flora	Hygrocybe reesiae		Not Sensitive	Vulnerable	Not Listed	
Fungi	Flora	Hygrocybe rubronivea		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Acacia gordonii		Not Sensitive	Endangered	Endangered	
Plantae	Flora	Acacia pubescens	Downy Wattle	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. Eastern Sydney	Sunshine wattle	Not Sensitive	Endangered	Endangered	
Plantae	Flora	Allocasuarina portuensis	Nielsen Park She-oak	Category 3	Endangered	Endangered	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Amperea xiphoclada var. pedicellata		Not Sensitive	Extinct	Extinct	
Plantae	Flora	Asterolasia buxifolia		Not Sensitive	Critically Endangered	Critically Endangered	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Category 2	Vulnerable	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Category 3	Vulnerable	Not Listed	
Plantae	Flora	Darwinia biflora		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Dichanthium setosum	Bluegrass	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Doryanthes palmeri	Giant Spear Lily	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Epacris purpurascens var. purpurascens		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Eucalyptus fracta	Broken Back Ironbark	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Eucalyptus pulverulenta	Silver-leafed Gum	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Genoplesium baueri	Bauer's Midge Orchid	Category 2	Endangered	Endangered	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Category 3	Endangered	Not Listed	
Plantae	Flora	Grevillea caleyi	Caley's Grevillea	Category 3	Critically Endangered	Critically Endangered	
Plantae	Flora	Hibbertia puberula		Not Sensitive	Endangered	Not Listed	
Plantae	Flora	Lasiopetalum joyceae		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Leptospermum deanei		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Sensitive	Not Listed	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Melaleuca biconvexa	Biconvex Paperbark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Category 3	Endangered	Endangered	
Plantae	Flora	Pimelea curviflora var. curviflora		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Prasophyllum fuscum	Slaty Leek Orchid	Category 2	Critically Endangered	Vulnerable	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Category 3	Critically Endangered	Critically Endangered	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Not Sensitive	Critically Endangered	Critically Endangered	
Plantae	Flora	Sarcochilus hartmannii	Hartman's Sarcochilus	Category 2	Vulnerable	Vulnerable	
Plantae	Flora	Senecio spathulatus	Coast Groundsel	Not Sensitive	Endangered	Not Listed	
Plantae	Flora	Senna acclinis	Rainforest Cassia	Not Sensitive	Endangered	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Not Sensitive	Endangered	Vulnerable	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Tetratheca glandulosa		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Thesium australe	Austral Toadflax	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Triplarina imbricata	Creek Triplarina	Not Sensitive	Endangered	Endangered	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Not Sensitive	Vulnerable	Not Listed	

Source: NSW BioNet Species Sightings
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Appendix D

Extract from Previous Report

APPENDIX H
Summary of Test Results by Consultants

TABLE B
SUMMARY OF LABORATORY TEST DATA
HEAVY METALS - FILL SOILS
All data in mg/kg unless stated otherwise

ANALYTE	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
PQL - Envirolab Services	4.0	1.0	1.0	1.0	1.0	0.1	1.0	1.0
Guideline concentration-HIL *	500	100	60%	5000	1500	75	3000	35000
SAMPLE (Depth in metres)								
BH1 (0.15-0.5)	6.9	LPQL	21	170	320	1.6	11	250
BH2 (0.15-0.5)	7.5	LPQL	22	170	410	2.8	18	330
BH3 (0.55-0.8)	LPQL	LPQL	16	LPQL	4	LPQL	2	3
BH4 (0.15-0.5)	18	LPQL	18	35	200	0.8	9	140
BH5 (0.2-0.5)	4.2	1.1	9.7	42	260	1	5	740
BH6 (0.2-0.6)	12	LPQL	23	180	320	1.5	72	190
BH7 (0.25-0.4)	19	3.4	21	640	470	0.8	19	1400
Total no. of samples	7	7	7	7	7	7	7	7
Maximum Value	19	3.4	23	640	470	2.8	72	1400

EXPLANATION:
*: National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC Guidelines)
HIL - Column F, Commercial/Industrial

Concentration above HIL **100**
Concentration above EIL ***100***

PQL: Practical Quantitation Limit
LPQL: Less than PQL
NA: Not Analysed

NOTE: Statistical analysis only shown where appropriate.

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TABLE C
SUMMARY OF LABORATORY TEST DATA
ORGANICS - FILL SOILS
All data in mg/kg unless stated otherwise

ORGANICS	Total PAHs	B(a)P	Aldrin and Dieldrin	Chlordane	DDT & DDD & DDE	Heptachlor	PCBs
PQL - Envirolab	-	0.05	0.1	0.1	0.1	0.1	0.1
Guideline concentration *	100	5	50	250	1000	50	50
SAMPLE							
BH1 (0.15-0.5)	109	8.1	LPQL	LPQL	LPQL	LPQL	LPQL
BH2 (0.15-0.5)	48	5.3	LPQL	LPQL	LPQL	LPQL	LPQL
BH3 (0.55-0.8)	0.05	0.05	LPQL	LPQL	LPQL	LPQL	LPQL
BH4 (0.15-0.5)	7.9	0.8	LPQL	LPQL	LPQL	LPQL	LPQL
BH5 (0.2-0.5)	25	2.5	LPQL	LPQL	LPQL	LPQL	LPQL
BH6 (0.2-0.6)	197	23	LPQL	LPQL	LPQL	LPQL	LPQL
BH7 (0.25-0.4)	31	3	LPQL	LPQL	LPQL	LPQL	LPQL
Total no. of samples	7	7	7	7	7	7	7
Maximum Value	197	23	0	0	0	0	0
Mean Value	59.7	6.1	LPQL	LPQL	LPQL	LPQL	LPQL

EXPLANATION:
*: National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC Guidelines) Column F, Commercial/Industrial

Concentration above guideline level

ABBREVIATIONS:
PCBs: Polychlorinated Biphenyls
PAH: Polycyclic aromatic hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL

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TABLE D
SUMMARY OF LABORATORY TEST DATA
PETROLEUM HYDROCARBONS
All data in mg/kg unless stated otherwise

	PETROLEUM HYDROCARBONS								
	Total Petroleum Hydrocarbons				Benzene	Toluene	Ethyl Benzene	Total Xylenes	PID Reading
	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}					
PQL - Envirolab	25	100	100	100	1.0	1.0	1.0	3.0	
Guideline concentration *	65		1000		1	1.4	3.1	14	
SAMPLE (Depth in metres)									
BH1 (0.15-0.5)	LPQL	LPQL	250	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH2 (0.15-0.5)	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH3 (0.55-0.8)	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH4 (0.15-0.5)	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH5 (0.2-0.5)	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH6 (0.2-0.6)	LPQL	LPQL	590	490	LPQL	LPQL	LPQL	LPQL	0
BH7 (0.25-0.4)	LPQL	LPQL	580	710	LPQL	LPQL	LPQL	LPQL	0
Total no. of samples	7	7	7	7	7	7	7	7	7
Maximum Value	0	0	590	710	0	0	0	0	0
Mean Value	LPQL	LPQL	473.3	600	LPQL	LPQL	LPQL	LPQL	0
Upper Level 95% Confidence Limit on Mean Value			869.5						

EXPLANATION:
* EPA Guidelines for Assessing Service Station Sites - 1994

Concentration above Guideline Level
Toluene guideline of 15.5mg/kg can be adopted as corrected value based on original data (ve de Plasse et al 1993)
PQL: Practical Quantitation Limit
LPQL: - Less than Practical QuantitationLimit
NOTE: Statistical analysis only shown where appropriate

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TABLE E
SUMMARY OF LABORATORY TEST DATA
ASBESTOS IN SOIL

ANALYTE	Asbestos Identification	Respirable Fibre Content
SAMPLE (Depth in metres)		
BH1 (0.15-0.5)	No asbestos detected	Respirable Fibres Not Detected
BH2 (0.15-0.5)	No asbestos detected	Respirable Fibres Not Detected
BH3 (0.55-0.8)	No asbestos detected	Respirable Fibres Not Detected
BH4 (0.15-0.5)	No asbestos detected	Respirable Fibres Not Detected
BH5 (0.2-0.5)	No asbestos detected	Respirable Fibres Not Detected
BH6 (0.2-0.6)	No asbestos detected	Respirable Fibres Not Detected
BH7 (0.25-0.4)	No asbestos detected	Respirable Fibres Not Detected

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TABLE F
GROUNDWATER MONITORING ANALYSIS
All results in mg/L unless stated otherwise.

Contaminant	PQL Envirolab	Guideline Concentration		SAMPLES
		ANZECC 2000	Drinking Water	BH3
Arsenic (As III)	0.001	0.024	0.007	LPQL
Cadmium	0.0001	0.0002	0.002	LPQL
Chromium	0.001	0.001	0.05	LPQL
Copper	0.001	0.0014	2.0	LPQL
Lead	0.001	0.0034	0.01	0.003
Mercury	0.0001	0.0006	0.001	LPQL
Nickel	0.001	0.011	0.02	0.008
Zinc	0.001	0.008	3.0	0.011
Hydrocarbons C6-C9	0.01	NSL	NSL	LPQL
Hydrocarbons C10-C14	0.05	NSL	NSL	LPQL
Hydrocarbons C15-C28	0.1			LPQL
Hydrocarbons C29-C36	0.1			LPQL
Benzene	0.001	0.95	0.001	LPQL
Toluene	0.001	0.18	0.8	LPQL
Ethyl Benzene	0.001	0.08	0.3	LPQL
Total xylenes	0.003	nsl	0.6	LPQL
o-xylene	0.001	0.35	NSL	LPQL
m+p-xylene	0.002	0.03	NSL	LPQL

EXPLANATION:
NA : Not Analysed
NSL : No set limit

* Trigger value for protection of 95% of freshwater species.
Australian and New Zealand Guidelines for Fresh and Marine Water Quality,
Australian and New Zealand Environment and Conservation Council 2000.
\# Threshhold concentrations for Protection of Aquatic Ecosystems
NSW EPA Guidelines for Assessing Service Station sites - Health Based Levels 1994.

Concentration above guideline level

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TABLE G-1
QA/QC - RELATIVE PERCENTAGE DIFFERENCES

SAMPLE	ANALYSIS	INITIAL (mg/kg)	REPEAT (mg/kg)	MEAN (mg/kg)	RPD %
Intra-laboratory Soil BH3 (0.55-0.8) = Dup A	Arsenic	LPQL	LPQL	LPQL	0
	Cadmium	LPQL	LPQL	LPQL	0
	Chromium	16	15	15.5	6
	Copper	LPQL	LPQL	LPQL	0
	Lead	4	4	4	0
	Mercury	LPQL	LPQL	LPQL	0
	Nickel	2	2	2	0
	Zinc	3	3	3	0
	Naphthalene	LPQL	LPQL	LPQL	0
	Acenaphthylene	LPQL	LPQL	LPQL	0
	Acenaphthene	LPQL	LPQL	LPQL	0
	Fluorene	LPQL	LPQL	LPQL	0
	Phenanthrene	LPQL	LPQL	LPQL	0
	Anthracene	LPQL	LPQL	LPQL	0
	Fluoranthene	LPQL	LPQL	LPQL	0
	Pyrene	LPQL	LPQL	LPQL	0
	Benzo(a)anthracene	LPQL	LPQL	LPQL	0
	Chrysene	LPQL	LPQL	LPQL	0
	Benzo(b)&(k)fluorant	LPQL	LPQL	LPQL	0
	Benzo(a)pyrene	0.05	LPQL	0.0375	67
	Indeno(123-cd)pyrene	LPQL	LPQL	LPQL	0
	Dibenzo(ah)anthracene	LPQL	LPQL	LPQL	0
	Benzo(ghi)perylene	LPQL	LPQL	LPQL	0
	Total PAHs	0.05	LPQL	0.0375	67
	C_6-C_9 TPH	LPQL	LPQL	LPQL	0
	C_{10}-C_{14} TPH	LPQL	LPQL	LPQL	0
	C_{15}-C_{28} TPH	LPQL	LPQL	LPQL	0
	C_{29}-C_{36} TPH	LPQL	LPQL	LPQL	0
	Benzene	LPQL	LPQL	LPQL	0
	Toluene	LPQL	LPQL	LPQL	0
	Ethylbenzene	LPQL	LPQL	LPQL	0
	Total Xylenes	LPQL	LPQL	LPQL	0

Explanation

RPD : Relative Percentage Difference
nc : Not calculated

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TABLE G-2
QA/QC - RELATIVE PERCENTAGE DIFFERENCES

SAMPLE	ANALYSIS	INITIAL (mg/kg)	REPEAT (mg/kg)	MEAN (mg/kg)	RPD %
Intra-laboratory Soil BH6 (0.2-0.6) = Dup B	Arsenic	12	11	11.5	9
	Cadmium	LPQL	1	0.75	67
	Chromium	23	23	23	0
	Copper	180	160	170	12
	Lead	320	260	290	21
	Mercury	1.5	1.4	1.45	7
	Nickel	72	45	58.5	46
	Zinc	190	310	250	48
	Naphthalene	1.5	1.8	1.65	18
	Acenaphthylene	3	4	3.5	29
	Acenaphthene	0.9	1.2	1.05	29
	Fluorene	0.9	LPQL	0.7	57
	Phenanthrene	15	19	17	24
	Anthracene	3.5	5.4	4.45	43
	Fluoranthene	29	33	31	13
	Pyrene	29	35	32	19
	Benzo(a)anthracene	16	20	18	22
	Chrysene	17	19	18	11
	Benzo(b)&(k)fluorant	31	30	30.5	3
	Benzo(a)pyrene	23	22	22.5	4
	Indeno(123-cd)pyrene	11	12	11.5	9
	Dibenzo(ah)anthracene	2.9	2.9	2.9	0
	Benzo(ghi)perylene	13	18	15.5	32
	Total PAHs	197	223.3	210.15	13
	C_6-C_9 TPH	LPQL	LPQL	LPQL	0
	C_{10}-C_{14} TPH	LPQL	LPQL	LPQL	0
	C_{15}-C_{28} TPH	590	850	720	36
	C_{29}-C_{36} TPH	490	360	425	31
	Benzene	LPQL	LPQL	LPQL	0
	Toluene	LPQL	LPQL	LPQL	0
	Ethylbenzene	LPQL	LPQL	LPQL	0
	Total Xylenes	LPQL	LPQL	LPQL	0

Explanation

RPD : Relative Percentage Difference
nc : Not calculated

TABLE G-3
QA/QC - RELATIVE PERCENTAGE DIFFERENCES

SAMPLE	ANALYSIS	INITIAL (mg/kg)	REPEAT (mg/kg)	MEAN (mg/kg)	RPD %
Inter-laboratory Water BH3 = Dup 1	Arsenic	LPQL	LPQL	LPQL	0
	Cadmium	LPQL	LPQL	LPQL	0
	Chromium	LPQL	LPQL	LPQL	0
	Copper	LPQL	LPQL	LPQL	0
	Lead	0.003	0.003	0.003	0
	Mercury	LPQL	LPQL	LPQL	0
	Nickel	0.008	0.008	0.008	0
	Zinc	0.011	0.017	0.014	43
	C6-C9 TPH	LPQL	LPQL	LPQL	0
	C10-C14 TPH	LPQL	LPQL	LPQL	0
	C15-C28 TPH	LPQL	LPQL	LPQL	0
	C29-C36 TPH	LPQL	LPQL	LPQL	0
	Benzene	LPQL	LPQL	LPQL	0
	Toluene	LPQL	LPQL	LPQL	0
	Ethylbenzene	LPQL	LPQL	LPQL	0
	Total Xylenes	LPQL	LPQL	LPQL	0

Explanation

RPD : Relative Percentage Difference
nc : Not calculated

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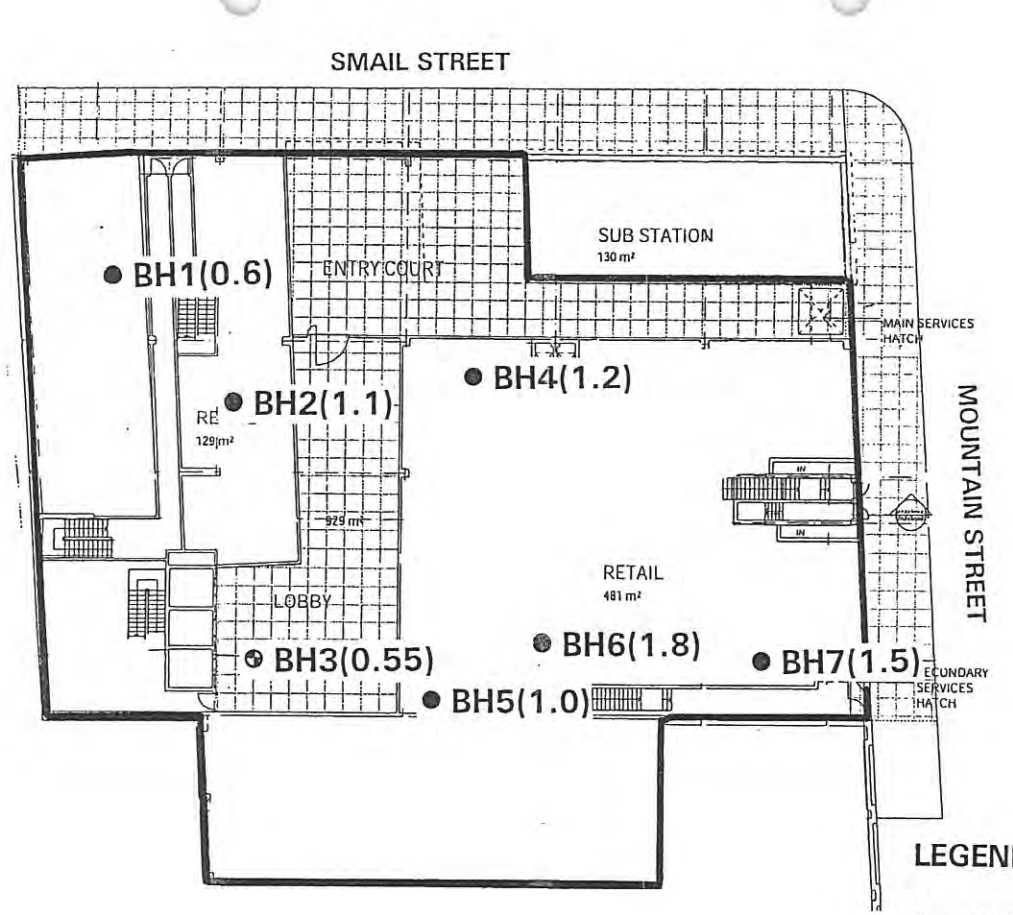
TABLE H
SUMMARY OF LABORATORY TEST DATA
TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)
All data in mg/L unless stated otherwise

ANALYTE	As	Cr	Pb	Hg	Ni	B(a)P
PQL - Envirolab	0.05	0.01	0.03	0.0005	0.02	0.001
Guideline concentration * TCLP1 Inert	0.5	0.5	0.5	0.02	0.2	0.004
SAMPLE						
BH1 (0.15-0.5)	NA	NA	NA	NA	NA	LPQL
BH2 (0.15-0.5)	LPQL	LPQL	0.4	LPQL	0.03	LPQL
BH4 (0.15-0.5)	LPQL	LPQL	0.38	LPQL	LPQL	NA
BH5 (0.2-0.5)	LPQL	LPQL	0.2	LPQL	LPQL	NA
BH6 (0.2-0.6)	NA	NA	NA	NA	NA	LPQL
BH7 (0.25-0.4)	LPQL	LPQL	0.19	LPQL	0.08	LPQL
Total no. of samples	6	6	6	6	6	6
Maximum Value	0	0	0.4	0	0.08	0

EXPLANATION:
* Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid wastes (NSW EPA 1999)
Further reference should be made to Table A-2 for waste classification criteria
NA: not analysed

Value above guideline level

NOTE: Statistical analysis only shown where appropriate



N

635

LEGEND:

- • BH1(0.6) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (METRES)
- ⊙ BH3(0.55) — TEMPORARY MONITORING WELL INSTALLED IN BOREHOLE

BORHOLE LOCATION PLAN

43-49 MOUNTAIN STREET, ULTIMO

NOTE: Reference should be made to the text for a full understanding of this plan.

SCALE (M)
0 15

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Report No. E14286F-RPT2
Figure: 2

APPENDIX G
Bore Logs prepared by Consultants

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CONSULTING ENVIRONMENTAL ENGINEERS

EIS

ENVIRONMENTAL LOG

Borehole No. 1 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 8.10am

Date: 20-12-05 **Finish:** 9.20am

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 150mm.t				
					PID = 0			-	FILL: Clayey sand, fine to medium grained, brown, with a trace of slag and sandstone gravel.	M	-	-	
					PID = 0	1		SM	SILTY SAND: fine to medium grained, light brown, with a trace of clay.	D	-	-	
					PID = 0			SC -	CLAYEY SAND: fine to medium grained, orange brown, with extremely weathered sandstone bands.	D XW	-	-	LOW 'TC' BIT RESISTANCE
						2			SANDSTONE: light grey. END OF BOREHOLE AT 2.0m				
						3							
						4							
						5							
						6							
						7							

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ENVIRONMENTAL LOG

Borehole No. 2 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 9.30am

Date: 20-12-05 **Finish:** 10.15am

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 150mm.t				
					PID = 0			-	FILL: Silty sand, fine to medium grained, brown, with a trace of slag, sandstone and igneous gravel.	M	-	-	
					PID = 0	1			as above, but light brown.				
					PID = 0			SM	SILTY SAND: fine to medium grained, light brown, with orange brown bands.	M	-	-	POSSIBLY FILL
								CL-CH	SANDY CLAY: medium to high plasticity, orange brown mottled red, with a trace of ironstone gravel.	MC < PL	-	-	
					PID = 0	2		-	SANDSTONE: light grey.	XW	-	-	LOW 'TC' BIT RESISTANCE
						3			END OF BOREHOLE AT 3.0m				
						4							
						5							
						6							
						7							

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ENVIRONMENTAL LOG

Borehole No. 3 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 10.40am

Date: 20-12-05 **Finish:** 11.30am

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE; 550mm.t				NO SPT DUE TO HEIGHT RESTRICTIONS
					PID = 0	1		SC	CLAYEY SAND: fine to medium grained, orange brown.	M	-	-	
								-	SANDSTONE: light grey, with orange bands	XW	-	-	LOW 'TC' BIT RESISTANCE
▼ AFTER 4 HRS					PID = 0	2							
						3				DW			MODERATE RESISTANCE
									as above, but light brown.				
						4				SW			HIGH RESISTANCE
									END OF BOREHOLE AT 4.5m				TEMPORARY PIEZOMETER INSTALLED UNSLOTTED 0-1.5m SLOTTED 1.5-4.5m
						5							
						6							
						7							

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ENVIRONMENTAL LOG

Borehole No. 4 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 2.40pm

Date: 20-12-05 **Finish:** 3.15pm

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 150mm.t				
	■				PID = 0			-	FILL: Silty sand, fine to medium grained, brown, with a trace of sandstone and igneous gravel, clay and slag.	D	-	-	
					PID = 0				as above, but light grey.				
						1							
					PID = 0			SM	SILTY SAND: fine to medium grained, light grey.	D	-	-	POSSIBLY FILL
					PID = 0				as above, but with orange bands and clay.				
						2							
	■				PID = 0			-	SANDSTONE: light grey.	XW	-	-	LOW 'TC' BIT RESISTANCE
						3			END OF BOREHOLE AT 3.0m				
						4							
						5							
						6							
						7							

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ENVIRONMENTAL LOG

Borehole No. 5 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 12.15pm

Date: 20-12-05 **Finish:** 12.55pm

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 200mm.t				
					PID = 0			-	FILL: Silty sand, fine to medium grained, brown, with a trace of ceramics, brick fragments and sandstone gravel.	M	-	-	
					PID = 0				as above, but orange brown, with a trace of clay.				
						1		SC	CLAYEY SAND: fine to medium grained, orange brown.	D	-	-	
					PID = 0								
					PID = 0								
					PID = 0	2		-	SANDSTONE: yellow brown, with light grey bands.	XW	-	-	LOW 'TC' BIT RESISTANCE
						3			END OF BOREHOLE AT 3.0m				
						4							
						5							
						6							
						7							

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EIS

ENVIRONMENTAL LOG

Borehole No. 6 1/1

Environmental logs are not to be used for geotechnical purposes

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 1.00pm

Date: 20-12-05 **Finish:** 1.30pm

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 200mm.t				
					PID = 0			-	FILL: Silty sand, fine to medium grained, brown, with igneous gravel and a trace of sandstone gravel, brick fragments and clay.	M	-	-	
					PID = 0				as above, but with clay bands.				
						1			FILL: Silty sand, fine to medium grained, brown, with a trace of slag and brick fragments.				
					PID = 0			SC	CLAYEY SAND: fine to medium grained, orange brown, with red bands.	D	-	-	
					PID = 0	2		-	SANDSTONE: orange brown.	XW	-	-	LOW 'TC' BIT RESISTANCE
						3			END OF BOREHOLE AT 3.0m				
						4							
						5							
						6							
						7							

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Borehole No. 7 1/1

Weather: Sunny 25°

Client: NATION-WIDE INCORPORATED CO PTY LTD

Project: PROPOSED COMMERICAL DEVELOPMENT

Location: 43-49 MOUNTAIN STREET, ULTIMO, NSW

Job No. E14286F **Method:** SPIRAL AUGER JK250 **Start:** 1.45pm

Date: 20-12-05 **Finish:** 2.30pm

Logged/Checked by: T.H./

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			CONCRETE: 250mm.t				
					PID = 0			-	FILL: Silty sand, fine to medium grained, brown, with a trace of igneous and sandstone gravel, ash, slag and ceramics.	W	-	-	NO SPT DUE TO HEIGHT RESTRICTIONS
					PID = 0	1			FILL: Gravelly sand, fine to medium grained, red brown, with 20mm sub angular sandstone gravel.	MC < PL			
					PID = 0				FILL: Silty clay, medium plasticity, brown, with a trace of igneous and ironstone gravel, sand, and slag.				
					PID = 0			SM	SILTY SAND: fine to medium grained, light brown, with a trace of sandstone gravel.	D	-	-	POSSIBLY FILL
					PID = 0	2		-	SANDSTONE: red brown.	XW	-	-	VERY LOW 'TC' BIT RESISTANCE WITH LOW BANDS
						3			END OF BOREHOLE AT 3.0m				
						4							
						5							
						6							
						7							

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ABN 17 003 550 801

REPORT EXPLANATION NOTES

INTRODUCTION

These notes have been provided to amplify the geotechnical report in regard to classification methods, field procedures and certain matters relating to the Comments and Recommendations section. Not all notes are necessarily relevant to all reports.

The ground is a product of continuing natural and man-made processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Geotechnical engineering involves gathering and assimilating limited facts about these characteristics and properties in order to understand or predict the behaviour of the ground on a particular site under certain conditions. This report may contain such facts obtained by inspection, excavation, probing, sampling, testing or other means of investigation. If so, they are directly relevant only to the ground at the place where and time when the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, the SAA Site Investigation Code. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geotechnical practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the grading of other particles present (eg sandy clay) as set out below:

Soil Classification	Particle Size
Clay	less than 0.002mm
Silt	0.002 to 0.06mm
Sand	0.06 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose	less than 4
Loose	4 – 10
Medium dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) either by use of hand penetrometer, laboratory testing or engineering examination. The strength terms are defined as follows.

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 – 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 – 400
Hard	Greater than 400
Friable	Strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, "Shale" is used to describe thinly bedded to laminated siltstone.

SAMPLING

Sampling is carried out during drilling or from other excavations to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on plasticity, grain size, colour, moisture content, minor constituents and, depending upon the degree of disturbance, some information on strength and structure. Bulk samples are similar but of greater volume required for some test procedures.

Undisturbed samples are taken by pushing a thin-walled sample tube, usually 50mm diameter (known as a U50), into the soil and withdrawing it with a sample of the soil contained in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Details of the type and method of sampling used are given on the attached logs.

INVESTIGATION METHODS

The following is a brief summary of investigation methods currently adopted by the Company and some comments on their use and application. All except test pits, hand auger drilling and portable dynamic cone penetrometers require the use of a mechanical drilling rig which is commonly mounted on a truck chassis.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the insitu soils if it is safe to descend into the pit. The depth of penetration is limited to about 3m for a backhoe and up to 6m for an excavator. Limitations of test pits are the problems associated with disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as hard clay, gravel or ironstone, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table. Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock fragments.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term "mud" encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (eg from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel, which gives a core of about 50mm diameter, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS. The location of losses are determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the top end of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposes" – Test F3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of, say, 4, 6 and 7 blows, as

  N = 13

  4, 6, 7
- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as

  N > 30

  15, 30/40mm

The results of the test can be related empirically to the engineering properties of the soil.

Occasionally, the drop hammer is used to drive 50mm diameter thin walled sample tubes (U50) in clays. In such circumstances, the test results are shown on the borehole logs in brackets.

A modification to the SPT test is where the same driving system is used with a solid 60° tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as "N_c" on the borehole logs, together with the number of blows per 150mm penetration.

Static Cone Penetrometer Testing and Interpretation: Cone penetrometer testing (sometimes referred to as a Dutch Cone) described in this report has been carried out using an Electronic Friction Cone Penetrometer (EFCP). The test is described in Australian Standard 1289, Test F5.1.

In the tests, a 35mm diameter rod with a conical tip is pushed continuously into the soil, the reaction being provided by a specially designed truck or rig which is fitted with an hydraulic ram system. Measurements are made of the end bearing resistance on the cone and the frictional resistance on a separate 134mm long sleeve, immediately behind the cone. Transducers in the tip of the assembly are electrically connected by wires passing through the centre of the push rods to an amplifier and recorder unit mounted on the control truck.

As penetration occurs (at a rate of approximately 20mm per second) the information is output as incremental digital records every 10mm. The results given in this report have been plotted from the digital data.

The information provided on the charts comprise:

- Cone resistance – the actual end bearing force divided by the cross sectional area of the cone – expressed in MPa.
- Sleeve friction – the frictional force on the sleeve divided by the surface area – expressed in kPa.
- Friction ratio – the ratio of sleeve friction to cone resistance, expressed as a percentage.

The ratios of the sleeve resistance to cone resistance will vary with the type of soil encountered, with higher relative friction in clays than in sands. Friction ratios of 1% to 2% are commonly encountered in sands and occasionally very soft clays, rising to 4% to 10% in stiff clays and peats. Soil descriptions based on cone resistance and friction ratios are only inferred and must not be considered as exact.

Correlations between EFCP and SPT values can be developed for both sands and clays but may be site specific.

Interpretation of EFCP values can be made to empirically derive modulus or compressibility values to allow calculation of foundation settlements.

Stratification can be inferred from the cone and friction traces and from experience and information from nearby boreholes etc. Where shown, this information is presented for general guidance, but must be regarded as interpretive. The test method provides a continuous profile of engineering properties but, where precise information on soil classification is required, direct drilling and sampling may be preferable.

Portable Dynamic Cone Penetrometers: Portable Dynamic Cone Penetrometer (DCP) tests are carried out by driving a rod into the ground with a sliding hammer and counting the blows for successive 100mm increments of penetration.

Two relatively similar tests are used:

- Cone penetrometer (commonly known as the Scala Penetrometer) – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS1289, Test F3.2). The test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various Road Authorities.
- Perth sand penetrometer – a 16mm diameter flat ended rod is driven with a 9kg hammer, dropping 600mm (AS1289, Test F3.3). This test was developed for testing the density of sands (originating in Perth) and is mainly used in granular soils and filling.

LOGS

The borehole or test pit logs presented herein are an engineering and/or geological interpretation of the sub-surface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will enable the most reliable assessment, but is not always practicable or possible to justify on economic grounds. In any case, the boreholes or test pits represent only a very small sample of the total subsurface conditions.

The attached explanatory notes define the terms and symbols used in preparation of the logs.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than "straight line" variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open.
- A localised perched water table may lead to an erroneous indication of the true water table.
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction.
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must be washed out of the hole or "reverted" chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after stabilising at intervals ranging from several days to perhaps weeks

for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (eg bricks, steel etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably determine the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density, strength and material type is much greater than with natural soil deposits. Consequently, there is an increased risk of adverse engineering characteristics or behaviour. If the volume and quality of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes.

LABORATORY TESTING

Laboratory testing is normally carried out in accordance with Australian Standard 1289 "Methods of Testing Soil for Engineering Purposes". Details of the test procedure used are given on the individual report forms.

ENGINEERING REPORTS

Engineering reports are prepared by qualified personnel and are based on the information obtained and on current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal (eg a three storey building) the information and interpretation may not be relevant if the design proposal is changed (eg to a twenty storey building). If this happens, the company will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical aspects and recommendations or suggestions for design and construction. However, the Company cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions – the potential for this will be partially dependent on borehole spacing and sampling frequency as well as investigation technique.
- Changes in policy or interpretation of policy by statutory authorities.
- The actions of persons or contractors responding to commercial pressures.

If these occur, the company will be pleased to assist with investigation or advice to resolve any problems occurring.

SITE ANOMALIES

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, the company requests that it immediately be notified. Most problems are much more readily resolved when conditions are exposed that at some later stage, well after the event.

REPRODUCTION OF INFORMATION FOR CONTRACTUAL PURPOSES

Attention is drawn to the document "Guidelines for the Provision of Geotechnical Information in Tender Documents", published by the Institution of Engineers, Australia. Where information obtained from this investigation is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. The company would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Copyright in all documents (such as drawings, borehole or test pit logs, reports and specifications) provided by the Company shall remain the property of Jeffery and Katauskas Pty Ltd. Subject to the payment of all fees due, the Client alone shall have a licence to use the documents provided for the sole purpose of completing the project to which they relate. License to use the documents may be revoked without notice if the Client is in breach of any objection to make a payment to us.

REVIEW OF DESIGN

Where major civil or structural developments are proposed or where only a limited investigation has been completed or where the geotechnical conditions/ constraints are quite complex, it is prudent to have a joint design review which involves a senior geotechnical engineer.

SITE INSPECTION

The company will always be pleased to provide engineering inspection services for geotechnical aspects of work to which this report is related.

Requirements could range from:

i) a site visit to confirm that conditions exposed are no worse than those interpreted, to
ii) a visit to assist the contractor or other site personnel in identifying various soil/rock types such as appropriate footing or pier founding depths, or
iii) full time engineering presence on site.

GRAPHIC LOG SYMBOLS FOR SOILS AND ROCKS

SOIL

FILL

TOPSOIL

CLAY (CL, CH)

SILT (ML, MH)

SAND (SP, SW)

GRAVEL (GP, GW)

SANDY CLAY (CL, CH)

SILTY CLAY (CL, CH)

CLAYEY SAND (SC)

SILTY SAND (SM)

GRAVELLY CLAY (CL, CH)

CLAYEY GRAVEL (GC)

SANDY SILT (ML)

PEAT AND ORGANIC SOILS

ROCK

CONGLOMERATE

SANDSTONE

SHALE

SILTSTONE, MUDSTONE, CLAYSTONE

LIMESTONE

PHYLLITE, SCHIST

TUFF

GRANITE, GABBRO

DOLERITE, DIORITE

BASALT, ANDESITE

QUARTZITE

DEFECTS AND INCLUSIONS

CLAY SEAM

SHEARED OR CRUSHED SEAM

BRECCIATED OR SHATTERED SEAM/ZONE

IRONSTONE GRAVEL

ORGANIC MATERIAL

OTHER MATERIALS

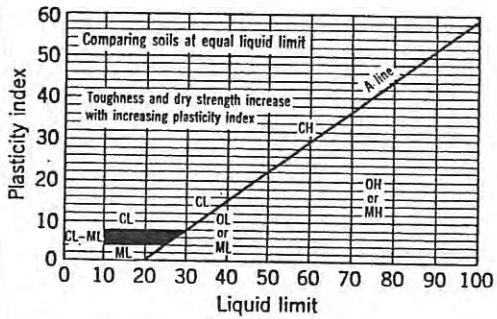
CONCRETE

BITUMINOUS CONCRETE, COAL

COLLUVIUM

UNIFIED SOIL CLASSIFICATION TABLE

Field Identification Procedures (Excluding particles larger than 75 μm and basing fractions on estimated weights)					Group Symbols [a]	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria
Coarse-grained soils More than half of material is *larger* than 75 μm sieve size[b] (The 75 μm sieve size is about the smallest particle visible to naked eye)	Gravels More than half of coarse fraction is larger than 4 mm sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes		*GW*	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics Example: *Silty sand*, gravelly; about 20% hard, angular gravel particles 12 mm maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (*SM*)	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than 75 μm sieve size) coarse grained soils are classified as follows: Less than 5% *GW, GP, SW, SP* More than 12% *GM, GC, SM, SC* 5% to 12% *Borderline* cases requiring use of dual symbols Use grain size curve in identifying the fractions as given under field identification $C_U = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *GW* Atterberg limits below "A" line, or *PI* less than 4 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits above "A" line, with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing		*GP*	Poorly graded gravels, gravel-sand mixtures, little or no fines		
		Gravels with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures see *ML* below)		*GM*	Silty gravels, poorly graded gravel-sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)		*GC*	Clayey gravels, poorly graded gravel-sand-clay mixtures		
	Sands More than half of coarse fraction is smaller than 4 mm sieve size	Clean sands (little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes		*SW*	Well graded sands, gravelly sands, little or no fines		$C_U = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *SW* Atterberg limits below "A" line or *PI* less than 5 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits below "A" line with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing		*SP*	Poorly graded sands, gravelly sands, little or no fines		
		Sands with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures, see *ML* below)		*SM*	Silty sands, poorly graded sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)		*SC*	Clayey sands, poorly graded sand-clay mixtures		
Fine-grained soils More than half of material is *smaller* than 75 μm sieve size	Identification Procedures on Fraction Smaller than 380 μm Sieve Size							
	Silts and clays liquid limit less than 50	Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)				
		None to slight	Quick to slow	None	*ML*	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions Example: *Clayey silt*, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (*ML*)	
		Medium to high	None to very slow	Medium	*CL*	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
		Slight to medium	Slow	Slight	*OL*	Organic silts and organic silt-clays of low plasticity		
	Silts and clays liquid limit greater than 50	Slight to medium	Slow to none	Slight to medium	*MH*	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
		High to very high	None	High	*CH*	Inorganic clays of high plasticity, fat clays		
		Medium to high	None to very slow	Slight to medium	*OH*	Organic clays of medium to high plasticity		
Highly Organic Soils		Readily identified by colour, odour, spongy feel and frequently by fibrous texture			*Pt*	Peat and other highly organic soils		



Plasticity chart
for laboratory classification of fine grained soils

NOTE: 1) Soils possessing characteristics of two groups are designated by combinations of group symbols (e.g. GW-GC, well graded gravel-sand mixture with clay fines).

2) Soils with liquid limits of the order of 35 to 50 may be visually classified as being of medium plasticity.

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CONSULTING GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

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LOG SYMBOLS

LOG COLUMN	SYMBOL	DEFINITION
Groundwater Record		Standing water level. Time delay following completion of drilling may be shown.
		Extent of borehole collapse shortly after drilling.
		Groundwater seepage into borehole or excavation noted during drilling or excavation.
Samples	ES	Soil sample taken over depth indicated, for environmental analysis.
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.
	DB	Bulk disturbed sample taken over depth indicated.
	DS	Small disturbed bag sample taken over depth indicated.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration. 'R' as noted below.
	N_c = 5 7 3R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60 degree solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25	Vane shear reading in kPa of Undrained Shear Strength.
	PID = 100	Photoionisation detector reading in ppm (Soil sample headspace test).
Moisture Condition (Cohesive Soils)	MC > PL	Moisture content estimated to be greater than plastic limit.
	MC ≈ PL	Moisture content estimated to be approximately equal to plastic limit.
	MC < PL	Moisture content estimated to be less than plastic limit.
(Cohesionless Soils)	D	DRY - runs freely through fingers.
	M	MOIST - does not run freely but no free water visible on soil surface.
	W	WET - free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS	VERY SOFT - Unconfined compressive strength less than 25kPa
	S	SOFT - Unconfined compressive strength 25-50kPa
	F	FIRM - Unconfined compressive strength 50-100kPa
	St	STIFF - Unconfined compressive strength 100-200kPa
	VSt	VERY STIFF - Unconfined compressive strength 200-400kPa
	H	HARD - Unconfined compressive strength greater than 400kPa
	( )	Bracketed symbol indicates estimated consistency based on tactile examination or other tests.
Density Index/ Relative Density (Cohesionless Soils)		**Density Index (I_D) Range (%)** / **SPT 'N' Value Range (Blows/300mm)**
	VL	Very Loose: <15 / 0-4
	L	Loose: 15-35 / 4-10
	MD	Medium Dense: 35-65 / 10-30
	D	Dense: 65-85 / 30-50
	VD	Very Dense: >85 / >50
	( )	Bracketed symbol indicates estimated density based on ease of drilling or other tests.
Hand Penetrometer Readings	300 250	Numbers indicate individual test results in kPa on representative undisturbed material unless noted otherwise.
Remarks	'V' bit	Hardened steel 'V' shaped bit.
	'TC' bit	Tungsten carbide wing bit.
	T 60	Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.

Ref: Standard Sheets Log Symbols
August 2001

Jeffery and Katauskas Pty Ltd

CONSULTING GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

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LOG SYMBOLS

ROCK MATERIAL WEATHERING CLASSIFICATION

TERM	SYMBOL	DEFINITION
Residual Soil	RS	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
Extremely weathered rock	XW	Rock is weathered to such an extent that it has "soil" properties, ie it either disintegrates or can be remoulded, in water.
Distinctly weathered rock	DW	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by ironstaining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores.
Slightly weathered rock	SW	Rock is slightly discoloured but shows little or no change of strength from fresh rock.
Fresh rock	FR	Rock shows no sign of decomposition or staining.

ROCK STRENGTH

Rock strength is defined by the Point Load Strength Index (Is 50) and refers to the strength of the rock substance in the direction normal to the bedding. The test procedure is described by the International Journal of Rock Mechanics, Mining, Science and Geomechanics. Abstract Volume 22, No 2, 1985.

TERM	SYMBOL	Is (50) MPa	FIELD GUIDE
Extremely Low:	EL	0.03	Easily remoulded by hand to a material with soil properties.
Very Low:	VL	0.1	May be crumbled in the hand. Sandstone is "sugary" and friable.
Low:	L	0.3	A piece of core 150mm long x 50mm dia may be broken by hand and easily scored with a knife. Sharp edges of core may be friable and break during handling.
Medium Strength:	M	1	A piece of core 150mm long x 50mm dia can be broken by hand with difficulty. Readily scored with knife.
High:	H	3	A piece of core 150mm long x 50mm dia core cannot be broken by hand, can be slightly scratched or scored with knife; rock rings under hammer.
Very High:	VH	10	A piece of core 150mm long x 50mm dia may be broken with hand-held pick after more than one blow. Cannot be scratched with pen knife; rock rings under hammer.
Extremely High:	EH		A piece of core 150mm long x 50mm dia is very difficult to break with hand-held hammer. Rings when struck with a hammer.

ABBREVIATIONS USED IN DEFECT DESCRIPTION

ABBREVIATION	DESCRIPTION	NOTES
Be	Bedding Plane Parting	Defect orientations measured relative to the normal to the long core axis (ie relative to horizontal for vertical holes)
CS	Clay Seam	
J	Joint	
P	Planar	
Un	Undulating	
S	Smooth	
R	Rough	
IS	Ironstained	
XWS	Extremely Weathered Seam	
Cr	Crushed Seam	
60t	Thickness of defect in millimetres	

Appendix E

SafeWork

Nerilee Edwards

From: Licensing <licensing@safework.nsw.gov.au>
Sent: Friday, 10 January 2025 1:50 PM
To: Zihan Wang
Subject: SafeWork NSW: 01044763 –Site Search application – Result not found [thread::oZIDVpTUe661GISzhyAejXw::]

Security Classification: Sensitive Personal
Please do not amend the subject line of this email

Dear Zihan

Re: Site Search for Schedule 11 Hazardous Chemicals on premises Application – Result not found

I refer to your application for a Site Search for Schedule 11 Hazardous Chemicals on premises, received by SafeWork NSW for the following site: 41-49 Mountain Street Ultimo NSW 2007.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

If you have any questions, please contact SafeWork NSW using one of the following options, quoting the SafeWork NSW enquiry reference number 01044763:

- Email: licensing@safework.nsw.gov.au
- Phone: 13 10 50

Kind regards

Mo Lotonuu
Licensing Representative
SafeWork NSW | SafeWork Licensing
p- 13 10 50
e- licensing@safework.nsw.gov.au | safework.nsw.gov.au
Level 3, 32 Mann Street, Gosford, NSW 2250

NSW GOVERNMENT

SafeWork

Tax Invoice_Receipt - copy for customer.pdf

thread::oZIDVpTUe661GISzhyAejXw::

Appendix F

Site Photographs

Photo 1: Inside the former electrical substation - person

Photo 2: Demountable being used as site office - located in the north east portion of the site

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	1
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 3: Batteries and fuel container stored at ground surface behind demountable in east of the site

Photo 4: Gas cylinders located in the north-east part of the site

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	2
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 5: Drainage pit in north east of the site

Photo 6: Electrical kiosk with high voltage on an elevated concrete slab located in the north-west corner of the site

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	3
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 7: Metal containers located in the north-west portion of the site

Photo 8: Canopy structure being used as car space and storage area

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	4
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 9: Maintenance area for storage of tools and equipment, chemical containers

Photo 10: Chemical cleaning products, spray paints, fertiliser, cement additive, pesticide, oil containers store in maintenance area

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	5
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 11: Flammable liquid depot in covered maintenance area in south west of the site

Photo 12: Flammable liquid depot located adjacent to southern boundary in south-west of the site

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	6
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 13: Wash down area with containers and asphalt storage shed in background

Photo 14: Inside asphalt storage shed in south-west of site

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	7
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Photo 15: Pit located in the south- east corner of the site understood to be used to collect wash down water pending off-site disposal

Photo 16: Concrete surface across the site - Looking south-west

Douglas PARTNERS	**Site Photographs**	PROJECT:	231957.01
	Proposed Mixed Use Development	PLATE No:	8
	41-49 Mountain Street, Ultimo NSW	REV:	0
	CLIENT	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2	

Appendix G

Data Quality Objectives

1. Data quality objectives

The contamination investigation has been devised broadly in accordance with the seven-step data quality objectives (DQO) process which is provided in Appendix B, Schedule B2 of NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).

Table 1: Data quality objectives

Step	Summary
1: State the problem	The objective of this investigation is to assess the suitability of the site from a contamination perspective for the proposed development and whether further investigation and/or management is required. The report is being undertaken as the site is proposed to be redeveloped for mixed-use commercial / residential land use with one level basement. A preliminary conceptual site model (CSM) has been prepared (Section 9) for the proposed development. The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager and field staff.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the CSM (Section 9). The CSM identifies the associated contaminants of potential concern (CoPC) and the likely impacted media. The site assessment criteria (SAC) for each of the CoPC are detailed in Appendix I. The decision is to establish whether or not the results fall below the SAC or whether or not the 95% upper confidence limit of the sample population falls below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective will be derived and a decision made on whether (or not) further assessment and/or remediation will be required.
3: Identify the information inputs	Inputs will be the field results and analytical results for the CoPC and media (identified in the CSM, Section 9) from NATA accredited laboratories and methods, where possible. The SAC for each of the CoPC are detailed in Appendix I. Field results and observations such as photoionisation detector (PID) and observations of building debris, ash, odours, etc will be used to inform sample selection for laboratory analysis.
4: Define the study boundaries	The lateral boundaries of the investigation area are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of contamination impact as determined from the site history assessment and site observations. The assessment is limited to the timeframe over which the field works were undertaken. Constraints to the assessment are identified and discussed in the conclusions of the report, Section 14.

Step	Summary
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with the SAC (Appendix I, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where available and warranted. Where a sample result exceeds the adopted criterion, a further site-specific assessment will be made as to the risk posed by the presence of that contaminant(s). Initial comparisons will be with individual results then, where required and appropriate, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL)) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field duplicates, triplicates and laboratory results, RPD values should generally be below 30%; for field blanks and rinsates, results should be at or less than the limits of reporting (NEPC, 2013). The field and laboratory quality assurance assessment is included in Appendix N.
6: Specify the performance or acceptance criteria	Baseline condition: Contaminants at the site exceed the human health and environmental SAC and pose a potentially unacceptable risk to receptors (null hypothesis). Alternative condition: Contaminants at the site comply with the human health and environmental SAC and therefore, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.
7: Optimise the design for obtaining data	As the purpose of the investigation is to assess the contamination status of the site, the sampling program is reliant on professional judgement to identify and sample the potentially affected areas. Further details regarding the proposed sampling plan are presented in Section 10.2.

2. References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]*. Australian Government Publishing Services Canberra: National Environment Protection Council.

Appendix H

Field Work Methodology

1. Guidelines

The following key guidelines were consulted for the field work methodology:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- HEPA *PFAS National Environmental Management Plan 3.0 (NEMP)* (HEPA, 2025).
- ASTM *Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapour Intrusion Evaluations* (ASTM D7663-12, 2018).
- USEPA *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air* (USEPA, 1999a).
- USEPA *Compendium Method TO-15 Determination of Volatile Organic Compounds (VOCs) In Air Collected in Specially-Prepared Canisters and Analysed By Gas Chromatography Mass Spectrometry (GC/MS)* (USEPA, 1999b).
- NSW EPA *Assessment and Management of Hazardous Ground Gases* (NSW EPA, 2020).

2. Soil sampling

2.1 Drilling

Soil sampling was carried out in accordance with Douglas' standard operating procedures. Non-destructive digging (NDD) using a wet vacuum truck was used to drill through the boreholes, followed by the use of hand auger for direct sample collection. The general sampling and sample management procedures comprised:

- Collect soil samples directly from the borehole or auger at the nominated sample depth;
- Transfer samples in laboratory-prepared glass jars with Teflon lined lids by hand, capping immediately and minimising headspace within the sample jar;
- Transfer samples in laboratory-prepared container (specific for PFAS) by hand, capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for photoionisation detector (PID) screening;
- Collect ~500 ml samples for fibrous asbestos and asbestos fines (FA / AF) analysis;
- Collect ~40 g to 50 g samples in zip-lock bags for asbestos (presence / absence) analysis (where insufficient sample for FA / AF analysis);
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- Collect 10% replicate samples for quality control (QC) purposes;
- Label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- Place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

Reference was made to HEPA (2025) for requirements specific to PFAS.

2.2 Field testing

Field testing is carried out in accordance with Douglas' standard operating procedures. The general sampling and sample management procedures comprise:

PID field test

- Calibrate the PID with isobutylene gas at 100 ppm and with fresh air prior to commencement of each successive day's field work;
- Allow the headspace in the PID zip-lock bag samples to equilibrate; and
- Screen using the PID.

3. Soil vapour sampling

3.1 Vapour well installation

Vapour well BH105A was constructed using inert Teflon tubing (nominally quarter inch / 6.4mm outside diameter) fitted with a stainless-steel implant positioned (suspended) near the base of the borehole. A gravel pack was then placed to cover the stainless-steel implant (total thickness of gravel pack approximately 20cm). The well was completed with a 40cm dry granular bentonite plug then hydrated bentonite plug to the surface. The top of the tubing was fitted with a gas-light sampling valve or cap. The vapour well was completed at the surface with a Gatic cover.

3.2 Soil vapour sampling

The soil vapour sampling is carried out in accordance with Douglas' standard operating procedures based on ASTM (2018) and current industry practice. The general sampling and sample management procedures comprise:

- Connect sample tubing directly to the vapour well outlet following removal of the stainless-steel cap and plastic cap; and
- Collect the primary soil vapour sample to a Summa canister and the backup sample on carbon tubes. Attach Summa canisters directly to the sample point via disposable tubing. Collect the back-up sample using an air sampling pump, with the flow rate monitored using a rotameter and vacuum gauge.
- Perform shut in tests (minimum 30 seconds) following assembly of the sampling apparatus comprising:
    - Summa canister: Assemble the sample apparatus to the extent practical (i.e. connecting the Summa canister to the regulator), then open the canister valve to apply the vacuum (of between -29 mm Hg to -30 mm Hg) to the sampling train, while the regulator is still capped;
    - Carbon back-up tube: Assemble the sample train (fittings to attach to vapour well, carbon tube, vacuum gauge, rotameter and pump plus the associated tubing connecting the sample train) then clamp the sampling tube between the vapour port and carbon tube, activate the pump until a vacuum of 15 in Hg is achieved and then the sampling train is clamped at the pump;

- Purge the soil vapour well prior to sampling by removing one volume of air / vapour from the well (~500 ml);
- Introduce liquid isopropyl alcohol (IPA) into the sampling shroud to act as a tracer gas for leaks in the soil vapour well and/or the sampling train. All samples are analysed for IPA as part of the TO15 analysis;
- Take PID readings from the soil vapour well prior to and following application of the IPA tracer gas. Take a PID reading inside the shroud to provide a field indication of potential leaks;
- Measure general gas parameters from the soil vapour well, including methane, oxygen and carbon dioxide, on-site using a calibrated landfill gas analyser;
- Collect primary sample directly from the soil vapour port into 1 L Summa canisters with a flow regulator set by the analytical laboratory (approximately 100 ml/min). The regulator was supplied by the analytical laboratory and decontaminated by the laboratory prior to shipment;
- Collect an intra-laboratory QC duplicate soil vapour sample;
- Collect back-up sample directly onto carbon tubes using an SKC constant flow air-sampling pump, low flow adapter and rotameter to confirm the flow rate;
- Collect a shroud sample on a carbon tube to conduct analysis for IPA and determine the concentration of the tracer compound in the shroud;
- Collect the VOC sample from the sample point directly into the sorbent tube / canister so as not to pass through the pump, rotameter or tubing which has the potential to contaminate the samples (rotameter not required for canisters); and
- Label the sample canister and tubes and record on chain of custody documentation. Complete field sampling sheets and transport samples to the laboratory in an appropriate sealed container.

4. Ambient air sampling

The indoor air sampling was carried out in accordance with Douglas' standard operating procedures based on USEPA (1999a) and USEPA (1999b). The general sampling and sample management procedures comprise:

- Undertake a pre-sampling inspection to assess the most appropriate positions for the placement of canisters;
- Record temperature, barometric pressure and weather conditions at the start and end of the sampling period;
- At the commencement of the sampling period, open the sample canister valve to begin sample collection. Record the time and initial vacuum when the sample collection started on a standard sampling form;
- Close the sample canister valve after the appropriate collection period (1 hour). Record the time the sample collection is stopped and the final vacuum on the sampling form;
- Label the sample canister and record on the chain of custody the sample name, date and time the sample was collected, the canister and flow controller serial numbers, and the initial and final vacuum gauge readings; and

- Transport sample to the laboratory in an appropriate sealed container.

5. Groundwater sampling

5.1 Monitoring well installation

Monitoring wells BH101 to BH103 were constructed using class 18 uPVC machine slotted screen and blank sections with screw threaded joints. The screened section of each well was backfilled with a washed sand filter pack to approximately 0.5 m above the screened interval.

Each well was completed with a hydrated bentonite plug of at least 0.5 m thick and then cement grout to the surface. Each well was completed at the surface with a Gatic cover.

Well construction is detailed in the corresponding borehole logs in Appendix I.

5.2 Monitoring well development

Groundwater monitoring wells were developed as soon as practicable following well installation. The purpose of well development is to remove sediments and / or drilling fluid introduced to the well during drilling and to facilitate connection of the monitoring well to the aquifer. The wells were developed by pumping to remove a minimum of five well volumes, or until dry.

5.3 Groundwater sampling

Groundwater sampling is carried out in accordance with Douglas' standard operating procedures. Groundwater samples are collected using a positive displacement low flow bladder pump via the micro-purge (minimal drawdown) method. The method minimises aeration of the sample and disturbance to the water column thereby enhancing the quality of results for oxygen sensitive analytes. The sampling method is described as follows:

- Measure the static water level using an electronic interface probe and record the thickness of LNAPL (if encountered);
- Decontaminate the interface probe and cable between monitoring wells by rinsing in a diluted Liquinox solution and then rinsing in demineralised water;
- Fit the pump with a well-dedicated bladder and tubing. Lower the pump into the well then clamp at a level estimated to be 1 m below the top of the water column (provided the depth of the pump is within the screened section) or to the approximate mid-point of the well screen;
- Set the pump at the lowest rate possible that could produce laminar flow to minimise drawdown of the water column;
- Measure physical parameters by continuously passing the purged water through a flow cell; and
- Following stabilisation of the field parameters, collect samples in laboratory-prepared bottles minimising headspace within the sample bottle and cap immediately.

Note: due to the limited water present in BH103 at the time of sampling, micropurging and collection of field parameters was not able to be undertaken.

Sample handling

The general groundwater sample handling and management procedures comprise:

- Collect 10% replicate samples for QC purposes;
- Label sample containers with individual and unique identification details, including project number and sample location;
- Place the sample jars into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

6. References

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Appendix I

Site Assessment Criteria

1. Introduction

1.1 Guidelines

The following key guidelines were consulted for deriving the site assessment criteria (SAC):

- NEPC National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM] (NEPC, 2013).
- CRC CARE Health screening levels for petroleum hydrocarbons in soil and groundwater (CRC CARE, 2011).
- HEPA PFAS National Environmental Management Plan (NEMP) (HEPA, 2025).
- ANZG Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018).
- NHMRC Guidelines for Managing Risks In Recreational Water (NHMRC, 2008).
- NHMRC, NRMMC *Australian Drinking Water Guidelines 6 2011, Version 3.2* (NHMRC, NRMMC, 2022).
- ANZECC Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000).

1.2 General

The SAC applied in the current investigation are informed by the CSM which identified human and environmental receptors to potential contamination at the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The proposed development comprises of a mixed-use residential / commercial development including basement level for parking and services; a ground level spaces (lobby, retail and service areas); and residential units on Level 1 and above. The proposal includes the adaptive reuse of a heritage-listed substation at the corner of Mountain Street for commercial uses; no basement will be constructed below the substation building.

The following inputs are relevant to the selection and/or derivation of the SAC:

- Land use: mixed-use residential / commercial development:
- Corresponding to land use category 'B', residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flat. Noting that there is no residential use proposed on the ground floor, and no ground level soft landscaping the use of HIL B is considered to be a conservative screen.
- Corresponding to land use category 'D', commercial / industrial such as shops, offices, factories and industrial sites, noting the presence of basement, applies to the selection of health screening levels (HSL) for vapour intrusion risk, as suggested in NEPC (2013) where basement levels are formed and/or these are commercial ground floor uses.
- Soil type: silty sand / silty clayey sand (mixed fill); sand being dominant.

2. Soils

2.1 Health investigation and screening levels

The generic health investigation levels (HIL) and health screening levels (HSL) are considered to be appropriate for the assessment of human health risk via all relevant pathways of exposure associated with contamination at the site. The adopted soil HIL and HSL for the contaminants of concern are in Table 1 and Table 2.

Table 1: Health investigation levels (mg/kg)

Contaminant	HIL-B
Metals	
Arsenic	500
Cadmium	150
Chromium (VI)	500
Copper	30 000
Lead	1200
Mercury (inorganic)	120
Nickel	1200
Zinc	60 000
PAH	
B(a)P TEQ	4
Total PAH	400
Phenols	
Phenol	45 000
Pentachlorophenol	130
OCP	
DDT+DDE+DDD	600
Aldrin and dieldrin	10
Chlordane	90
Endosulfan	400
Endrin	20
Heptachlor	10
HCB	15
Methoxychlor	500
Mirex	20

Contaminant	HIL-B
OPP	
Chlorpyrifos	340
PCB	
PCB	1

Table 2: Health screening levels (mg/kg)

Contaminant	HSL-D	HSL-D	HSL-D
SAND	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**
Benzene	3	3	3
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	230	NL	NL
Naphthalene	NL	NL	NL
TRH F1	260	370	630
TRH F2	NL	NL	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

The HSL for direct contact derived from CRC CARE (2011) are in Table 3.

Table 3: Health screening levels for direct contact (mg/kg)

Contaminant	DC HSL-B	DC HSL-IMW
Benzene	140	1100
Toluene	21 000	120 000
Ethylbenzene	5900	85 000
Xylenes	17 000	130 000
Naphthalene	2200	29 000
TRH F1	5600	82 000
TRH F2	4200	62 000
TRH F3	5800	85 000
TRH F4	8100	120 000

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
IMW intrusive maintenance worker

2.2 Health investigation levels for per- and poly-fluoroalkyl substances in soil

The laboratory analytical results for per- and poly-fluoroalkyl substances (PFAS) in soil have been assessed against HIL published in HEPA (2020). The HIL represent a nationally-agreed suite that should be used to inform site investigations. The HIL are intentionally conservative, and an exceedance of these criteria may not constitute a risk if other exposure pathways are controlled. An exceedance of the HIL should trigger further investigations, such as a site-specific risk assessment. At the time of this investigation, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

The HIL derived from Table 2 of HEPA (2020) are in Table 4.

Table 4: Health investigation levels (mg/kg)

Contaminant	HIL-B
PFOS and PFHxS *	2
PFOA	20

Notes: * Includes PFOS only, PFHxS only and the sum of the two.

2.3 Asbestos in soil

The HSL for asbestos in soil are based on likely exposure levels for different scenarios published in NEPC (2013) for the following forms of asbestos:

- Bonded asbestos containing material (ACM); and
- Fibrous asbestos and asbestos fines (FA and AF).

The HSL are in Table 5.

Table 5: Health screening levels for asbestos

Form of asbestos	HSL-B
ACM	0.04%
FA / AF	0.001%
FA / AF and ACM	No visible asbestos for surface soil *

Notes: Surface soils defined as top 10 cm.
* Based on site observations at the sampling points and the analytical results of surface samples.

2.4 Ecological investigation levels (EIL), screening levels (ESL) and guideline values (EGV)

Schedule B5A of NEPC (2013) states that the aim of the EIL is that varying levels of protection will be provided to the following ecological receptors at all sites:

- Biota supporting ecological processes, including microorganisms and soil invertebrates;
- Native flora and fauna;
- Introduced flora and fauna; and
- Transitory or permanent wildlife.

Furthermore, Schedule B5A of NEPC (2013) states that commercial and industrial land, particularly in long-established industrial areas, is often heavily contaminated by past activities or fill materials used to level the area. In these cases, jurisdictions may determine that the HIL are the most appropriate soil quality criteria and that EIL are not applicable.

In determining the relevance of EIL and ESL the presence or absence of sensitive ecological receptors must be considered. In this regard both the potential ecological receptors on and off-site must be considered in conjunction with the current / proposed development.

The site is proposed to be developed into a mixed-use residential / commercial development. A single level basement and loading dock area is planned to occupy the entire site for the project. The site is therefore considered to have a low ecological value and the risk of exposure to soil contamination for transitory wildlife are considered very low, and that human health risk screening levels are more appropriate. Consequently, EIL, ESL and EGV are not considered relevant to the current assessment.

2.5 Management limits

In addition to appropriate consideration and application of the HSL, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards; and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services.

The adopted management limits are in Table 6.

Table 6: Management limits (mg/kg)

Contaminant	Soil type	ML-A-B-C
TRH F1	Coarse	700
TRH F2	Coarse	1000
TRH F3	Coarse	2500
TRH F4	Coarse	10 000

Notes: TRH F1 is TRH C_6-C_{10} including BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
ML-A-B-C residential, parkland and public open space

3. Soil vapour

3.1 Interim soil vapour health investigation levels

Soil vapour interim HIL for specific chlorinated VOC were published by NEPC (2013) to assess the vapour intrusion exposure pathway.

The interim HIL for chlorinated VOC methodology employs a simple though conservative approach using an attenuation factor that relates the concentration of a volatile contaminant in indoor air to the concentration in soil gas immediately below a building foundation slab.

The interim health investigation levels (IHIL) derived from NEPC (2013) are in Table 7.

Table 7: Soil vapour interim health investigation levels, chlorinated hydrocarbons (µg/m3)

Chemical	IHIL-D
TCE	80
1,1,1–TCA	230 000
PCE	8000
cis-DCE	300
VC	100

Notes: TCE trichloroethene
1,1,1–TCA 1,1,1-trichloroethane
PCE tetrachloroethene
cis-DCE cis-1,2-dichloroethene
VC chloromethane / vinyl chloride

3.2 Health screening levels

Soil vapour HSL for petroleum hydrocarbons were published by NEPC (2013) to assess the vapour intrusion exposure pathway.

The HSL derived from NEPC (2013) are in Table 8.

Table 8: Soil vapour health screening levels for vapour intrusion (µg/m^3)

Contaminant	HSL-D	HSL-D	HSL-D
SAND	0-1 m	1-2 m	2-4 m
Benzene	4000	10000	30 000
Toluene	4 800 000	16 000 000	39 000 000
Ethylbenzene	1 300 000	4 600 000	11 000 000
Xylene Total	840 000	3 200 000	8 000 000
Naphthalene	3000	15 000	35 000
TRH F1	680 000	2 800 000	7 000 000
TRH F2	500 000	2 400 000	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The maximum possible soil vapour concentrations have been calculated based on vapour pressures of the pure chemicals. Where soil vapour HSL exceed these values, a soil-specific source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

4. Groundwater

4.1 Introduction

The groundwater investigation levels (GIL) used for interpretation of the groundwater data (as a Tier 1 assessment) have been selected based on the potential risks posed from contamination sourced from the site to receptors at or down-gradient of the site, as identified by the conceptual site model (CSM). The receptors, exposure points and pathways are summarised in Table 9.

Table 9: Summary of potential receptors and potential risks

Receptor	Location	Exposure point	Exposure pathway
Surface water aquatic ecosystem	Down-gradient from site.	Receiving surface water body at the groundwater discharge point.	Exposure to contaminants.
Occupants of buildings	On site and down-gradient from site.	Enclosed buildings (existing demountable / offices).	Inhalation of VOC (including TRH and BTEX) overlying VOC impacted groundwater via the vapour intrusion pathway.
Human recreation (e.g. swimming)	Down-gradient from site.	Receiving surface water body at the groundwater discharge point.	Ingestion / dermal absorption of contaminants during recreational activities (e.g. swimming).

The rationale for the selection of GIL is in Table 10.

Table 10: Groundwater investigation level rationale

Receptor / beneficial use	GIL	Source	Comments / rationale
Aquatic ecosystem	DGV	ANZG (2018)	**Marine water** 99% LOP for bioaccumulative contaminants 95% LOP for non-bioaccumulative contaminants
Aquatic ecosystem	DGV	HEPA (2020)	**Marine water 99% LOP** Screening values were only available for PFOS and PFOA at the time of this investigation.
Building occupants (vapour intrusion)	HSL	NEPC (2013)	Groundwater depth of 2 m to <4 adopted based on current data.
Recreational waters	GV	NHMRC (2008)	Based on the NHMRC (2022) values x10 to account for ingestion of water whilst undertaking recreational activities.

Notes: DGV default guideline value
% LOP percentage level of protection of species
HSL health screening level
GV guideline value
LTV long term value (up to 100 years)
STV short term value (up to 20 years)

4.2 Groundwater investigation levels for aquatic ecosystems

The DGV for the protection of aquatic ecosystems derived from ANZG (2018) are in Table 11.

Table 11: Groundwater investigation levels for protection of aquatic ecosystems (µg/L)

Contaminant	Marine DGV 95% LOP	Notes
Metals / metalloids		
Arsenic	24 / 13	Levels provided for As III / As IV respectively as adopted from freshwater criteria in absence of marine criteria. Unknown reliability.
Cadmium	0.7	99% LOP adopted as recommended due to potential for bioaccumulation. Very high reliability.
Chromium (VI)	4.4	Chromium VI levels adopted as initial screen for total chromium. Very high reliability.
Copper	1.3	Very high reliability.
Lead	4.4	Low reliability.
Manganese	80	Unknown reliability and LOP.
Mercury (inorganic)	0.1	99% LOP adopted as recommended due to potential for bioaccumulation. Very high reliability.
Nickel	7	99% LOP adopted as recommended to protect key species from chronic toxicity. Very high reliability.
Zinc	8	Very high reliability.
BTEX		
Benzene	500	99% LOP adopted as recommended to protect key species from chronic toxicity. Moderate reliability.
Ethylbenzene	80	Unknown reliability.
m-Xylene	75	Unknown reliability.
o-xylene	350	Adopted from freshwater criteria for in absence of marine criteria. Unknown reliability.
p-Xylene	200	Adopted from freshwater criteria for in absence of marine criteria. Unknown reliability.
Toluene	180	Unknown reliability.
PAH		
Anthracene	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Benzo(a)pyrene	0.1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.

Contaminant	Marine DGV 95% LOP	Notes
Fluoranthene	1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Naphthalene	50	99% LOP adopted as recommended to protect key species from chronic toxicity. Moderate reliability.
Phenanthrene	0.6	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
OCP		
Aldrin	0.003	Unknown reliability and LOP.
Chlordane	0.001	Unknown reliability and LOP.
DDT	0.0004	Unknown reliability and LOP.
Dieldrin	0.01	Freshwater criteria adopted in absence of marine criteria. Unknown reliability and LOP.
Endosulfan	0.005	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Endrin	0.004	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Heptachlor	0.0004	Unknown reliability and LOP.
Methoxychlor	0.004	Unknown reliability and LOP.
OPP		
Chlorpyrifos	0.009	Low reliability.
Diazinon	0.01	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Dimethoate	0.15	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Fenitrothion	0.001	Unknown reliability and LOP.
Malathion	0.05	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Parathion	0.004	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
PCB		
Aroclor 1242	0.3	Adopted from freshwater criteria for in absence of marine criteria. 99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.

Contaminant	Marine DGV 95% LOP	Notes
Aroclor 1254	0.01	Adopted from freshwater criteria for in absence of marine criteria. 99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
VOC		
Tetrachloroethene (PCE)	70	Unknown reliability.
Trichloroethene (TCE)	330	Unknown reliability.
cis-1,2-dichloroethene (DCE)	700	Unknown reliability.
Chloroethene (vinyl chloride / VC)	100	Unknown reliability.
Tetrachloromethane (carbon tetrachloride / CT)	240	Unknown reliability.
Trichloromethane (chloroform / TCM)	370	99% LOP adopted as recommended to protect key species from chronic toxicity. Unknown reliability.
Inorganics		
Ammonia	910	At a receiving body pH of 8. Note: ammonia toxicity is pH and temperature dependent. Very high reliability.
Nitrate (as N)	1100	Adopted from freshwater criteria for in absence of marine criteria. . For soft water. Other thresholds apply to moderately hard and high hardness waters. High reliability.

Notes: 95% LOP for non-bioaccumulative contaminants
99% LOP for bioaccumulative contaminants

The DGV for the protection of aquatic ecosystems derived from HEPA (2020) are in Table 12.

Table 12: Groundwater investigation levels for protection of aquatic ecosystems (µg/L)

Contaminant / LOP	Interim marine water DGV
PFOS 99% LOP	0.00023
PFOA 99% LOP	19
PFOS 95% LOP	0.13
PFOA 95% LOP	220

4.3 Health screening levels for vapour intrusion

The HSL to evaluate potential vapour intrusion risks derived from NEPC (2013) are in Table 13.

Table 13: Groundwater health screening levels for vapour intrusion (µg/L)

Contaminant	HSL-D	HSL-D	Solubility limit
SAND	**2 m to <4 m**	**4 m to <8 m**	**-**
Benzene	5000	5000	59 000
Toluene	NL	NL	61 000
Ethylbenzene	NL	NL	3900
Xylenes	NL	NL	21 000
Naphthalene	NL	NL	170
TRH F1	6000	6000	9000
TRH F2	NL	NL	3000

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The solubility limit is defined as the groundwater concentration at which the water cannot dissolve any more of an individual chemical based on a petroleum mixture. The soil vapour that is in equilibrium with the groundwater will be at its maximum. If the derived groundwater HSL exceeds the water solubility limit, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

4.4 Groundwater investigation levels for recreational water

The GV for recreational water derived from NHMRC (2008) are in Table 14.

Table 14: Groundwater investigation levels for protection of recreational waters (µg/L)

Contaminant	Recreational water guideline values
Metals / metalloids	
Arsenic	100
Cadmium	20
Chromium (VI)	500
Copper	20000
Lead	100
Manganese	5000
Mercury (inorganic)	10
Nickel	200
BTEX	
Benzene	10
Ethylbenzene	3000
Xylenes	6000
Toluene	8000

Contaminant	Recreational water guideline values
PAH	
Benzo(a)pyrene	0.1
OCP	
Aldrin + Dieldrin	3
Chlordane	20
DDT	90
Endosulfan	200
Heptachlor	3
Methoxychlor	3000
OPP	
Chlorpyrifos	100
Diazinon	40
Dimethoate	70
Fenitrothion	70
Malathion	700
Parathion	200
PFAS	
PFOS + PFHxS*	2
PFOA	10
VOC	
Tetrachloroethene (PCE)	500
cis-1,2-dichloroethene (DCE)	300
Chloroethene (vinyl chloride / VC)	3
Tetrachloromethane (carbon tetrachloride / CT)	30
Trichloromethane (chloroform / TCM)	2500

Notes: * Includes PFOS only, PFHxS only and the sum of the two.

5. References

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Appendix J

Table Summary Results

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Table J1: Summary of Results of Soil Analysis

				Metals								PAH																TRH							
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	TRH C6 - C10	TRH >C10-C16	TRH >C10-C16 less Naphthalene)	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	TRH C6 - C9	TRH C10-C36
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	25	50	25	50	100	100	25	50
Sample ID	Depth	FILL / NATURAL	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.3 m	FILL	21/01/25	12	<0.4	12	340	430	1.3	11	530	<1	**3.7**	**5.4**	**36**	<0.1	**0.5**	**0.7**	**2.7**	**2**	**2.6**	**0.6**	**6**	0.1	**2.6**	**3.2**	**5.8**	<25	<50	<25	<50	**220**	<100	<25	**250**
			500	-	150	-	500	-	30,000	-	1,200	-	120	-	1,200	-	60,000	-	NL	-	-	4	-	400	-	-	-

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Table J1: Summary of Results of Soil Analysis

				BTEX				Phenols	OCP														
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Phenolics	DDT+DDE+DDD [c]	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Heptachlor Epoxide	Endrin Aldehyde	alpha-BHC	beta-BHC	delta-BHC	Lindane
			PQL	0.2	0.5	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sample ID	Depth	FILL / NATURAL	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0.1 - 0.3 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH101	0.9 - 1.1 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102	0.16 - 0.18 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102	0.35 - 0.55 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH102	0.8 - 1 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH103	0.1 - 0.3 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH103	1.3-1.5 m	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BD3/20250214	1.3-1.5 m	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH104	0.3 - 0.5 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH104A	0.4 - 0.6 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH104A	0.9 - 1.1 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH105	0.25 - 0.35 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH105A	0.12 - 0.2 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH105A	0.9 - 1.1 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH105A	1.3 - 1.5 m	NATURAL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	NL -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH106	0.08 - 0.2 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH106	1.2 - 1.4 m	NATURAL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	NL -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH107	0.1 - 0.3 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH107	0.5 - 0.7 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BD2/20250121	0.5 - 0.7 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH107	1 - 1.2 m	FILL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	NL -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH107	2.1 - 2.3 m	NATURAL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	NL -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH110	0 - 0.2 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH110	0.5 - 0.8 m	FILL	21/01/25	<0.2	<0.5	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				3 -	NL -	NL -	230 -	130 -	600 -	10 -	90 -	400 -	20 -	10 -	15 -	500 -	20 -	- -	- -	- -	- -	- -	- -
BH110	1.2 - 1.4 m	NATURAL	21/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 -	NL -	NL -	NL -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101 - [TRIPLICATE]	0.1 - 0.3 m	-	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH107 - [TRIPLICATE]	0.5 - 0.7 m	-	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report **Blue** = DC exceedance **Red** = EGV-indirect exceedance HSL 0-<1 Exceedance

Bold = Lab detections - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable NL = Not limiting NAD = No Asbestos detected

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Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Residential B with minimal opportunities for soil access with commercial and/or communal parking below residential use (including as basement)

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

HIL	HIL-B (NEPC, 2013 or HEPA, 2020 (PFAS only))	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2020)
DC	Direct contact HSL B Residential (High density) (CRC CARE, 2011)		

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Table J1: Summary of Results of Soil Analysis

				OPP																	PCB	PFAS									Asbestos		
				Chlorpyriphos	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Ronnel (fenchlorphos)	Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS	Perfluorobutanes ulfonic acid	6:2 FTS	8:2 FTS	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos Summary
			PQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002			
Sample ID	Depth	FILL / NATURAL	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	
BH101	0.1 - 0.3 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0003	<0.0001	**0.0003**	**0.0003**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	NAD	NAD	-
				340																1		20	2	2	2							
BH101	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-
BH102	0.16 - 0.18 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.0004**	**0.0001**	**0.0003**	**0.0003**	<0.0001	<0.0001	<0.0001	<0.0002	-	-	-
																						20	2	2	2							
BH102	0.35 - 0.55 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	NAD	NAD	-
				340																1												
BH102	0.8 - 1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-
BH103	0.1 - 0.3 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	NAD	NAD	-
				340																1												
BH103	1.3-1.5 m	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BD3/20250214	1.3-1.5 m	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH104	0.3 - 0.5 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	NAD	NAD	-
				340																1												
BH104A	0.4 - 0.6 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.0001**	<0.0001	**0.0001**	0.0001	<0.0001	<0.0001	<0.0001	<0.0002	NAD	NAD	-
																						20	2	2	2							
BH104A	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	
BH105	0.25 - 0.35 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	NAD	NAD	-
				340																1												
BH105A	0.12 - 0.2 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	NAD	NAD	-
				340																1		20	2	2	2							
BH105A	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	
BH105A	1.3 - 1.5 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH106	0.08 - 0.2 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	NAD	NAD	-
				340																1		20	2	2	2							
BH106	1.2 - 1.4 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	
BH107	0.1 - 0.3 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0001	<0.0001	**0.0001**	**0.0001**	<0.0001	<0.0001	<0.0001	<0.0002	-	-	-
																						20	2	2	2							
BH107	0.5 - 0.7 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	**Chrysotile asbestos detected**	NAD	**Detected**
				340																1												
BD2/20250121	0.5 - 0.7 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH107	1 - 1.2 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	-	
BH107	2.1 - 2.3 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH110	0 - 0.2 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.0009**	**0.0002**	**0.0007**	**0.0007**	<0.0001	<0.0001	<0.0001	<0.0002	-	-	-
																						20	2	2	2							
BH110	0.5 - 0.8 m	FILL	21/01/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	NAD	NAD	-
				340																1												
BH110	1.2 - 1.4 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH101 - [TRIPLICATE]	0.1 - 0.3 m	-	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH107 - [TRIPLICATE]	0.5 - 0.7 m	-	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Lab result

HIL/HSL value EIL/ESL/EGV value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

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DC	Direct contact HSL B Residential (High density) (CRC CARE, 2011)		

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Table J2 : Summary of Laboratory Results of Waste Classification Assessment

				Metals							TRH		BTEX				PAH			
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	TCLP Benzo(a)pyrene (B(a)P)	Total PAH	TCLP Total PAH
			PQL	4	0.4	1	1	0.03	0.1	1	25	50	0.2	0.5	1	1	0.05	0.0001	0.05	
Sample ID	Depth	FILL / NATURAL	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L
BH101	0.1 - 0.3 m	FILL	21/01/25	12	<0.4	12	**430**	-	1.3	11	<25	250	<0.2	<0.5	<1	<1	**3.7**	-	36	-
BH101 - [TRIPLICATE]	0.1 - 0.3 m	FILL	21/01/25	12	<0.4	21	460	-	1	16	-	-	-	-	-	-	-	-	-	-
BH101	0.9 - 1.1 m	FILL	21/01/25	5	<0.4	7	**110**	-	0.6	3	<25	410	<0.2	<0.5	<1	<1	**3.6**	-	31	-
BH102	0.16 - 0.18 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	0.35 - 0.55 m	FILL	21/01/25	9	<0.4	10	**330**	-	1	10	<25	360	<0.2	<0.5	<1	<1	**5**	-	70	-
BH102	0.8 - 1 m	FILL	21/01/25	<4	<0.4	9	21	-	<0.1	1	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-
BH103	0.1 - 0.3 m	FILL	21/01/25	4	<0.4	8	30	-	0.1	2	<25	140	<0.2	<0.5	<1	<1	**4.2**	-	33	-
BH103	1.3-1.5	FILL	14/02/2025	<4	<0.4	7	51	-	0.1	2	-	-	-	-	-	-	-	-	-	-
BD3/20250214	1.3-1.5	FILL	14/02/2025	2.8	<0.4	7.3	39	-	0.2	<5	-	-	-	-	-	-	-	-	-	-
BH104	0.3 - 0.5 m	FILL	21/01/25	7	<0.4	20	21	-	<0.1	1	<25	<50	<0.2	<0.5	<1	<1	0.3	-	1.6	-
BH104A	0.4 - 0.6 m	FILL	21/01/25	<4	<0.4	5	47	-	0.3	3	<25	<50	<0.2	<0.5	<1	<1	**1.1**	-	10	-
BH104A	0.9 - 1.1 m	FILL	21/01/25	<4	<0.4	5	60	-	2.5	4	<25	<50	<0.2	<0.5	<1	<1	0.59	-	5.9	-
BH105	0.25 - 0.35 m	FILL	21/01/25	19	<0.4	15	**330**	0.54	0.9	15	<25	610	<0.2	<0.5	<1	<1	**8.1**	<0.0001	130	-
BH105A	0.12 - 0.2 m	FILL	21/01/25	<4	<0.4	9	**120**	-	0.5	3	<25	<50	<0.2	<0.5	<1	<1	0.4	-	2.2	-
BH105A	0.9 - 1.1 m	FILL	21/01/25	<4	<0.4	14	13	-	0.1	1	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-
BH105A	1.3 - 1.5 m	NATURAL	21/01/25	4	<0.4	17	12	-	0.1	1	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-
BH106	0.08 - 0.2 m	FILL	21/01/25	<4	<0.4	7	**550**	0.91	0.7	5	<25	<50	<0.2	<0.5	<1	<1	**2.7**	<0.0001	22	-
BH106	1.2 - 1.4 m	NATURAL	21/01/25	<4	<0.4	12	4	-	<0.1	1	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-
BH107	0.1 - 0.3 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107	0.5 - 0.7 m	FILL	21/01/25	5	<0.4	8	**220**	0.44	0.7	5	<25	<50	<0.2	<0.5	<1	<1	**2**	<0.0001	15	0.0007
BD2/20250121	0.5 - 0.7 m	FILL	21/01/25	<4	<0.4	9	**470**	-	2	4	<25	<50	<0.2	<0.5	<1	<1	**0.91**	-	7.9	-
BH107 - [TRIPLICATE]	0.5 - 0.7 m	FILL	21/01/25	7	<0.4	9	430	-	0.6	7	-	-	-	-	-	-	-	-	-	-
BH107	1 - 1.2 m	FILL	21/01/25	13	<0.4	18	**380**	-	0.8	8	<25	<50	<0.2	<0.5	<1	<1	0.3	-	3	-
BH107	2.1 - 2.3 m	NATURAL	21/01/25	<4	<0.4	14	12	-	<0.1	2	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-
BH110	0 - 0.2 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH110	0.5 - 0.8 m	FILL	21/01/25	<4	<0.4	6	69	-	0.3	3	<25	<50	<0.2	<0.5	<1	<1	0.4	-	2.1	-
BH110	1.2 - 1.4 m	NATURAL	21/01/25	<4	<0.4	8	6	-	<0.1	2	<25	<50	<0.2	<0.5	<1	<1	0.1	-	0.2	-

Table J2 : Summary of Laboratory Results of Waste Classification Assessment

				Metals							TRH		BTEX				PAH			
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	TCLP Benzo(a)pyrene (B(a)P)	Total PAH	TCLP Total PAH
			PQL	4	0.4	1	1	0.03	0.1	1	25	50	0.2	0.5	1	1	0.05	0.0001	0.05	
Waste Classification Criteria [f]																				
CT1				100	20	100	100	-	4	40	650	10,000	10	288	600	1000	0.8	-	200	-
SCC1				500	100	1,900	1,500	-	50	1,050	650	10,000	18	518	1,080	1,800	10	-	200	-
TCLP1				-	-	-	-	5	-	-	-	-	-	-	-	-	-	0.04	-	-
CT2				400	80	400	400	-	16	160	2,600	40,000	40	1,152	2,400	4,000	3.2	-	800	-
SCC2				2,000	400	7,600	6,000	-	200	4,200	2,600	40,000	72	2,073	4,320	7,200	23	-	800	-
TCLP2				-	-	-	-	20	-	-	-	-	-	-	-	-	-	0.16	-	-
NEPC (1999)				1-50	1	5-1000	2-100	-	0.03	5-500	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				0.2-30	0.04-2	0.5-110	1-190	-	0.001-0.1	2-400	-	-	0.05 - 1	0.1 - 1	-	-	-	-	0.95-5	0.95-5
ANZECC (2000)				1-53	0.016-0.78	2.5-673	0.4-412	-	-	1-517	-	-	-	-	-	-	-	-	-	-

CT1 exceedance TCLP1 and/or SCC1 exceedance CT2 exceedance TCLP2 and/or SCC2 exceedance Asbestos detection

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste

PQL Practical quantitation limit

CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table J2 : Summary of Laboratory Results of Waste Classification Assessment

				Phenols	OCP				OPP	PCB	PFAS				Asbestos			
				Total Phenolics	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos Comment	Asbestos Summary
			PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.00001	0.0001	0.00001				
Sample ID	Depth	FILL / NATURAL	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	-	-	-	
BH101	0.1 - 0.3 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	-	**0.0003**	-	NAD	NAD	Nil	-
BH101 - [TRIPLICATE]	0.1 - 0.3 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH102	0.16 - 0.18 m	FILL	21/01/25	-	-	-	-	-	-	-	0.0001	<0.00001	**0.0003**	<0.00001	-	-	-	-
BH102	0.35 - 0.55 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	NAD	Nil	-
BH102	0.8 - 1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH103	0.1 - 0.3 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	NAD	Nil	-
BH103	1.3-1.5	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD3/20250214	1.3-1.5	FILL	14/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH104	0.3 - 0.5 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	NAD	Nil	-
BH104A	0.4 - 0.6 m	FILL	21/01/25	-	-	-	-	-	-	-	<0.0001	-	0.0001	-	NAD	NAD	Nil	-
BH104A	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH105	0.25 - 0.35 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	NAD	Nil	-
BH105A	0.12 - 0.2 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	NAD	NAD	Nil	-
BH105A	0.9 - 1.1 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH105A	1.3 - 1.5 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106	0.08 - 0.2 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	NAD	NAD	Nil	-
BH106	1.2 - 1.4 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH107	0.1 - 0.3 m	FILL	21/01/25	-	-	-	-	-	-	-	<0.0001	-	0.0001	-	-	-	-	-
BH107	0.5 - 0.7 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	**Detected**	NAD	**YES**	**Chrysotile asbestos detecte**
BD2/20250121	0.5 - 0.7 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107 - [TRIPLICATE]	0.5 - 0.7 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107	1 - 1.2 m	FILL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	Nil	-
BH107	2.1 - 2.3 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH110	0 - 0.2 m	FILL	21/01/25	-	-	-	-	-	-	-	0.0002	<0.00001	**0.0007**	0.00001	-	-	-	-
BH110	0.5 - 0.8 m	FILL	21/01/25	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	NAD	NAD	Nil	-
BH110	1.2 - 1.4 m	NATURAL	21/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table J2 : Summary of Laboratory Results of Waste Classification Assessment

				Phenols	OCP				OPP	PCB	PFAS				Asbestos			
				Total Phenolics	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos Comment	Asbestos Summary
			PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.00001	0.0001	0.00001				
Waste Classification Criteria [f]																		
CT1				288	<50	60	-	-	4	<50	-	-	-	-	-	-	-	-
SCC1				518	<50	108	-	-	7.5	<50	18	-	1.8	-	-	-	-	-
TCLP1				-	-	-	-	-	-	-	-	0.5	-	0.05	-	-	-	-
CT2				1,152	<50	240	-	-	16	<50	-	-	-	-	-	-	-	-
SCC2				2,073	<50	432	-	-	30	<50	72	-	7.2	-	-	-	-	-
TCLP2				-	-	-	-	-	-	-	-	2	-	0.2	-	-	-	-
NEPC (1999)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				0.03 – 0.5	-	<0.001 - <0.97	-	-	-	0.02 – 0.1	-	-	-	-	-	-	-	-
ANZECC (2000)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CT1 exceedance TCLP1 and/or SCC1 exceedance CT2 exceedance TCLP2 and/or SCC2 exceedance Asbestos detection

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a QA/QC replicate of sample listed directly below the primary sample

b Total chromium used as initial screen for chromium(VI).

c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste

PQL Practical quantitation limit

CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table J3: Summary of Laboratory Results of Soil Vapour and Ambient Air Analysis

		IPA	BTEX					VCH																								
		Isopropyl Alcohol	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	o-Xylene	Naphthalene	trans-1,2-dichloroethene (trans-DCE)	cis-1,2-dichloroethene (cis-DCE)	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Chloroform	Vinyl chloride	1,1-dichloroethene	1,1,1-trichloroethane	1,1,2-trichloroethane	1,1-dichloroethane	Propylene	Ethanol	Acetone	Carbon Disulfide	MEK	Hexane	Tetrahydrofuran	Styrene	Methyl Butyl Ketone	Methyl Methacrylate	Trichlorofluoromethane (Fereon 11)	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
		µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
PQL		12	1.6	1.9	2.2	4.3	2.2	2.6	2	2	2.7	3.4	2.4	1.3	2	2.7	2.7	2	0.9	9	11	16	15	1.8	1.5	2.1	2	2	2.8	2.5	1
Site Assessment Criteria (Comercial/ industrial)																																
HSL, Sand, 0-<1m (soil vapour)			4,000	4,800,000	1,300,000	840,000		3,000																								
IHIL -D (soil vapour)										300	80	8,000		100		230,000																
Modified IHIL (ambinet air)										30	8	800				23000																
WHO Tolerable Concentration (ambient air)													140		200																	
Modified WHO Tolerable Concentration (soil vapour)													1,400		2,000																	
Vapour Well	Date																															
105A	25/03/24	**1,100**	**4**	**40**	**10**	**40**	**10**	<2.6	<2	<2	<2.7	<3.4	**5**	<1.3	<2	<2.7	<2.7	<2	**4**	**20**	**30**	<16	<15	**20**	**23**	**9**	**8**	**6**	**3**	**5**	**5**
BD	25/03/24	**1,200**	**4**	**42**	**10**	**40**	**10**	<2.6	<2	<2	<2.7	<3.4	**5**	<1.3	<2	<2.7	<2.7	<2	**4**	**20**	**40**	<16	<15	**10**	**24**	**10**	**9**	**7**	**4**	**5**	**5**
Ambient Air																																
Sub-AB01	20/02/24	**50**	<3	<4	<4	<9	<4	<5	<4	<4	<5	<7	**<5**	<3	<4	<5	<8	<4	**<2**	**20**	**<20**	<30	<30	**<4**	<3					<5	<5

Comments
USEPA RSLs Industrial Air modified to THQ=0.1, TR 10-5 in accordance with Australian guidelines. In addition for assessment of soil vapour, an attenuation Factor of 0.1 was to account for presence of concrete slab

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		Metals - Total										Metals - Dissolved										TRH			
		Total Arsenic	Cadmium	Total Chromium	Copper	Iron	Lead	Manganese	Mercury (inorganic)	Nickel	Zinc	Total Arsenic	Cadmium	Total Chromium	Copper	Iron	Lead	Manganese	Mercury (inorganic)	Nickel	Zinc	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
	PQL	1	0.1	1	1	10	1	5	0.05	1	1	1	0.1	1	1	10	1	5	0.05	1	1	10	50	100	100
NHMRC (2012) Recreation		100	20		20,000		100	5,000	10	200		100	20		20,000		100	5,000	10	200					
ANZG (2018) 95% LOP Marine			5.5	4.4	1.3		4.4	80	**0.1**	70	8		5.5	4.4	1.3		4.4	80	**0.1**	70	8				
HEPA (2018) 99% LOP Marine																									
HEPA (2018) 95% LOP Marine																									
NEPC (2013) HSL 2-4m																						6,000	NL		
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	3	<0.1	19	30	4,300	24	37	<0.05	30	56	<1	<0.1	2	**8**	860	**9**	25	<0.05	28	**23**	<10	<50	<100	<100
GWD1/20250220	20/02/25	1	<0.1	4	10	1,200	15	27	<0.05	31	25	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100
BH102	20/02/25	14	0.9	98	460	41,000	720	400	2.5	72	1,100	<1	<0.1	<1	**2**	730	<1	**110**	<0.05	20	**72**	<10	<50	<100	<100
BH103	20/02/25	11	0.2	93	220	31,000	66	560	<0.05	170	250	-	-	-	-	-	-	-	-	-	-	<10	**120**	**180**	<100

Notes:

- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		BTEX						PAH																				
		Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (B(a)P)	Benzo(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of detected PAH	DDE	DDT	DDD	Aldrin	Dieldrin
	PQL	1	1	1	1	2	1	0.1	0.1	0.1	0.1	1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.001	0.001	0.001
NHMRC (2012) Recreation		10	8,000	3,000			6,000						0.1												90			
ANZG (2018) 95% LOP Marine		700	180	80		75				**0.01**		70	**0.1**					**1**			**0.6**				**0.0004**			**0.003**	
HEPA (2018) 99% LOP Marine																												
HEPA (2018) 95% LOP Marine																												
NEPC (2013) HSL 2-4m		5,000	NL	NL			NL					NL																
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
GWD1/20250220	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
BH103	20/02/25	<1	**81**	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-

Notes:

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		OCP																	OPP								
		Aldrin + Dieldrin (calculated)	alpha-chlordane	gamma-Chlordane	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	alpha-BHC	beta-BHC	delta-BHC	Lindane	Sum of detected OCP	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Ronnel (fenchlorphos)
	PQL	0.001	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.02	0.05	0.009	0.05	0.01	0.05	0.1	0.05	0.05
NHMRC (2012) Recreation		3								3							100		300	100	100		40	50	70	40	
ANZG (2018) 95% LOP Marine								**0.004**		**0.0004**		0.1	**0.004**				0.007				**0.009**						
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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										PCB																
		Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Sum of detected OPP	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Sum of detected PCB	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	tetrachloroethene (PCE)	1,1,2-trichloroethane	1,1,2-trichloroethylene	1,1-dichloroethane	1,1-Dichloroethene (DCE)	1,1-dichloropropene	1,2,3-trichlorobenzene
	PQL	0.05	0.05	0.05	0.004	0.05	0.05	0.05	0.004	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1	1	1	1	1	1
NHMRC (2012) Recreation		70	70	700	200	7	60	5													500				300		
ANZG (2018) 95% LOP Marine		0.001																	270	400	70	1,900	330		700		
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		VOC (excluding BTEX)																								
		1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethyl benzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethyl benzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	4-isopropyl toluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	carbon tetrachloride	Chloroethane	Vinyl Chloride	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
	PQL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1	10	1	1
NHMRC (2012) Recreation						15,000	30					400									30		3	2500			
ANZG (2018) 95% LOP Marine			**20**				1,900	900			1,100										240		100	770			
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	**1**	<10	<1	<1
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	**2**	<10	<1	<1
BH103	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1	<1	<10	<10	**7**	<10	<1	<1

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

																			PFAS						
		Isopropylbenzene (cumene)	Cyclohexane	dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,2-dibromoethane	hexachlorobutadiene	Bromomethane	Monochlorobenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene (vinylbenzene)	Tert-butyl benzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Sum of detected VOC	PFOS	PFOA	PFHxS	Perfluorobutanesulfonic acid	6:2 FTS	8:2 FTS	Sum of detected PFAS
	PQL	1	1	1	1	10	1	1	10	1	1	1	1	1	1	1	1	10	1	0.0002	0.0002	0.0002	0.0004	0.0004	0.0004	0.0002
NHMRC (2012) Recreation							10	7	10	3,000				300							10					
ANZG (2018) 95% LOP Marine		30								55																
HEPA (2018) 99% LOP Marine																				**0.00023**	**19**					
HEPA (2018) 95% LOP Marine																				**0.13**	**220**					
NEPC (2013) HSL 2-4m																										
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**1**	**0.028**	**0.0098**	**0.009**	**0.011**	**0.016**	<0.0004	**0.074**
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**2**	**0.06**	**0.01**	**0.0051**	**0.0069**	**0.051**	<0.0004	**0.133**
BH103	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**8**	-	-	-	-	-	-	-

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		Nutrients							Physical Parameters						Anions & Cations						Anions & Cations - Dissolved			
		Nitrogen	Ammonia as N	TKN in water	Nitrate as N	Nitrite as N	NOx as N	Organic Nitrogen as N	Total dissolved solids	pH	Electrical Conductivity	Total Suspended Solids (TSS)	Oil & Grease	Turbidity	Bicarbonate Alkalinity as CaCO3	Chloride	Hydroxide Alkalinity (OH-) as CaCO3	Ionic Balance	Sulphate	Total Alkalinity as CaCO3	Calcium	Magnesium	Potassium	Sodium
	PQL	100	5	100	5	5	5	200	5,000	-	1	5,000	5,000	0.1	5,000	1000	5,000		1000	5,000	500	500	500	500
NHMRC (2012) Recreation					500,000	30,000																		
ANZG (2018) 95% LOP Marine			910			1100																		
HEPA (2018) 99% LOP Marine																								
HEPA (2018) 95% LOP Marine																								
NEPC (2013) HSL 2-4m																								
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH Units	µS/cm	µg/L	µg/L	ntu	µg/L	µg/L	µg/L	%	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	21,000	440	8,200	13,000	16	13,000	7,700	420,000	4.5	640	940,000	<5000	610	8,000	31,000	<5000	-	160,000	8,000	29,000	8,800	28,000	32,000
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	22,000	95	9,300	13,000	170	13,000	9,200	440,000	5.9	830	5,800,000	7,000	-	210,000	25,000	<5000	-5	140,000	210,000	87,000	10,000	30,000	25,000
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,000	5,400	10,000	88,000

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NHMRC (2018) Australian Drinking Water Guidelines 6 2011, drinking water aesthetic-based criteria

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.

ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Appendix K

Borehole Logs

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 1 of 3

CONDITIONS ENCOUNTERED								SAMPLE			TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		0.10	CONCRETE PAVEMENT: 100 mm thick				ND								
			FILL / Silty SAND with gravel trace ash: brown; fine to medium; sandstone gravel.		FILL	ND								Sand	
		1.20	Silty SAND (SP-SM): pale grey / yellow; fine to medium.		ALV		M							Bentonite	
		1.50	SAND (SC-SM), with clay, trace silt: brown and orange-brown.		ALV	VL			SPT		1.50	SPT	0,1,1 N=2 Sunk 100mm on HW		
		2.00	Silty SAND (SM): red-brown; fine to coarse.		possibly ALV	MD			ES		1.85 2.00				
									A		2.10 2.20				
									A		2.30 2.35				
		2.40	Continued as rock log						SPT		2.39	SPT	5/40 HB		
▼ 20/02/25 08:00														Sand	

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.4m, NMLC to 10.2m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.4m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 2 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
			Continued from soil log		MW	2.40	L											Sand	
			SANDSTONE: pale grey and orange-brown, fine to coarse grained, indistictly cross bedded, 0 to 15°. Hawkesbury Sandstone		MW	2.46	L											Bentonite	
					MW	2.59	L to M	97	93		2.80m: B, 0°, PR, VNR Clay, RF					PLT	PL(A)=0.28MPa		
											3.05m: DS, 5°, 2mm 3.13m: B, 10°, PR, VNR Clay, RF 3.26-3.40m: JT, 30°, PR, INF, RF, Roots grown in joint					PLT	PL(A)=0.33MPa		
																PLT	PL(A)=0.56MPa		
▼ 20/02/25 08:00											3.78m: DS, 0°, 10mm 3.90m: CS, 0°, 5mm							Sand	
	4.20					4.20													
	2.59																		
	4.45		SANDSTONE: pale grey and orange-brown, fine to coarse grained, indistictly cross bedded, 0 to 15°. Hawkesbury Sandstone		MW	4.45	L				4.45m: DS, 0°, 50mm 4.50m: JT, 85°, PR, CN, RF					PLT	PL(A)=0.27MPa		
						4.80	SEAM			SEAM	4.69m: DS, 5°, 30mm 4.78-4.91m: JT, 85°, ST, INF Clay 5mm, VR								
					XW	4.86													
					MW	5.13	L	72	60		4.92m: DS, 5°, 5mm 4.93-5.01m: JT, 85°, IR, CN, RF 5.03m: DS, 0°, 130mm					PLT	PL(A)=0.55MPa		
					XW	5.16	SEAM			SEAM									
					MW	5.35	M												
					XW	5.37	SEAM			SEAM	5.36m: DS, 20°, 15mm								
					MW	5.48	M				5.49m: DS, 20°, 20mm								
	5.52				XW	5.52	SEAM			SEAM									
	5.78				SW	5.78	M				5.82m: B, 15°, PR, SN Fe, RF					PLT	PL(A)=0.41MPa		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

Generated with CORE-GS by Geroc - Split Soil-Rock Log

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.4m, NMLC to 10.2m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.4m

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 3 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		6.00	SANDSTONE: pale grey and orange-brown, fine to coarse grained, cross bedded, 0 to 15°, with frequent iron-staining and extremely weathered bands/seams. Hawkesbury Sandstone.		SW		M				6.02-6.08m: JT, 60°, PR, CN, RF								
		6.20			XW	6.16	SEAM			SEAM	6.08m: DS, 10°, 5mm								
						6.20					6.16m DS, 20°, 40mm								
		6.43				6.43					6.43-6.48m: JT, 85°, PR, CN, RF								
	-0							72	60		6.66m: DS, 5°, 10mm					PLT	PL(A)=0.52MPa		
		7					M				6.82-7.15m: JT, 85°, PR, CN, RF				7				
	-1				SW	7.30					7.31m: B, 35°, PR, CN, RF					PLT	PL(A)=0.25MPa		
							L				7.86m: CZ, 0°, 60mm								
		8													8			Sand	
		8.33				8.33													
		8.37				8.37	VL				8.37-8.42m: DS, 0°, 50 mm								
	-2					8.42		98	90							PLT	PL(A)=0.50MPa		
							M				8.82m: DS, 0°, 5mm								
		9									8.96m: DS, 0°, 70mm				9				
						9.03													
					SW		M to H				9.22m: B, 10°, PR, CT CBS, RF								
						9.38					9.38m: DS, 0°, 40mm								
						9.42	VL				9.50m: B, 10°, PR, CN, RF								
	-3						M to H				9.68-9.70m: SZ, 10°, 20 mm					PLT	PL(A)=1.0MPa		
						9.90	VL				9.90m: DS, 0°, 60mm								
		9.94				9.94													
		10.00				10.00					10.00-10.20m: JT, 85°, IR, SN Fe, VR				10				
					SW		M to H												
	-4		Borehole discontinued at 10.20m depth. Target depth reached.																
		11																	
	-5																		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.4m, NMLC to 10.2m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.4m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 1 of 1

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 1 of 3

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		0.16	CONCRETE PAVEMENT: 160 mm thick				ND								
		0.30	FILL / Silty Gravelly SAND, with clay, trace asphalt, sandstone gravel, slag: brown; fine to medium.		FILL										
		1.00	FILL / Gravelly SAND with clay trace cobbles: brown; fine to medium; fine to coarse, sandstone and igneous gravel; sandstone cobbles; with asphalt, slag; and trace terracotta, tile, and rusty metal piece.		FILL	ND								Bentonite	
		1.50	Clayey SAND (SC): yellow / orange; fine to medium.		ALV		M				1.50				
		2.00	Clayey SAND (SC), trace gravel: red-brown, orange-brown and pale grey; fine to coarse; fine to medium, ironstone gravel.		ALV	VL			SPT		1.80	SPT	0,0,1/100		
		2.50	SAND (SP), trace gravel: pale grey and yellow-brown; fine to coarse; fine, sandstone gravel.		possibly ALV	MD			ES		1.90 2.00				
▼ 20/02/25 07:00		2.67	SAND with gravel trace clay: pale grey; fine to coarse; fine to medium, sandstone gravel. Hawkesbury Sandstone.			ND	ND		A		2.20 2.35	SPT	25/130 (HB)		
		3.30			XWM	(D)	NDF		SPT		2.48				
		3.58	Continued as rock log			ND	ND							Sand	

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 2 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
20/02/25 07:00	6	1	Continued from soil log												1			Bentonite	
	5	2													2				
	4	3													3			Sand	
	3	4	SANDSTONE: pale grey, orange-brown and red-brown, fine to coarse grained, cross bedded, 0 to 10°; with abundant iron-staining and extremely weathered seams, highly fractured. Occasional carbonaceous lenses. Hawkesbury Sandstone.		HW	3.58	VL	81	43	SEAM	3.65m: DS, 10°, 180mm				4	PLT	PL(A)=0.27MPa		
					XW	3.66	SEAM			SEAM									
					HW	3.83	VL to				3.87m: DS, 15°, 25mm								
					XW	4.00	SEAM			SEAM	4.00m: DS, 0°, 480mm								
	2	5			HW	4.48	L	79	17	SEAM	4.63m: DS, 0°, 70mm				5	PLT	PL(A)=0.26MPa		
					XW	4.63	SEAM												
					HW	4.70	L to M				4.72-4.90m: JT, 85°, PR, CN, VR								
					XW	5.09	SEAM			SEAM	5.10m: DS, 0°, 30mm					PLT	PL(A)=0.26MPa		
					HW	5.13	L to M				5.04-5.20m: JT, 75°, ST, CN, VR 5.19-5.23m: JT, 45°, PR, INF Clay 2mm, SM 5.31m: B, 5°, PR, INF Clay 2mm, SM								
	1	5.45				5.45													
		5.71			SW	5.71	L to M												
					XW	5.85	SEAM			SEAM	5.85m: DS, 10°, 370mm								

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 3 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		6.00	SANDSTONE: pale grey, orange-brown and red-brown, fine to coarse grained, cross bedded, 0 to 10°; with abundant iron-staining and extremely weathered seams, highly fractured. Occasional carbonaceous lenses. Hawkesbury Sandstone.		XW	6.22	SEAM	79	17	SEAM	6.44m: DS, 10°, 370mm					PLT	PL(A)=0.31MPa		
					SW	6.45	L to M												
					XW		SEAM			SEAM									
		6.62				6.62													
	-0	6.88				6.88										PLT	PL(A)=0.42MPa		
		7			SW						7.02m: DS, 0°, 20mm 7.05m: JT, 45°, PR, INF Clay 2mm, SM 7.13m: JT, 45°, PR, INF Clay 25mm, RF 7.23m: JT, 45°, PR, INF Clay 25mm, RF				7				
						7.20	M	80	10							PLT	PL(A)=0.56MPa		
					HW						7.56m: JT, 60°, PR, VNR Clay, SM								
	-1										7.68-7.86m: DS, 0°, 15mm, x4								
		8				7.94					7.94m: DS, 0°, 160mm				8			Sand	
		8.10			XW	8.10	SEAM			SEAM									
		8.26	SANDSTONE: orange-brown and red-brown, then grey, fine to coarse grained, 0 to 10°, thinly laminated, occasional carbonaceous lenses. Hawkesbury Sandstone		SW	8.26	M									PLT	PL(A)=0.73MPa		
						8.50													
						8.53					8.53m: DS, 0°, 150mm								
					XW		SEAM			SEAM						PLT	PL(A)=0.13MPa		
						8.68					8.76-8.83m: JT, 70°, IR, CN, RF								
		9			HW		L	90	80		8.95m: DS, 0°, 20mm				9				
																PLT	PL(A)=0.13MPa		
						9.50					9.50m: DS, 0°, 110mm								
					XW		SEAM			SEAM						PLT	PL(A)=0.52MPa		
	-3					9.60													
					SW		M												
					XW	9.88	SEAM			SEAM	9.88m: DS, 5°, 140mm								
		10			SW	9.94	M								10	PLT	PL(A)=0.60MPa		
			Borehole discontinued at 10.10m depth. Target depth reached.																
	-4																		
		11																	
	-5																		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 1 of 1

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 1 of 3

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	6	0.08	CONCRETE PAVEMENT: 80 mm thick								0.08			Sand	
			FILL / Clayey SAND, with silt, trace ash, asphalt, broken glass pieces: brown/yellow; fine to medium.		FILL	ND	ND								
		0.40	FILL / SAND, trace clay, trace gravel: brown and grey-brown; fine to medium; fine to medium, igneous, sandstone and ironstone gravel.											Bentonite	
		1			FILL	MD					1	SPT	4,3,7 N=10		
	5	1.50	SAND (SP), with clay, trace gravel: red-brown and orange-brown; fine to coarse; fine, sandstone gravel.		possibly RS	MD to D	M		A/ASS		1.30				
									A/ASS		1.50				
		2							A/ASS		1.70				
	4	2.50	Continued as rock log								2.00				
											2.20				
		3									2.50			Sand	
	3										3				
20/02/25 13:00		4									4				
	2														
		5									5			Bentonite	
	1														

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 2 of 3

CONDITIONS ENCOUNTERED													SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH. (PS, XW, DW, HW, MW, SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.03, 0.06, 0.20, 0.60, 2.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	6																		
	5																		
	4		Continued from soil log			2.50													
	3	2.63	SANDSTONE: pale grey, fine to coarse grained, bedded, 0 to 10°, with orange-brown and brown laminae, cross bedded, 20 to 30°. Hawkesbury Sandstone		SW	2.63	M	85	85		2.66m: B, 0°, PR, SN Fe, RF 2.72m: B, 0°, PR, CN, RF 2.95m: B, 20°, PR, CT CBS, RF 3.68m: B, 10°, ST, CN, RF				3	PLT	PL(A)=0.38MPa	Sand	
	2															PLT	PL(A)=0.53MPa		
	1							100	100							PLT	PL(A)=0.75MPa	Bentonite	
20/02/25 13:00		5.03	SANDSTONE: orange-brown then grey with occasional purple and red-brown, fine to coarse grained, laminated, 0 to 20°, indistictly cross bedded, 0 to 20°; occasional carbonaceous lenses, indistinct. Hawkesbury Sandstone		MW	5.03	H				4.99-5.01m: DS, 10°, 20 mm				5	PLT	PL(A)=1.0MPa		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

Generated with CORE-GS by Geroc - Split Soil-Rock Log

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 3 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH. (PS, XW, HW, DW, MW, SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	-0	7	[CONT] SANDSTONE: orange-brown then grey with occasional purple and red-brown, fine to coarse grained, laminated, 0 to 20°, indistictly cross bedded, 0 to 20°; occasional carbonaceous lenses, indistinct. Hawkesbury Sandstone		MW	6.41	H	100	100		6.42-6.44m: CS, 0-10°, PR, SN Fe, VR 6.58-6.61m: CS, 0°, 30mm 6.65m: B, 20°, CU, VNR Clay, SM 6.80m: DS, 20°, 10mm 6.85m: DS, 30°, 10mm 6.97m: B, 10°, PR, VNR Clay, SM 7.13-7.22m: CZ, 90mm 7.50m: B, 5°, PR, CT CBS, RF 7.92m: B, 10°, PR, VNR Clay, SM 8.07-8.10m: DS, 10°, 30 mm 8.26m: B, 20°, CU, VNR Clay, SM 8.30m: IS, 0°, 20mm 8.44m: B, 5°, PR, VNR Clay, SM 8.50m: DS, 0°, 15mm 8.60-8.68m: JT x2, 60°, PR, SN Fe, VR, JTs Cross each other				7	PLT	PL(A)=0.30MPa		
	-1	8					M	100	89						8	PLT	PL(A)=0.53MPa		
	-2	9				8.60	VH									PLT	PL(A)=0.64MPa		
	-3	10	Borehole discontinued at 8.78m depth. Target depth reached.													PLT	PL(A)=4.7MPa		
	-4	11																	
	-5																		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Apt.Residential Pty Ltd
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 1 of 1

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333146.1, N:6249357.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH104
PROJECT No: 231957.01
DATE: 21/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	6.5	CONCRETE PAVEMENT: 220 mm thick.				ND						
	0.22	FILL / CLAY with cobbles trace ash, slag: brown /orange; sandstone cobbles.		FILL	ND	M		ES		0.30 0.50	PID	0.9ppm
	1	Borehole discontinued at 0.80m depth. Refusal on sandstone cobbles / bricks in fill.										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, Vaccum truck and hand tools **OPERATOR:** Geosurv **LOGGED:** Pourkazemi
METHOD: DT (150) to 0.22 m, VE to 0.8 m. **CASING:** Uncased
REMARKS: Borehole completed at the surface with a quick set concrete.

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.7 AHD
COORDINATE: E:333137.4, N:6249358.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH104A
PROJECT No: 231957.01
DATE: 21/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0	CONCRETE PAVEMENT: 150 mm thick.				ND						
	0.15	FILL / SAND: yellow; fine; (bedding sand).		FILL		D		ES		0.16 0.20		
	0.25	CONCRETE: 100 mm thick.				ND						
	0.35	FILL / Clayey SAND, with sandstone gravel, with silt: brown.		FILL	ND	M		ES		0.40 0.60	PID	0.8ppm
	0.80	FILL / Gravelly SAND, with ash / slag, sandstone gravel, with silt: brown.		FILL				ES		0.90 1	PID	0.6ppm
	1.10	Borehole discontinued at 1.10m depth. Refusal on sandstone cobbles in fill.								1.10		

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, vaccum truck and hand tools **OPERATOR:** Geosurv **LOGGED:** Pourkazemi
METHOD: DT (150) to 0.15m ,HA to 0.25 m,DT (150) to 0.35 m, VE to 0.5 m, HA to 0.8 m, VE to 1m, HA to 1.1 m. **CASING:** Uncased
REMARKS: Borehole completed at the surface with a quick set concrete.

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL:
COORDINATE: E:333136.3, N:6249339.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH105
PROJECT No: 231957.01
DATE: 21/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.20	CONCRETE PAVEMENT: 200 mm thick.				ND						
		FILL / Gravelly SAND, trace clay, sandstone, igneous gravel, ash: brown; fine to medium.		FILL	ND	D		ES		0.25 0.35	PID	0.5ppm
	1	Borehole discontinued at 0.50m depth. Refusal on sandstone cobbles/ bricks in fill.									PID	0.3ppm

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, hand tool
METHOD: DT (150mm) to 0.2 m, then HA to 0.5 m.
REMARKS: Coordinates and levels estimated from site drawings (low accuracy)
.Borehole completed at the surface with quick set concrete.

OPERATOR: Douglas
LOGGED: Pourkazemi
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333160.8, N:6249341.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH106
PROJECT No: 231957.01
DATE: 21/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.05	CONCRETE PAVEMENT: 50 mm thick.				ND						
		FILL / SAND, with ash, sandstone gravel: brown; coarse; trace slag.		FILL	ND	M		ES		0.08 – 0.20	PID	0.5ppm
	6										PID	0.5ppm
	1							ES		0.90 – 1		
	1.10	Clayey SAND (SC): yellow / orange; coarse.		ALV				ES		1.20 – 1.40		
	5	Borehole discontinued at 1.50m depth. Target depth reached.										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, vaccum truck, and hand tools
METHOD: DT (150mm) to 0.05, VE to 0.7 m, then HA to 1.5 m
REMARKS: Borehole completed at the surface with quick set

OPERATOR: Geosurv

LOGGED: Pourkazemi
CASING: Uncased

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Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333170.8, N:6249345.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH107
PROJECT No: 231957.01
DATE: 21/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.08	CONCRETE PAVEMENT: 80 mm thick.				ND						
		FILL / Gravelly SAND, with ash, asphalt, sandstone gravel, igneous gravel , with clay: brown; fine to medium.		FILL	ND	M		ES		0.10		
										0.30	PID	2.9ppm
								ES		0.50		
										0.70	PID	2.7ppm
								ES		1.00		
										1.20	PID	2.6ppm
								ES		1.50		
										1.80	PID	2.1ppm
	1.90	Silty SAND (SM) with clay: grey/orange; fine to medium.		ALV				ES		2		
										2.10		
										2.30		
		Borehole discontinued at 2.40m depth. Target depth reached.										

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, vaccum truck and hand tools **OPERATOR:** Geosurv **LOGGED:** Pourkazemi
METHOD: DT(150) to 0.08 m, VE to 0.5 m,HA to 0.8 m,VE to 1 m, HA to 1.2m, VE to 1.5 m , HA to 2.4 m. **CASING:** Uncased
REMARKS: Replicate sample BH0D2/20250121 collected at 0.5-0.7. No Hydrocarbon odour. Borehole completed at the surface with quick set concrete.

Refer to explanatory notes for symbol and abbreviation definitions

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BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL:
COORDINATE: E:333180.0, N:6249337.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH110
PROJECT No: 231957.01
DATE: 21/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
		CONCRETE PAVEMENT: 300 mm thick.				ND		ES		0.20	PID	0.3ppm
	0.30	ASPHALT: 100 mm thick.				ND						
	0.40	FILL / Gravelly SAND, with sandstone gravel: brown; fine to medium; trace ash and igneous gravel.		FILL	ND	M		ES		0.50		
	1									0.80	PID	0.1ppm
	1.10	Silty SAND (SM) with clay: orange / light brown; fine to medium.		ALV				ES		1		
										1.20		
										1.40		
		Borehole discontinued at 1.50m depth. Target depth reached.										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, vaccum truck and hand tools
OPERATOR: Geosurve
LOGGED: Pourkazemi
METHOD: DT (150) to 0.4 m, VE to 0.5m, HA to 1.5m
CASING: Uncased
REMARKS: Coordinates and levels estimated from site drawings (low accuracy).
Borehole completed at the surface with quick set concrete.

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd ATF Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333144.5, N:6249342.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH105A
PROJECT No: 231957.01
DATE: 21/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		0.10	CONCRETE PAVEMENT: 100 mm thick.				ND				0.12			Concrete	
			FILL / Silty SAND, trace ash, sandstone gravel, slag, igneous gravel: brown; fine to medium.		FILL				ES		0.20	PID	1.1ppm	Bentonite	5mm Teflon Tube
		0.50	FILL / BOULDERS, with bricks, sandstone, concrete.		FILL									Sand	
	6	0.80	FILL / Silty SAND, trace slag, sandstone gravel, igneous gravel: brown; fine to medium.		FILL	ND	M				0.90				Inlet
		1							ES		1				
		1.20	Silty SAND (SM) with clay: brown/orange; fine to medium.		ALV						1.10	PID	0.5ppm	Backfill	
									ES		1.30				
											1.50				
	5		Borehole discontinued at 1.70m depth. Target depth reached.												
		2													
	4														

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Concrete coring machine, vaccum truck and hand tool
METHOD: DT(150mm) to 0.1, HA to 0.2m, VE to 0.8m, HA to 1.7m
REMARKS: The borehole was backfilled to a depth of 1m to install the vapour well.Well completed at surface with gatic cover; Well inlet comprised 10cm stainless steel soil vapour.

OPERATOR: Geosurve
LOGGED: Pourkazemi
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Terminology, Symbols and Abbreviations

November 2023

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style XW. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

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Introduction

All materials which are not considered to be "in-situ rock" are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:

The "classification" comprises a two character "group symbol" providing a general summary of dominant soil characteristics. The "name" summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either "fine grained" (also known as "cohesive" behaviour) or "coarse grained" ("non cohesive" behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as "oversize"	
Cobble	63 - 200		
Gravel[1]	2.36 - 63	Coarse	>65%
Sand[1]	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

[1] – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer "component proportions" below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a "Sandy CLAY", this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a "primary", "secondary", or "minor" component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition[1]	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor[2]	Present in the soil, but not significant to its engineering properties	All other components	All other components

[1] As defined in AS1726-2017 6.1.4.4

[2] In the detailed material description, minor components are split into two further sub-categories. Refer "identification of minor components" below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, "INTERBEDDED Silty CLAY AND SAND".

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component [1]	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

[1] – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

Type		Particle size (mm)
Gravel	Coarse	19 - 63
	Medium	6.7 - 19
	Fine	2.36 – 6.7
Sand	Coarse	0.6 - 2.36
	Medium	0.21 - 0.6
	Fine	0.075 - 0.21

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code NDF, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as "extremely weathered material" in reports and by the abbreviation code XWM on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than 'very low' as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

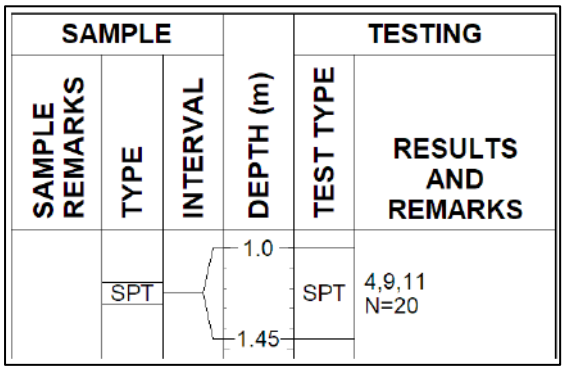
The presence of particles considered to be "oversize" may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with "MIXTURE OF".

intentionally blank

Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:



Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Driven Tube sample	DT
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U[1]
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

[1] – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y =*x* blows for *y* mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(_)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP9/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150
Dynamic probe super heavy, followed by blow count penetration increment in mm	DPSH/100

Groundwater Observations

	water seepage/inflow
	water seepage/outflow
	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD[1]
Air Track	AT
Diatube	DT[1]
Hand auger	HA[1]
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA[1]
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT[1]
Ripping tyne/ripper	R
Rock roller	RR[1]
Rock breaker/hydraulic hammer	EH
Sonic drilling	SON[1]
Mud/blade bucket	MB[1]
Toothed bucket	TB[1]
Vibrocore	VC[1]
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB[1]

[1] – numeric suffixes indicate tool diameter/width in mm

Appendix L

Field Notes

Certificate of Service and Calibration
Bladder Pump
QED MP15 Micropurge Kit

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	QED MP15 Kit
Serial Number	Sample Pro Pump: 145106
Serial Number	MP15 Backpack: 1809
Client Name	Setareh Pourkazemi (Douglas Partners Pty Ltd)
Project Number	235719.01/511
Comments	1x Spare CO2 Bottle

Instrument Check			
Item	Test	Test Passed	Comments
MP15 Backpack Controller	Operation	✓	Controller operational
Gas Regulator	Condition	✓	No damage, good condition
Wrench and Tube Cutter	Condition	✓	Attached to the controller
Blue Coiled Hose	Condition	✓	No tears, clean, good condition
Tube Connection Fitting	Condition	✓	No damage
Black Canvas Bag	Condition	✓	No damage, clean
Sample Pro Pump	Condition	✓	No damage, decontaminated
Bladder	Condition	✓	1x New bladder included free of charge
Pump Fittings	Condition	✓	No damage, good condition
CO2 Gas Bottle	Check & Test	✓	1x CO2 bottle included free of charge
Kit Operation	Operation	✓	MP15 kit fully operational
Instructional Manual	-	✓	User manual included

Inclusions

The MP15 Kit should include the following items:

- QED MP15 Backpack Controller, Blue Coiled Hose with Tube Connection Fitting, Wrench and Tube Cutter, Sample Pro Pump, 1x CO2 gas bottle fitted with the MP15 Backpack, Wire Cable Hand Reel and spares/accessories box
- Additional CO2 gas bottles will be supplied upon request at an additional cost

Declaration

WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The pump has been decontaminated and cleaned upon return from the previous hire and is in good working order.

Checked By	William Pak
Calibration Date	18/02/2025
Calibration Due	18/08/2025

WAM Scientific:
26 Bungarra Crescent
CHIPPING NORTON NSW 2170
T: +61 405 241 484 | +61 424 198 667
E: rentals@wamscientific.com.au
E: accounts@wamscientific.com.au

Douglas PARTNERS

Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location	Ultimo			NMLC	Project Number	231957.01
Well Construction Details	Well ID	BH 101	Drilling Method	NDD/ADI	Hole Diameter (m)^	
	Well Depth (m bgl)		Screened (m bgl)	2	Stick Up (m)	
Survey Information	Easting	333156.6	Northing	6249348.6	Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	12/02/25			Purged By	CSY
Purge Method / Equipment	Peri Pump				
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-purge)		m bgl	Observed Well Depth		m bgl
Height of Water Column (H)		m bgl	Estimated Bore Volume*		L
GW Level (post-purge)		m bgl	Total Volume Purged**		L
Appearance/Comments					

Sampling Details					
Date / Time / Weather Conditions	20/2/2025			Sampled By	SP
Sampling Method / Equipment	Bladder pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	3.9	m bgl	Observed Well Depth	10.16	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)	4.3	m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
		24.7	5.17	15.6	4.14	352.2	13.62
		23.9	5.67	15.5	4.14	353.4	12.84
			3.87	20.6	4.05	400.9	32.84
		23.4	-0.17	11.9	3.84	108.8	68.19
		23.2	-0.18	14.5	3.81	408.8	52.61
		23.2	-0.19	10.2	3.81	409.2	71.88
			-0.19	12.2	3.81	409.3	74.28
			-0.20	11.2	3.81	409.1	75.17
				12.2		409.4	

Notes: # Considered stabilised if three DO values are less than 0.5 mg/L ^ Considered stabilised if three Turbidity values are less than 5 NTU

Sample Details							
Sampling Depth (rationale)		m bgl					
Sample Observations (e.g. colour, sediment, sheen, odour)	light brown, some silt,						
Sample ID							
QAQC Samples	Replicate	DI/20250220	Triplicate			Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass		Plastic			PFAS (no teflon)	
	Metals (F/UF) (HNO3)		Phenols/COD/NH3 (H2SO4)			Vials (HCl)	
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)			Other	
Comments							

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Douglas PARTNERS

Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location	Ultimo				Project Number	231957.01
Well Construction Details	Well ID	BH102	Drilling Method	NDD/AD/NMLC	Hole Diameter (m)	
	Well Depth (m bgl)	10.10	Screened (m bgl)	2	Stick Up (m)	
Survey Information	Easting	333148.3	Northing	6249336.8	Elevation RL	6.8
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	13/02/25			Purged By	CSY
Purge Method / Equipment					
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-purge)		m bgl	Observed Well Depth		m bgl
Height of Water Column (H)		m bgl	Estimated Bore Volume*		L
GW Level (post-purge)		m bgl	Total Volume Purged**		L
Appearance/Comments					

Sampling Details					
Date / Time / Weather Conditions	20/02/25 / cloudy			Sampled By	SP
Sampling Method / Equipment	Bladder pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	2.60	m bgl	Observed Well Depth	10.1	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)	4.1	m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
		23	7.58	17.2	5.70	213.5	1763.51
		22.5	-0.07	653	5.15	236.9	~~1927~~
			-0.11	766	5.13	235.5	1976.22
			-0.16	754	5.15	232.3	
			-0.16	12.8	5.15		44.27
			-0.16	13.6	5.15	231.4	84.15
			-0.18	20.8			
			-0.17	18.4	5.13	230.7	37.82

Notes: # Considered stabilised if three DO values are less than 0.5 mg/L ^ Considered stabilised if three Turbidity values are less than 5 NTU

Sample Details							
Sampling Depth (rationale)		m bgl,					
Sample Observations (e.g. colour, sediment, sheen, odour)	brown / silty / no odour						
Sample ID	BH102						
QAQC Samples	Replicate		Triplicate		Other		
Sample Containers Quantity / Preservation / Filtration	Amber glass		Plastic		PFAS (no teflon)		
	Metals (F/UF) (HNO3)		Phenols/COD/NH3 (H2SO4)		Vials (HCl)		
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other		
Comments							

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Douglas PARTNERS

Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location	Ultimo				Project Number	231957.01
Well Construction Details	Well ID	BH103	Drilling Method	NDD/AD/HQ	Hole Diameter (m)~	
	Well Depth (m bgl)	8.78	Screened (m bgl)		Stick Up (m)	
Survey Information	Easting	333174.7	Northing	6249336.8	Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	14/02/25			Purged By	CSY
Purge Method / Equipment					
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-purge)		m bgl	Observed Well Depth		m bgl
Height of Water Column (H)		m bgl	Estimated Bore Volume*		L
GW Level (post-purge)		m bgl	Total Volume Purged**		L
Appearance/Comments					

Sampling Details					
Date / Time / Weather Conditions	20/2/25			Sampled By	SP
Sampling Method / Equipment	Bladder pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness		mm	Confirmed with Bailer? (Y / N)		
GW Level (pre-micropurge)	3.87	m bgl	Observed Well Depth	4.87	m bgl
Height of Water Column		m bgl	Estimated Bore Volume*		L
GW Level (post sample)	almost dry	m bgl	Total Volume of Micro-Purged		L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
		No reading due to insufficient water					

Notes: # Considered stabilised if three DO values are less than 0.5 mg/L ^ Considered stabilised if three Turbidity values are less than 5 NTU

Sample Details						
Sampling Depth (rationale)		m bgl,				
Sample Observations (e.g. colour, sediment, sheen, odour)	light brown, no odour, silty					
Sample ID						
QAQC Samples	Replicate		Triplicate		Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass		Plastic		PFAS (no teflon)	
	Metals (F/UF) (HNO3)		Phenols/COD/NH3 (H2SO4)		Vials (HCl)	
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

not sufficient water so only sample collected for HM, VOC, general contam.
- no PFAS sample collect
- sample for metal not filtered

Douglas PARTNERS

Soil Vapour Sampling Sheet

Project and Bore Installation Details					
Project Name:	Mount St, Ulfland				
Project Number:	231957.01				
Client	Apt				
Sample ID / Bore No.	Sub station				
Site Location:					
GPS Co-ord:					
Elevation (RL, m AHD)					
Installation Date:	N/A				
Well / Pin Construction Details	N/A				
Weather	Humidity		Temperature	Barometric	
Canister Flow Controller		mL/min			
Carbon / TD Tube Flow Controller		mL/min	Type	Rotameter, flow flow adaptor and vacuum gauge	
Pump ID					
Date/Time:	20.2.25				
Sampled By:	HT				
Purge Details / Field Readings					
Pre Purge PID Reading		ppm			

Bulk Gas readings	Time	Concentration (% v/v) CH_4	CO_2	O_2	H_2S (ppm)	CO (ppm)

Purge Method				
Post Purge PID Reading		ppm		
Approximate Volume Purged		L		
Pre-Start QA Tests				
Shut In Test				
	Canister		**Carbon Tube / TD Setup**	
Vacuum Applied		in Hg		kPa
Duration		min		min
Pass / Fail				
Leak Test	**PID in Sample Train**		**PID in Shroud**	
		ppm		ppm
Pass / Fail				
Sampling Details - Primary				
	Canister		**Carbon Tube / TD Tube**	
ID Number	10642			
Regulator Number	1825		N/A	
Start Time	1300	min		min
Start Vacuum	-30	in Hg		kPa
Stop Time	1410	min		min
Stop Vacuum	-22	in Hg		kPa
Approximate Sample Volume		mL		mL
	Note: recommended end vacuum of -7 in Hg (~75% full)		Note: recommended < 2.5 kPa induced vacuum (ASTM	
Sampling Details - Replicate				
	Canister		**Carbon Tube / TD Tube**	
ID Number				
Regulator Number			N/A	
Start Time		min		min
Start Vacuum		in Hg		kPa
Stop Time		min		min
Stop Vacuum		in Hg		kPa
Approximate Sample Volume		mL		mL
Sampling Details - Shroud				
Carbon / TD Tube ID				
Start Time		min		
Stop Time		min		
Sample Time		min		
Approximate Sample Volume		mL		
Comments / Observations:				

ultimo

Douglas PARTNERS

Soil Vapour Sampling Sheet

Project and Bore Installation Details

Project Name:	Mount St, Ultimo
Project Number:	231957.01
Client	Apt
Sample ID / Bore No.	105A
Site Location:	
GPS Co-ord:	
Elevation (RL, m AHD)	
Installation Date:	
Well / Pin Construction Details	
Weather	Humidity / Temperature / Barometric
Canister Flow Controller	mL/min
Carbon / TD Tube Flow Controller	100 mL/min Type: Rotameter, flow flow adaptor and vacuum gauge
Pump ID	SN: 14528213
Date/Time:	
Sampled By:	HT / SK

Purge Details / Field Readings

Pre Purge PID Reading: ppm

Bulk Gas readings	Time	CH_4	CO_2	O_2	H_2S (ppm)	CO (ppm)
	10:54	0	8	14.2	0	0
	10:58	0	8	9.6	0	0
	11:03	0	0	12.2	0	0
	11:07	0	0	13.8	0	0

Purge Method	Pump		
Post Purge PID Reading	0	ppm	0
Approximate Volume Purged	500 0.5	L	

Pre-Start QA Tests

Shut In Test

	Canister		Carbon Tube / TD Setup	
Vacuum Applied	30/28	in Hg	-0.8	kPa
Duration	5	min	5	min
Pass / Fail				

Leak Test

	PID in Sample Train		PID in Shroud	
	0	ppm	23	ppm
Pass / Fail	Pass			

0198811686

100mL/min
5min

Sampling Details - Primary

	Canister		Carbon Tube / TD Tube	
ID Number	3535		0198811686	
Regulator Number	403		N/A	
Start Time	1230	min	12:09	min
Start Vacuum	-30	in Hg	-0.3	kPa
Stop Time	1236	min	12:14	min
Stop Vacuum	-7	in Hg	-0.3	kPa
Approximate Sample Volume		mL	500	mL
	Note: recommended end vacuum of -7 in Hg (~75% full)		Note: recommended < 2.5 kPa induced vacuum (ASTM	

100mL

Sampling Details - Replicate

	Canister		Carbon Tube / TD Tube	
ID Number	3541		0198811686	
Regulator Number	518		N/A	
Start Time	1230	min	12:09	min
Start Vacuum	-28	in Hg	-0.3	kPa
Stop Time	1236	min	12:14	min
Stop Vacuum	-6	in Hg	-0.3	kPa
Approximate Sample Volume		mL	500	mL

Sampling Details - Shroud

Carbon / TD Tube ID	0198821505		
Start Time	1231	min	100mL
Stop Time	1236	min	
Sample Time	~~500~~ 5	min	
Approximate Sample Volume	500	mL	

Comments / Observations:	

Appendix M

Laboratory Analysis Certificates

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 373760

Client Details

Client	Douglas Partners Pty Ltd
Attention	Setareh Pourkazemi
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01**
Number of Samples	1 Air
Date samples received	21/02/2002
Date completed instructions received	21/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	07/03/2025
Date of Issue	04/03/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor

Authorised By
Nancy Zhang, Laboratory Manager

TO15 in Canisters/Bags		
Our Reference		373760-1
Your Reference	UNITS	Sub-AB01
Date Sampled		20/02/2025
Type of sample		Air
Air Kit Security No.		10642
Vacuum before Shipment	Hg"	-30
Vacuum before Analysis	Hg"	-20
Date prepared	-	26/02/2025
Date analysed	-	28/02/2025
Propylene	ppbv	<1
Dichlorodifluoromethane	ppbv	<1
Chloromethane	ppbv	<1
1,2-Dichlorotetrafluoroethane	ppbv	<1
Vinyl chloride	ppbv	<1
1,3-Butadiene	ppbv	<1
Bromomethane	ppbv	<1
Chloroethane	ppbv	<1
Ethanol	ppbv	10
Acrolein	ppbv	<10
Trichlorofluoromethane (Freon 11)	ppbv	<1
Acetone	ppbv	<10
Isopropyl Alcohol	ppbv	20
1,1-Dichloroethene	ppbv	<1
1,1,2-Trichlorotrifluoroethane	ppbv	<1
Methylene chloride (Dichloromethane)	ppbv	<10
Carbon Disulfide	ppbv	<10
trans-1,2-dichloroethene	ppbv	<1
MTBE	ppbv	<1
1,1- Dichloroethane	ppbv	<1
Vinyl Acetate	ppbv	<1
MEK	ppbv	<10
Hexane	ppbv	<1
cis-1,2-Dichloroethene	ppbv	<1
Ethyl Acetate	ppbv	<1
Chloroform	ppbv	<1
Tetrahydrofuran	ppbv	<1
1,1,1-Trichloroethane	ppbv	<1
1,2-Dichloroethane	ppbv	<1
Benzene	ppbv	<1
Carbon tetrachloride	ppbv	<1

TO15 in Canisters/Bags		
Our Reference		373760-1
Your Reference	UNITS	Sub-AB01
Date Sampled		20/02/2025
Type of sample		Air
Air Kit Security No.		10642
Cyclohexane	ppbv	<1
Heptane	ppbv	<1
Trichloroethene	ppbv	<1
1,2-Dichloropropane	ppbv	<1
1,4-Dioxane	ppbv	<1
Bromodichloromethane	ppbv	<1
Methyl Methacrylate	ppbv	<1
MIBK	ppbv	<10
cis-1,3-Dichloropropene	ppbv	<1
trans-1,3-Dichloropropene	ppbv	<1
Toluene	ppbv	<1
1,1,2-Trichloroethane	ppbv	<1
Methyl Butyl Ketone	ppbv	<1
Dibromochloromethane	ppbv	<1
Tetrachloroethene	ppbv	<1
1,2-Dibromoethane	ppbv	<1
Chlorobenzene	ppbv	<1
Ethylbenzene	ppbv	<1
m-& p-Xylene	ppbv	<2
Styrene	ppbv	<1
o-Xylene	ppbv	<1
Bromoform	ppbv	<1
1,1,2,2-Tetrachloroethane	ppbv	<1
4-ethyl toluene	ppbv	<1
1,3,5-Trimethylbenzene	ppbv	<1
1,2,4-Trimethylbenzene	ppbv	<1
1,3-Dichlorobenzene	ppbv	<1
Benzyl chloride	ppbv	<1
1,4-Dichlorobenzene	ppbv	<1
1,2-Dichlorobenzene	ppbv	<1
1,2,4-Trichlorobenzene	ppbv	<1
Naphthalene	ppbv	<1
Hexachloro- 1,3-butadiene	ppbv	<1
Surrogate-Bromochloromethane	% rec	100
Surrogate -1,4-Difluorobenzene	% rec	101
Surrogate-Chlorobenzene-D5	% rec	99

TO15 in Canisters µg/m3		
Our Reference		373760-1
Your Reference	UNITS	Sub-AB01
Date Sampled		20/02/2025
Type of sample		Air
Air Kit Security No.		10642
Vacuum before Shipment	Hg"	-30
Vacuum before Analysis	Hg"	-20
Date prepared	-	26/02/2025
Date analysed	-	28/02/2025
Propylene	µg/m³	<2
Dichlorodifluoromethane	µg/m³	<5
Chloromethane	µg/m³	<2
1,2-Dichlorotetrafluoroethane	µg/m³	<5
Vinyl chloride	µg/m³	<3
1,3-Butadiene	µg/m³	<2
Bromomethane	µg/m³	<4
Chloroethane	µg/m³	<3
Ethanol	µg/m³	20
Acrolein	µg/m³	<20
Trichlorofluoromethane (Freon 11)	µg/m³	<6
Acetone	µg/m³	<20
Isopropyl Alcohol	µg/m³	50
1,1-Dichloroethene	µg/m³	<4
1,1,2-Trichlorotrifluoroethane	µg/m³	<8
Methylene chloride (Dichloromethane)	µg/m³	<30
Carbon Disulfide	µg/m³	<30
trans-1,2-dichloroethene	µg/m³	<4
MTBE	µg/m³	<4
1,1- Dichloroethane	µg/m³	<4
Vinyl Acetate	µg/m³	<4
MEK	µg/m³	<30
Hexane	µg/m³	<4
cis-1,2-Dichloroethene	µg/m³	<4
Ethyl Acetate	µg/m³	<4
Chloroform	µg/m³	<5
Tetrahydrofuran	µg/m³	<3
1,1,1-Trichloroethane	µg/m³	<5
1,2-Dichloroethane	µg/m³	<4
Benzene	µg/m³	<3
Carbon tetrachloride	µg/m³	<6

TO15 in Canisters µg/m3		
Our Reference		373760-1
Your Reference	UNITS	Sub-AB01
Date Sampled		20/02/2025
Type of sample		Air
Air Kit Security No.		10642
Cyclohexane	µg/m³	<3
Heptane	µg/m³	<4
Trichloroethene	µg/m³	<5
1,2-Dichloropropane	µg/m³	<5
1,4-Dioxane	µg/m³	<4
Bromodichloromethane	µg/m³	<7
Methyl Methacrylate	µg/m³	<4
MIBK	µg/m³	<40
cis-1,3-Dichloropropene	µg/m³	<5
trans-1,3-Dichloropropene	µg/m³	<5
Toluene	µg/m³	<4
1,1,2-Trichloroethane	µg/m³	<5
Methyl Butyl Ketone	µg/m³	<4
Dibromochloromethane	µg/m³	<3
Tetrachloroethene	µg/m³	<7
1,2-Dibromoethane	µg/m³	<8
Chlorobenzene	µg/m³	<5
Ethylbenzene	µg/m³	<4
m-& p-Xylene	µg/m³	<9
Styrene	µg/m³	<4
o-Xylene	µg/m³	<4
Bromoform	µg/m³	<10
1,1,2,2-Tetrachloroethane	µg/m³	<7
4-ethyl toluene	µg/m³	<5
1,3,5-Trimethylbenzene	µg/m³	<5
1,2,4-Trimethylbenzene	µg/m³	<5
1,3-Dichlorobenzene	µg/m³	<6
Benzyl chloride	µg/m³	<5
1,4-Dichlorobenzene	µg/m³	<6
1,2-Dichlorobenzene	µg/m³	<6
1,2,4-Trichlorobenzene	µg/m³	<7
Naphthalene	µg/m³	<5
Hexachloro- 1,3-butadiene	µg/m³	<10
Surrogate-Bromochloromethane	% rec	100
Surrogate -1,4-Difluorobenzene	% rec	101
Surrogate-Chlorobenzene-D5	% rec	99

Method ID	Methodology Summary
TO15	USEPA TO15 - Analysis of VOC's in air using USEPA TO15 and in house method AT-002. Note, longer term stability of some oxygenated compounds is questionable where significant humidity is present.
USEPA 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography using USEPA m18.

QUALITY CONTROL: TO15 in Canisters/Bags					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Vacuum before Shipment	Hg"			[NT]	1	-30	-30	0	[NT]	[NT]
Vacuum before Analysis	Hg"			[NT]	1	-20	-20	0	[NT]	[NT]
Date prepared	-			26/02/2025	1	26/02/2025	26/02/2025		26/02/2025	[NT]
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		28/02/2025	[NT]
Propylene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	106	[NT]
Dichlorodifluoromethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Chloromethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Vinyl chloride	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,3-Butadiene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Bromomethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Chloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Ethanol	ppbv	5	TO15	<5	1	10	<10	0	[NT]	[NT]
Acrolein	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Acetone	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
Isopropyl Alcohol	ppbv	5	TO15	<5	1	20	20	0	[NT]	[NT]
1,1-Dichloroethene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Methylene chloride (Dichloromethane)	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
Carbon Disulfide	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
trans-1,2-dichloroethene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
MTBE	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,1- Dichloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Vinyl Acetate	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
MEK	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
Hexane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	82	[NT]
cis-1,2-Dichloroethene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Ethyl Acetate	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Chloroform	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Tetrahydrofuran	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,1,1-Trichloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Benzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	77	[NT]
Carbon tetrachloride	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Cyclohexane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	77	[NT]
Heptane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	123	[NT]

QUALITY CONTROL: TO15 in Canisters/Bags						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Trichloroethene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,4-Dioxane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Bromodichloromethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Methyl Methacrylate	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
MIBK	ppbv	5	TO15	<5	1	<10	<10	0	[NT]	[NT]
cis-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
trans-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Toluene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	87	[NT]
1,1,2-Trichloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Methyl Butyl Ketone	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2-Dibromoethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	98	[NT]
m-& p-Xylene	ppbv	1	TO15	<1	1	<2	<2	0	106	[NT]
Styrene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	87	[NT]
o-Xylene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	100	[NT]
Bromoform	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
4-ethyl toluene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	99	[NT]
1,3,5-Trimethylbenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	100	[NT]
1,2,4-Trimethylbenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	95	[NT]
1,3-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Benzyl chloride	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Naphthalene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Hexachloro- 1,3-butadiene	ppbv	0.5	TO15	<0.5	1	<1	<1	0	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	99	1	100	101	1	107	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	97	1	101	102	1	105	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	97	1	99	100	1	105	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Vacuum before Shipment	Hg"			[NT]	1	-30	-30	0	[NT]	[NT]
Vacuum before Analysis	Hg"			[NT]	1	-20	-20	0	[NT]	[NT]
Date prepared	-			26/02/2025	1	26/02/2025	26/02/2025		[NT]	[NT]
Date analysed	-			28/02/2025	1	28/02/2025	28/02/2025		[NT]	[NT]
Propylene	µg/m³	0.9	TO15	<0.9	1	<2	<2	0	[NT]	[NT]
Dichlorodifluoromethane	µg/m³	2.5	TO15	<2.5	1	<5	<5	0	[NT]	[NT]
Chloromethane	µg/m³	1.0	TO15	<1.0	1	<2	<2	0	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	µg/m³	2.5	TO15	<2.5	1	<5	<5	0	[NT]	[NT]
Vinyl chloride	µg/m³	1.3	TO15	<1.3	1	<3	<3	0	[NT]	[NT]
1,3-Butadiene	µg/m³	1.1	TO15	<1.1	1	<2	<2	0	[NT]	[NT]
Bromomethane	µg/m³	1.9	TO15	<1.9	1	<4	<4	0	[NT]	[NT]
Chloroethane	µg/m³	1.3	TO15	<1.3	1	<3	<3	0	[NT]	[NT]
Ethanol	µg/m³	9	TO15	<9	1	20	20	0	[NT]	[NT]
Acrolein	µg/m³	11	TO15	<11	1	<20	<20	0	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	µg/m³	2.8	TO15	<2.8	1	<6	<6	0	[NT]	[NT]
Acetone	µg/m³	11.9	TO15	<11.9	1	<20	<20	0	[NT]	[NT]
Isopropyl Alcohol	µg/m³	12	TO15	<12	1	50	40	22	[NT]	[NT]
1,1-Dichloroethene	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	µg/m³	3.8	TO15	<3.8	1	<8	<8	0	[NT]	[NT]
Methylene chloride (Dichloromethane)	µg/m³	17	USEPA 18	<17	1	<30	<30	0	[NT]	[NT]
Carbon Disulfide	µg/m³	16	TO15	<16	1	<30	<30	0	[NT]	[NT]
trans-1,2-dichloroethene	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
MTBE	µg/m³	1.8	TO15	<1.8	1	<4	<4	0	[NT]	[NT]
1,1- Dichloroethane	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
Vinyl Acetate	µg/m³	1.8	TO15	<1.8	1	<4	<4	0	[NT]	[NT]
MEK	µg/m³	15	TO15	<15	1	<30	<30	0	[NT]	[NT]
Hexane	µg/m³	1.8	TO15	<1.8	1	<4	<4	0	[NT]	[NT]
cis-1,2-Dichloroethene	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
Ethyl Acetate	µg/m³	1.8	TO15	<1.8	1	<4	<4	0	[NT]	[NT]
Chloroform	µg/m³	2.4	TO15	<2.4	1	<5	<5	0	[NT]	[NT]
Tetrahydrofuran	µg/m³	1.5	TO15	<1.5	1	<3	<3	0	[NT]	[NT]
1,1,1-Trichloroethane	µg/m³	2.7	TO15	<2.7	1	<5	<5	0	[NT]	[NT]
1,2-Dichloroethane	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
Benzene	µg/m³	1.6	TO15	<1.6	1	<3	<3	0	[NT]	[NT]
Carbon tetrachloride	µg/m³	3.1	TO15	<3.1	1	<6	<6	0	[NT]	[NT]
Cyclohexane	µg/m³	1.7	TO15	<1.7	1	<3	<3	0	[NT]	[NT]
Heptane	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Trichloroethene	µg/m³	2.7	TO15	<2.7	1	<5	<5	0	[NT]	[NT]
1,2-Dichloropropane	µg/m³	2.3	TO15	<2.3	1	<5	<5	0	[NT]	[NT]
1,4-Dioxane	µg/m³	1.8	TO15	<1.8	1	<4	<4	0	[NT]	[NT]
Bromodichloromethane	µg/m³	3.4	TO15	<3.4	1	<7	<7	0	[NT]	[NT]
Methyl Methacrylate	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
MIBK	µg/m³	20	TO15	<20	1	<40	<40	0	[NT]	[NT]
cis-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	1	<5	<5	0	[NT]	[NT]
trans-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	1	<5	<5	0	[NT]	[NT]
Toluene	µg/m³	1.9	TO15	<1.9	1	<4	<4	0	[NT]	[NT]
1,1,2-Trichloroethane	µg/m³	2.7	TO15	<2.7	1	<5	<5	0	[NT]	[NT]
Methyl Butyl Ketone	µg/m³	2.0	TO15	<2.0	1	<4	<4	0	[NT]	[NT]
Dibromochloromethane	µg/m³	1.6	TO15	<1.6	1	<3	<3	0	[NT]	[NT]
Tetrachloroethene	µg/m³	3.4	TO15	<3.4	1	<7	<7	0	[NT]	[NT]
1,2-Dibromoethane	µg/m³	3.8	TO15	<3.8	1	<8	<8	0	[NT]	[NT]
Chlorobenzene	µg/m³	2.3	TO15	<2.3	1	<5	<5	0	[NT]	[NT]
Ethylbenzene	µg/m³	2.2	TO15	<2.2	1	<4	<4	0	[NT]	[NT]
m-& p-Xylene	µg/m³	4.3	TO15	<4.3	1	<9	<9	0	[NT]	[NT]
Styrene	µg/m³	2.1	TO15	<2.1	1	<4	<4	0	[NT]	[NT]
o-Xylene	µg/m³	2.2	TO15	<2.2	1	<4	<4	0	[NT]	[NT]
Bromoform	µg/m³	5.2	TO15	<5.2	1	<10	<10	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	µg/m³	3.4	TO15	<3.4	1	<7	<7	0	[NT]	[NT]
4-ethyl toluene	µg/m³	2.5	TO15	<2.5	1	<5	<5	0	[NT]	[NT]
1,3,5-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	1	<5	<5	0	[NT]	[NT]
1,2,4-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	1	<5	<5	0	[NT]	[NT]
1,3-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<6	<6	0	[NT]	[NT]
Benzyl chloride	µg/m³	2.6	TO15	<2.6	1	<5	<5	0	[NT]	[NT]
1,4-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<6	<6	0	[NT]	[NT]
1,2-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<6	<6	0	[NT]	[NT]
1,2,4-Trichlorobenzene	µg/m³	3.7	TO15	<3.7	1	<7	<7	0	[NT]	[NT]
Naphthalene	µg/m³	2.6	TO15	<2.6	1	<5	<5	0	[NT]	[NT]
Hexachloro- 1,3-butadiene	µg/m³	5.3	TO15	<5.3	1	<10	<10	0	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	99	1	100	101	1	[NT]	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	97	1	101	102	1	[NT]	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	97	1	99	100	1	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PQL has been raised due to the small volume of sample supplied.

CHAIN OF CUSTODY - CANISTERS / BAGS / TD TUBES

[Copyright and Confidential]

See reverse side for TERMS AND CONDITIONS FOR PROVISION OF SAMPLING EQUIPMENT

ENVIROLAB GROUP

National phone number 1300 424 344

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
P 02 9910 6200 | E sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt, Myaree, WA 6154
P 08 9317 2505 | E lab@mpl.com.au

Melbourne Lab - Envirolab Services
25 Research Drive, Croydon South, VIC 3136
P 03 9763 2500 | E melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
P 08 7067 6800 | E adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
P 07 3266 9532 | E brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 20/119 Reichardt Road, Winnellie, NT 0820

Client: Douglas Partners Pty Ltd	Client Project Name / Number / Site etc. (i.e. report title): 231957.01
Contact Person: Neilee Edwards / Setareh Pourkazemi	
Project Mgr: Neilee Edwards	PO No.:
Sampler: Huy Tran	Envirolab Quote No. :
Address:	Date results required:
	Or choose: standard / same day / 1 day / 2 day / 3 day
	Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Phone: Mob:	Additional report format: esdat / equis /
Email: Neilee.Edwards@douglaspartners.com.au; Setareh.Pourkazemi@douglaspartners.com.au	Lab Comments:

Sample Information											Tests Required								Comments
Envirolab Sample ID	Client Sample ID (Field Location)	Canister / TD Tube #	Soil Gas Train / Mass Flow Controller #	Leak Test Passed (Y/N)	PID Reading (ppmv)	Date of Collection	Collection Time: Time On	Collection Time: Time Off	Canister Vacuum (Hg"): Initial	Canister Vacuum (Hg"): Final	Flow Rate (Bags/TD Tubes only)	TO-15 (Cans/Bags) / TO-17 (Tubes)	TPH	5 Sulphides (Cans/Bags only)	Ozone Precursors	General Gases* (Cans/Bags only)	RGA Full List (Cans/Bags only)			
1	Sub-AB01	10642	1825	Y	N/A	20.2.25	~~13.00~~ 13.30	1410	-30	-22		✓								

* General Gases - Please tick one:

- ☐ 1) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Nitrogen
- ☐ 2) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Helium, Hydrogen
- ☐ 3) Specify analytes (NB: If both Nitrogen and Helium/Hydrogen are require, please contact the laboratory

Relinquished by (Company): Douglas Partners	Received by (Company): ELS	Lab Use Only:
Print Name: Huy Tran	Print Name: Amanda C	Job Number: 373760
Date & Time: 20.2.25	Date & Time: 21/2/25 17:00	Security seal: Intact / Broken / None
Signature:	Signature: AC	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD

TERMS AND CONDITIONS FOR PROVISION OF SAMPLING EQUIPMENT

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Setareh Pourkazemi

Sample Login Details

Your reference	231957.01
Envirolab Reference	373760
Date Sample Received	21/02/2002
Date Instructions Received	21/02/2025
Date Results Expected to be Reported	28/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Air
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	n/a
Cooling Method	Not applicable
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	TO15 in Canisters/Bags	TO15 in Canisters µg/m3
Sub-AB01	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info
Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 376087

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01 Ultimo**
Number of Samples	1 Soil
Date samples received	20/03/2025
Date completed instructions received	20/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	21/03/2025
Date of Issue	21/03/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Loren Bardwell, Development Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil		
Our Reference		376087-1
Your Reference	UNITS	Bh103
Depth		1.3-1.5
Date Sampled		14/02/2025
Type of sample		Soil
Date prepared	-	20/03/2025
Date analysed	-	20/03/2025
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	7
Copper	mg/kg	14
Lead	mg/kg	51
Mercury	mg/kg	0.1
Nickel	mg/kg	2
Zinc	mg/kg	37

Moisture		
Our Reference		376087-1
Your Reference	UNITS	Bh103
Depth		1.3-1.5
Date Sampled		14/02/2025
Type of sample		Soil
Date prepared	-	20/03/2025
Date analysed	-	21/03/2025
Moisture	%	9.7

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	[NT]
Date prepared	-			20/03/2025	[NT]	[NT]	[NT]	[NT]	20/03/2025	[NT]
Date analysed	-			20/03/2025	[NT]	[NT]	[NT]	[NT]	20/03/2025	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	116	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
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Quality Control Definitions

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Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

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When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231957.01	**Suburb:**	Ultimo	**To:**	Envirolab Services
Project Manager:	Nerilee Edwards	**Order Number:**		**Sampler:** SP	12 Ashley St, Chatswood NSW 2067
Email:	Nerilee.Edwards@douglaspartners.com.au - setareh.pourkazemi@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☑ Fridge ☐ Freezer ☐ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☑ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: 8 Metals	Comobo3A	Comobo3	PFAS (short suite)	PH/CEC	BTEX/TRH	Asbestos Material				Notes/ Preservation/ Additional Requirements
1	BH103	1.3	1.5	14.02.2025	S	G	x										
260																	

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Lab No: 376087
Date Received: 20/3/25
Time Received: 1440
Received By: ON
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**
Send results to:		**Received by:** O.WILCOX
Address:	**Phone:** (02) 9809 0666	**Date & Time** 20/3/25 1440
Relinquished by:	**Date:** **Signed:**	**Signed:** ON

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards

Sample Login Details

Your reference	231957.01 Ultimo
Envirolab Reference	376087
Date Sample Received	20/03/2025
Date Instructions Received	20/03/2025
Date Results Expected to be Reported	21/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	Acid Extractable metalsin soil
Bh103-1.3-1.5	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info
Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SH

Proje 231957.01	**Suburb:** Ultimo		**To:** Lab nameEurofins
Project Manager: Nerilee Edwards	**Order Number:**	**Sampler:** Chosum	Lab address179 Magowar Road, NSW 2145 Girrawe
Email: Nerilee.Edwards@douglaspartners.com.au setareh.pourkazemi@douglaspartners.co			**Attn:** Name
Turnaround time: ☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day			Lab phone Lab emailEnviroSales@eurof
Prior Storage: ☐ Fridge ☐ Freezer ☐ Esky ☐ Shelf	**Do samples contain 'potential' HBM?** ☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: 8 Metals											Notes/ Preservation/ Additio Requirements
	BD3/20250214	-	-	14.02.2025	S	G	x											
763																		

Metals to analyse:

Number of samples in container: | **Transported to laboratory by:**

Send results to: Douglas Partners Pty Ltd

Address: | **Phone:**

Relinquished by: | **Date:** | **Signed:**

LAB RECEIPT

Lab Ref. No:

Received by: Bitamat / Smaqd

Date & Tim 2013 4:10 pm

Signed:

15°

chill

1200313

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Douglas Partners (Syd)
Contact name:	Nerilee Edwards
Project name:	ULTIMO
Project ID:	231957.01
Turnaround time:	1 Day
Date/Time received	Mar 20, 2025 4:10 PM
Eurofins reference	1200313

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Adam Bateup on phone : or by email: Adam.Bateup@eurofinsanz.com

Results will be delivered electronically via email to Nerilee Edwards - nerilee.edwards@douglaspartners.com.au.

Note: A copy of these results will also be delivered to the general Douglas Partners (Syd) email address.

Global Leader - Results you can trust

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd
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Perth
46-48 Banksia Road
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WA 6106
+61 8 6253 4444
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Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Douglas Partners (Syd)
Address: 96 Hermitage Road
West Ryde
NSW 2114

Project Name: ULTIMO
Project ID: 231957.01

Order No.:
Report #: 1200313
Phone: 02 9809 0666
Fax:

Received: Mar 20, 2025 4:10 PM
Due: Mar 21, 2025
Priority: 1 Day
Contact Name: Nerilee Edwards

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Metals M8	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	BD3/20250214	Mar 14, 2025		Soil	S25-Ma0048640	X	X
Test Counts						1	1

Douglas Partners (Syd)
96 Hermitage Road
West Ryde
NSW 2114

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Nerilee Edwards**

Report **1200313-S**
Project name ULTIMO
Project ID 231957.01
Received Date Mar 20, 2025

Client Sample ID			**BD3/20250214**
Sample Matrix			**Soil**
Eurofins Sample No.			**S25-Ma0048640**
Date Sampled			**Mar 14, 2025**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	2	mg/kg	2.8
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	7.3
Copper	5	mg/kg	16
Lead	5	mg/kg	39
Mercury	0.1	mg/kg	0.2
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	40
Sample Properties			
% Moisture	1	%	7.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	Mar 21, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Mar 21, 2025	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Company Name: Douglas Partners (Syd)
Address: 96 Hermitage Road
West Ryde
NSW 2114

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	BD3/20250214	Mar 14, 2025		Soil	S25-Ma0048640	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	89			80-120	Pass	
Cadmium	%	88			80-120	Pass	
Chromium	%	93			80-120	Pass	
Copper	%	90			80-120	Pass	
Lead	%	91			80-120	Pass	
Mercury	%	91			80-120	Pass	
Nickel	%	91			80-120	Pass	
Zinc	%	93			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S25-Ma0038187	NCP	%	94			75-125	Pass	
Cadmium	S25-Ma0038187	NCP	%	95			75-125	Pass	
Chromium	S25-Ma0038187	NCP	%	93			75-125	Pass	
Copper	S25-Ma0038187	NCP	%	107			75-125	Pass	
Lead	S25-Ma0038187	NCP	%	110			75-125	Pass	
Mercury	S25-Ma0038187	NCP	%	90			75-125	Pass	
Nickel	S25-Ma0038187	NCP	%	90			75-125	Pass	
Zinc	W25-Ma0041994	NCP	%	100			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S25-Ma0035046	NCP	mg/kg	13	10	20	30%	Pass	
Cadmium	S25-Ma0035046	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S25-Ma0035046	NCP	mg/kg	25	23	9.0	30%	Pass	
Copper	S25-Ma0035046	NCP	mg/kg	34	35	4.0	30%	Pass	
Lead	S25-Ma0035046	NCP	mg/kg	25	23	10	30%	Pass	
Mercury	S25-Ma0035046	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S25-Ma0035046	NCP	mg/kg	17	17	1.0	30%	Pass	
Zinc	S25-Ma0035046	NCP	mg/kg	64	66	3.0	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S25-Ma0048644	NCP	%	4.2	3.6	16	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised by:

Nileshni Goundar	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Ryan Phillips	Senior Analyst-Sample Properties

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CERTIFICATE OF ANALYSIS 371281

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01 Ultimo**
Number of Samples	34 Soil, 1 Water
Date samples received	24/01/2025
Date completed instructions received	24/01/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	03/02/2025
Date of Issue	03/02/2025

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Amanda Lee
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Liam Timmins, Organics Supervisor
Lucy Zhu, Asbestos Supervisor
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371281-1	371281-3	371281-6	371281-7	371281-9
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.3	0.9-1.1	0.35-0.55	0.8-1	0.1-0.3
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	92	97	84	88

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371281-10	371281-12	371281-13	371281-14	371281-16
Your Reference	UNITS	BH104	BH104A	BH104A	BH105	BH105A
Depth		0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35	0.12-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	99	94	84	90	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371281-17	371281-18	371281-19	371281-22	371281-24
Your Reference	UNITS	BH105A	BH105A	BH106	BH106	BH107
Depth		0.9-1.1	1.3-1.5	0.08-0.2	1.2-1.4	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	93	83	96	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371281-25	371281-27	371281-29	371281-30	371281-32
Your Reference	UNITS	BH107	BH107	BH110	BH110	BD2/20250121
Depth		1-1.2	2.1-2.3	0.5-0.8	1.2-1.4	-
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	88	90	94	95

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		371281-33	371281-34
Your Reference	UNITS	TS	TB
Depth		-	-
Date Sampled		21/01/25	21/01/25
Type of sample		Soil	Soil
Date extracted	-	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	96%	<0.2
Toluene	mg/kg	89%	<0.5
Ethylbenzene	mg/kg	100%	<1
m+p-xylene	mg/kg	95%	<2
o-Xylene	mg/kg	94%	<1
Naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	105	87

svTRH (C10-C40) in Soil						
Our Reference		371281-1	371281-3	371281-6	371281-7	371281-9
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.3	0.9-1.1	0.35-0.55	0.8-1	0.1-0.3
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	130	190	190	<100	<100
TRH C_{29} - C_{36}	mg/kg	120	210	170	<100	140
Total +ve TRH (C10-C36)	mg/kg	250	410	360	<50	140
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	220	330	320	<100	200
TRH >C_{34} -C_{40}	mg/kg	<100	280	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	220	610	320	<50	200
Surrogate o-Terphenyl	%	118	116	112	104	98

svTRH (C10-C40) in Soil						
Our Reference		371281-10	371281-12	371281-13	371281-14	371281-16
Your Reference	UNITS	BH104	BH104A	BH104A	BH105	BH105A
Depth		0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35	0.12-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	380	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	230	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	610	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	540	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	110	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	650	<50
Surrogate o-Terphenyl	%	90	102	101	133	100

svTRH (C10-C40) in Soil						
Our Reference		371281-17	371281-18	371281-19	371281-22	371281-24
Your Reference	UNITS	BH105A	BH105A	BH106	BH106	BH107
Depth		0.9-1.1	1.3-1.5	0.08-0.2	1.2-1.4	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	105	102	101	104	99

svTRH (C10-C40) in Soil						
Our Reference		371281-25	371281-27	371281-29	371281-30	371281-32
Your Reference	UNITS	BH107	BH107	BH110	BH110	BD2/20250121
Depth		1-1.2	2.1-2.3	0.5-0.8	1.2-1.4	-
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	98	99	97	89	99

PAHs in Soil						
Our Reference		371281-1	371281-3	371281-6	371281-7	371281-9
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.3	0.9-1.1	0.35-0.55	0.8-1	0.1-0.3
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	31/01/2025	30/01/2025	31/01/2025	30/01/2025
Naphthalene	mg/kg	0.1	0.2	0.2	<0.1	0.1
Acenaphthylene	mg/kg	0.5	0.4	0.7	<0.1	0.2
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Fluorene	mg/kg	0.1	0.1	0.1	<0.1	0.1
Phenanthrene	mg/kg	3.2	1.2	1.7	<0.1	1.5
Anthracene	mg/kg	0.7	0.4	0.6	<0.1	0.5
Fluoranthene	mg/kg	6.0	5.4	17	<0.1	4.2
Pyrene	mg/kg	5.8	4.8	16	<0.1	4.6
Benzo(a)anthracene	mg/kg	2.7	3.4	7.8	<0.1	2.4
Chrysene	mg/kg	2.6	2.6	4.8	<0.1	2.3
Benzo(b,j+k)fluoranthene	mg/kg	5.2	5.2	7.8	<0.2	5.9
Benzo(a)pyrene	mg/kg	3.7	3.6	5.0	<0.05	4.2
Indeno(1,2,3-c,d)pyrene	mg/kg	2.6	1.4	3.7	<0.1	3.1
Dibenzo(a,h)anthracene	mg/kg	0.6	0.4	1	<0.1	0.8
Benzo(g,h,i)perylene	mg/kg	2.0	1.7	2.8	<0.1	2.7
Total +ve PAH's	mg/kg	36	31	70	<0.05	33
Benzo(a)pyrene TEQ calc (zero)	mg/kg	5.4	5.0	8.0	<0.5	6.2
Benzo(a)pyrene TEQ calc(half)	mg/kg	5.4	5.0	8.0	<0.5	6.2
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	5.4	5.0	8.0	<0.5	6.2
Surrogate p-Terphenyl-d14	%	106	109	109	125	104

PAHs in Soil						
Our Reference		371281-10	371281-12	371281-13	371281-14	371281-16
Your Reference	UNITS	BH104	BH104A	BH104A	BH105	BH105A
Depth		0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35	0.12-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	31/01/2025	31/01/2025	30/01/2025	30/01/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	2.2	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.9	<0.1
Phenanthrene	mg/kg	<0.1	0.9	0.6	17	0.1
Anthracene	mg/kg	<0.1	0.2	0.1	3.6	<0.1
Fluoranthene	mg/kg	0.1	1.6	1.0	30	0.2
Pyrene	mg/kg	0.2	1.7	1.0	26	0.3
Benzo(a)anthracene	mg/kg	0.1	0.8	0.5	10	0.2
Chrysene	mg/kg	0.1	0.9	0.5	8.9	0.2
Benzo(b,j+k)fluoranthene	mg/kg	0.3	1	0.9	12	0.3
Benzo(a)pyrene	mg/kg	0.3	1.1	0.59	8.1	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	0.4	0.3	5.2	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.1	<0.1	3.4	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	0.9	0.4	4.3	0.2
Total +ve PAH's	mg/kg	1.6	10	5.9	130	2.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	1.5	0.8	14	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	1.5	0.8	14	0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.5	1.5	0.9	14	0.6
Surrogate p-Terphenyl-d14	%	106	115	113	103	106

PAHs in Soil						
Our Reference		371281-17	371281-18	371281-19	371281-22	371281-24
Your Reference	UNITS	BH105A	BH105A	BH106	BH106	BH107
Depth		0.9-1.1	1.3-1.5	0.08-0.2	1.2-1.4	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	31/01/2025	31/01/2025	30/01/2025	31/01/2025	30/01/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.2	<0.1	0.2
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	1.6	<0.1	1.1
Anthracene	mg/kg	<0.1	<0.1	0.5	<0.1	0.3
Fluoranthene	mg/kg	<0.1	<0.1	3.7	<0.1	2.2
Pyrene	mg/kg	<0.1	<0.1	3.4	<0.1	2.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	1.9	<0.1	1.1
Chrysene	mg/kg	<0.1	<0.1	1.5	<0.1	1.0
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	3.4	<0.2	2.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	2.7	<0.05	2.0
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	1.8	<0.1	1.4
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.4	<0.1	0.2
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	1.3	<0.1	1
Total +ve PAH's	mg/kg	<0.05	<0.05	22	<0.05	15
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	3.8	<0.5	2.7
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	3.8	<0.5	2.7
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	3.8	<0.5	2.7
Surrogate p-Terphenyl-d14	%	125	124	105	120	99

PAHs in Soil						
Our Reference		371281-25	371281-27	371281-29	371281-30	371281-32
Your Reference	UNITS	BH107	BH107	BH110	BH110	BD2/20250121
Depth		1-1.2	2.1-2.3	0.5-0.8	1.2-1.4	-
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	31/01/2025	31/01/2025	30/01/2025	31/01/2025	31/01/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1	<0.1	<0.1	0.6
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Fluoranthene	mg/kg	0.5	<0.1	0.3	<0.1	1.2
Pyrene	mg/kg	0.5	<0.1	0.3	<0.1	1.2
Benzo(a)anthracene	mg/kg	0.2	<0.1	0.2	<0.1	0.7
Chrysene	mg/kg	0.3	<0.1	0.2	0.1	0.7
Benzo(b,j+k)fluoranthene	mg/kg	0.5	<0.2	0.4	<0.2	1
Benzo(a)pyrene	mg/kg	0.3	<0.05	0.4	0.1	0.91
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	0.4
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.2	<0.1	0.6
Total +ve PAH's	mg/kg	3.0	<0.05	2.1	0.2	7.9
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	0.5	<0.5	1.3
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	0.6	<0.5	1.3
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	0.6	<0.5	1.3
Surrogate p-Terphenyl-d14	%	121	123	105	120	115

Organochlorine Pesticides in soil						
Our Reference		371281-1	371281-6	371281-9	371281-10	371281-14
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0.1-0.3	0.35-0.55	0.1-0.3	0.3-0.5	0.25-0.35
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025	30/01/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	117	116	110	116	111

Organochlorine Pesticides in soil					
Our Reference		371281-16	371281-19	371281-24	371281-29
Your Reference	UNITS	BH105A	BH106	BH107	BH110
Depth		0.12-0.2	0.08-0.2	0.5-0.7	0.5-0.8
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	114	115	108	116

Organophosphorus Pesticides in Soil						
Our Reference		371281-1	371281-6	371281-9	371281-10	371281-14
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0.1-0.3	0.35-0.55	0.1-0.3	0.3-0.5	0.25-0.35
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025	30/01/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	117	116	110	116	111

Organophosphorus Pesticides in Soil					
Our Reference		371281-16	371281-19	371281-24	371281-29
Your Reference	UNITS	BH105A	BH106	BH107	BH110
Depth		0.12-0.2	0.08-0.2	0.5-0.7	0.5-0.8
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	114	115	108	116

PCBs in Soil						
Our Reference		371281-1	371281-6	371281-9	371281-10	371281-14
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0.1-0.3	0.35-0.55	0.1-0.3	0.3-0.5	0.25-0.35
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025	30/01/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	103	103	99	101	101

PCBs in Soil					
Our Reference		371281-16	371281-19	371281-24	371281-29
Your Reference	UNITS	BH105A	BH106	BH107	BH110
Depth		0.12-0.2	0.08-0.2	0.5-0.7	0.5-0.8
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	30/01/2025	30/01/2025	30/01/2025	30/01/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	101	100	95	103

Misc Soil - Inorg						
Our Reference		371281-1	371281-6	371281-9	371281-10	371281-14
Your Reference	UNITS	BH101	BH102	BH103	BH104	BH105
Depth		0.1-0.3	0.35-0.55	0.1-0.3	0.3-0.5	0.25-0.35
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg					
Our Reference		371281-16	371281-19	371281-24	371281-29
Your Reference	UNITS	BH105A	BH106	BH107	BH110
Depth		0.12-0.2	0.08-0.2	0.5-0.7	0.5-0.8
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5

Acid Extractable metals in soil						
Our Reference		371281-1	371281-3	371281-6	371281-7	371281-9
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.3	0.9-1.1	0.35-0.55	0.8-1	0.1-0.3
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Arsenic	mg/kg	12	5	9	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	7	10	9	8
Copper	mg/kg	340	28	240	7	31
Lead	mg/kg	430	110	330	21	30
Mercury	mg/kg	1.3	0.6	1	<0.1	0.1
Nickel	mg/kg	11	3	10	1	2
Zinc	mg/kg	530	510	400	93	29

Acid Extractable metals in soil						
Our Reference		371281-10	371281-12	371281-13	371281-14	371281-16
Your Reference	UNITS	BH104	BH104A	BH104A	BH105	BH105A
Depth		0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35	0.12-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Arsenic	mg/kg	7	<4	<4	19	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	5	5	15	9
Copper	mg/kg	7	21	23	350	33
Lead	mg/kg	21	47	60	330	120
Mercury	mg/kg	<0.1	0.3	2.5	0.9	0.5
Nickel	mg/kg	1	3	4	15	3
Zinc	mg/kg	6	41	65	500	24

Acid Extractable metals in soil						
Our Reference		371281-17	371281-18	371281-19	371281-22	371281-24
Your Reference	UNITS	BH105A	BH105A	BH106	BH106	BH107
Depth		0.9-1.1	1.3-1.5	0.08-0.2	1.2-1.4	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Arsenic	mg/kg	<4	4	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	17	7	12	8
Copper	mg/kg	5	3	440	<1	72
Lead	mg/kg	13	12	550	4	220
Mercury	mg/kg	0.1	0.1	0.7	<0.1	0.7
Nickel	mg/kg	1	1	5	1	5
Zinc	mg/kg	16	11	170	2	130

Acid Extractable metals in soil						
Our Reference		371281-25	371281-27	371281-29	371281-30	371281-32
Your Reference	UNITS	BH107	BH107	BH110	BH110	BD2/20250121
Depth		1-1.2	2.1-2.3	0.5-0.8	1.2-1.4	-
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Arsenic	mg/kg	13	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	14	6	8	9
Copper	mg/kg	330	2	33	3	35
Lead	mg/kg	380	12	69	6	470
Mercury	mg/kg	0.8	<0.1	0.3	<0.1	2.0
Nickel	mg/kg	8	2	3	2	4
Zinc	mg/kg	290	15	47	3	270

Acid Extractable metals in soil			
Our Reference		371281-36	371281-37
Your Reference	UNITS	BH101 - [TRIPLICATE]	BH107 - [TRIPLICATE]
Depth		0.1-0.3	0.5-0.7
Date Sampled		21/01/25	21/01/25
Type of sample		Soil	Soil
Date prepared	-	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025
Arsenic	mg/kg	12	7
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	21	9
Copper	mg/kg	410	94
Lead	mg/kg	460	430
Mercury	mg/kg	1	0.6
Nickel	mg/kg	16	7
Zinc	mg/kg	510	170

Moisture						
Our Reference		371281-1	371281-3	371281-5	371281-6	371281-7
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH102
Depth		0.1-0.3	0.9-1.1	0.16-0.18	0.35-0.55	0.8-1
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Moisture	%	10	15	16	15	13

Moisture						
Our Reference		371281-9	371281-10	371281-12	371281-13	371281-14
Your Reference	UNITS	BH103	BH104	BH104A	BH104A	BH105
Depth		0.1-0.3	0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Moisture	%	13	18	13	16	13

Moisture						
Our Reference		371281-16	371281-17	371281-18	371281-19	371281-22
Your Reference	UNITS	BH105A	BH105A	BH105A	BH106	BH106
Depth		0.12-0.2	0.9-1.1	1.3-1.5	0.08-0.2	1.2-1.4
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Moisture	%	14	22	19	10	12

Moisture						
Our Reference		371281-23	371281-24	371281-25	371281-27	371281-28
Your Reference	UNITS	BH107	BH107	BH107	BH107	BH110
Depth		0.1-0.3	0.5-0.7	1-1.2	2.1-2.3	0-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Moisture	%	14	19	17	13	30

Moisture				
Our Reference		371281-29	371281-30	371281-32
Your Reference	UNITS	BH110	BH110	BD2/20250121
Depth		0.5-0.8	1.2-1.4	-
Date Sampled		21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025
Moisture	%	21	14	13

Asbestos ID - soils						
Our Reference		371281-1	371281-3	371281-6	371281-7	371281-9
Your Reference	UNITS	BH101	BH101	BH102	BH102	BH103
Depth		0.1-0.3	0.9-1.1	0.35-0.55	0.8-1	0.1-0.3
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Sample mass tested	g	Approx. 75g	Approx. 75g	Approx. 105g	Approx. 85g	Approx. 110g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected Synthetic mineral fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		371281-10	371281-12	371281-13	371281-14	371281-16
Your Reference	UNITS	BH104	BH104A	BH104A	BH105	BH105A
Depth		0.3-0.5	0.4-0.6	0.9-1.1	0.25-0.35	0.12-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Sample mass tested	g	Approx. 105g	Approx. 75g	Approx. 90g	Approx. 65g	Approx. 80g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		371281-17	371281-19	371281-22	371281-24	371281-25
Your Reference	UNITS	BH105A	BH106	BH106	BH107	BH107
Depth		0.9-1.1	0.08-0.2	1.2-1.4	0.5-0.7	1-1.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Sample mass tested	g	Approx. 100g	Approx. 80g	Approx. 30g	88.72g	Approx. 105g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	YES	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		371281-29
Your Reference	UNITS	BH110
Depth		0.5-0.8
Date Sampled		21/01/25
Type of sample		Soil
Date analysed	-	03/02/2025
Sample mass tested	g	Approx. 90g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil
Trace Analysis	-	No asbestos detected

PFAS in Soils Short						
Our Reference		371281-1	371281-5	371281-12	371281-16	371281-19
Your Reference	UNITS	BH101	BH102	BH104A	BH105A	BH106
Depth		0.1-0.3	0.16-0.18	0.4-0.6	0.12-0.2	0.08-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/01/2025	28/01/2025	28/01/2025	28/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.3	0.3	0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	100	101	100	99	101
Surrogate $^{13}C_2$ *PFOA*	%	97	99	100	102	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	97	94	95	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%	101	98	97	98	94
Extracted ISTD $^{13}C_4$ *PFOS*	%	97	91	93	93	91
Extracted ISTD $^{13}C_4$ *PFOA*	%	99	93	93	94	93
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95	95	91	90	109
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	110	112	99	96	120
Total Positive PFHxS & PFOS	µg/kg	0.3	0.3	0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.3	0.4	0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	0.3	0.4	0.1	<0.1	<0.1

PFAS in Soils Short			
Our Reference		371281-23	371281-28
Your Reference	UNITS	BH107	BH110
Depth		0.1-0.3	0-0.2
Date Sampled		21/01/25	21/01/25
Type of sample		Soil	Soil
Date prepared	-	29/01/2025	28/01/2025
Date analysed	-	29/01/2025	29/01/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	0.7
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.2
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	98	101
Surrogate $^{13}C_2$ *PFOA*	%	101	104
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	91
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	89
Extracted ISTD $^{13}C_4$ *PFOS*	%	96	86
Extracted ISTD $^{13}C_4$ *PFOA*	%	93	84
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95	90
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	109	100
Total Positive PFHxS & PFOS	µg/kg	0.1	0.7
Total Positive PFOS & PFOA	µg/kg	0.1	0.9
Total Positive PFAS	µg/kg	0.1	0.9

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			29/01/2025	1	29/01/2025	29/01/2025		29/01/2025	29/01/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	91	88
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	91	88
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	89	87
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	90	90
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	92	88
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	92	87
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	97	93
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	90	1	100	91	9	94	93

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	371281-27
Date extracted	-			[NT]	12	28/01/2025	31/01/2025		28/01/2025	31/01/2025
Date analysed	-			[NT]	12	29/01/2025	03/02/2025		29/01/2025	03/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	12	<25	<25	0	89	96
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	12	<25	<25	0	89	96
Benzene	mg/kg	0.2	Org-023	[NT]	12	<0.2	<0.2	0	93	99
Toluene	mg/kg	0.5	Org-023	[NT]	12	<0.5	<0.5	0	85	101
Ethylbenzene	mg/kg	1	Org-023	[NT]	12	<1	<1	0	89	93
m+p-xylene	mg/kg	2	Org-023	[NT]	12	<2	<2	0	89	90
o-Xylene	mg/kg	1	Org-023	[NT]	12	<1	<1	0	94	99
Naphthalene	mg/kg	1	Org-023	[NT]	12	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	12	94	94	0	99	92

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		[NT]	[NT]
Date analysed	-			[NT]	24	29/01/2025	29/01/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	24	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	24	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	24	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	24	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	24	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	24	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	24	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	24	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	24	95	97	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			01/02/2025	1	01/02/2025	01/02/2025		01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	120	112
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	130	110	17	101	101
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	120	110	9	124	96
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	120	112
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	220	190	15	101	101
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	124	96
Surrogate o-Terphenyl	%		Org-020	115	1	118	109	8	99	100

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	01/02/2025	01/02/2025		01/02/2025	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	24	<50	<50	0	130	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	24	<100	<100	0	96	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	24	<100	<100	0	96	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	24	<50	<50	0	130	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	24	<100	<100	0	96	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	24	<100	<100	0	96	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	24	99	88	12	93	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			31/01/2025	1	30/01/2025	30/01/2025		30/01/2025	30/01/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	87	75
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.5	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	79
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	80	74
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	3.2	2.3	33	87	96
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.7	0.6	15	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	6.0	5.3	12	87	132
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	5.8	5.3	9	88	136
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	2.7	2.8	4	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	2.6	2.6	0	83	119
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	5.2	5.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	3.7	3.7	0	104	115
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	2.6	2.6	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.6	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	2.0	2.0	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	115	1	106	106	0	112	104

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	30/01/2025	30/01/2025		30/01/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	90	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	24	0.2	0.1	67	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	93	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	84	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	24	1.1	0.5	75	91	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	24	0.3	0.2	40	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	24	2.2	1.3	51	90	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	24	2.1	1.2	55	90	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	24	1.1	0.7	44	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	24	1.0	0.6	50	87	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	24	2.2	1	75	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	24	2.0	1.4	35	104	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	24	1.4	1	33	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	24	0.2	0.2	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	24	1	0.7	35	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	24	99	102	3	107	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			31/01/2025	1	30/01/2025	30/01/2025		30/01/2025	30/01/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	82
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	70
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	72
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	82
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	86
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	77
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	87
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	84
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	86
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	65
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	128	1	117	114	3	121	113

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	30/01/2025	30/01/2025		30/01/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	94	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	94	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	99	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	85	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	104	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	91	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	100	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	102	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	97	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	84	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	24	108	111	3	115	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			31/01/2025	1	30/01/2025	30/01/2025		30/01/2025	30/01/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	76
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	71
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	87
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	123	84
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	80
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	82
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	75
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	128	1	117	114	3	121	113

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	30/01/2025	30/01/2025		30/01/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	107	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	94	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	115	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	127	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	95	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	100	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	97	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	24	108	111	3	115	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date extracted	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			31/01/2025	1	30/01/2025	30/01/2025		30/01/2025	30/01/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	94	80
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	115	1	103	102	1	108	104

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date extracted	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	30/01/2025	30/01/2025		30/01/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	96	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	24	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	24	95	98	3	109	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	371281-1
Date prepared	-			29/01/2025	1	28/01/2025	28/01/2025		29/01/2025	29/01/2025
Date analysed	-			29/01/2025	1	29/01/2025	29/01/2025		29/01/2025	29/01/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	102	93

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	371281-16
Date prepared	-			28/01/2025	1	28/01/2025	28/01/2025		28/01/2025	28/01/2025
Date analysed	-			29/01/2025	1	29/01/2025	29/01/2025		29/01/2025	29/01/2025
Arsenic	mg/kg	4	Metals-020	<4	1	12	13	8	106	86
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	75
Chromium	mg/kg	1	Metals-020	<1	1	12	14	15	100	81
Copper	mg/kg	1	Metals-020	<1	1	340	630	60	101	87
Lead	mg/kg	1	Metals-020	<1	1	430	720	50	98	#
Mercury	mg/kg	0.1	Metals-021	<0.1	1	1.3	1.1	17	107	108
Nickel	mg/kg	1	Metals-020	<1	1	11	16	37	100	79
Zinc	mg/kg	1	Metals-020	<1	1	530	480	10	100	76

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	[NT]
Date prepared	-			[NT]	24	28/01/2025	28/01/2025		28/01/2025	[NT]
Date analysed	-			[NT]	24	29/01/2025	29/01/2025		29/01/2025	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	24	5	6	18	107	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	24	<0.4	<0.4	0	98	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	24	8	10	22	100	[NT]
Copper	mg/kg	1	Metals-020	[NT]	24	72	88	20	101	[NT]
Lead	mg/kg	1	Metals-020	[NT]	24	220	330	40	98	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	24	0.7	0.6	15	113	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	24	5	6	18	100	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	24	130	140	7	100	[NT]

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			28/01/2025	[NT]	[NT]	[NT]	[NT]	28/01/2025	[NT]
Date analysed	-			29/01/2025	[NT]	[NT]	[NT]	[NT]	29/01/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	97	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	103	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample/s 371281-24.

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 371281-1 for Cu & Pb. Therefore a triplicate result has been issued as laboratory sample number 371281-36.
- The laboratory RPD acceptance criteria has been exceeded for 371281-24 for Pb. Therefore a triplicate result has been issued as laboratory sample number 371281-37.
- # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Sample 371281-22 was sub-sampled from a jar provided by the client.
Note: Samples 371281-1, 3, 6, 7, 9, 10, 12, 13, 14, 16, 17, 19, 24, 25, 29 were sub-sampled from bags provided by the client.

Sample 371281-24; Chrysotile asbestos identified embedded in a fragment of fibre cement weighing 0.7640g, it is estimated to be 1.29g/kg in 88.72g of soil (i.e. > reporting limit for the method of 0.1g/kg).

COC: 24/1/25 1129

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231957.01	**Suburb:**	Ultimo	**To:**	Envirolab Services
Project Manager:	Nerilee Edwards	**Order Number:**		**Sampler:** SP	12 Ashley St, Chatswood NSW 2067
Email:	Nerilee.Edwards@douglaspartners.com.au - setareh.pourkazemi@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.con
Prior Storage:	☑ Fridge ☐ Freezer ☐ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☑ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8A	Combo3A	Combo3	PFAS (short suite)	PH/CEC	BTEX/TRH	Asbestos Material					Notes/ Preservation/ Additional Requirements
1	BH101	0.1	0.3	21/01/25	S	G/P	x			x								
2	BH101	0.5	0.8	21/01/25	S	G/P												on hold
3	BH101	0.9	1.1	21/01/25	S	G/P		x										
4	BH101	1.3	1.5	21/01/25	S	G/P												on hold
5	BH102	0.16	0.18	21/01/25	S	G/P				x								
6	BH102	0.35	0.55	21/01/25	S	G/P	x											
7	BH102	0.8	1	21/01/25	S	G/P		x										
8	BH102	1.1	1.2	21/01/25	S	G/P												On hold
9	BH103	0.1	0.3	21/01/25	S	G/P	x											
10	BH104	0.3	0.5	21/01/25	S	G/P	x											
11	BH104A	0.16	0.2	21/01/25	S	G												on hold
12	BH104A	0.4	0.6	21/01/25	S	G/P		x		x								
13	BH104A	0.9	1.1	21/01/25	S	G/P		x										
14	BH105	0.25	0.35	21/01/25	S	G/P	x											

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 371281
Date Received: 23/01/2025
Time Received: 1515
Received By: DN
Temp: Cool/Ambient
Cooling: Ice/Icepack 12C
Security: Intact/Broken/None

Metals to analyse:			**LAB RECEIPT**
Number of samples in container:		**Transported to laboratory by:**	**Lab Ref. No:** 371281
Send results to:	Douglas Partners Pty Ltd		**Received by:** DN
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Time** 23/01/2025 1515
Relinquished by:		**Date:** **Signed:**	**Signed:**

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Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231957.01	**Suburb:** Ultimo	**To:** Envirolab Services
Project Manager:	Nerilee Edwards		**Dispatch date:** 0/01/1900

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8A	Combo3A	Combo3	PFAS (short suite)	PH/CEC	BTEX/TRH	Asbestos Material					Notes/ Preservation/ Additional Requirements
15	BH105	0.4	0.5	21/01/25	S	G/P												on hold
16	BH105A	0.12	0.2	21/01/25	S	G/P	x			x								
17	BH105A	0.9	1.1	21/01/25	S	G/P		x										
18	BH105A	1.3	1.5	21/01/25	S	G/P			x									
19	BH106	0.08	0.2	21/01/25	S	G/P	x			x								
20	BH106	0.5	0.8	21/01/25	S	G/P												on hold
21	BH106	0.9	1.1	21/01/25	S	G/P												on hold
22	BH106	1.2	1.4	21/01/25	S	G/P		x										
23	BH107	0.1	0.3	21/01/25	S	G/P				x								
24	BH107	0.5	0.7	21/01/25	S	G/P	x											
25	BH107	1	1.2	21/01/25	S	G/P		x										
26	BH107	1.5	1.8	21/01/25	S	G/P												
27	BH107	2.1	2.3	21/01/25	S	G/P			x									
28	BH110	0	0.2	21/01/25	S	G/P				x								
29	BH110	0.5	0.8	21/01/25	S	G/P	x											
30	BH110	1.2	1.4	21/01/25	S	G/P			X									on hold
31	BD1/20250121	-	-	21/01/25	S	G/P												
32	BD2/20250121	-	-	21/01/25	S	G/P			x									

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Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 231957.01 **Suburb:** Ultimo **To:** Envirolab Services

Project Manager: Nerilee Edwards **Dispatch date:** 0/01/1900

Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo8A	Combo3A	Combo3	PFAS (short suite)	PH/CEC	BTEX/TRH	Asbestos Material					Notes/ Preservation/ Additional Requirements
33/34	TS/TB	-	-	21/01/25	S	G						x						
35 ~~36~~	Rin1	-	-	21/01/25	W	G												On Hold

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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards

Sample Login Details

Your reference	231957.01 Ultimo
Envirolab Reference	371281
Date Sample Received	24/01/2025
Date Instructions Received	24/01/2025
Date Results Expected to be Reported	03/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	34 Soil, 1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Short	On Hold
BH101-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH101-0.5-0.8											✓
BH101-0.9-1.1	✓	✓	✓					✓	✓		
BH101-1.3-1.5											✓
BH102-0.16-0.18										✓	
BH102-0.35-0.55	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH102-0.8-1	✓	✓	✓					✓	✓		
BH102-1.1-1.2											✓
BH103-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH104-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH104A-0.16-0.2											✓
BH104A-0.4-0.6	✓	✓	✓					✓	✓	✓	
BH104A-0.9-1.1	✓	✓	✓					✓	✓		
BH105-0.25-0.35	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH105-0.4-0.5											✓
BH105A-0.12-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH105A-0.9-1.1	✓	✓	✓					✓	✓		
BH105A-1.3-1.5	✓	✓	✓					✓			
BH106-0.08-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH106-0.5-0.8											✓
BH106-0.9-1.1											✓
BH106-1.2-1.4	✓	✓	✓					✓	✓		
BH107-0.1-0.3										✓	
BH107-0.5-0.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH107-1-1.2	✓	✓	✓					✓	✓		
BH107-1.5-1.8											✓
BH107-2.1-2.3	✓	✓	✓					✓			
BH110-0-0.2										✓	
BH110-0.5-0.8	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH110-1.2-1.4	✓	✓	✓					✓			
BD1/20250121											✓
BD2/20250121	✓	✓	✓					✓			

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Short	On Hold
TS	✓										
TB	✓										
Rin1											✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 371281-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01 Ultimo**
Number of Samples	Additional analysis
Date samples received	24/01/2025
Date completed instructions received	04/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	11/02/2025
Date of Issue	10/02/2025

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Results Approved By
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Sean McAlary, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid						
Our Reference		371281-A-5	371281-A-14	371281-A-19	371281-A-24	371281-A-28
Your Reference	UNITS	BH102	BH105	BH106	BH107	BH110
Depth		0.16-0.18	0.25-0.35	0.08-0.2	0.5-0.7	0-0.2
Date Sampled		21/01/25	21/01/25	21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	7.6	7.1	7.4	7.4	7.6
pH of soil TCLP (after HCl)	pH units	2.0	2.2	1.9	1.9	2.1
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.4	5.5	5.2	5.1	6.2

PAHs in TCLP (USEPA 1311)				
Our Reference		371281-A-14	371281-A-19	371281-A-24
Your Reference	UNITS	BH105	BH106	BH107
Depth		0.25-0.35	0.08-0.2	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	0.0005
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	0.0007
Surrogate p-Terphenyl-d14	%	106	106	70

Metals from Leaching Fluid pH 2.9 or 5				
Our Reference	UNITS	371281-A-14	371281-A-19	371281-A-24
Your Reference		BH105	BH106	BH107
Depth		0.25-0.35	0.08-0.2	0.5-0.7
Date Sampled		21/01/25	21/01/25	21/01/25
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	06/02/2025	06/02/2025	06/02/2025
Lead	mg/L	0.54	0.91	0.44

PFAS in TCLP Short			
Our Reference		371281-A-5	371281-A-28
Your Reference	UNITS	BH102	BH110
Depth		0.16-0.18	0-0.2
Date Sampled		21/01/25	21/01/25
Type of sample		Soil	Soil
Date prepared	-	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	94	97
Surrogate $^{13}C_2$ *PFOA*	%	107	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	108	111
Extracted ISTD $^{18}O_2$ *PFHxS*	%	94	101
Extracted ISTD $^{13}C_4$ *PFOS*	%	106	109
Extracted ISTD $^{13}C_4$ *PFOA*	%	96	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	87	86
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	92	90
Total Positive PFHxS & PFOS	µg/L	<0.01	0.01
Total Positive PFOS & PFOA	µg/L	<0.01	0.01
Total Positive PFAS	µg/L	<0.01	0.01

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	92	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	92	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	86	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	96	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	94	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	87	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	103	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: PFAS in TCLP Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	371281-A-28
Date prepared	-			07/02/2025	5	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			07/02/2025	5	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	94	96
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	97	104
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	98	106
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	101	105
6:2 FTS	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	115	107
8:2 FTS	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	109	111
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	94	5	94	107	13	92	95
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	97	5	107	97	10	97	101
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	104	5	108	108	0	105	106
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	97	5	94	107	13	100	100
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	110	5	106	100	6	109	107
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	102	5	96	103	7	100	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	85	5	87	87	0	93	99
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	86	5	92	90	2	101	100

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Anna Bui

From: Nerilee Edwards <nerilee.edwards@douglaspartners.com.au>
Sent: Tuesday, 4 February 2025 3:22 PM
To: Aileen Hie
Cc: Envirolab Sydney Sample Receipt; Setareh Pourkazemi
Subject: Further analysis 371281 231957.01 Ultimo
Attachments: 371281-COC.pdf

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Aileen,

Hope you've had a lovely Christmas.

Can you please organise the additional analysis below?

ta

ELS REF: 371281-A
TAT: STANDARD
DUE: 11/2/25
AB.

	Sample		Date	Analysis
5	BH102	0.16 - 0.18 m	21/01/25	TCLP PFAS
14	BH105	0.25 - 0.35 m	21/01/25	TCLP Pb, PAH
19	BH106	0.08 - 0.2 m	21/01/25	TCLP Pb, PAH
24	BH107	0.5 - 0.7 m	21/01/25	TCLP Pb, PAH
28	BH110	0 - 0.2 m	21/01/25	TCLP PFAS

Nerilee Edwards | Principal / Environmental Scientist

02 9809 0666 +61 414 769 011 Nerilee.Edwards@douglaspartners.com.au

www.douglaspartners.com.au 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

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From: Stuart Chen <SChen2@envirolab.com.au>
Sent: Monday, 3 February 2025 4:55 PM
To: Nerilee Edwards <nerilee.edwards@douglaspartners.com.au>; Setareh Pourkazemi <setareh.pourkazemi@douglaspartners.com.au>
Subject: Results for Registration 371281 231957.01 Ultimo [Filed 04 Feb 2025 09:02]

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards

Sample Login Details

Your reference	231957.01 Ultimo
Envirolab Reference	371281-A
Date Sample Received	24/01/2025
Date Instructions Received	04/02/2025
Date Results Expected to be Reported	11/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	TCLP Preparation - Acid	PAHs in TCLP (USEPA 1311)	Lead	PFAS in TCLP Short	On Hold
BH101-0.1-0.3					✓
BH101-0.5-0.8					✓
BH101-0.9-1.1					✓
BH101-1.3-1.5					✓
BH102-0.16-0.18	✓			✓	
BH102-0.35-0.55					✓
BH102-0.8-1					✓
BH102-1.1-1.2					✓
BH103-0.1-0.3					✓
BH104-0.3-0.5					✓
BH104A-0.16-0.2					✓
BH104A-0.4-0.6					✓
BH104A-0.9-1.1					✓
BH105-0.25-0.35	✓	✓	✓		
BH105-0.4-0.5					✓
BH105A-0.12-0.2					✓
BH105A-0.9-1.1					✓
BH105A-1.3-1.5					✓
BH106-0.08-0.2	✓	✓	✓		
BH106-0.5-0.8					✓
BH106-0.9-1.1					✓
BH106-1.2-1.4					✓
BH107-0.1-0.3					✓
BH107-0.5-0.7	✓	✓	✓		
BH107-1-1.2					✓
BH107-1.5-1.8					✓
BH107-2.1-2.3					✓
BH110-0-0.2	✓			✓	
BH110-0.5-0.8					✓
BH110-1.2-1.4					✓
BD1/20250121					✓
BD2/20250121					✓

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Sample ID	TCLP Preparation - Acid	PAHs in TCLP (USEPA 1311)	Lead	PFAS in TCLP Short	On Hold
TS					✓
TB					✓
Rin1					✓
BH101 - [TRIPLICATE]-0.1-0.3					✓
BH107 - [TRIPLICATE]-0.5-0.7					✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 373759

Client Details

Client	Douglas Partners Pty Ltd
Attention	Setareh Pourkazemi
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01**
Number of Samples	4 Air
Date samples received	21/02/2025
Date completed instructions received	21/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	07/03/2025
Date of Issue	07/03/2025

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Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Steven Luong, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

TO15 in Canisters/Bags			
Our Reference		373759-1	373759-2
Your Reference	UNITS	105A	BD 120250220
Date Sampled		20/02/2025	20/02/2025
Type of sample		Air	Air
Air Kit Security No.		3535	3541
Vacuum before Shipment	Hg"	-30	-30
Vacuum before Analysis	Hg"	-5	-7
Date prepared	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Propylene	ppbv	2	2
Dichlorodifluoromethane	ppbv	<0.5	<0.5
Chloromethane	ppbv	<0.5	<0.5
1,2-Dichlorotetrafluoroethane	ppbv	<0.5	<0.5
Vinyl chloride	ppbv	<0.5	<0.5
1,3-Butadiene	ppbv	<0.5	<0.5
Bromomethane	ppbv	<0.5	<0.5
Chloroethane	ppbv	<0.5	<0.5
Ethanol	ppbv	10	9
Acrolein	ppbv	<5	<5
Trichlorofluoromethane (Freon 11)	ppbv	0.6	0.6
Acetone	ppbv	10	20
Isopropyl Alcohol	ppbv	460	470
1,1-Dichloroethene	ppbv	<0.5	<0.5
1,1,2-Trichlorotrifluoroethane	ppbv	<0.5	<0.5
Methylene chloride (Dichloromethane)	ppbv	<5	<5
Carbon Disulfide	ppbv	<5	<5
trans-1,2-dichloroethene	ppbv	<0.5	<0.5
MTBE	ppbv	<0.5	<0.5
1,1- Dichloroethane	ppbv	<0.5	<0.5
Vinyl Acetate	ppbv	<0.5	<0.5
MEK	ppbv	<5	<5
Hexane	ppbv	4	4
cis-1,2-Dichloroethene	ppbv	<0.5	<0.5
Ethyl Acetate	ppbv	<0.5	<0.5
Chloroform	ppbv	1	1
Tetrahydrofuran	ppbv	7.9	8.3
1,1,1-Trichloroethane	ppbv	<0.5	<0.5
1,2-Dichloroethane	ppbv	<0.5	<0.5
Benzene	ppbv	1	1
Carbon tetrachloride	ppbv	<0.5	<0.5

TO15 in Canisters/Bags			
Our Reference		373759-1	373759-2
Your Reference	UNITS	105A	BD 120250220
Date Sampled		20/02/2025	20/02/2025
Type of sample		Air	Air
Air Kit Security No.		3535	3541
Cyclohexane	ppbv	<0.5	<0.5
Heptane	ppbv	<0.5	<0.5
Trichloroethene	ppbv	<0.5	<0.5
1,2-Dichloropropane	ppbv	<0.5	<0.5
1,4-Dioxane	ppbv	<0.5	<0.5
Bromodichloromethane	ppbv	<0.5	<0.5
Methyl Methacrylate	ppbv	2	2
MIBK	ppbv	<5	<5
cis-1,3-Dichloropropene	ppbv	<0.5	<0.5
trans-1,3-Dichloropropene	ppbv	<0.5	<0.5
Toluene	ppbv	11	11
1,1,2-Trichloroethane	ppbv	<0.5	<0.5
Methyl Butyl Ketone	ppbv	2	2
Dibromochloromethane	ppbv	<0.5	<0.5
Tetrachloroethene	ppbv	<0.5	<0.5
1,2-Dibromoethane	ppbv	<0.5	<0.5
Chlorobenzene	ppbv	<0.5	<0.5
Ethylbenzene	ppbv	3	3
m-& p-Xylene	ppbv	8	9
Styrene	ppbv	2	2
o-Xylene	ppbv	3	3
Bromoform	ppbv	<0.5	<0.5
1,1,2,2-Tetrachloroethane	ppbv	<0.5	<0.5
4-ethyl toluene	ppbv	<0.5	<0.5
1,3,5-Trimethylbenzene	ppbv	1	1
1,2,4-Trimethylbenzene	ppbv	1	1
1,3-Dichlorobenzene	ppbv	<0.5	<0.5
Benzyl chloride	ppbv	<0.5	<0.5
1,4-Dichlorobenzene	ppbv	<0.5	<0.5
1,2-Dichlorobenzene	ppbv	<0.5	<0.5
1,2,4-Trichlorobenzene	ppbv	<0.5	<0.5
Naphthalene	ppbv	<0.5	<0.5
Hexachloro- 1,3-butadiene	ppbv	<0.5	<0.5
Surrogate-Bromochloromethane	% rec	98	104
Surrogate -1,4-Difluorobenzene	% rec	100	102
Surrogate-Chlorobenzene-D5	% rec	99	101

TO15 in Canisters µg/m3			
Our Reference		373759-1	373759-2
Your Reference	UNITS	105A	BD 120250220
Date Sampled		20/02/2025	20/02/2025
Type of sample		Air	Air
Air Kit Security No.		3535	3541
Vacuum before Shipment	Hg"	-30	-30
Vacuum before Analysis	Hg"	-5	-7
Date prepared	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Propylene	µg/m³	4	4
Dichlorodifluoromethane	µg/m³	<2.5	<2.5
Chloromethane	µg/m³	<1	<1
1,2-Dichlorotetrafluoroethane	µg/m³	<2.5	<2.5
Vinyl chloride	µg/m³	<1.3	<1.3
1,3-Butadiene	µg/m³	<1.1	<1.1
Bromomethane	µg/m³	<1.9	<1.9
Chloroethane	µg/m³	<1.3	<1.3
Ethanol	µg/m³	20	20
Acrolein	µg/m³	<11	<11
Trichlorofluoromethane (Freon 11)	µg/m³	3	4
Acetone	µg/m³	30	40
Isopropyl Alcohol	µg/m³	1,100	1,200
1,1-Dichloroethene	µg/m³	<2	<2
1,1,2-Trichlorotrifluoroethane	µg/m³	<3.8	<3.8
Methylene chloride (Dichloromethane)	µg/m³	<17	<17
Carbon Disulfide	µg/m³	<16	<16
trans-1,2-dichloroethene	µg/m³	<2	<2
MTBE	µg/m³	<1.8	<1.8
1,1- Dichloroethane	µg/m³	<2	<2
Vinyl Acetate	µg/m³	<1.8	<1.8
MEK	µg/m³	<15	<15
Hexane	µg/m³	20	10
cis-1,2-Dichloroethene	µg/m³	<2	<2
Ethyl Acetate	µg/m³	<1.8	<1.8
Chloroform	µg/m³	5	5
Tetrahydrofuran	µg/m³	23	24
1,1,1-Trichloroethane	µg/m³	<2.7	<2.7
1,2-Dichloroethane	µg/m³	<2	<2
Benzene	µg/m³	4	4
Carbon tetrachloride	µg/m³	<3.1	<3.1

TO15 in Canisters µg/m3			
Our Reference		373759-1	373759-2
Your Reference	UNITS	105A	BD 120250220
Date Sampled		20/02/2025	20/02/2025
Type of sample		Air	Air
Air Kit Security No.		3535	3541
Cyclohexane	µg/m³	<1.7	<1.7
Heptane	µg/m³	<2	<2
Trichloroethene	µg/m³	<2.7	<2.7
1,2-Dichloropropane	µg/m³	<2.3	<2.3
1,4-Dioxane	µg/m³	<1.8	<1.8
Bromodichloromethane	µg/m³	<3.4	<3.4
Methyl Methacrylate	µg/m³	6	7
MIBK	µg/m³	<20	<20
cis-1,3-Dichloropropene	µg/m³	<2.3	<2.3
trans-1,3-Dichloropropene	µg/m³	<2.3	<2.3
Toluene	µg/m³	40	42
1,1,2-Trichloroethane	µg/m³	<2.7	<2.7
Methyl Butyl Ketone	µg/m³	8	9
Dibromochloromethane	µg/m³	<1.6	<1.6
Tetrachloroethene	µg/m³	<3.4	<3.4
1,2-Dibromoethane	µg/m³	<3.8	<3.8
Chlorobenzene	µg/m³	<2.3	<2.3
Ethylbenzene	µg/m³	10	10
m-& p-Xylene	µg/m³	40	40
Styrene	µg/m³	9	10
o-Xylene	µg/m³	10	10
Bromoform	µg/m³	<5.2	<5.2
1,1,2,2-Tetrachloroethane	µg/m³	<3.4	<3.4
4-ethyl toluene	µg/m³	<2.5	<2.5
1,3,5-Trimethylbenzene	µg/m³	5	5
1,2,4-Trimethylbenzene	µg/m³	5	5
1,3-Dichlorobenzene	µg/m³	<3	<3
Benzyl chloride	µg/m³	<2.6	<2.6
1,4-Dichlorobenzene	µg/m³	<3	<3
1,2-Dichlorobenzene	µg/m³	<3	<3
1,2,4-Trichlorobenzene	µg/m³	<3.7	<3.7
Naphthalene	µg/m³	<2.6	<2.6
Hexachloro- 1,3-butadiene	µg/m³	<5.3	<5.3
Surrogate-Bromochloromethane	% rec	98	104
Surrogate -1,4-Difluorobenzene	% rec	100	102
Surrogate-Chlorobenzene-D5	% rec	99	101

IPA in Carbon Tubes & Badges*		
Our Reference		373759-4
Your Reference	UNITS	Shroud
Date Sampled		20/02/2025
Type of sample		Air
Air Kit Security No.		0198821505
Date Extracted	-	05/03/2025
Date Analysed	-	06/03/2025
Tube Sampling rate	mL/min	100
Sampling Time	mins	5
Volume sampled	m^3	0.00050
Isopropyl Alcohol*	µg	650
Isopropyl Alcohol*	$µg/m^3$	1,300,000
Surrogate Toluene-d8	%	81
Surrogate 4-Bromofluorobenzene	%	84

Method ID	Methodology Summary
ORG-022	Determination of volatile organic compounds in charcoal tubes/badges/sorbents using CS2 extraction, determined by GC/GC-MS. Desorption efficiencies are not applied to results. Note where µg/m3 or mg/m3 results are supplied for SKC badges, the factors used are for 575-002, if 575-002 data is unavailable for an analyte then use 575-001 then 575-003 (exposure time must be supplied). Otherwise a sampling rate may be used for a similar analyte on request. Analytes such as (where applicable) Iodomethane, Chloroprene, Nitrobenzene, Naphthalene and 1, 2, 3 / 1, 2, 4 Trichlorobenzenes are considered to be semi-quant analyses using CS2 desorption from charcoal tubes. The latter three compounds are better served by XAD-2 collection and analysis. Note - air volume measurements are not covered by Envirolab's NATA accreditation.
TO15	USEPA TO15 - Analysis of VOC's in air using USEPA TO15 and in house method AT-002. Note, longer term stability of some oxygenated compounds is questionable where significant humidity is present.
USEPA 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography using USEPA m18.

QUALITY CONTROL: TO15 in Canisters/Bags					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Propylene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Dichlorodifluoromethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl chloride	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-Butadiene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethanol	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acrolein	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acetone	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropyl Alcohol	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methylene chloride (Dichloromethane)	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon Disulfide	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MTBE	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1- Dichloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Acetate	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MEK	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	82	[NT]
cis-1,2-Dichloroethene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethyl Acetate	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrahydrofuran	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,1-Trichloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]
Carbon tetrachloride	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]
Heptane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	123	[NT]
Trichloroethene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichloropropane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: TO15 in Canisters/Bags					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
1,4-Dioxane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromodichloromethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Methacrylate	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MIBK	ppbv	5	TO15	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	87	[NT]
1,1,2-Trichloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Butyl Ketone	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dibromoethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	98	[NT]
m-& p-Xylene	ppbv	1	TO15	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Styrene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	87	[NT]
o-Xylene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
Bromoform	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-Tetrachloroethane	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-ethyl toluene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
1,3,5-Trimethylbenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
1,2,4-Trimethylbenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
1,3-Dichlorobenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzyl chloride	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-Dichlorobenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichlorobenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-Trichlorobenzene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Naphthalene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachloro- 1,3-butadiene	ppbv	0.5	TO15	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	99	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	97	[NT]	[NT]	[NT]	[NT]	105	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	97	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Propylene	µg/m³	0.9	TO15	<0.9	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorodifluoromethane	µg/m³	2.5	TO15	<2.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/m³	1.0	TO15	<1.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	µg/m³	2.5	TO15	<2.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl chloride	µg/m³	1.3	TO15	<1.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-Butadiene	µg/m³	1.1	TO15	<1.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/m³	1.9	TO15	<1.9	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/m³	1.3	TO15	<1.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethanol	µg/m³	9	TO15	<9	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acrolein	µg/m³	11	TO15	<11	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	µg/m³	2.8	TO15	<2.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acetone	µg/m³	11.9	TO15	<11.9	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropyl Alcohol	µg/m³	12	TO15	<12	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	µg/m³	3.8	TO15	<3.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methylene chloride (Dichloromethane)	µg/m³	17	USEPA 18	<17	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon Disulfide	µg/m³	16	TO15	<16	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MTBE	µg/m³	1.8	TO15	<1.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1- Dichloroethane	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Acetate	µg/m³	1.8	TO15	<1.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MEK	µg/m³	15	TO15	<15	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexane	µg/m³	1.8	TO15	<1.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,2-Dichloroethene	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethyl Acetate	µg/m³	1.8	TO15	<1.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/m³	2.4	TO15	<2.4	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrahydrofuran	µg/m³	1.5	TO15	<1.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,1-Trichloroethane	µg/m³	2.7	TO15	<2.7	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichloroethane	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/m³	1.6	TO15	<1.6	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/m³	3.1	TO15	<3.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/m³	1.7	TO15	<1.7	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptane	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/m³	2.7	TO15	<2.7	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichloropropane	µg/m³	2.3	TO15	<2.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
1,4-Dioxane	µg/m³	1.8	TO15	<1.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromodichloromethane	µg/m³	3.4	TO15	<3.4	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Methacrylate	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
MIBK	µg/m³	20	TO15	<20	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/m³	1.9	TO15	<1.9	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-Trichloroethane	µg/m³	2.7	TO15	<2.7	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Butyl Ketone	µg/m³	2.0	TO15	<2.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/m³	1.6	TO15	<1.6	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/m³	3.4	TO15	<3.4	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dibromoethane	µg/m³	3.8	TO15	<3.8	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/m³	2.3	TO15	<2.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/m³	2.2	TO15	<2.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m-& p-Xylene	µg/m³	4.3	TO15	<4.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/m³	2.1	TO15	<2.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
o-Xylene	µg/m³	2.2	TO15	<2.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/m³	5.2	TO15	<5.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-Tetrachloroethane	µg/m³	3.4	TO15	<3.4	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-ethyl toluene	µg/m³	2.5	TO15	<2.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzyl chloride	µg/m³	2.6	TO15	<2.6	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-Trichlorobenzene	µg/m³	3.7	TO15	<3.7	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Naphthalene	µg/m³	2.6	TO15	<2.6	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachloro- 1,3-butadiene	µg/m³	5.3	TO15	<5.3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	99	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	97	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	97	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: IPA in Carbon Tubes & Badges*					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date Extracted	-			05/03/2025	[NT]	[NT]	[NT]	[NT]	05/03/2025	[NT]
Date Analysed	-			06/03/2025	[NT]	[NT]	[NT]	[NT]	06/03/2025	[NT]
Isopropyl Alcohol*	µg	5	ORG-022	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate Toluene-d8	%		ORG-022	101	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate 4-Bromofluorobenzene	%		ORG-022	95	[NT]	[NT]	[NT]	[NT]	86	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

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CHAIN OF CUSTODY - CANISTERS / BAGS / TD TUBES

See reverse side for TERMS AND CONDITIONS FOR PROVISION OF SAMPLING EQUIPMENT

ENVIROLAB GROUP

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Unit 20/119 Reichardt Road, Winnellie, NT 0820

Client: Douglas Partners Pty Ltd	Client Project Name / Number / Site etc. (i.e. report title): 231457.01
Contact Person: Nerilee Edwards / Setareh Pour Razemi	
Project Mgr: Nerilee Edwards	PO No.:
Sampler: Huy Tran	Envirolab Quote No.:
Address: 96 Hermitage Road, West Ryde NSW	Date results required: Or choose: standard / same day / 1 day / 2 day / 3 day. Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Phone: Mob:	Additional report format: esdat / equis /
Email: Nerilee.edwards@douglaspartners.com.au; Setareh.PourRazemi@douglaspartners.com.au; Huy.Tran@douglaspartners.com.au	Lab Comments:

Sample Information							Collection Time		Canister Vacuum ("Hg")			Tests Required								Comments
Envirolab Sample ID	Client Sample ID (Field Location)	Canister / TD Tube #	Soil Gas Train / Mass Flow Controller #	Leak Test Passed (Y/N)	PID Reading (ppmv)	Date of Collection	Time On	Time Off	Initial	Final	Flow Rate (Bags/TD Tubes only)	TO-15 (Cans/Bags) / TO-17 (Tubes)	TPH	5 Sulphides (Cans/Bags only)	Ozone Precursors	General Gases* (Cans/Bags only)	RGA Full List (Cans/Bags only)	PA		
(1)	105A	3535	403	Y	0	20.2.25	1230	1236	-30	-7		✓								
(2)	BD: 120250220	3541	818	Y	0		1230	1236	-28	-8		✓								
(3)	105A - TT	09881686		Y	0		12:09	12:14			100ml/min	✓								
(4)	Shroud	0198821505		Y	34		1231	1236			100ml/min							✓		

* General Gases - Please tick one:

- ☐ 1) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Nitrogen
- ☐ 2) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Helium, Hydrogen
- ☐ 3) Specify analytes (NB: If both Nitrogen and Helium/Hydrogen are require, please contact the laboratory

Relinquished by (Company): Douglas Partners	Received by (Company): ES	Lab Use Only: 37371-9
Print Name: Huy Tran	Print Name: Amanda C	Job Number:
Date & Time: 20.2.25	Date & Time: 21/2/25 17:00	Security seal: Intact / Broken / None
Signature:	Signature: AC	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD

TERMS AND CONDITIONS FOR PROVISION OF SAMPLING EQUIPMENT

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Setareh Pourkazemi

Sample Login Details

Your reference	231957.01
Envirolab Reference	373759
Date Sample Received	21/02/2025
Date Instructions Received	21/02/2025
Date Results Expected to be Reported	28/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	4 Air
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	n/a
Cooling Method	Not applicable
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	TO15 in Canisters/Bags	TO15 in Canisters µg/m3	IPA in Carbon Tubes & Badges*	On Hold
105A	✓	✓		
BD 120250220	✓	✓		
105A - CT				✓
Shroud			✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 373722

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01, Ultimo**
Number of Samples	6 Water
Date samples received	21/02/2025
Date completed instructions received	21/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	28/02/2025
Date of Issue	28/02/2025

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Results Approved By
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VOCs in water				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date Extracted	-	24/02/2025	26/02/2025	24/02/2025
Date Analysed	-	25/02/2025	27/02/2025	25/02/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	1	2	7
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	81
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1

VOCs in water				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	110	100	110
Surrogate Toluene-d8	%	96	91	97
Surrogate 4-Bromofluorobenzene	%	104	102	105

vTRH(C6-C10)/BTEXN in Water						
Our Reference		373722-1	373722-2	373722-3	373722-4	373722-5
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220	TS/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/02/2025	26/02/2025	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	25/02/2025	27/02/2025	25/02/2025	25/02/2025	25/02/2025
TRH C_6 - C_9	µg/L	<10	<10	84	<10	[NA]
TRH C_6 - C_{10}	µg/L	<10	<10	90	<10	[NA]
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	[NA]
Benzene	µg/L	<1	<1	<1	<1	116%
Toluene	µg/L	<1	<1	81	<1	117%
Ethylbenzene	µg/L	<1	<1	<1	<1	121%
m+p-xylene	µg/L	<2	<2	<2	<2	114%
o-xylene	µg/L	<1	<1	<1	<1	117%
Naphthalene	µg/L	<1	<1	<1	<1	[NA]
Surrogate Dibromofluoromethane	%	110	100	110	98	110
Surrogate Toluene-d8	%	96	91	97	96	102
Surrogate 4-Bromofluorobenzene	%	104	102	105	104	101

vTRH(C6-C10)/BTEXN in Water		
Our Reference		373722-6
Your Reference	UNITS	TB/20250220
Date Sampled		20/02/2025
Type of sample		Water
Date extracted	-	24/02/2025
Date analysed	-	25/02/2025
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	80
Surrogate Toluene-d8	%	97
Surrogate 4-Bromofluorobenzene	%	103

svTRH (C10-C40) in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	26/02/2025	26/02/2025	26/02/2025	26/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	120	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	140	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	260	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	120	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	120	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	180	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	300	<50
Surrogate o-Terphenyl	%	94	106	104	88

PAHs in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	26/02/2025	26/02/2025	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025	27/02/2025	27/02/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	85	91	91	90

OCPs in Water - Trace Level			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
alpha-BHC	µg/L	<0.001	<0.001
HCB	µg/L	<0.001	<0.001
beta-BHC	µg/L	<0.001	<0.001
gamma-BHC	µg/L	<0.001	<0.001
Heptachlor	µg/L	<0.001	<0.001
delta-BHC	µg/L	<0.001	<0.001
Aldrin	µg/L	<0.001	<0.001
Heptachlor Epoxide	µg/L	<0.001	<0.001
gamma-Chlordane	µg/L	<0.001	<0.001
alpha-Chlordane	µg/L	<0.001	<0.001
Endosulfan I	µg/L	<0.002	<0.002
pp-DDE	µg/L	<0.001	<0.001
Dieldrin	µg/L	<0.001	<0.001
Endrin	µg/L	<0.001	<0.001
Endosulfan II	µg/L	<0.002	<0.002
pp-DDD	µg/L	<0.001	<0.001
Endrin Aldehyde	µg/L	<0.001	<0.001
pp-DDT	µg/L	<0.001	<0.001
Endosulfan Sulphate	µg/L	<0.001	<0.001
Methoxychlor	µg/L	<0.001	<0.001
Surrogate 4-Chloro-3-NBTF	%	88	84

OP in water LL ANZECCF/ADWG			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Dichlorvos	µg/L	<0.05	<0.05
Mevinphos	µg/L	<0.05	<0.05
Phorate	µg/L	<0.05	<0.05
Dimethoate	µg/L	<0.1	<0.1
Diazinon	µg/L	<0.01	<0.01
Disulfoton	µg/L	<0.05	<0.05
Chlorpyriphos-methyl	µg/L	<0.05	<0.05
Parathion-Methyl	µg/L	<0.05	<0.05
Ronnel	µg/L	<0.05	<0.05
Fenitrothion	µg/L	<0.05	<0.05
Malathion	µg/L	<0.05	<0.05
Chlorpyriphos	µg/L	<0.009	<0.009
Fenthion	µg/L	<0.05	<0.05
Parathion	µg/L	<0.004	<0.004
Bromophos ethyl	µg/L	<0.05	<0.05
Methidathion	µg/L	<0.05	<0.05
Fenamiphos	µg/L	<0.05	<0.05
Ethion	µg/L	<0.05	<0.05
Phosalone	µg/L	<0.05	<0.05
Azinphos-methyl (Guthion)	µg/L	<0.02	<0.02
Coumaphos	µg/L	<0.05	<0.05
Surrogate 4-Chloro-3-NBTF	%	88	84

PCBs in Water - Trace Level			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Aroclor 1016	µg/L	<0.01	<0.01
Aroclor 1221	µg/L	<0.01	<0.01
Aroclor 1232	µg/L	<0.01	<0.01
Aroclor 1242	µg/L	<0.01	<0.01
Aroclor 1248	µg/L	<0.01	<0.01
Aroclor 1254	µg/L	<0.01	<0.01
Aroclor 1260	µg/L	<0.01	<0.01
Surrogate 2-Fluorobiphenyl	%	84	87

Total Phenolics in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05	<0.05	<0.05

HM in water - total					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Arsenic-Total	µg/L	3	14	11	1
Cadmium-Total	µg/L	<0.1	0.9	0.2	<0.1
Chromium-Total	µg/L	19	98	93	4
Copper-Total	µg/L	30	460	220	10
Iron-Total	µg/L	4,300	41,000	31,000	1,200
Mercury-Total	µg/L	<0.05	2.5	<0.05	<0.05
Manganese-Total	µg/L	37	400	560	27
Nickel-Total	µg/L	30	72	170	31
Lead-Total	µg/L	24	720	66	15
Zinc-Total	µg/L	56	1,100	250	25

HM in water - dissolved			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date prepared	-	26/02/2025	26/02/2025
Date analysed	-	26/02/2025	26/02/2025
Arsenic-Dissolved	µg/L	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1
Chromium-Dissolved	µg/L	2	<1
Copper-Dissolved	µg/L	8	2
Iron-Dissolved	µg/L	860	730
Mercury-Dissolved	µg/L	<0.05	<0.05
Manganese-Dissolved	µg/L	25	110
Nickel-Dissolved	µg/L	28	20
Lead-Dissolved	µg/L	9	<1
Zinc-Dissolved	µg/L	23	72

Miscellaneous Inorganics				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date prepared	-	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	24/02/2025	24/02/2025	24/02/2025
pH	pH Units	4.5	5.9	INS
Electrical Conductivity	µS/cm	640	830	INS
Turbidity	NTU	610	NT	INS
Total Dissolved Solids (grav)	mg/L	420	440	INS
Total Suspended Solids	mg/L	940	5,800	INS
Oil & Grease (LLE)	mg/L	<5	7	INS
Ammonia as N in water	mg/L	0.44	0.095	INS
Nitrate as N in water	mg/L	13	13	INS
Nitrite as N in water	mg/L	0.016	0.17	INS
NOx as N in water	mg/L	13	13	INS
Total Nitrogen in water	mg/L	21	22	INS
TKN in water	mg/L	8.2	9.3	INS
Organic Nitrogen as N	mg/L	7.7	9.2	INS

Ion Balance				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date prepared	-	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	24/02/2025	24/02/2025	24/02/2025
Calcium - Dissolved	mg/L	29	87	47
Potassium - Dissolved	mg/L	28	30	10
Sodium - Dissolved	mg/L	32	25	88
Magnesium - Dissolved	mg/L	8.8	10	5.4
Hardness (calc) equivalent $CaCO_3$	mg/L	110	260	140
Hydroxide Alkalinity (OH^-) as $CaCO_3$	mg/L	<5	<5	INS
Bicarbonate Alkalinity as $CaCO_3$	mg/L	8	210	INS
Carbonate Alkalinity as $CaCO_3$	mg/L	<5	<5	INS
Total Alkalinity as $CaCO_3$	mg/L	8	210	INS
Sulphate, SO4	mg/L	160	140	INS
Chloride, Cl	mg/L	31	25	INS
Ionic Balance	%	0	-5.0	[NT]

PFAS in Water TRACE Short			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date prepared	-	25/02/2025	25/02/2025
Date analysed	-	25/02/2025	25/02/2025
Perfluorobutanesulfonic acid	µg/L	0.011	0.0069
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0090	0.0051
Perfluorooctanesulfonic acid PFOS	µg/L	0.028	0.060
Perfluorooctanoic acid PFOA	µg/L	0.0098	0.010
6:2 FTS	µg/L	0.016	0.051
8:2 FTS	µg/L	<0.0004	<0.0004
Surrogate $^{13}C_8$ *PFOS*	%	113	121
Surrogate $^{13}C_2$ *PFOA*	%	90	86
Extracted ISTD $^{13}C_3$ *PFBS*	%	56	61
Extracted ISTD $^{18}O_2$ *PFHxS*	%	73	78
Extracted ISTD $^{13}C_4$ *PFOS*	%	83	86
Extracted ISTD $^{13}C_4$ *PFOA*	%	79	84
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	121	183
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	154	161
Total Positive PFHxS & PFOS	µg/L	0.037	0.066
Total Positive PFOS & PFOA	µg/L	0.037	0.071
Total Positive PFAS	µg/L	0.074	0.13

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell.
Inorg-003	Oil & Grease - determine gravimetrically following extraction with Hexane, in accordance with APHA latest edition, 5520-B.
Inorg-006	Alkalinity - determined titrimetrically in accordance with APHA latest edition, 2320-B.
Inorg-018	Total Dissolved Solids - determined gravimetrically. The solids are dried at 180+/-10°C. NOTE: Where the EC of the sample is <100µS/cm, the TDS will typically be below 70mg/L (as the sample is very likely to be at least drinking water quality). Therefore to ensure data quality for TDS, the TDS is typically calculated as per the equation below:- TDS = EC * 0.6
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.
Inorg-022	Turbidity - measured nephelometrically using a turbidimeter, in accordance with APHA latest edition, 2130-B.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-040	The concentrations of the major ions (mg/L) are converted to milliequivalents and summed. The ionic balance should be within +/- 15% ie total anions = total cations +/-15%.
Inorg-055	Nitrate - determined colourimetrically. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055/062/127	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen. Alternatively analysed by combustion and chemiluminescence.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-062	TKN - determined colourimetrically based on APHA latest edition 4500 Norg. Alternatively, TKN can be derived from calculation (Total N - NOx).
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date Extracted	-			24/02/2025	1	24/02/2025	26/02/2025		24/02/2025	[NT]
Date Analysed	-			25/02/2025	1	25/02/2025	27/02/2025		25/02/2025	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	100	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	1	1	<1	0	101	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	97	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
Dibromomethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	109	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	101	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	107	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
Bromoform	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	109	[NT]
Styrene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	1	110	101	9	81	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	96	91	5	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	102	1	104	102	2	99	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/02/2025	1	24/02/2025	26/02/2025		24/02/2025	[NT]
Date analysed	-			25/02/2025	1	25/02/2025	27/02/2025		25/02/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	<10	<10	0	108	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	<10	<10	0	108	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	109	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	1	110	101	9	81	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	96	91	5	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	102	1	104	102	2	99	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			27/02/2025	[NT]	[NT]	[NT]	[NT]	27/02/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate o-Terphenyl	%		Org-020	104	[NT]	[NT]	[NT]	[NT]	135	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	71	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	77	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	69	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	65	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	81	[NT]	[NT]	[NT]	[NT]	74	[NT]

QUALITY CONTROL: OCPs in Water - Trace Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
alpha-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	80	[NT]
HCB	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	70	[NT]
gamma-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	70	[NT]
delta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Heptachlor Epoxide	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
gamma-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Dieldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Endrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	60	[NT]
Endosulfan II	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	75	[NT]
Endrin Aldehyde	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	71	[NT]
Endosulfan Sulphate	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methoxychlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	78	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: OP in water LL ANZECCF/ADWG					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Dichlorvos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	78	[NT]
Mevinphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	µg/L	0.01	Org-022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	77	[NT]
Fenitrothion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Malathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	84	[NT]
Chlorpyriphos	µg/L	0.009	Org-022/025	<0.009	[NT]	[NT]	[NT]	[NT]	82	[NT]
Fenthion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	µg/L	0.004	Org-022/025	<0.004	[NT]	[NT]	[NT]	[NT]	94	[NT]
Bromophos ethyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	79	[NT]
Phosalone	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	µg/L	0.02	Org-022/025	<0.02	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	78	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: PCBs in Water - Trace Level						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Aroclor 1016	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	118	[NT]
Aroclor 1260	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	86	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: Total Phenolics in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-031	<0.05	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: HM in water - total						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			27/02/2025	3	27/02/2025	27/02/2025		27/02/2025	[NT]
Date analysed	-			27/02/2025	3	27/02/2025	27/02/2025		27/02/2025	[NT]
Arsenic-Total	µg/L	1	Metals-022	<1	3	11	[NT]		99	[NT]
Cadmium-Total	µg/L	0.1	Metals-022	<0.1	3	0.2	[NT]		102	[NT]
Chromium-Total	µg/L	1	Metals-022	<1	3	93	[NT]		101	[NT]
Copper-Total	µg/L	1	Metals-022	<1	3	220	[NT]		106	[NT]
Iron-Total	µg/L	10	Metals-022	<10	3	31000	[NT]		98	[NT]
Mercury-Total	µg/L	0.05	Metals-021	<0.05	3	<0.05	<0.05	0	102	[NT]
Manganese-Total	µg/L	5	Metals-022	<5	3	560	[NT]		96	[NT]
Nickel-Total	µg/L	1	Metals-022	<1	3	170	[NT]		101	[NT]
Lead-Total	µg/L	1	Metals-022	<1	3	66	[NT]		114	[NT]
Zinc-Total	µg/L	1	Metals-022	<1	3	250	[NT]		101	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date prepared	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Iron-Dissolved	µg/L	10	Metals-022	<10	[NT]	[NT]	[NT]	[NT]	89	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	117	[NT]
Manganese-Dissolved	µg/L	5	Metals-022	<5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			24/02/2025	2	24/02/2025	24/02/2025		24/02/2025	[NT]
Date analysed	-			24/02/2025	2	24/02/2025	24/02/2025		24/02/2025	[NT]
pH	pH Units		Inorg-001	[NT]	2	5.9	[NT]		101	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	2	830	[NT]		100	[NT]
Turbidity	NTU	0.1	Inorg-022	<0.1	2	NT	[NT]		103	[NT]
Total Dissolved Solids (grav)	mg/L	5	Inorg-018	<5	2	440	[NT]		103	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	2	5800	5500	5	97	[NT]
Oil & Grease (LLE)	mg/L	5	Inorg-003	<5	2	7	[NT]		89	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	2	0.095	[NT]		88	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	<0.005	2	13	[NT]		96	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	2	0.17	[NT]		96	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	<0.005	2	13	[NT]		96	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	<0.1	2	22	23	4	118	[NT]
TKN in water	mg/L	0.1	Inorg-062	<0.1	2	9.3	[NT]		[NT]	[NT]
Organic Nitrogen as N	mg/L	0.2	Inorg-055/062/127	<0.2	2	9.2	[NT]		[NT]	[NT]

QUALITY CONTROL: Ion Balance					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			24/02/2025	[NT]	[NT]	[NT]	[NT]	24/02/2025	[NT]
Date analysed	-			24/02/2025	[NT]	[NT]	[NT]	[NT]	24/02/2025	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
Potassium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	86	[NT]
Sodium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	98	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	88	[NT]
Hydroxide Alkalinity (OH^-) as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bicarbonate Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbonate Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Total Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	107	[NT]
Sulphate, SO4	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chloride, Cl	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: PFAS in Water TRACE Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			25/02/2025	[NT]	[NT]	[NT]	[NT]	25/02/2025	[NT]
Date analysed	-			25/02/2025	[NT]	[NT]	[NT]	[NT]	25/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	104	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	101	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	113	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	75	[NT]	[NT]	[NT]	[NT]	75	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	73	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	118	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

VOC vials have headspace

Turbidity: Sample 2 could not be analysed due to the high concentration of solid matter.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231957.01	**Suburb:**	Ultimo	**To:**	Envirolab Services
Project Manager:	Nerilee Edwards	**Order Number:**		**Sampler:** SP	12 Ashley St, Chatswood NSW 2067
Email:	Nerilee.Edwards@douglaspartners.com.au; Setareh.pourkazemi@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time: ☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day					(02) 9910 6200 samplereceipt@envirolab.com.au
Prior Storage: ☑ Fridge ☐ Freezer ☐ Esky ☐ Shelf		**Do samples contain 'potential' HBM?** ☑ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)			

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: CW008_T	CW004_T	Dissolved metals	BTEX, TRH	PFAS	VOC	Anions and cations	pH, EC, turbidity, TDS, TSS	nitrogen suite	Hardness	oil and grease			Notes/ Preservation/ Additional Requirements
1	BH101	-	-	20/02/25	W	G/P	x		x		x	x	x	x	x	x	x			PFAS, trace level, short suite.
2	BH102	-	-	20/02/25	W	G/P	x		x		x	x	x	x	x	x	x			OCP, OPP, PCB trace level
3	BH103	-	-	20/02/25	W	G/P		x				x	x	x	x	x	x			PAH low level
4	GWD1/20250220	-	-	20/02/25	W	G/P		x												Metals: pls see below
5	TS/20250220	-	-	20/02/25	W	Vials				BTEX										Sample 103 - pls analyse analytes from left to right until you run out of sample
6	TB/20250220	-	-	20/02/25	W	Vials				x										

Metals to analyse:	As, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Zn	**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:** Courier	**Lab Ref. No:**	373722
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Katy Wayne
Address:	96 Hermitage Road, West Ryde NSW 2114 **Phone:** (02) 9809 0666	**Date & Time:**	21/02/25 1400
Relinquished by:	SP **Date:** 21/02/2025 **Signed:** Setareh Pourkazemi	**Signed:**	

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Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 373722

Date Received: 21/02/25
Time Received: 1400
Received By: KW
Temp: Cool/Ambient
Cooling: Ice/Icepack 12°C
Security: Intact/Broken/None

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards

Sample Login Details

Your reference	231957.01, Ultimo
Envirolab Reference	373722
Date Sample Received	21/02/2025
Date Instructions Received	21/02/2025
Date Results Expected to be Reported	28/02/2025

Sample Condition

Samples received in appropriate condition for analysis	VOC vials have headspace
No. of Samples Provided	6 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	OCPs in Water - Trace Level	OP in water LL ANZECCF/ADWG	PCBs in Water - Trace Level	Total Phenolicsin Water	HM in water - total	HM in water - dissolved	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids(grav)	Total Suspended Solids	Oil & Grease (LLE)	Ammonia as N in water	Nitrate as N in water	Nitrite as N in water	NOx as N in water	Total Nitrogen in water	TKN in water	Organic Nitrogen as N	Calcium - Dissolved	Potassium - Dissolved	Sodium - Dissolved	Magnesium - Dissolved	Hardness (calc) equivalent CaCO3	Hydroxide Alkalinity (OH-) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Sulphate, SO4	Chloride, Cl	Ionic Balance	PFAS in Water TRACE Short
BH101	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH102	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH103	✓	✓	✓	✓				✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
GWD1/20250220		✓	✓	✓				✓	✓																										
TS/20250220		✓																																	
TB/20250220		✓																																	

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The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Appendix N

Quality Assurance and Quality Control

1. Field and laboratory data quality assurance and quality control

The field and laboratory data quality assurance and quality control (QA / QC) procedures and results are summarised in the following Table 1. Reference should be made to the field work methodology and the laboratory results / certificates of analysis for further details. The relative percentage difference (RPD) results, along with the other field QC samples are included in the summary results tables OR at the end of this appendix.

Table 1: Field and laboratory quality control

Item	Evaluation / acceptance criteria	Compliance
Analytical laboratories used	NATA accreditation	C
Holding times	Various based on type of analysis	C
Intra-laboratory replicates (soil and groundwater)	10% of primary samples; <30% RPD	C PC
Trip spikes	1 per sampling event; 60-140% recovery	C
Trip blanks	1 per sampling event; <PQL	C
Rinsates	1 per sampling event; <PQL	PC
IPA Leakage test	IPA in sample ≤10% of IPA in shroud	C
Shut in test	Vacuum decrease of ≤0.5% inch.Hg	C
Laboratory / reagent blanks	1 per batch; <PQL	C
Laboratory duplicate	1 per lab batch; as laboratory certificate	PC
Matrix spikes	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Surrogate spikes	All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Control samples	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Standard operating procedures (SOP)	Adopting SOP for all aspects of the sampling field work	C

Notes:
C = compliance; PC = partial compliance; NC = non-compliance

The RPD results were all within the acceptable range, except for metals and PAH in soils indicated in Table QA1 (results in bold). The exceedances are not, however, considered to be of concern given that:

- The actual differences in the concentrations of the replicate pairs where RPD exceedances occurred were typically low;

- The replicate pairs were collected from fill soils which by its nature are heterogeneous; and
- Replicates, rather than homogenised duplicates, were used to minimise risk of volatile loss, hence greater analytical variability between replicate pairs can be expected.

The PRD results for groundwater samples were all within the acceptable range as indicated in Table QA2, except for metals. The exceedances are not, however, considered to be on concern given that:

- The typically low actual differences in the concentrations of the replicate pair where some PRD exceedances occurred; and
- Most of the recorded concentrations being relatively close to PQL.

The RPD results for soil vapour samples were all within the acceptable range as indicated in table QA3.

A trip spike and trip blank were taken into the field during the soil and groundwater sampling with results summarised in Tables QA4 and AQ5. No analytes were reported above the PQL in the trip blank sample for soil and groundwater. All results in the trip spike samples were within the acceptable range of recovery.

No rinsate samples were collected during soil and groundwater sampling as re-usable sampling equipment was not used. Where possible soil samples were collected from recovered materials which had not been in contact with drilling equipment.

The results fort leakage testing for vapour sampling are provided in Table QA6. Result was less than the allowance leakage of ≤10% IPA in shroud for samples, with a maximum recorded result of 0.084%. This is indicative of no significant leakage occurring.

The laboratory reported exceedances of the acceptable RPD values for metals and PAH in their replicate analysis. The laboratory considered this to be due to heterogeneity in the samples, which is consistent with Douglas' field observations and laboratory results.

The laboratory certificates included the following additional comments:

- Asbestos was subsampled from the containers sent for analysis. This is not considered to be of concern as no potential asbestos containing material was observed in the fill in the field, and as such subsampling in the laboratory is considered to be equivalent to subsampling in the field;
- The VOC vials had headspace, this has been considered in assessing the results, with groundwater results also assessed with consideration of the soil vapour results;
- Sample BH102 had elevated suspended solids, preventing some analysis. This is consistent with turbidity results observed in the field; and
- The PQL was raised in the ambient air sample due to the limited sample volume. Douglas notes the PQL were less than the SAC.

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

2. Data quality indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQI) as outlined in NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013):

- Completeness: a measure of the amount of usable data from a data collection activity;
- Comparability: the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- Representativeness: the confidence (qualitative) of data representativeness of media present on-site;
- Precision: a measure of variability or reproducibility of data; and
- Accuracy: a measure of closeness of the data to the 'true' value.

The results of the assessment are summarised in Table 2.

Table 2: Data quality indicators

Data quality indicator	Method(s) of achievement
Completeness	A judgemental target sampling methodology was adopted for the site based on the site history, previous investigation, site observations and access constraints.
	Preparation of borehole logs, sample location plan and chain of custody records.
	Preparation of field groundwater, soil vapour and ambient air sampling sheets.
	Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody.
	Samples analysed for contaminants of potential concern (CoPC) identified in the conceptual site model (CSM).
	Completion of chain of custody documentation.
	NATA accredited laboratory results certificates provided by the laboratory.
	Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section 1.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project.
	Experienced sampler(s) used.
	Use of NATA registered laboratories, with test methods the same or similar between laboratories.
	Satisfactory results for field and laboratory QC samples.

Data quality indicator	Method(s) of achievement
Representativeness	Representative samples were collected at sample locations at various depths.
	Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQO.
	Samples were extracted and analysed within holding times.
	Samples were analysed in accordance with the chain of custody.
Precision	Field staff followed standard operating procedures.
	PRD of >30% exceedances occurred for field duplicate in samples between primary and secondary samples for soil and groundwater. However, this appears to be due to heterogeneity and the concentrations of all samples analysed were below the SAC.
	Satisfactory results for all other field and laboratory QC samples.
Accuracy	Field staff followed standard operating procedures.
	Satisfactory results for all field and laboratory QC samples.

Based on the above, it is considered that the DQI have generally been complied with.

3. Conclusion

Based on the results of the field QA and field and laboratory QC, and evaluation against the DQI it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

4. References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

Douglas PARTNERS

Table QA1: Relative Percentage Difference Results – Soil

Lab Report No	Sample ID	Depth	Sample Date	Sample Type	Units	Metals								PAH															Priority TRH						BTEX			
						Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene b	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(g,h,i)peryelene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	TRH C6 - C10	TRH >C10-C16	FI ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes
371281	BH107	0.5 - 0.7 m	21/01/25	Soil	mg/kg	5	<0.4	8	72	220	0.7	5	130	<1	2	2.7	15	<0.1	0.2	0.3	1.1	1	1	0.2	2.2	<0.1	1.4	1.1	2.1	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
371281	BD2/20250121	0.5 - 0.7 m	21/01/25	Soil	mg/kg	<4	<0.4	9	35	470	2	4	270	<1	0.91	1.3	7.9	<0.1	<0.1	0.1	0.7	0.6	0.7	0.1	1.2	<0.1	0.4	0.6	1.2	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
			Difference		mg/kg	1	0	1	37	250	1.3	1	140	0	1.09	1.4	7.1	0	0.1	0.2	0.4	0.4	0.3	0.1	1	0	1	0.5	0.9	0	0	0	0	0	0	0	0	0	0
			RPD		%	22%	0%	12%	**69%**	**72%**	**96%**	22%	**70%**	0%	**75%**	**70%**	**62%**	0%	**67%**	**100%**	**44%**	**50%**	**35%**	**67%**	**59%**	0%	**111%**	**59%**	**55%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
376087-1	BH103	1.3-1.5 m	14/02/2025	Soil	mg/kg	<4	<0.4	7	14	51	0.1	2	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1200313-S	BD3/20250214	1.3-1.5 m	14/02/2025	Soil	mg/kg	2.8	<0.4	7.3	16	39	0.2	<5	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Difference		mg/kg	1.2	0	0.3	2	12	0.1	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			RPD		%	**35%**	0%	4%	13%	27%	**43%**	**86%**	8%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Douglas PARTNERS

Table QA2: Relative Percentage Difference Results: Groundwater

Lab Report No	Sample ID	Sample Date	Sample Type	Units	Metals										TRH				BTEX						PAH															
					Total Arsenic	Cadmium	Total Chromium	Copper	Iron	Lead	Manganese	Mercury (inorganic)	Nickel	Zinc	F1 (C6-C10) (BTEX)	F2 (>C10-C16) less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (BaP)	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of detected PAH
373722	BH101	20/02/25	Water	µg/L	3	<0.1	19	30	4,300	24	37	<0.05	30	56	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
373722	GWDI/20250220	20/02/25	Water	µg/L	1	<0.1	4	10	1,200	15	27	<0.05	31	25	<10	<50	<100	<100	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Difference		µg/L	2	0	15	20	3,100	9	10	0	1	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		RPD		%	**100%**	0%	**130%**	**100%**	**113%**	**46%**	**31%**	0%	3%	**77%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table QA3: Relative Percentage Difference Results – Intra-laboratory Replicates: Soil Vapour Samples

		BTEX						VOC				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	o-Xylene	Naphthalene	trans-1,2-dichloroethene (trans-DCE)	cis-1,2-dichloroethene (cis-DCE)	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Vinyl chloride
Sample ID	Date	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
105A	25/03/2025	4	40	10	40	10	<2.6	<2	<2	<2.7	<3.4	<1.3
BD	25/03/2025	4	42	10	40	10	<2.6	<2	<2	<2.7	<3.4	<1.3
	Difference	0	2	0	0	0	0	0	0	0	0	0
	RPD	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table QA4: Trip Blank Results

Sample ID	Sample Date	Media Being Sampled	Sample Type	Units	Priority PAH	Priority TRH		TRH	BTEX				Lab Report No
					Naphthalene [b]	TRH C6 - C10	F1 ((C6-C10)-BTEX)	TRH C6 - C9	Benzene	Toluene	Ethylbenzene	Total Xylenes	
TB	21/01/2025	Soil	Soil	mg/kg	<1	<25	<25	<25	<0.2	<0.5	<1	<1	371281
TB	20/02/2025	Water	Water	µg/L	<1	<10	<10	-	<1	<1	<1	<1	373722

Table QA5: Trip Spike Results (% Recovery)

Sample ID	Sample Date	Media Being Sampled	Sample Type	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Lab Report No
TS	21/01/2025	Soil	Soil	96	89	100	94	95	371281
TS	20/02/2025	Water	Groundwater	116	117	121	117	114	373722

Table QA6: IPA Leakage Test Results – Vapour Sampling

Sample ID	Sample Date	Isopropyl Alcohol (IPA)	IPA as a percentage of concentration in Shroud sample
		µg/m3	%
Shroud Sample (where tracer added)			
Shroud	20/02/25	1,300,000	-
Soil Vapour Samples			
BH105A	20/02/25	1,100	0.0846%

Attachment A10

ESD Strategies

SUITE 7.06 65 YORK STREET SYDNEY NSW 2000 AUSTRALIA WWW.FLUXCO.CO

18 September 2025

APT Broadway 2 | 43-49 Mountain Street, Ultimo
Planning Proposal - Summary of ESD Strategies

Flux has been commissioned by APT Residential to provide the key Environmentally Sustainable Design (ESD) strategies for the proposed development 43-49 Mountain Street, Ultimo, to accompany the planning proposal submission.

The strategies outlined below will ensure that the proposed development:
- Delivers an all-electric building with renewable energy generation.
- Provides healthy, comfortable living environments with natural ventilation and daylight access.
- Reduces urban heat impacts through centralised rooftop heat rejection.
- Preserves and adaptively reuses heritage fabric, extending its lifecycle while integrating new uses.
- Minimises resource demand through rainwater harvesting.
- Exceeds SB SEPP 2022 BASIX requirements.
- Achieve 5 star Green Star Buildings.

1. Proposal overview

The Planning Proposal seeks approval for a new mixed-used residential development comprising active ground-level uses and build-to-rent apartments above, along with a rooftop communal open space. The proposal also includes the adaptive reuse of a heritage-listed substation at the corner of Mountain Street and Smail Street.

2. Planning framework

The ESD strategies were prepared as part of the Planning Proposal in line with the City of Sydney's ESD requirements for future development to be able to meet:

Environmentally Sustainable Development Strategy
Identify strategies, measures and benchmarks for environmental performance for future development on the site:
Relevant controls:
- Clause 3.6 Sydney DCP 2012
- SEPP (Sustainable Buildings) and Apartment Design Guide
- Any NABERS, Green Star Buildings or other tools used to measure environmental performance.

3. Limitations

This letter does not address the Housing SEPP of the Apartment Design Guide (ADG). This will be addressed by the Architect.

4. Existing conditions

The subject site is located at 43-49 Mountain Street within the Pyrmont / Ultimo Urban Conservation Area. The existing site consists of a service carpark and a heritage-listed substation situated at the corner of the site. The site itself occupies a corner location, bounded by two vehicular roads.

Adjacent properties to the south and west are developed with buildings of four to eight storeys, built mostly to the boundary with minimal setbacks. Surrounding buildings are generally of a similar scale, providing the subject site with opportunities for solar access.

The heritage-listed building is Federation Free Style building featuring ventilator openings, a multi-paned window within the gabled wall, and a pitched roof with exposed rafters.

5. Key ESD strategies

The commitments herein represent the primary sustainability strategies that are fundamental to the planning stage.

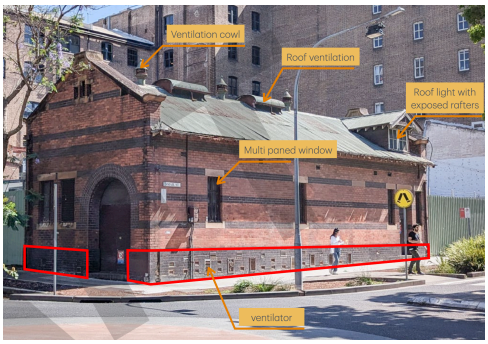
5.1. Future-ready low-carbon operation

- All-electric building
  The development will adopt an all-electric design, eliminating on-site fossil fuels through high-efficiency electric heat pumps for hot water, and induction cooktops and electric ovens in all apartments. This approach directly aligns with NSW's electricity decarbonisation trajectory and enables the project to contribute to net-zero targets.
- EV-charging readiness
  Capacity for electric vehicle charging will be incorporated into the basement design to allow progressive rollout.
- Onsite renewable energy
  Rooftop solar PV will be integrated on the new building to reduce grid demand and operational carbon emissions. To preserve heritage integrity, no PV panels will be installed on the adaptively reused substation building.
- HFC-free refrigerants
  The design will avoid using HFC synthetic greenhouse gases in air conditioning compressors and heat pumps to protect against premature redundancy of plant and equipment due to the regulated phase-down of HFCs, which provides no allocation for use in buildings after 2036.

5.2. Passive resilience

- Passive design - new construction
  Passive design in the new building will be addressed in the DA stage, with a focus on maximising solar access, natural ventilation, and the composition of the external fabric to achieve an appropriate window-to-wall ratio and depth to provide solar shading.

- Passive design - heritage-listed substation



The heritage-listed substation will be adaptively reused in a manner that preserves and adapts its passive design qualities for daylighting and natural ventilation to suit retail uses. Existing ridge ventilation components will be retained to function as stack ventilation, supporting passive airflow and minimising mechanical ventilation. The clerestory and multi-paned windows will also be preserved to maximise solar access without altering the building fabric.

- Reducing urban heat issues
  The development will implement a centralised heat rejection system located on the rooftop to minimise heat discharge to the surrounding environment.

5.3. Circularity

- Adaptive reuse
  The heritage-listed substation will be repurposed as a retail space, retaining the original structure and building fabric to extends the building's material life cycle, reducing the need for new construction materials and associated environmental impacts.

5.4. Performance benchmarks

- BASIX
  The project will exceed the Sustainable Buildings SEPP 2022 BASIX minimum targets of Energy (≥ 60) and Water (≥ 40) for residential development.
- Green star
  The development will target a minimum of 5-star Green Star Buildings rating. The design approach seeks to leverage the inherent qualities of the development to maximise credit achievement, while minimising reliance on measures that fall outside the project's core sustainability commitments.

Attachment A11

Flood Impact Risk Assessment

Broadway 2

Flood Impact Risk Assessment

Prepared for: APT Residential

Project No: SYD3746
Date: 31 October 2025
Revision: C

Project:	Broadway 2
Location:	41-49 Mountain Street Ultimo NSW 2007
Prepared by:	ADP Consulting Pty Ltd Level 6, 33 Erskine Street Sydney NSW 2000
Project No:	SYD3746
Revision:	C
Date:	31 October 2025

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisa-tion & QA	Signature
A	05.09.25		K.C		S.S.		S.S.	
B	16.09.25		K.C		S.S.		S.S.	
C	31.10.25		K.C		S.S.		S.S.	

Project Team	
Client / Principal	APT Residential ABN 45 657 586 868
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1. Introduction

This Flood Impact Risk Assessment has been prepared by ADP Consulting Engineers to support the Planning Proposal for the lots at 41-49 Mountain Street, Ultimo NSW 2007. This report outlines the local Council and TUFLOW model inputs used to simulate existing/proposed overland flows. The site is currently zoned Mixed Use (MU1) and APT Broadway aims to obtain appropriate rezoning of the Site to enable residential development with mixed use ground floor.

1.1 Site Context

The site is located on 41 - 49 Mountain Street, Ultimo NSW 2007 and is approximately 1,450 sqm in size. The site is located at the corner of Smail St and Mountain St and is current used as a depot area. The majority of the site open hardstand, with the exception of an existing substation in the northeast corner of the site which is to be retained and repurposed as part of this development (refer to Appendix A).

There is an existing sag point approximately 130m upstream of the site at Broadway (Parramatta Road), opposite Buckland Street and between Wattle Street and Mountain Street. When overland flow exceeds the capacity of the existing stormwater network, water will collect within this sag point. There are several relief points for this sag, Mountain St, Wattle St, an existing Arcade and a Laneway between two buildings, see figures below.

Figure 1 Site Context

Figure 2 Arcade from Broadway sag point through buildings and Plaza towards Blackwattle Lane

Figure 3 Laneway between buildings, with gap under hoarding to allow overland flow from Broadway sag point to Blackwattle Ln

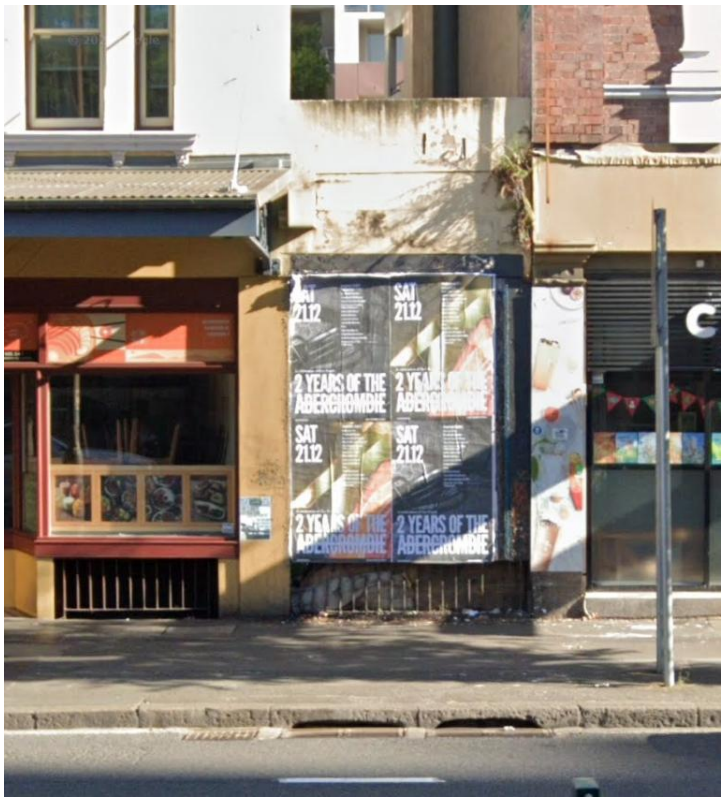


Figure 4 Gap under hoarding viewed from downstream at Blackwattle Lane

1.1.1 Existing Flood Studies

The proposed site lies within the Blackwattle Bay Catchment and is covered by the following studies:

- 2020 Blackwattle Bay Catchment Flood Study Model Update – ARR2019 Hydrology
- 2015 Blackwattle Bay Catchment Flood Study

Hydraulic and hydrological model inputs have been adopted from both flood studies and outlined in Section 2 below.

1.1.2 Sydney Local Environment Plan (LEP) 2012

The Sydney LEP 2012 contains one clause related to the development of land within the flood planning area. As the proposed site lies within the FPA (1% AEP flood level + 500mm), clause *5.21: Flood Planning* applies to the development. The objectives of this clause with respect to flood risk, impacts of the development on flood behaviour and evacuation are addressed in the sections that follow.

1.2 Planning Proposal Relevant Controls

This report has been prepared in response to the controls contained within the documents outlined below:

- NSW Flood Risk Management Manual 2023
- Local Planning Direction (s9.1) on Flooding
- Planning Circular PS21-006
- Considering Flooding in Land Use Planning Guideline
- PS24-001 – Update on Addressing Flood Risk in Planning Decisions
- Shelter-in-place Guideline for Flash Flooding
- City of Sydney Interim Floodplain Management Policy
- Relevant City of Sydney Catchment Study (2020 Blackwattle Bay Catchment Flood Study Model Update – ARR2019 Hydrology)
- Clause 7.15 of Sydney Local Environmental Plan 2012
- Clause 3.7 of the of the Sydney Development Control Plan 2012

2. Flood Modelling

2.1 Catchment Area

LiDAR data with 1m resolution has been obtained from NSW Spatial Services in order to determine the topography of the area surrounding the site and delineate catchments affecting the development. For the purposes of this report, the catchment outlet was chosen approximately 260m north of the site.

Figure 5 Catchment Map

2.2 Hydrological Modelling

The total contributing upstream catchment area was determined to be approximately ~130.72ha and mainly consists of highly urbanised residential developments. The total catchment has been sub-divided into 22 sub-catchments, using the existing Council information as reference. A DRAINS model was developed for the 22 sub-catchments and an ILCL analysis was run using the below inputs to generate 22 hydrographs which were then input into the TUFLOW model.

2.2.1 Rainfall Intensity

Site specific Infiltration-Frequency-Duration (IFD) data and 10 ensemble temporal patterns have been obtained from the Bureau of Meteorology and AR&R Datahub in accordance with ARR 2019. The storm duration of 30 minutes was determined to produce critical flood depths surrounding the proposed site.

2.2.2 Probable Maximum Precipitation Estimation

The Probable Maximum Precipitation (PMP) was estimated using the Generalised Short-Duration Method as outlined by the Bureau of Meteorology. See table below for inputs.

Table 1 PMP Factors

Factor	
Catchment Area	1.31km^2
Portion of area considered smooth	0%
Portion of area considered rough	100%
Mean elevation	21.5
Moisture Adjustment Factor	70%

2.2.3 Climate Change

Recent updates to the Australian Rainfall and Runoff (ARR): A Guide to Flood Estimation guidelines have seen a change in climate change impact estimation methods which have been based on latest Intergovernmental Panel on Climate Change (IPCC) projections.
Current modelling of climate change impacts has been conducted using the year 2090 SSP2-4.5 projection as a "middle of the road" estimation.
Climate change induced sea level rise was also determined to be inconsequential for the flood behaviour surrounding the subject site.

2.2.4 Rainfall Losses

Rainfall losses and other DRAINS hydrologic model parameters have been adopted from the 2020 Blackwattle Bay Catchment Flood Study.

Table 2 Adopted DRAINS hydrologic model parameters

Rainfall Losses	
Grassed Area Initial Loss	6.4mm
Grassed Area Continuing Loss	0.72mm/hr
Soil Type	**3**
Antecedent Moisture Conditions	**3**

2.3 Hydraulic Modelling

2.3.1 Digital Elevation Model

A 1 metre LiDAR DEM obtained from NSW Spatial Services was used to represent the existing ground surface for the hydraulic model. This resolution is fine enough to represent roads and overland flow paths and did not result in excessive run time.

2.3.2 Land Use

Land use throughout the site has been determined through satellite imagery. The following land use roughness coefficients have been adopted in accordance with the 2020 Blackwattle Bay Catchment Flood Study.

Table 3 Manning's Roughness Coefficient 'n'

Land Use Type	
Roads	0.015
Parks	0.03

2.3.3 Buildings

Building footprints have been determined using satellite imagery and modelled as inactive areas within the TUFLOW model.

2.3.4 Existing Stormwater Drainage

Stormwater drainage has not been modelled as part of this assessment. Flood levels and outputs will therefore be conservative as a result.

2.3.5 Upstream Boundary Condition

The stormwater hydrographs extracted from the Hydrologic Model were used as inputs for the TUFLOW model. The hydrographs were applied using 2d QT (Flow vs. Time) boundaries at the sub-catchment outlets to represent the overland flow paths affecting the site.

2.3.6 Downstream Boundary Condition

2d HQ (Stage vs. Discharge) boundaries were digitised parallel to Macarthur Street, approximately 260m northwest of the site as shown in Figure 5. This boundary location was determined to be sufficiently distant from the site to prevent any tailwater impacts on surrounding flood behaviour. The HQ boundary utilizes a stage-discharge curve that TUFLOW automatically creates based on the underlying topography.

3. Results

TUFLOW output maps for the full range of flood events (10% AEP, 5% AEP, 1% AEP, 0.5% AEP, 0.2% AEP and PMF) can be found in Appendix C.

The results discussed below are surrounding the 1% AEP event.

3.1 Existing Flood Behaviour

Flood modelling of the existing scenario show runoff running north within roads, collecting in Buckland St before entering the Broadway sag. Floodwaters continue to collect within the sag point before overflowing into the relief points identified in Section 1.1. The majority of flows are conveyed through the Arcade and Laneway, entering the Plaza and Blackwattle Ln.

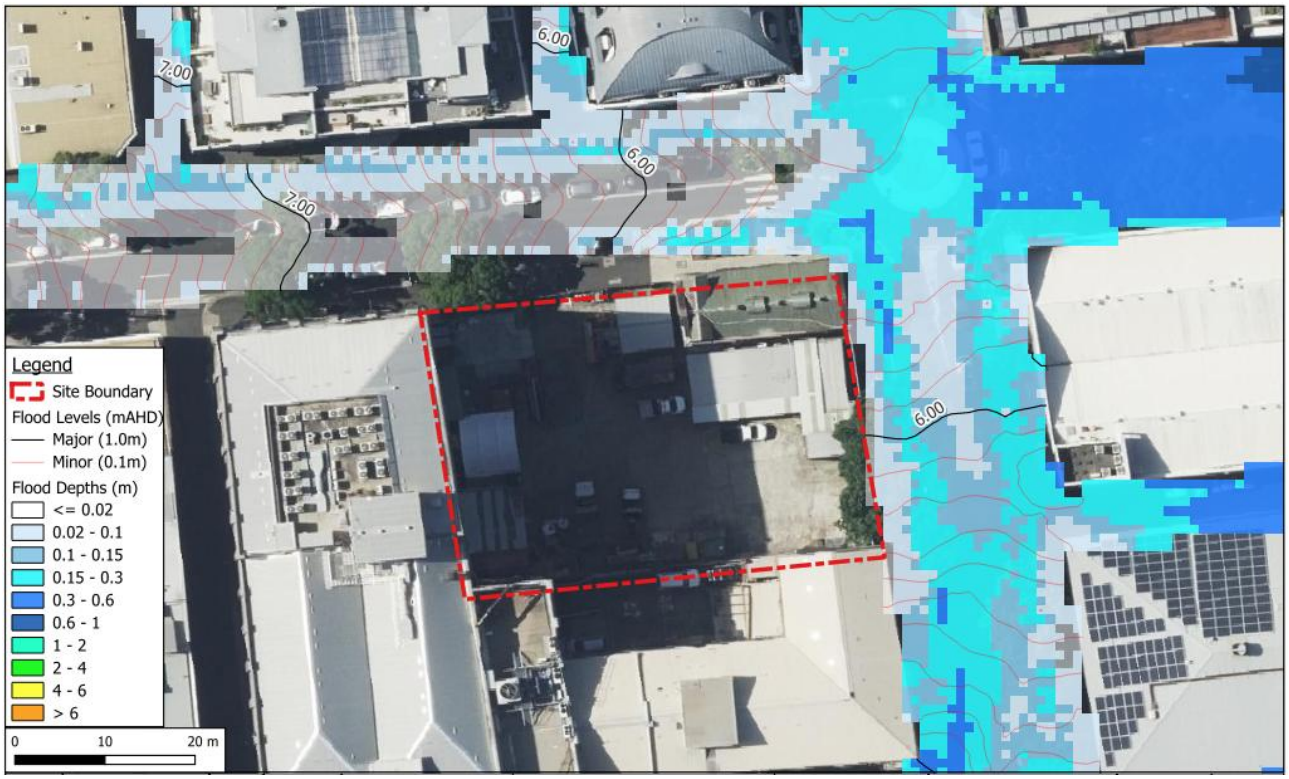
Flooding immediately surrounding the proposed site is comprised of two components, the overland flooding running along the eastern boundary within Mountain St, and flooding caused by the build-up of floodwaters surrounding Blackwattle Ln.

Flows within Mountain St are generally shallow and fast moving, however at the intersection of Mountain and Smail St, depths increase, and velocities slow as the overland flows join the ponded waters within Smail St.

Flows along the northern boundary, within Smail St are minor and contained within the kerb.

Flood hazard is high along Mountain Street due to the high flood velocities but is generally low hazard otherwise.

Figure 6 1% AEP Existing Flood Event



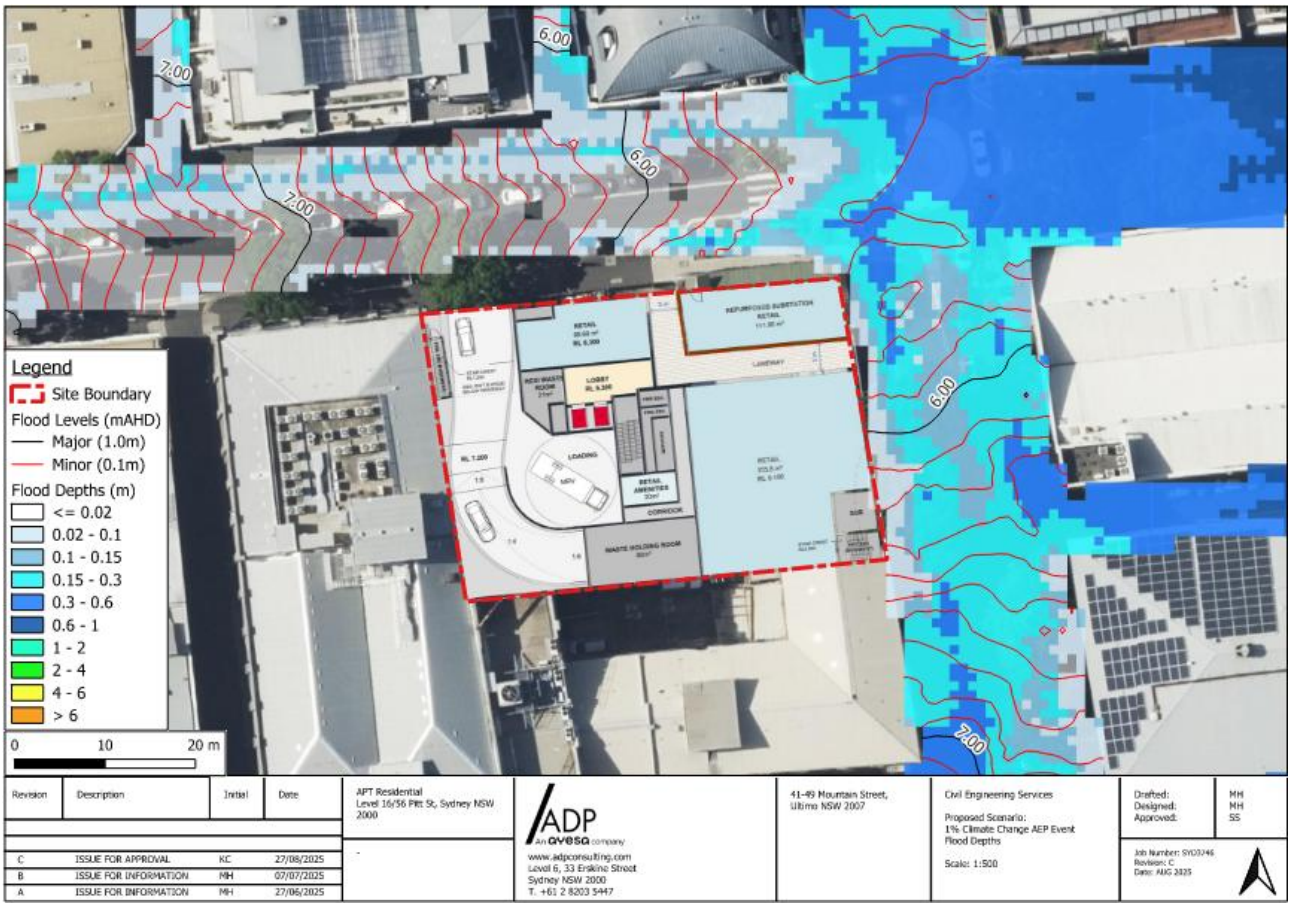
3.2 Flood Strategy

As flows are contained within the streets, the proposed development aims to mimic this behaviour while protecting the development from floodwaters. To protect the proposed development, ADP proposes all access points along Mountain St to be above 1% AEP top water levels to maintain this behaviour.

3.3 Proposed Flood Behaviour

As the floodwaters are fully contained within the street during existing and proposed flood scenarios and no works are proposed outside the site boundary, there are no changes between existing and proposed flood behaviour.

Figure 7 1% AEP Proposed Flood Event



3.3.1 Flood Planning Area and Levels

The Flood Planning Area (FPA) identifies the land that is subject to flood related controls, and the Flood Planning Level (FPL) is the minimum floor level applied to developments within the FPA.

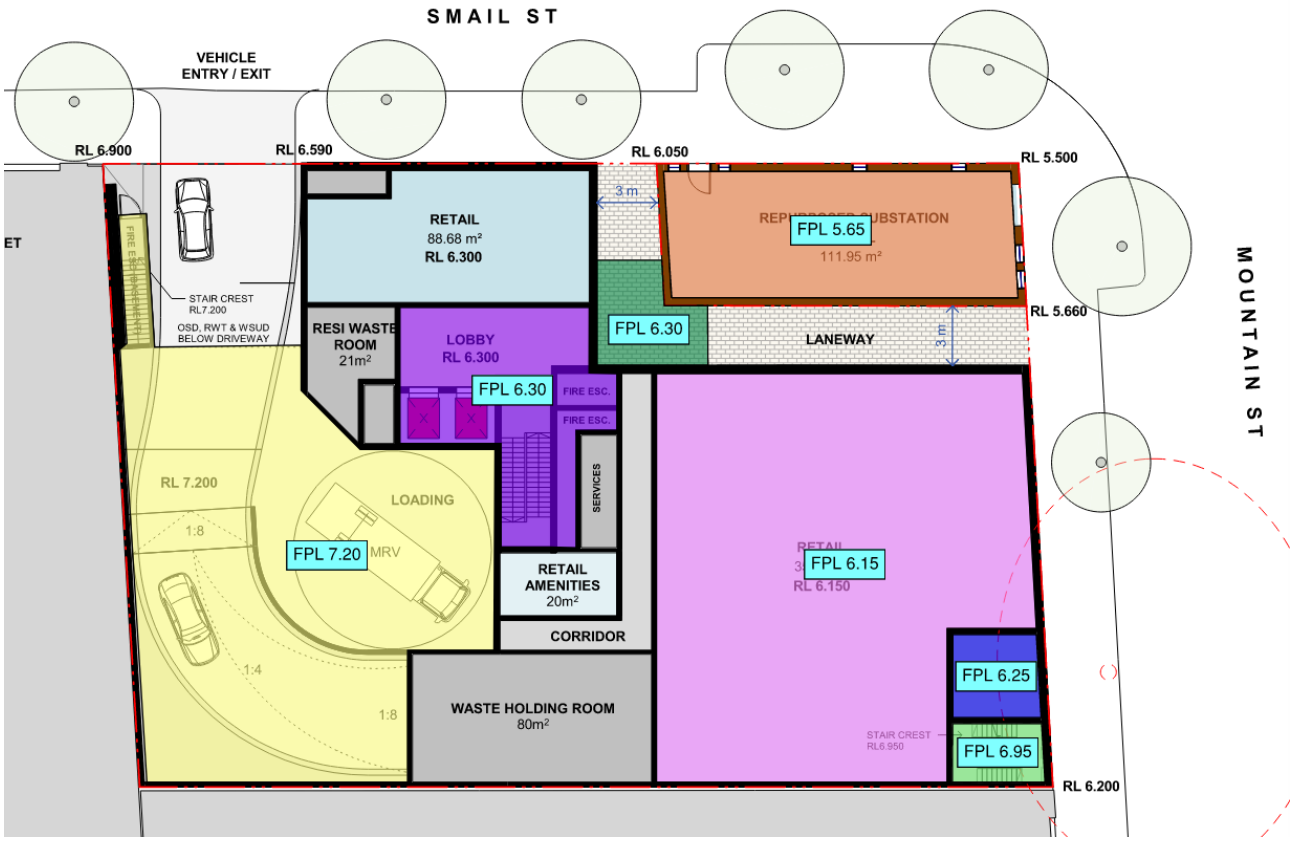
The Floodplain Development Manual Appendix K and City of Sydney DCP generally recommend that the FPL to be the 1% AEP + 0.5m freeboard. The below controls apply to the proposed site, and the proposed architectural plans have been deemed acceptable, see figure below for required FPLs across the development.

- Retail FFL = 1% AEP
- Habitable FFL = 1% AEP + 500mm freeboard
- Basement Entry = 1% AEP + 500mm freeboard or PMF (within floodplain)
  or 300mm above surrounding ground levels (outside floodplain)

The proposed laneway/through site link shall be ramped up to be flush with proposed finished floor levels and will therefore be flood free.

The existing substation building is to be retained, with proposed works to be internal repurposing only. The repurposed building is to be waterproofed to the 1% AEP flood level and flood barriers provided, should the existing FFL be below the FPL.

Figure 8 Required FPLs



4. Shelter-in-place

The flooding experienced by the proposed site occurs within 6 hours and is therefore defined as flash flooding. The lack of lead time to the flood event does not allow for the safe notice and evacuation of the site before floodwaters impact the development. Therefore, establishing safe shelter locations that can be accessed during peak flood levels is essential.

As the surrounding area consists of highly urbanised developments, floodwaters are largely conveyed through the streets. This concentration of flows leads to higher flood hazards within any potential egress routes from the proposed site. These high hazard floodwaters inundate the site for approximately 40 minutes.

Occupants should therefore shelter-in-place within the residential floors above the ground floor unless otherwise advised by emergency services. To facilitate this shelter-in-place strategy, the proposed development is to be designed to withstand the flood and debris forces of the PMF flood and residential floors are to be located above PMF levels. These measures are in line with the shelter-in-place considerations from the Department of Planning, Housing and Infrastructure.

4.1 Flooding Emergency Response Strategy (FERS)

The FERS sets out the potential consequences of flooding, the time at which action should be taken to evacuate and the procedures to be followed in a possible flood event. The FERS should be provided as part of the contract for all development lots and should be conditioned to be mounted in prominent locations throughout the future development where it can be seen by the occupants/patrons (for example; in hallways, the garage, where medical provisions are kept, electrical switchboard box, etc...) The FERS outlines that the occupants to move outdoor equipment, garbage, chemicals and poisons to higher locations and also plan which indoor items they will raise or empty if water threatens the home (e.g. freezers and refrigerators), check their emergency kit and safeguard their pets. They need to communicate with friends, family and neighbours about their plans etc. The FERS also describes what should be done after a flood event. A copy of the FERS for the development should be used as a guideline for the occupants/patrons as they may wish to adjust some of the items included in the document.

Flood indicators are to be located around the site to act as an early warning sign to potential rising floodwaters.

4.1.1 Procedure In Case of Flooding

1. Flood information including 'Flood Watches' and 'Flood Warnings' issued by the Bureau of Meteorology (BOM), road closures and advice on evacuations and property protection will be updated on the BOM website (http://www.bom.gov.au/nsw/warnings/), broadcast over ABC, other national, state and local radio stations. The ABC is the Emergency Services Broadcaster.
2. The NSW SES issue Flood Bulletins to radio stations which inform people about what is expected to happen during flooding. SES Flood Bulletins provide information on likely flood consequences and what actions are required to protect yourself and your property. Radio stations are asked to read the Flood Bulletin 'word for word' over a period of time.
3. Other ways you may be informed of possible flooding is through doorknocking by emergency services, through word of mouth or the SES may issue an Emergency Alert. An Emergency Alert is a message that is sent to your landline or mobile phone as a voice or text message. The SES advises people to always follow instructions given by the emergency services and make sure neighbours, family friends are aware of possible flooding.

IN THE EVENT THAT THE STATE EMERGENCY SERVICES HAS NOT PROVIDED AN EMERGENCY ALERT MESSAGE OR ARE UNABLE TO BE CONTACTED, THE FOLLOWING INSTRUCTIONS SHOULD BE FOLLOWED. HOWEVER, ANY MESSAGE AND INSTRUCTIONS RECEIVED BY STATE EMERGENCY SERVICES SHOULD GOVERN THE TRIGGER LEVELS OUTLINED BELOW.

4.1.2 Basic Preparedness

Issuing of Severe Weather Alert for Sydney metropolitan area by BOM. If it is anticipated that evacuation will be necessary, place any items of value (e.g. electrical goods, personal belongings, medical supplies) in an elevated area such as on top of desks/tables/benches.

4.1.3 Additional Risk Factors

4. During floods many local and major streets and roads may be cut off by floodwaters that may make the escape by vehicle extremely difficult. Travelling through floodwaters on foot or in a vehicle can be very dangerous as obstructions can be hidden under the floodwaters, or you could be swept away, even if in a car, or the water may be polluted. It is recommended to stay within the evacuation centres as much as practical as this is the safest option.
5. In the unlikely event that flood waters have risen up to the building, do not evacuate the building at this time unless instructed to do so by the SES or the Police. Floodwaters are much deeper, run much faster and are more dangerous outside. Any disabled person/s should be assisted and moved to the nominated level in the building as outlined above.
6. In the case of a medical or life threatening emergency ring '000' as normal, but explain about the flooding.
7. Stay tuned on a battery powered radio for official advice and warnings
8. Don't return home until authorities have said it is safe to do so
9. Stay away from drains, culverts and water over knee-deep
10. Do not turn on gas and electricity until it has been checked by a professional/licensed repairer.
11. Avoid using gas or electrical appliances which have been in flood water until checked by for safety by a suitably qualified person.
12. Take photos for insurance purposes.

4.1.4 After The Flood

Stay tuned to your local ABC Radio station on a battery powered radio for official advice and warnings

• Don't return home until authorities have said it is safe to do so

• Don't allow children to play in or near flood waters

• Avoid entering flood waters, it is dangerous. If you must, wear solid shoes and check depth and current with a stick

• Stay away from drains, culverts and water over knee-deep

• Don't turn on your gas and electricity until it has been checked by a professional/licensed repairer

• Avoid using gas or electrical appliances which have been in flood water until checked for safety

• Boil tap water until supplies have been declared safe

• Watch for trapped animals

• Beware of fallen power lines

• Take many photos for all damage for insurance purposes

• Notify family and friends of your whereabouts

Table 4 Important Phone Numbers

Contact	Important Phone Numbers
State Emergency Service	Emergency 132 500 General Enquires: 4251 6111
Police, Fire, Ambulance	Emergency 000
Bureau of Meteorology (Website)	http://www.bom.gov.au/weather
Land, Weather and Flood Warnings	1300 659 215
Inner West Council	02 9265 9333
Manager	
Strata Manager	
Other	

5. Conclusion

This Flood Impact Risk Assessment (FIRA) has been prepared to support the Planning Proposal of the lots at **41-49 Mountain Street**, Ultimo NSW 2007 from Mixed Use (MU1) to an appropriate zone to enable residential development with mixed use ground floor.

The proposed site lies within the Blackwattle Bay catchment and is covered by several existing Council Flood Studies. The inputs and results of these studies have informed a flood study covering the total proposed site. Using DRAINs for hydrological modelling and TUFLOW for hydraulic modelling, allowing for the assessment of the full range of flood events (10%, 5%, 1%, 0.5% and 0.2% AEP events as well as the PMF). Climate change has also been assessed as part of the design considerations under the 2090, SSP2-4.5 scenario.

The development was analysed against the City of Sydney DCP Flood Controls and relevant provisions applied to the proposed development. The development has been deemed acceptable under these controls and no impacts on adjoining properties have been identified.

A flood evacuation response strategy has been developed for the development. Occupants are unlikely to be able to evacuate before floodwaters impact the site. Therefore, a shelter-in-place strategy has been proposed, with the proposed development to provide habitable floors above the PMF level.

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Appendix A
Survey

MGA NORTH

N

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geosurv
with you from beginning to end
Level 1/11 Montgomery St, Kogarah NSW 2217
1300 554 675 | infol@geosurv.com.au

CLIENT

APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

NOTES

1. (P) SUBSTATION PREMISES - No. 35658 - Name: *ST. BARNABAS KETTLE* (GROUND FLOOR)
(R) RIGHT OF WAY 1.16 WIDE, 1.175 WIDE, 2.115 WIDE AND 2.125 WIDE
(E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⊐
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY &
DETAIL SURVEY
PLAN

REV.	DESCRIPTION	DATE
A	SUI, boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	18.09.24
C	New SUI Survey added for Issue	10.01.25

QUALITY ASSURANCE

Surveyor	Douglas Hepburn	Date of Survey	29.11.24
Checked by	Daniel Hudson	Date	10.01.25
Approved by	Marnus Streak	Date	10.01.25
Drafter	Amanda Santos	Date of Plan	10.01.25

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1:200

0 4 8 12 16 20
GRAPHIC SCALE:
1:200

Type of Survey	SUI, BOUNDARY & DETAIL SURVEY	Sheet	Page 1 of 11
Job Number			Current Revision
ASP240496-SUI-DS-BDY-03[C]			C

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Appendix B
Proposed Works

928

PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

GROUND FLOOR
S12603
1 : 200 @ A3

Drawing no. PP03.00
Rev. A

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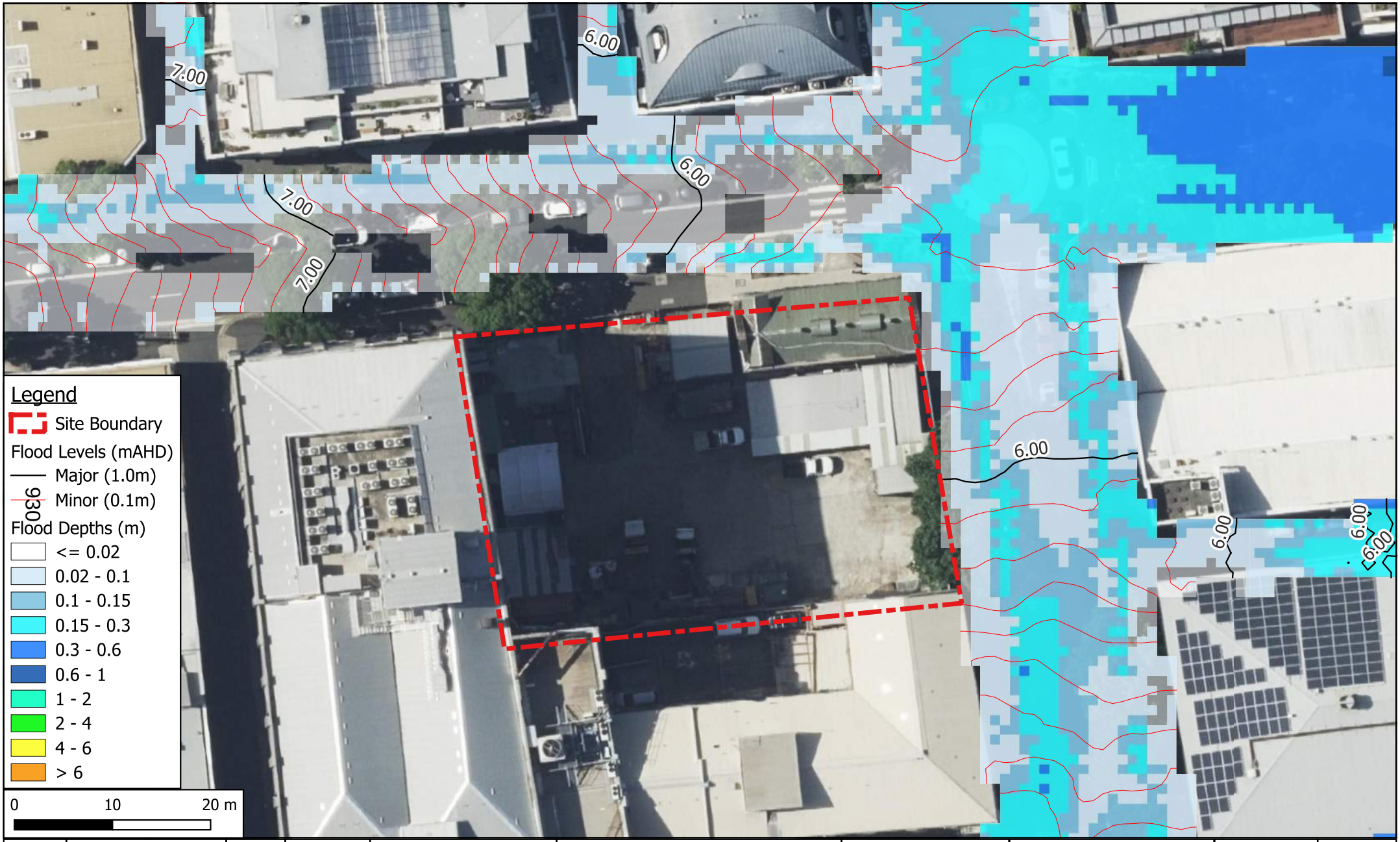
Consulting : Engineering

Appendix C
Flood Maps



Revision	Description	Initial	Date
A	ISSUE FOR APPROVAL	KC	27/08/2025

APT Residential
Level 16/56 Pitt St, Sydney NSW 2000

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T. +61 2 8203 5447

41-49 Mountain Street,
Ultimo NSW 2007

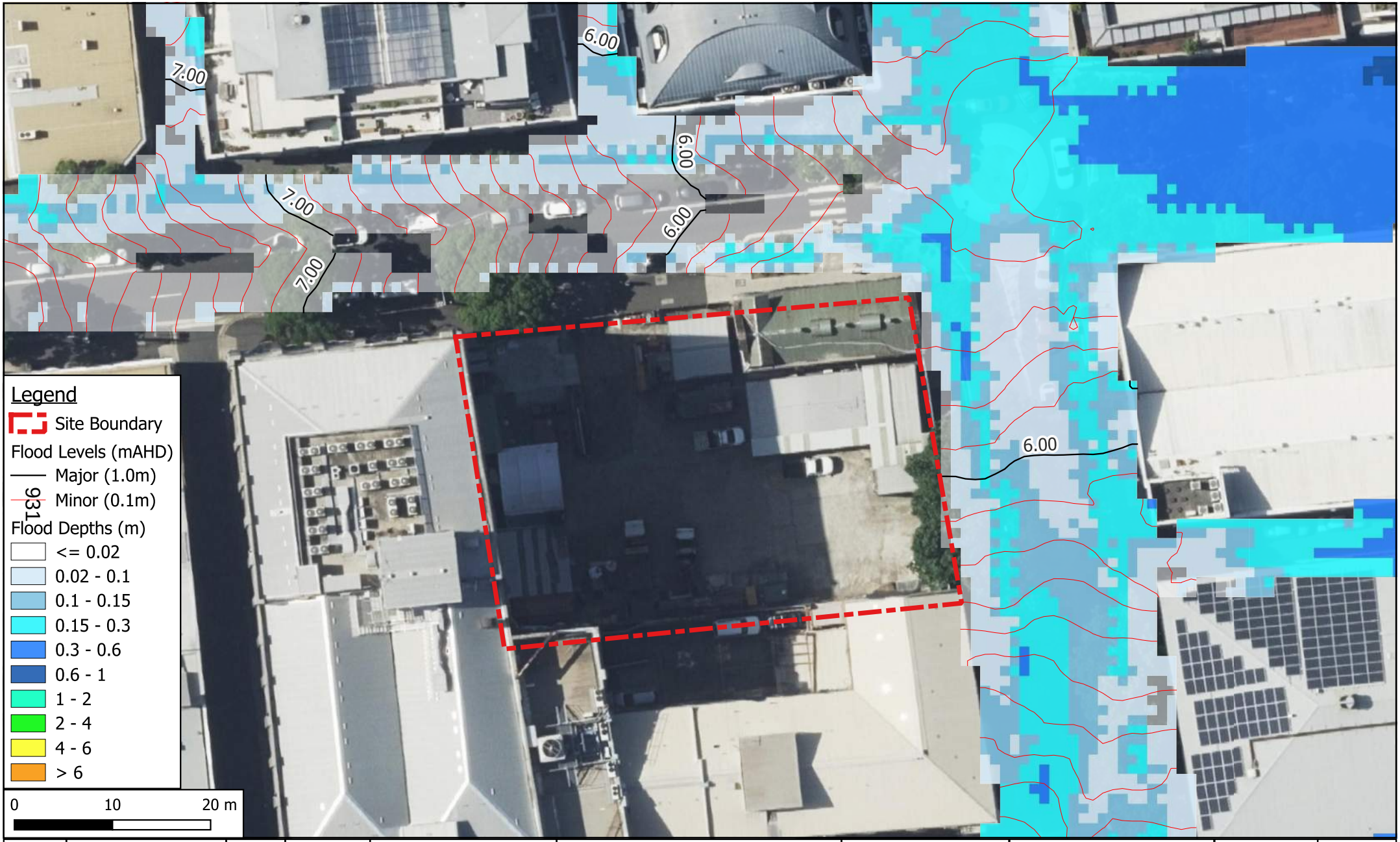
Civil Engineering Services

Existing Scenario:
10% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Ultimo NSW 2007

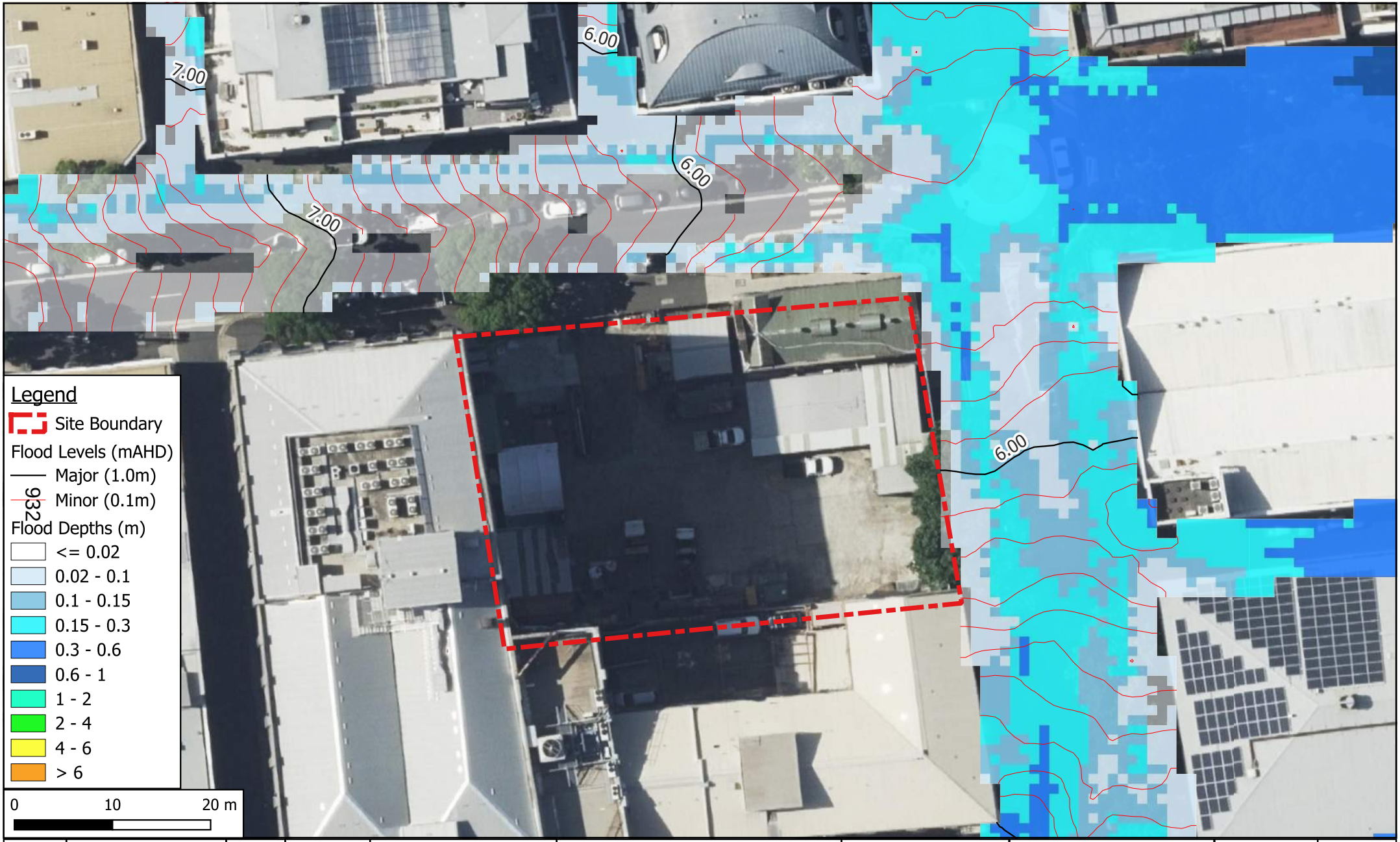
Civil Engineering Services

Existing Scenario:
5% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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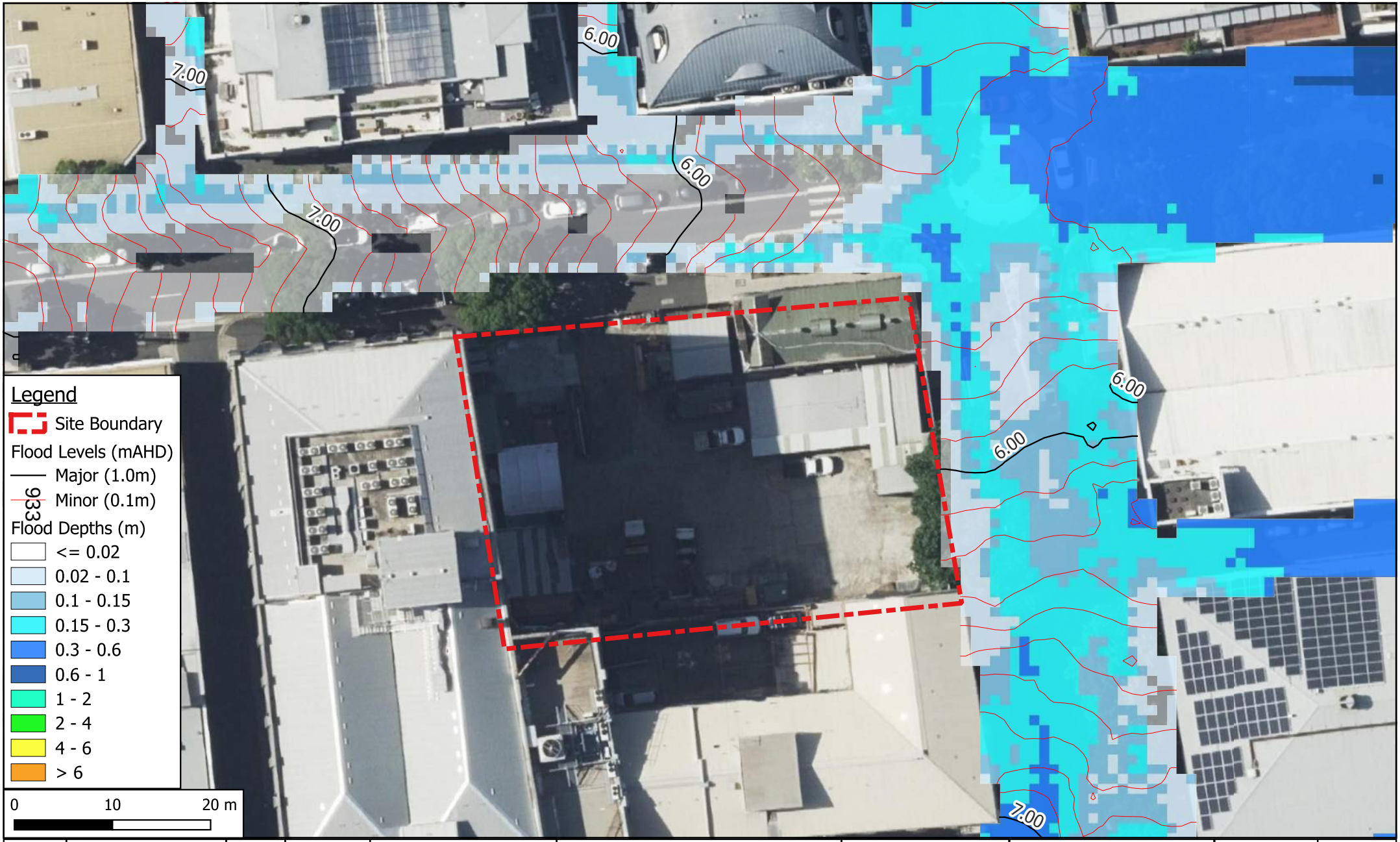
Existing Scenario:
1% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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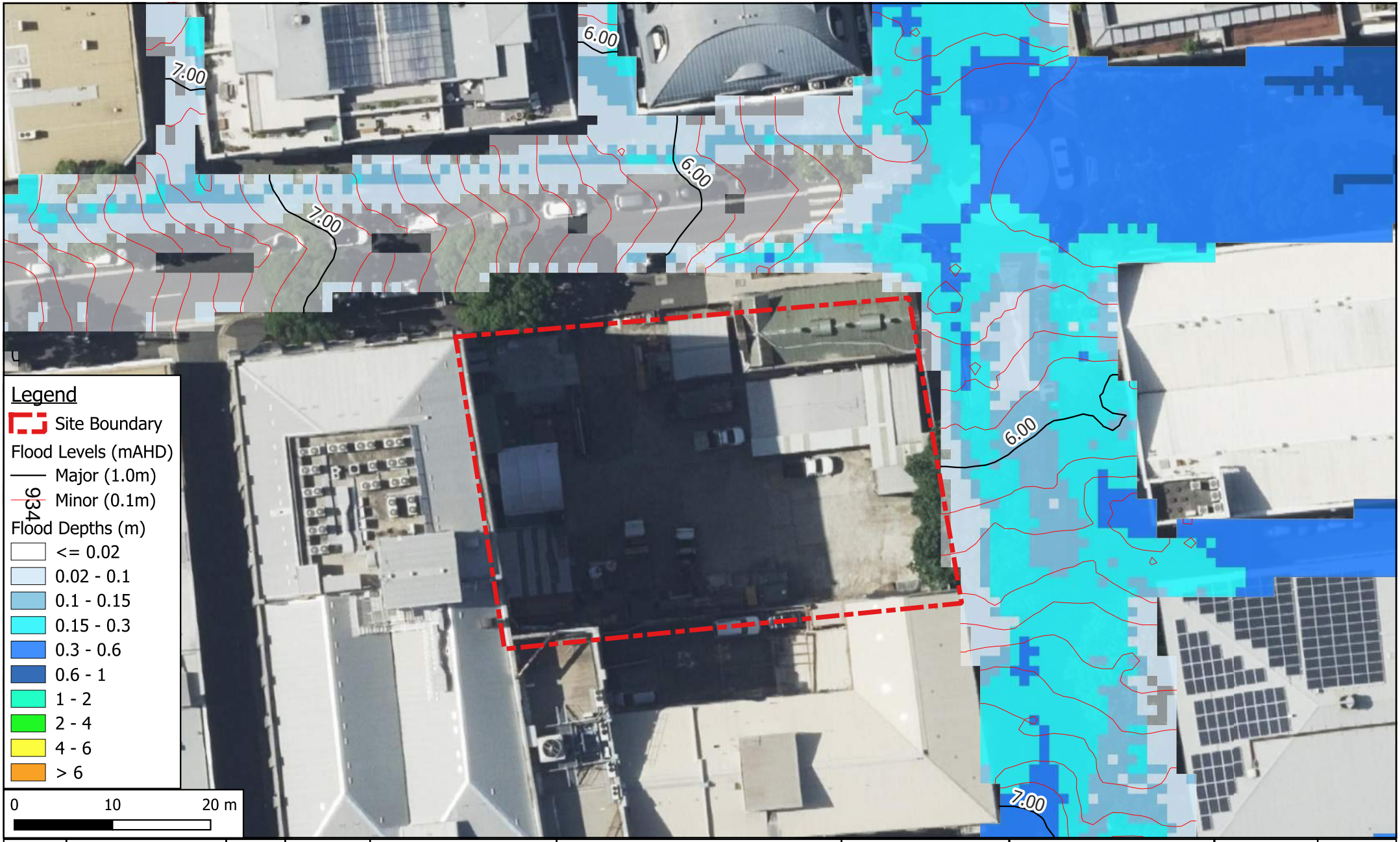
Existing Scenario:
0.5% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Ultimo NSW 2007

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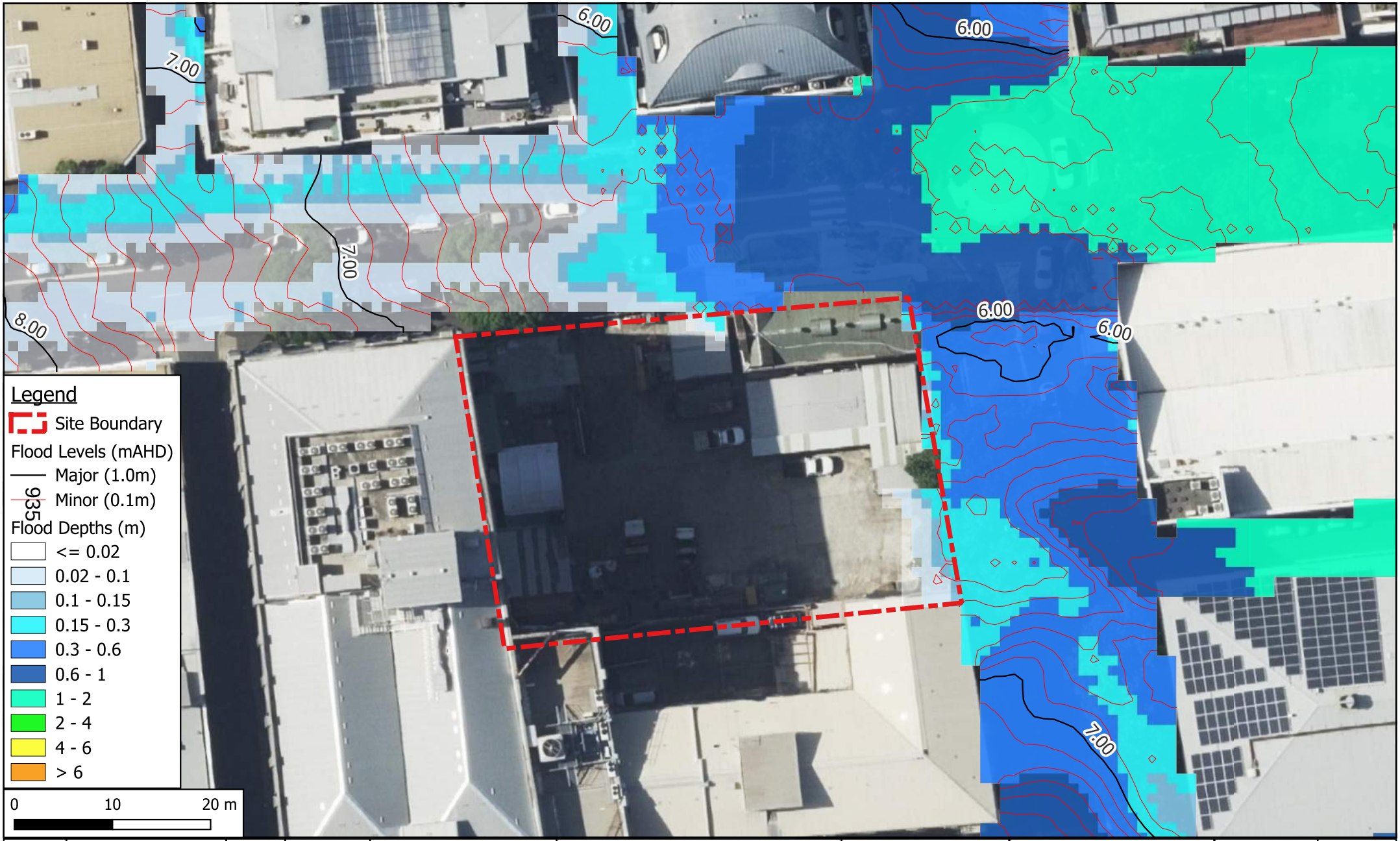
Existing Scenario:
0.2% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Existing Scenario:
PMF Depths

Scale: 1:500

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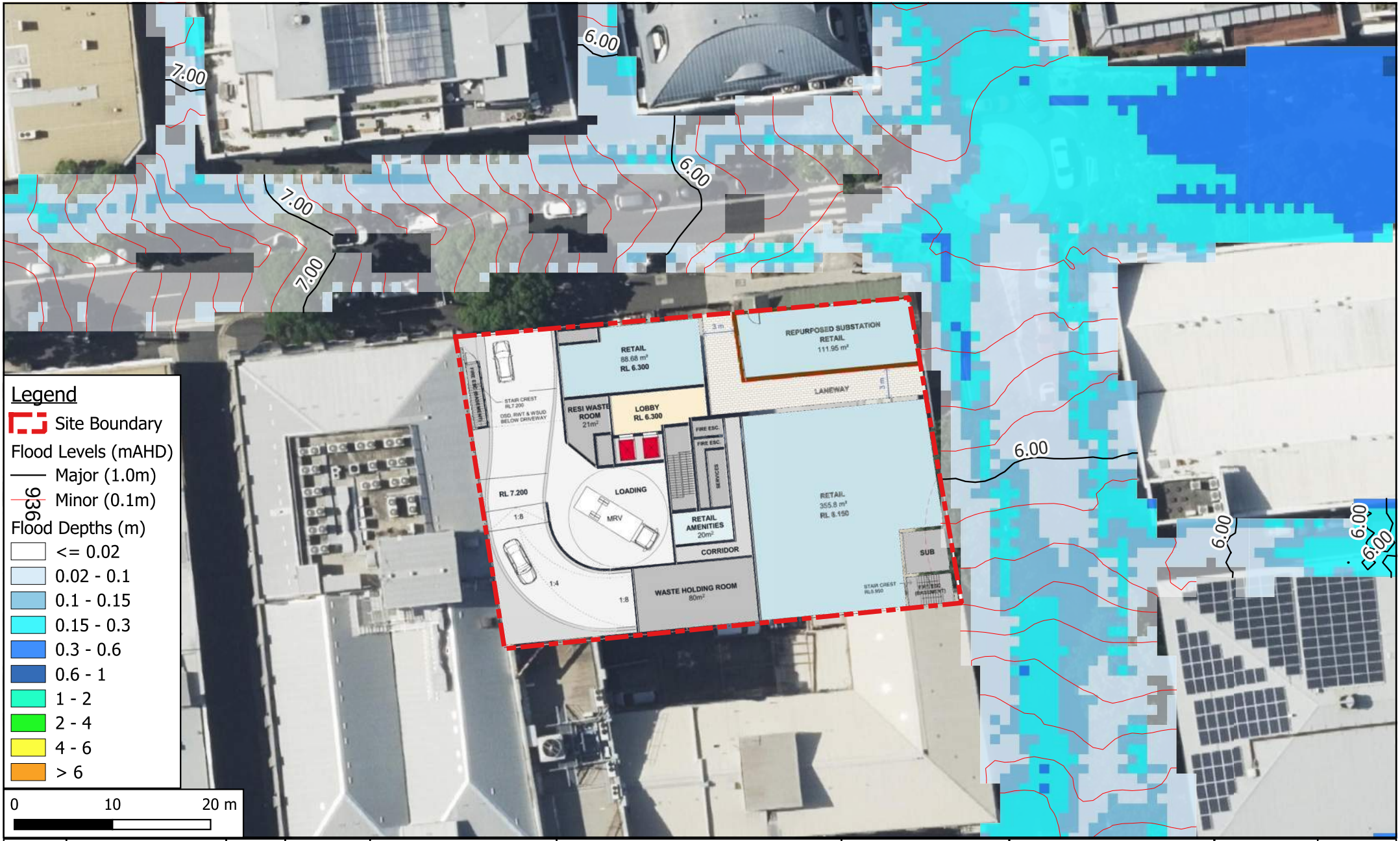
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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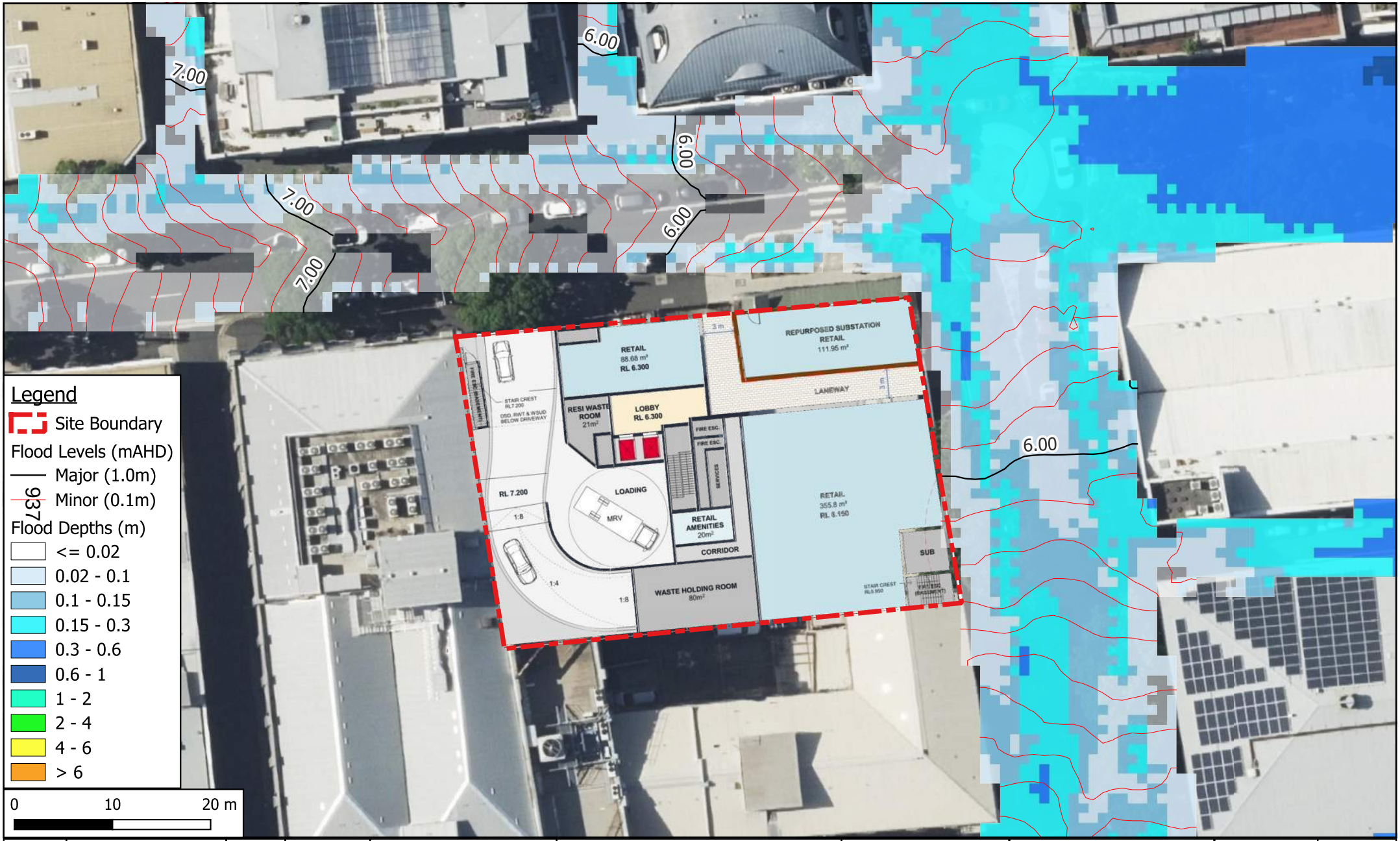
Proposed Scenario:
10% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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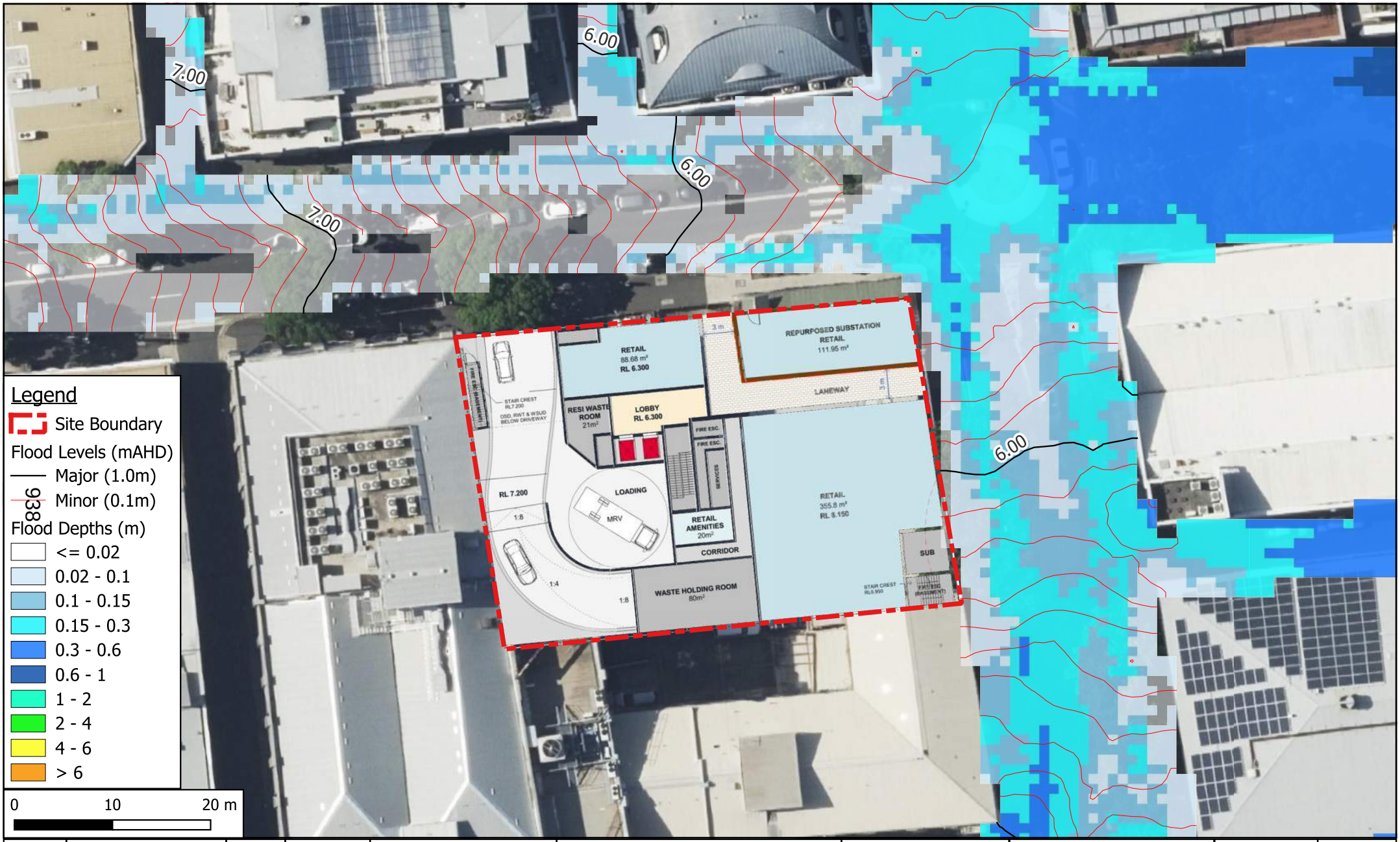
Proposed Scenario:
5% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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C	ISSUE FOR APPROVAL	KC	27/08/2025
B	ISSUE FOR INFORMATION	MH	07/07/2025
A	ISSUE FOR INFORMATION	MH	27/06/2025

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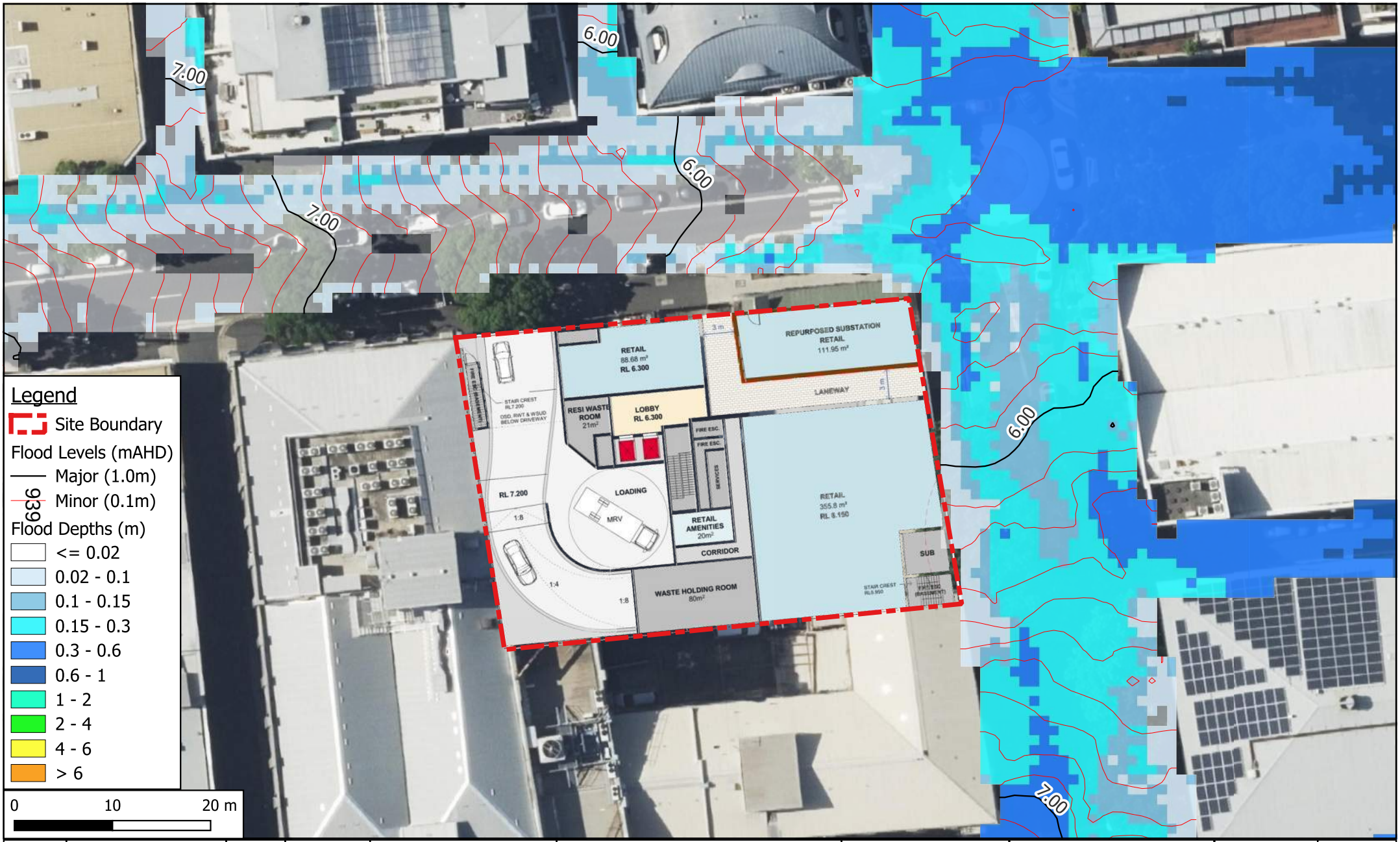
Proposed Scenario:
1% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: C
Date: AUG 2025



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C	ISSUE FOR APPROVAL	KC	27/08/2025
B	ISSUE FOR INFORMATION	MH	07/07/2025
A	ISSUE FOR INFORMATION	MH	27/06/2025

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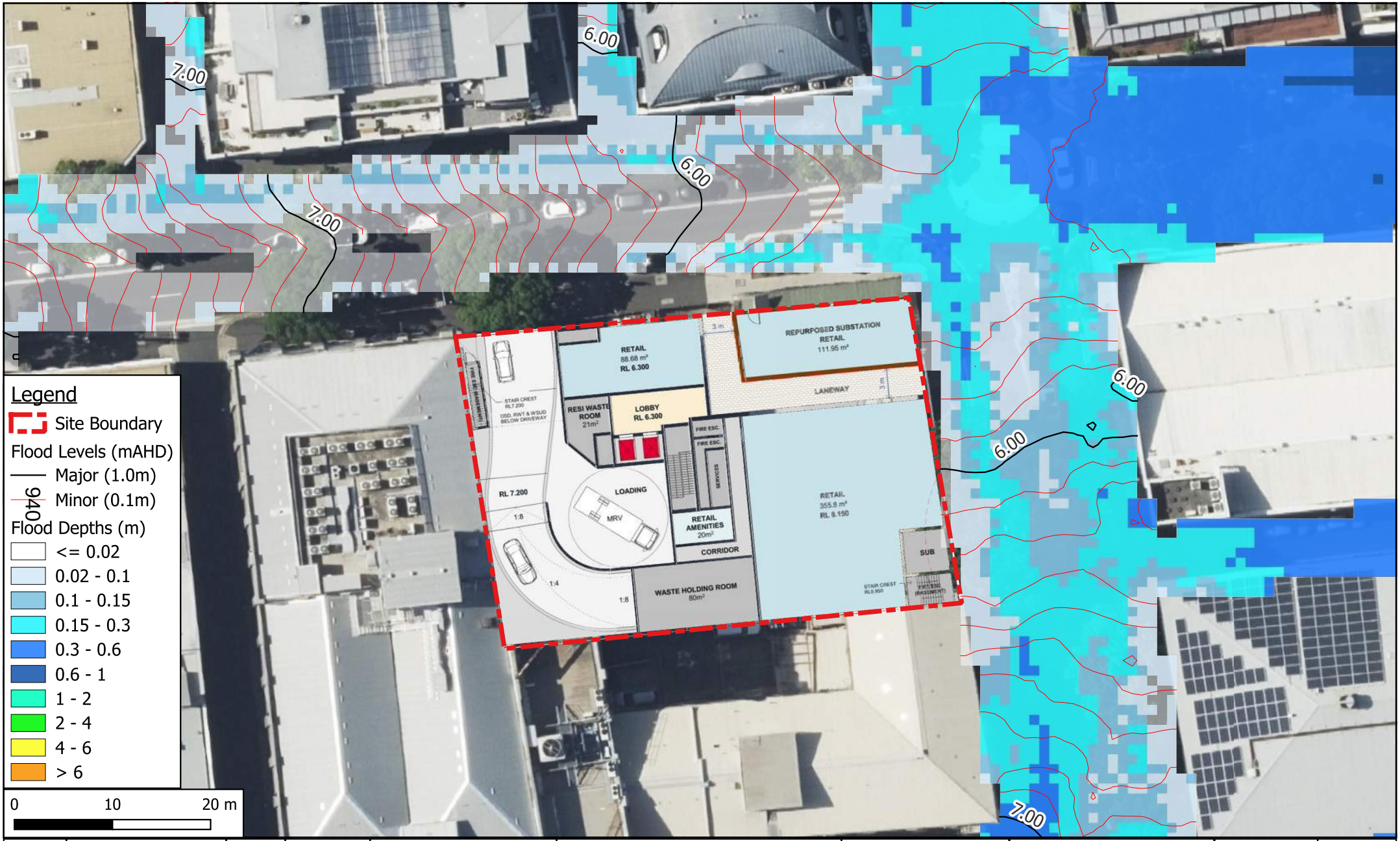
Proposed Scenario:
1% Climate Change AEP Event
Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: C
Date: AUG 2025



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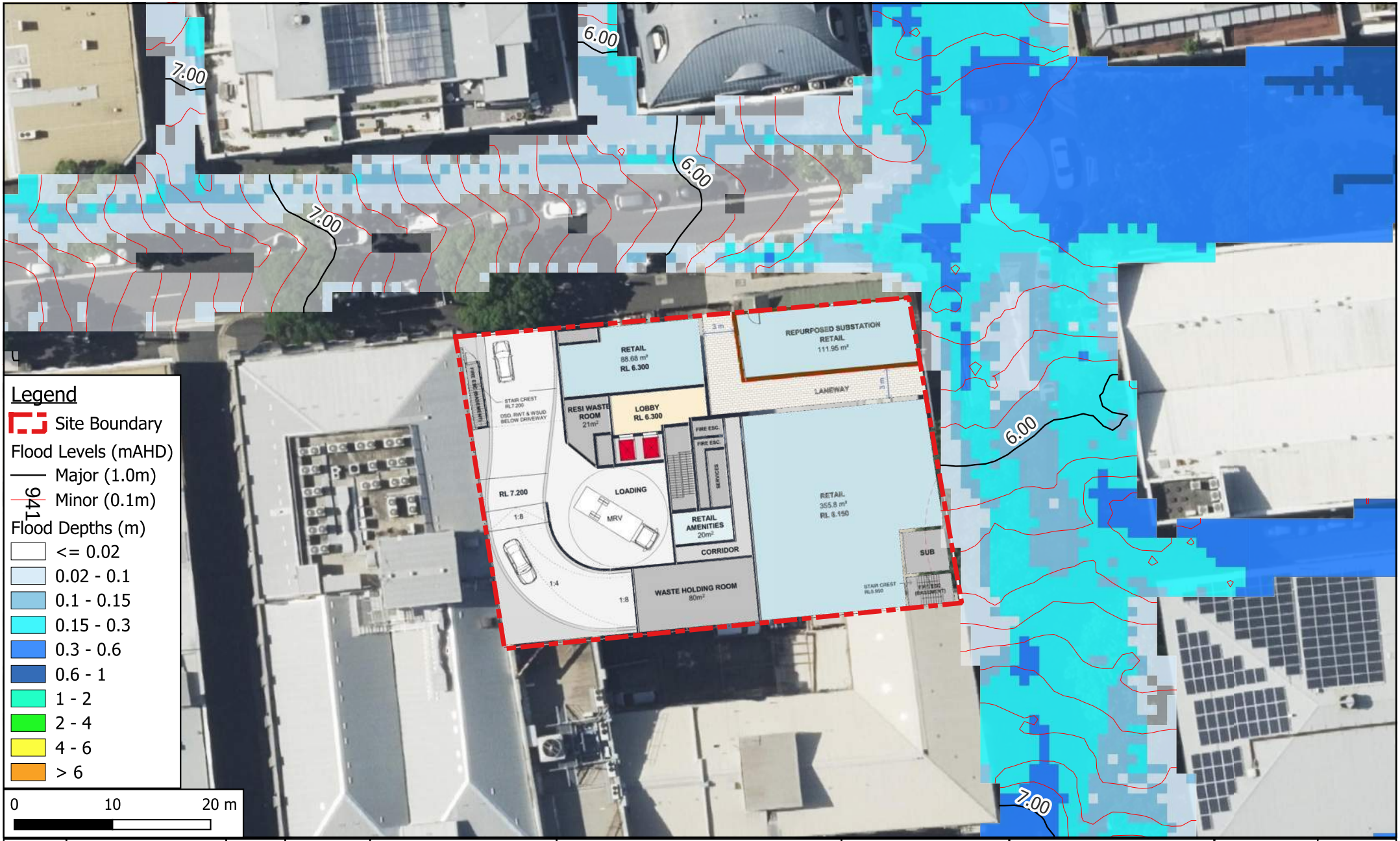
Proposed Scenario:
0.5% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Ultimo NSW 2007

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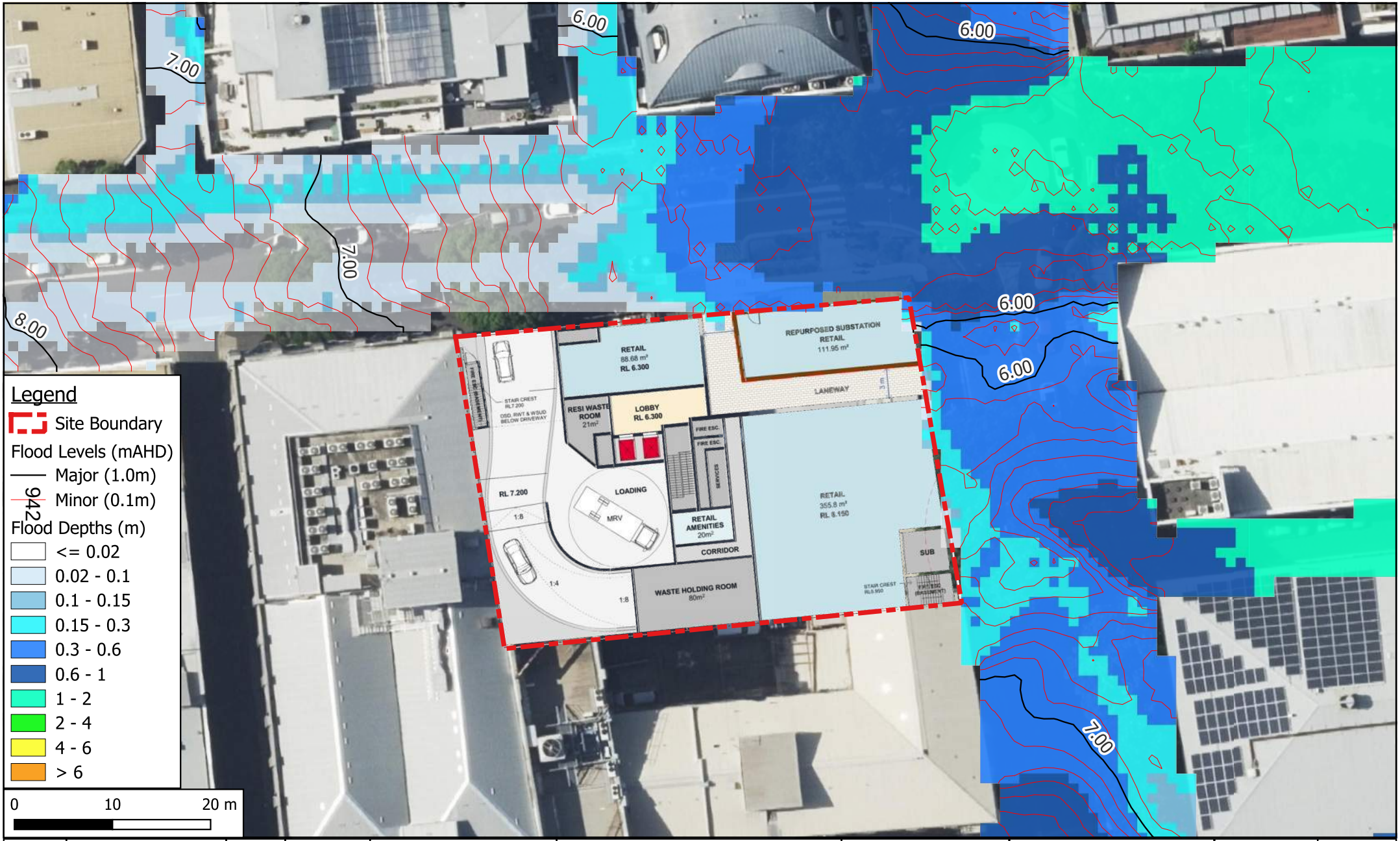
Proposed Scenario:
0.2% AEP Event Flood Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Ultimo NSW 2007

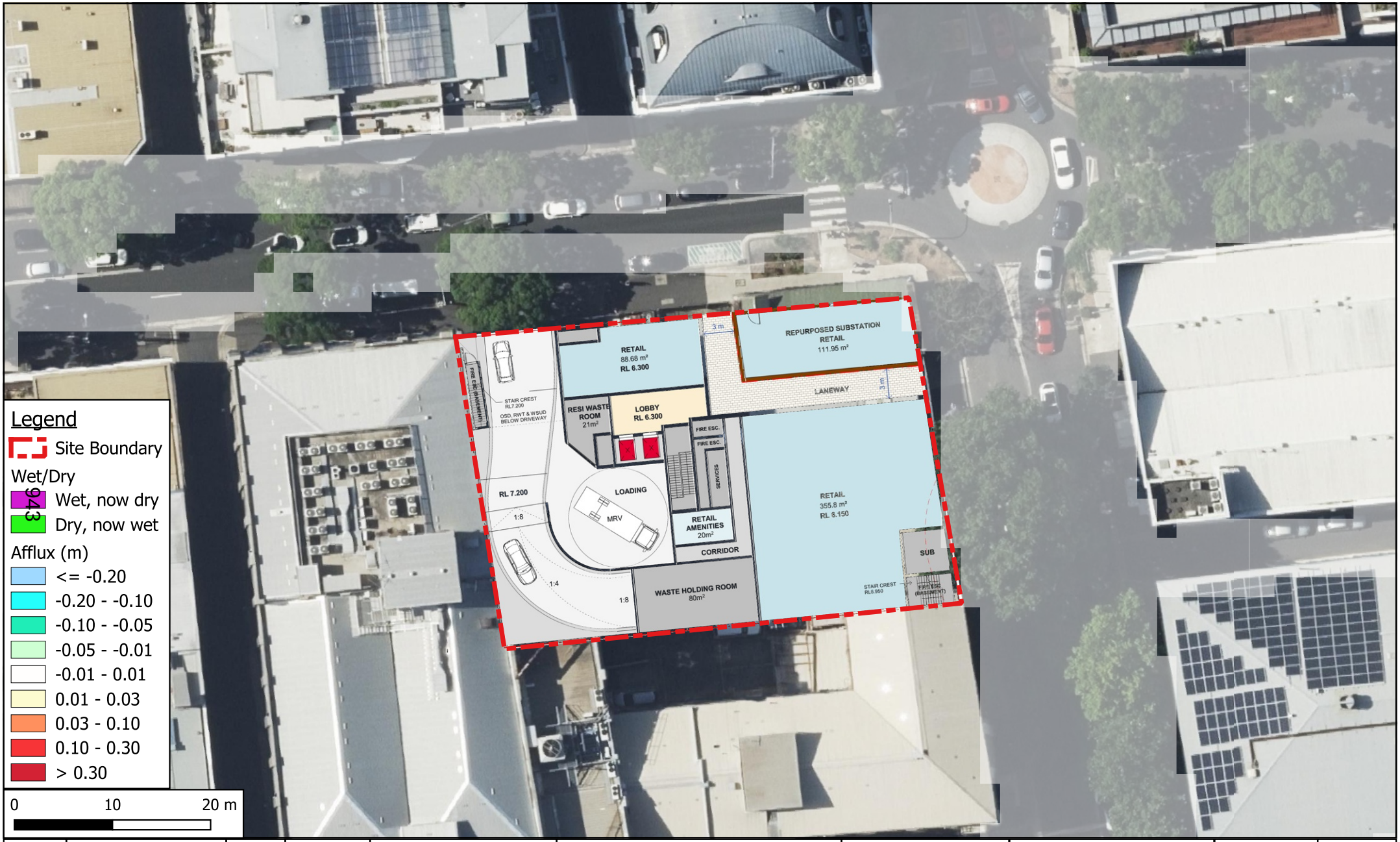
Civil Engineering Services

Proposed Scenario:
PMF Depths

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



Revision	Description	Initial	Date
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Ultimo NSW 2007

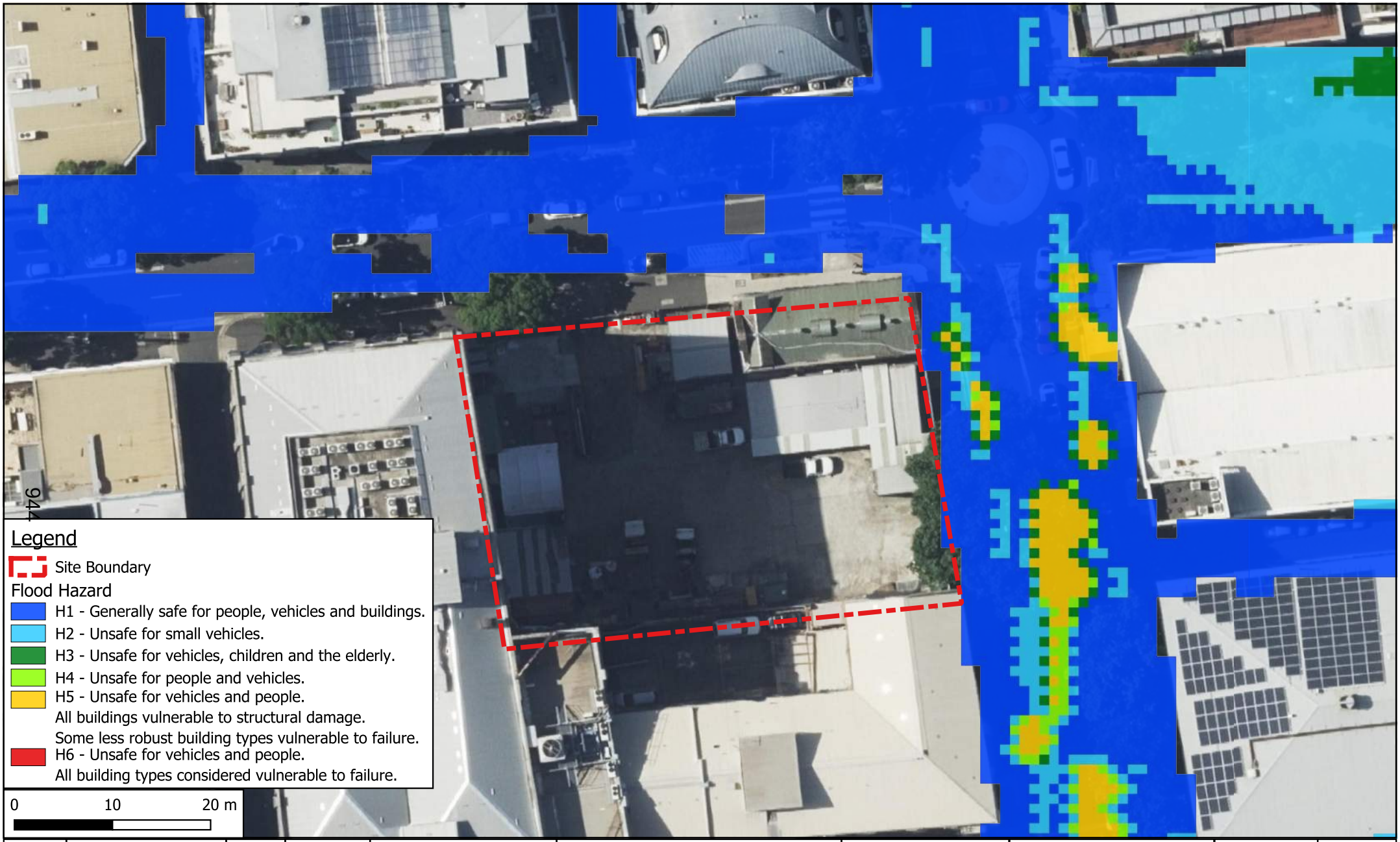
Civil Engineering Services

Proposed Scenario:
1% AEP Event Flood Afflux

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Ultimo NSW 2007

Civil Engineering Services

Existing Scenario:
10% AEP Event Flood Hazard

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
Revision: A
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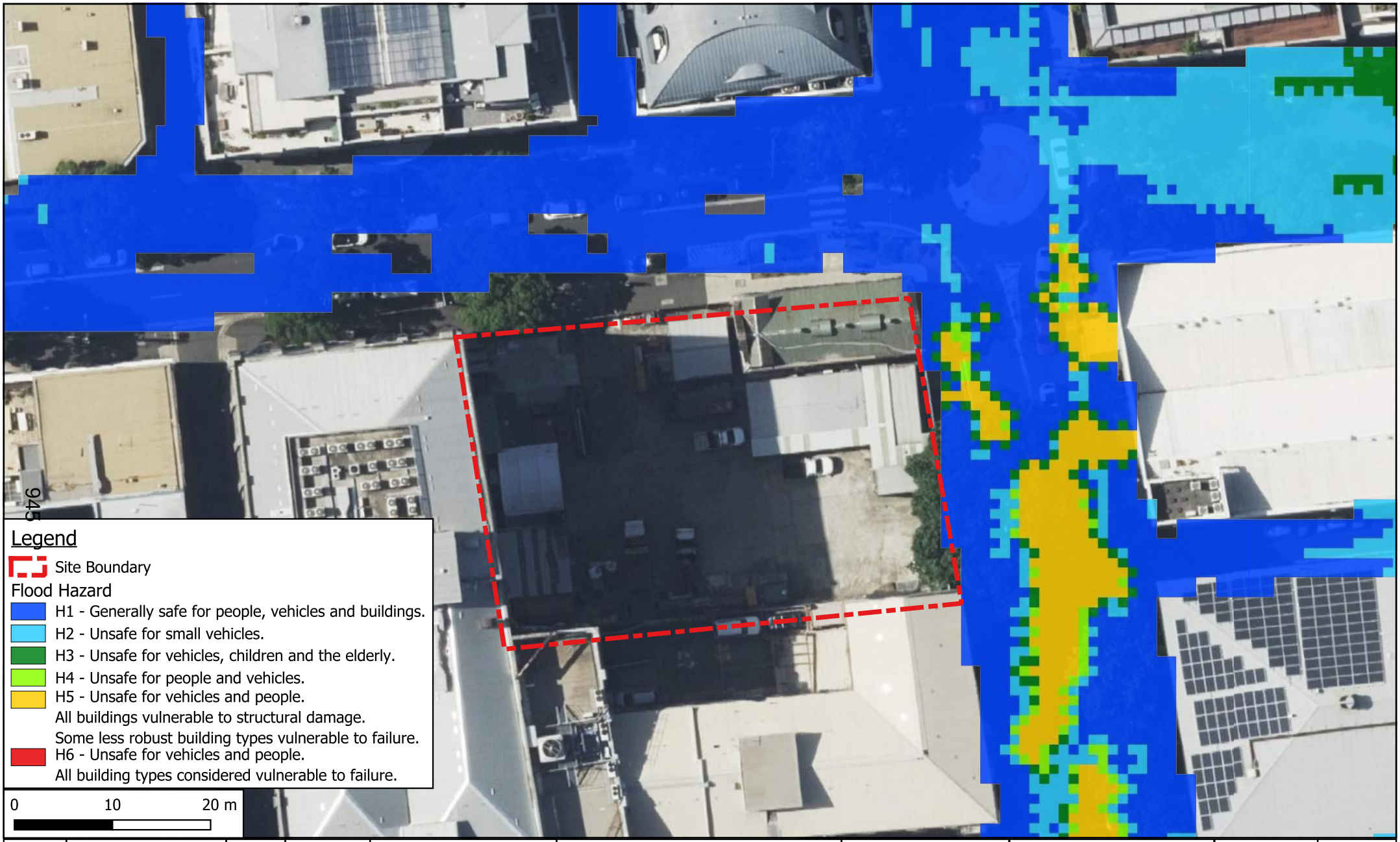

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Civil Engineering Services

Existing Scenario:
5% AEP Event Flood Hazard

Scale: 1:500

Drafted:	MH
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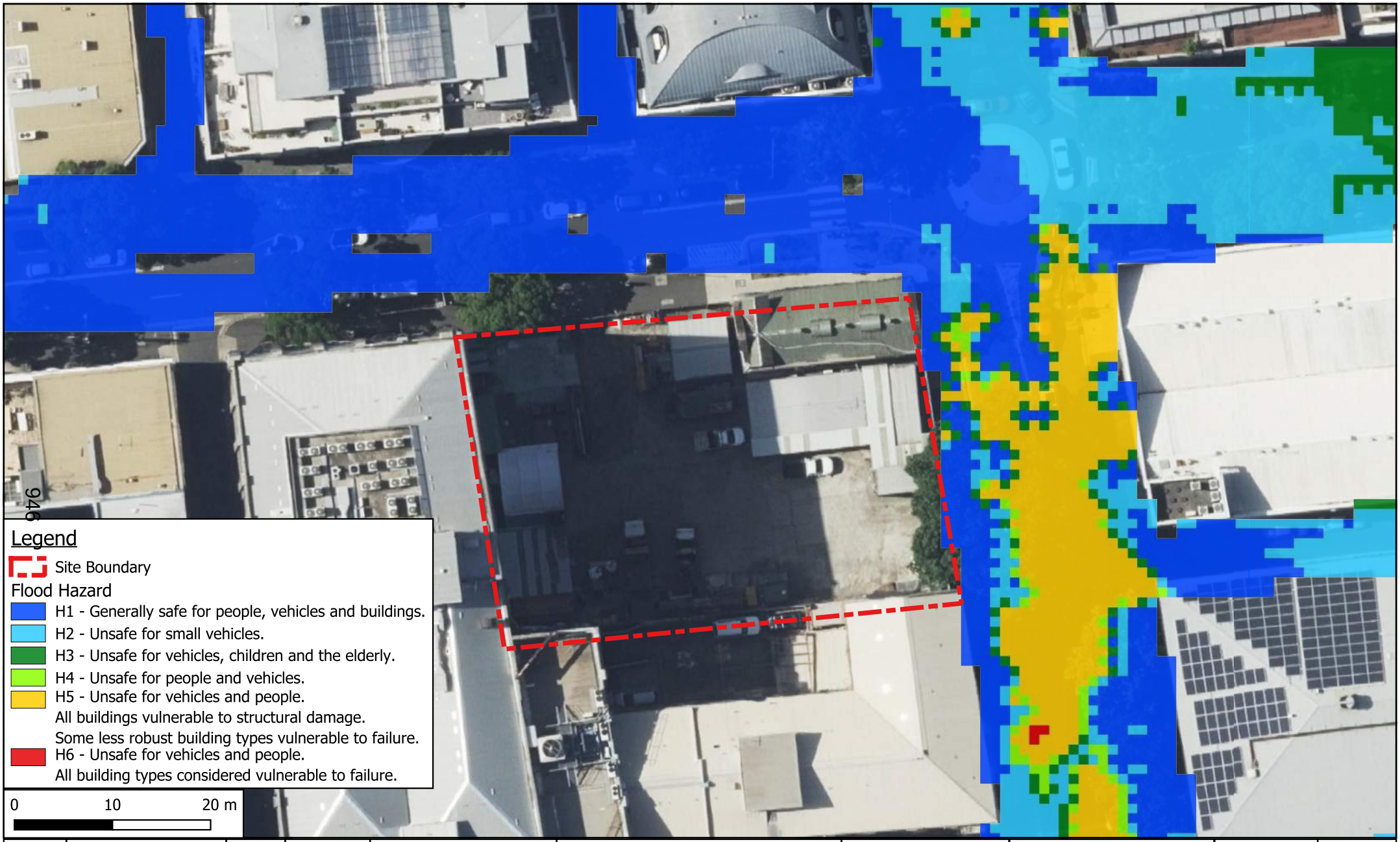
Approved:	SS

Job Number: SYD3746
Revision: A
Date: AUG 2025



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Civil Engineering Services

Existing Scenario:
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Scale: 1:500

Drafted:	MH
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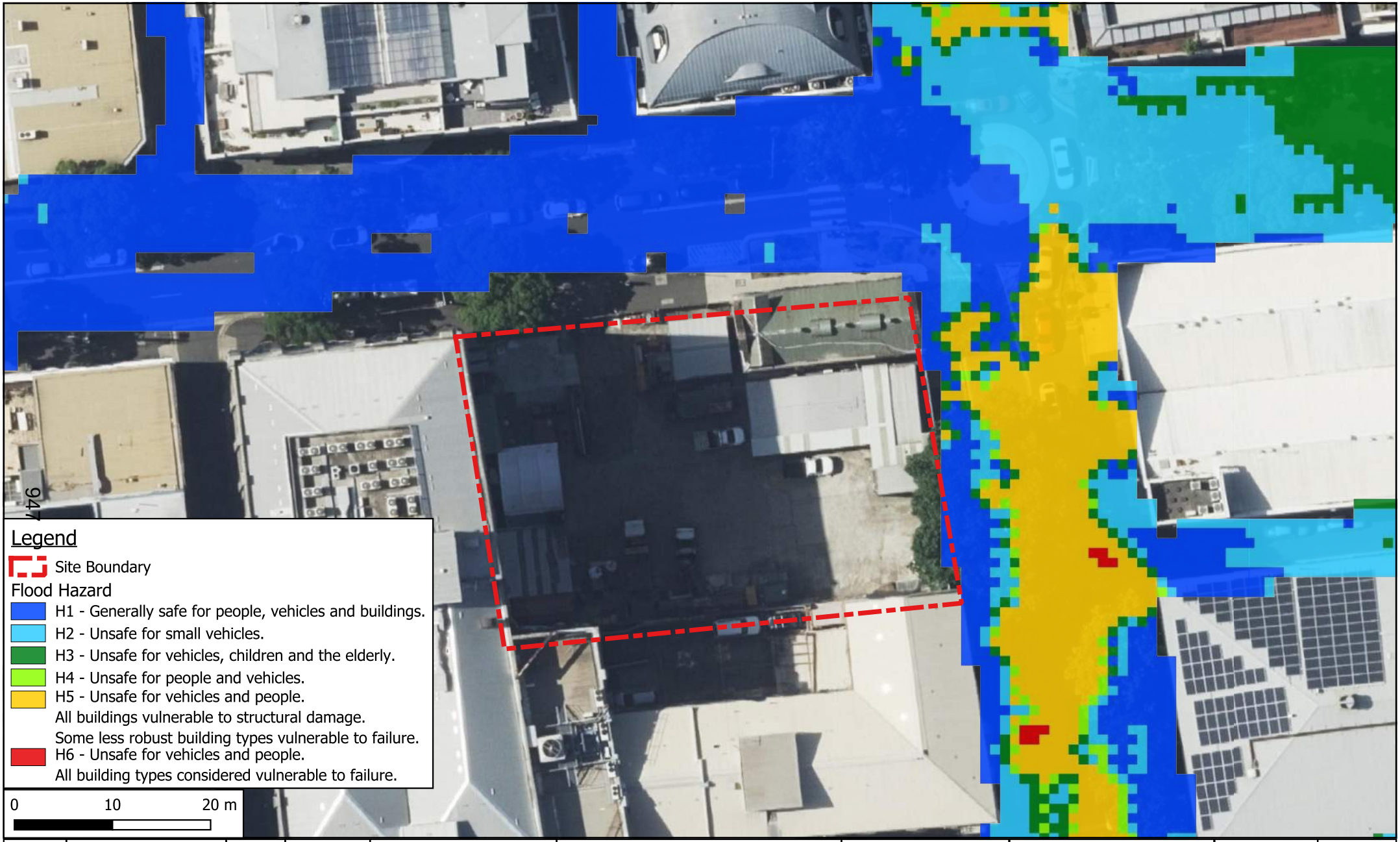

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Civil Engineering Services

Existing Scenario:
0.5% AEP Event Flood Hazard

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
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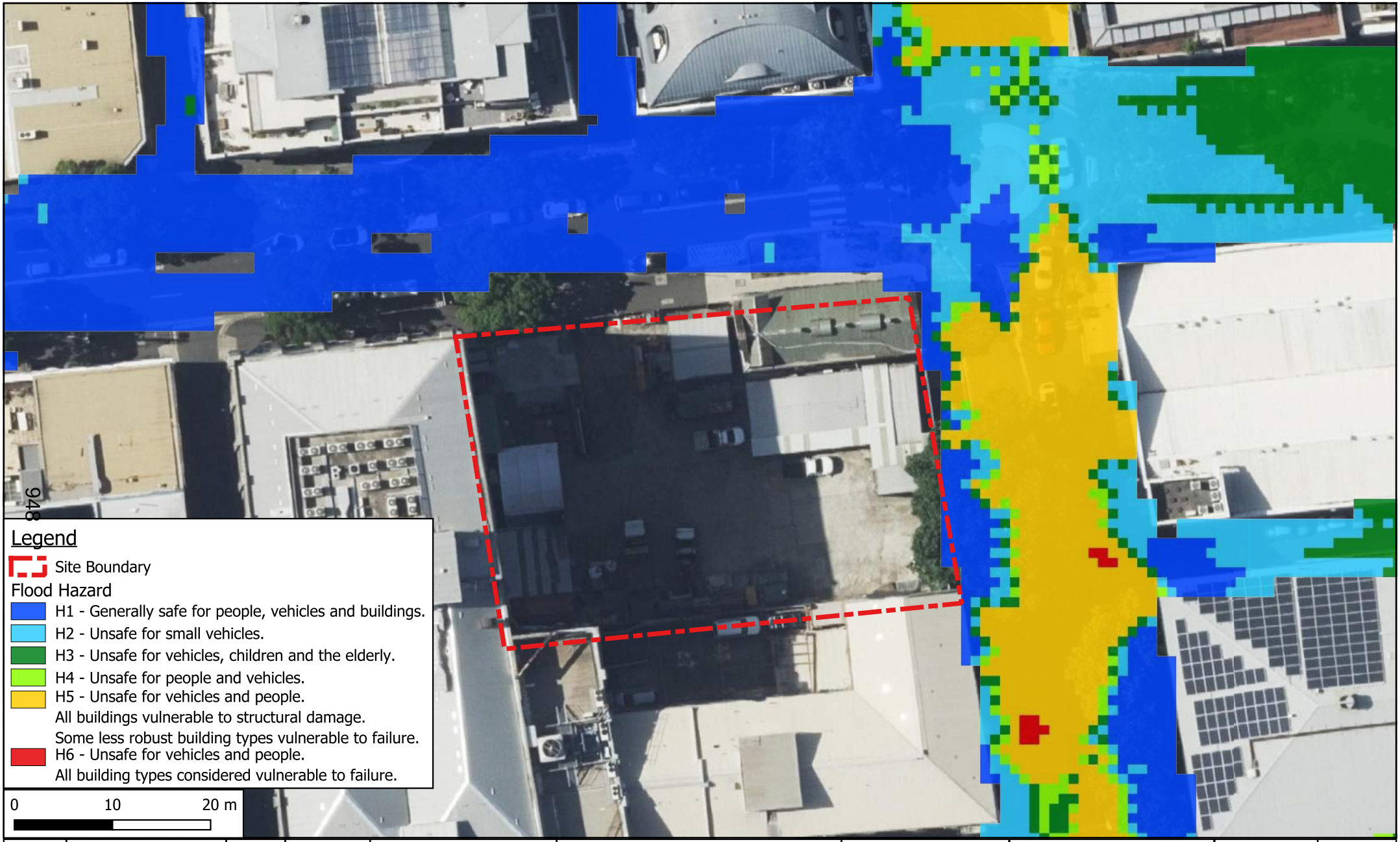

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Ultimo NSW 2007

Civil Engineering Services

Existing Scenario:
0.2% AEP Event Flood Hazard

Scale: 1:500

Drafted:	MH
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Approved:	SS

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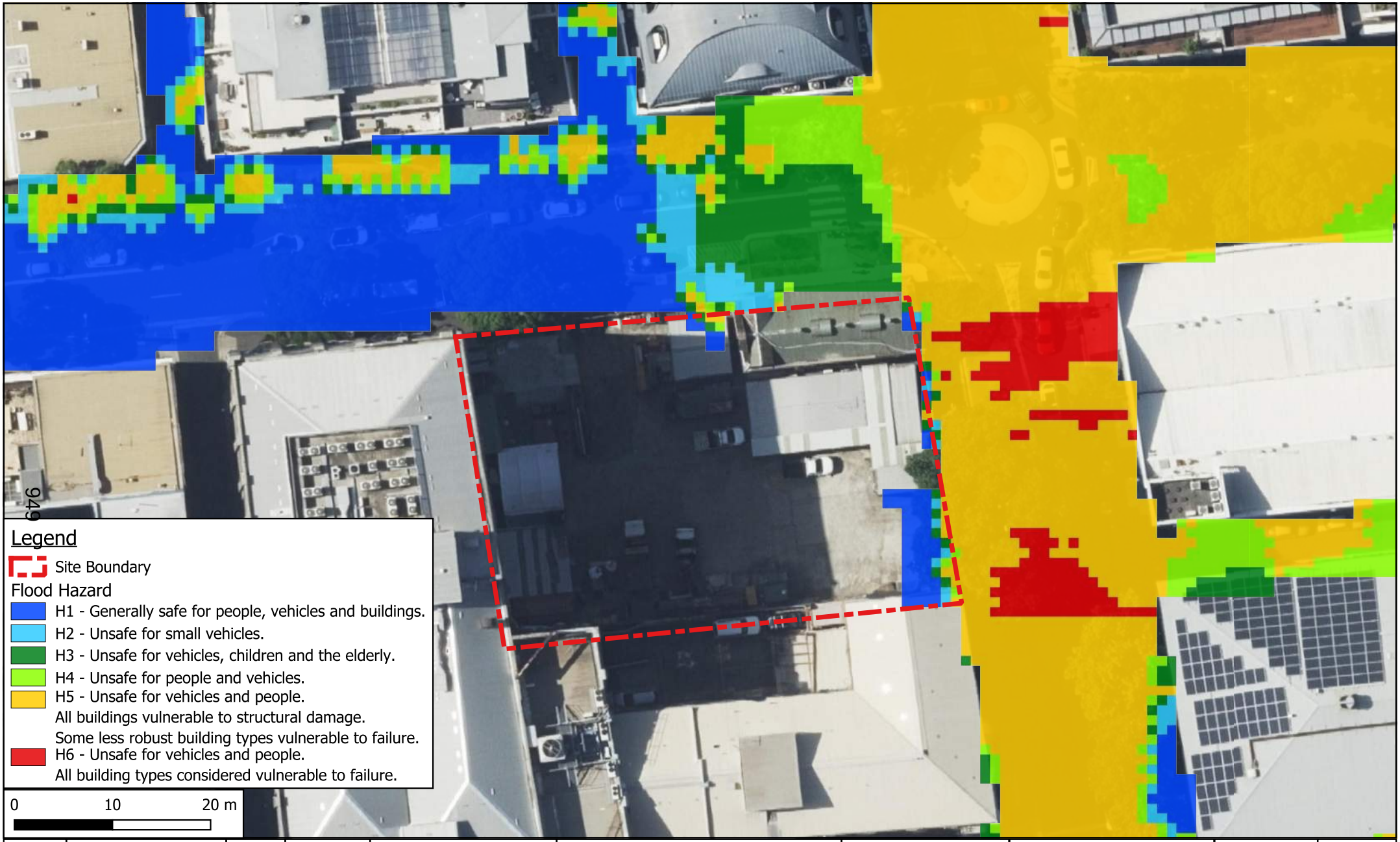

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Existing Scenario:
PMF Hazard

Scale: 1:500

Drafted: MH
Designed: MH
Approved: SS

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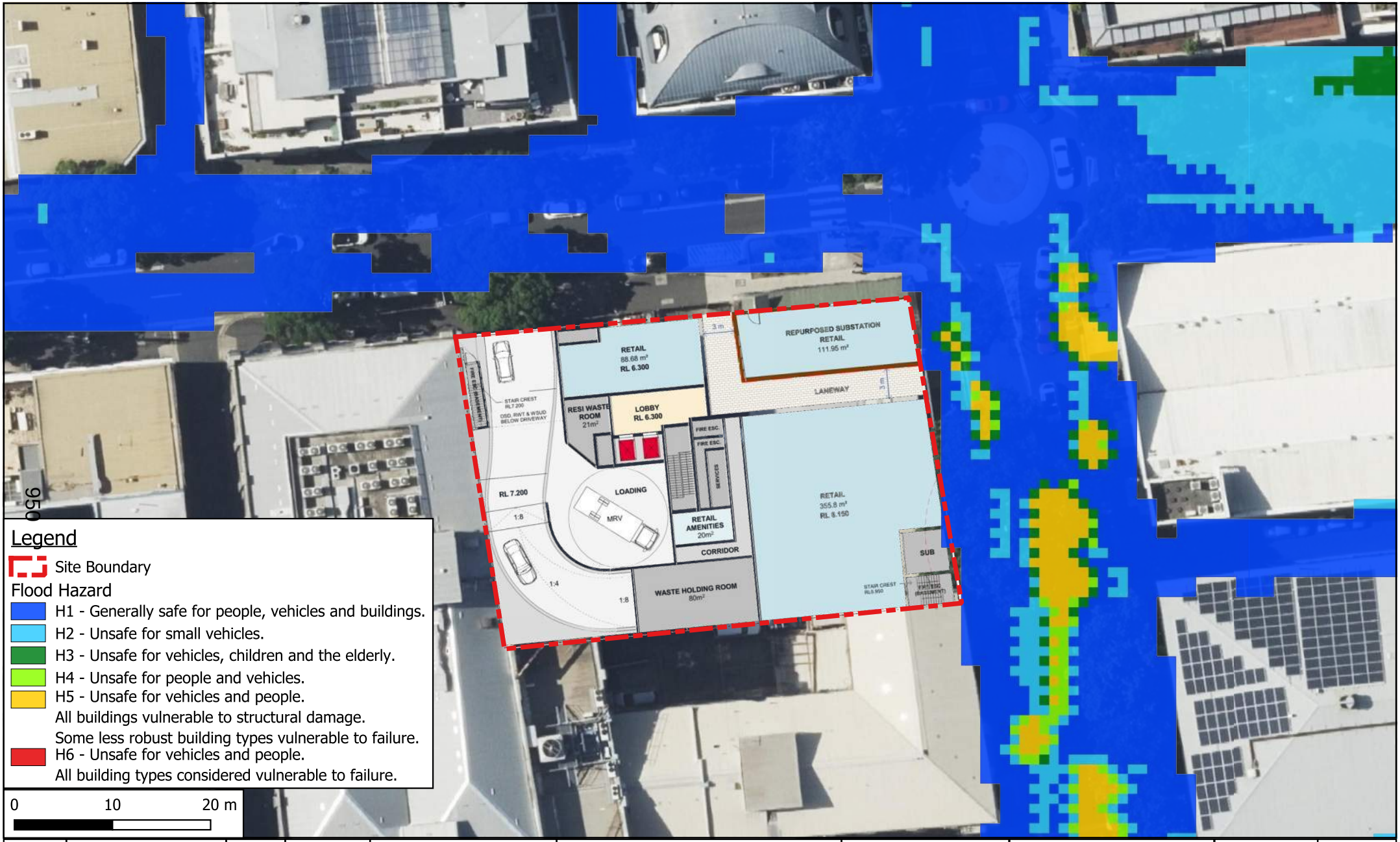

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Proposed Scenario:
10% AEP Event Flood Hazard

Scale: 1:500

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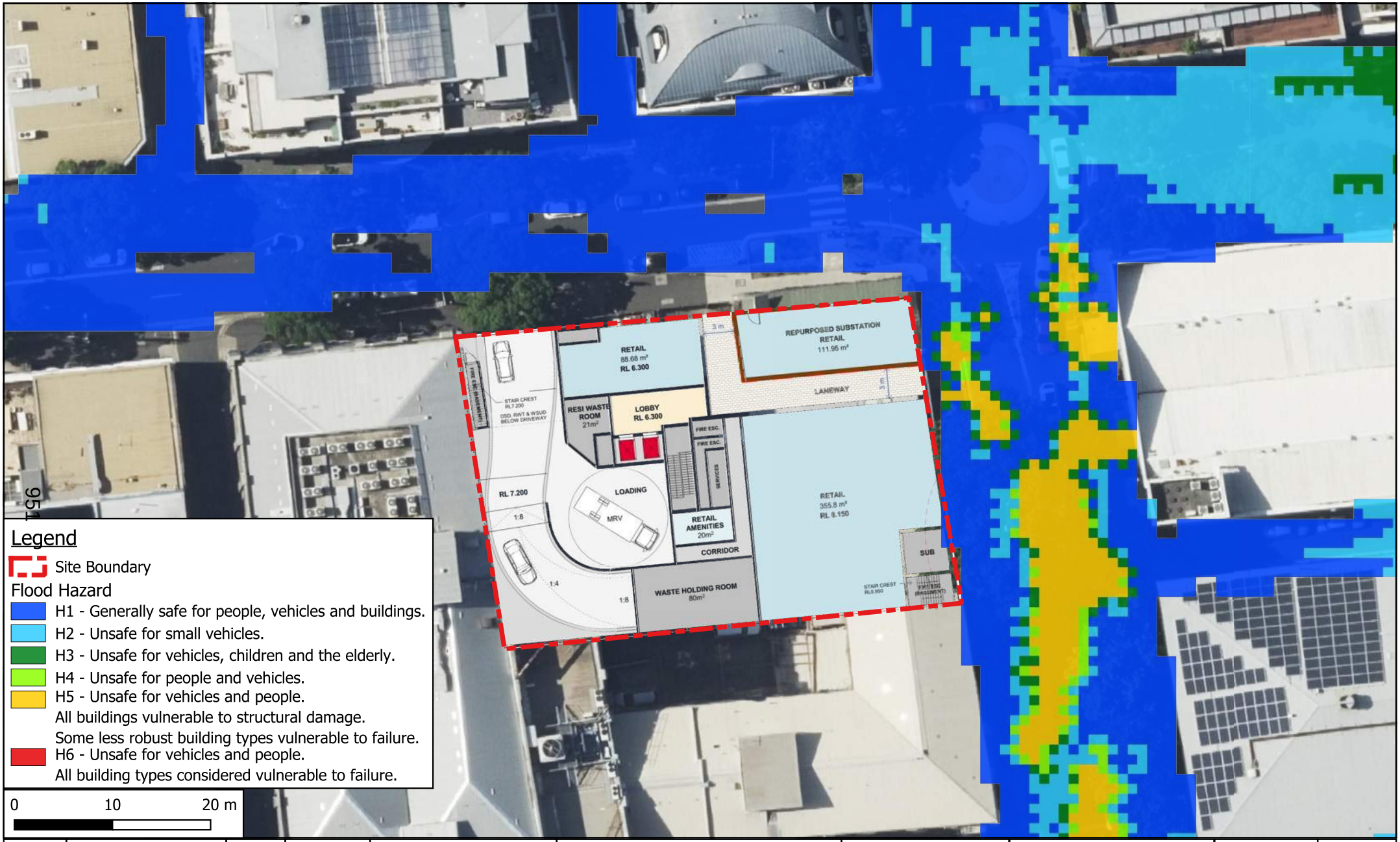

Legend

Site Boundary

Flood Hazard

- H1 - Generally safe for people, vehicles and buildings.
- H2 - Unsafe for small vehicles.
- H3 - Unsafe for vehicles, children and the elderly.
- H4 - Unsafe for people and vehicles.
- H5 - Unsafe for vehicles and people.
  All buildings vulnerable to structural damage.
  Some less robust building types vulnerable to failure.
- H6 - Unsafe for vehicles and people.
  All building types considered vulnerable to failure.

0 10 20 m

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Proposed Scenario:
5% AEP Event Flood Hazard

Scale: 1:500

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Designed:	MH
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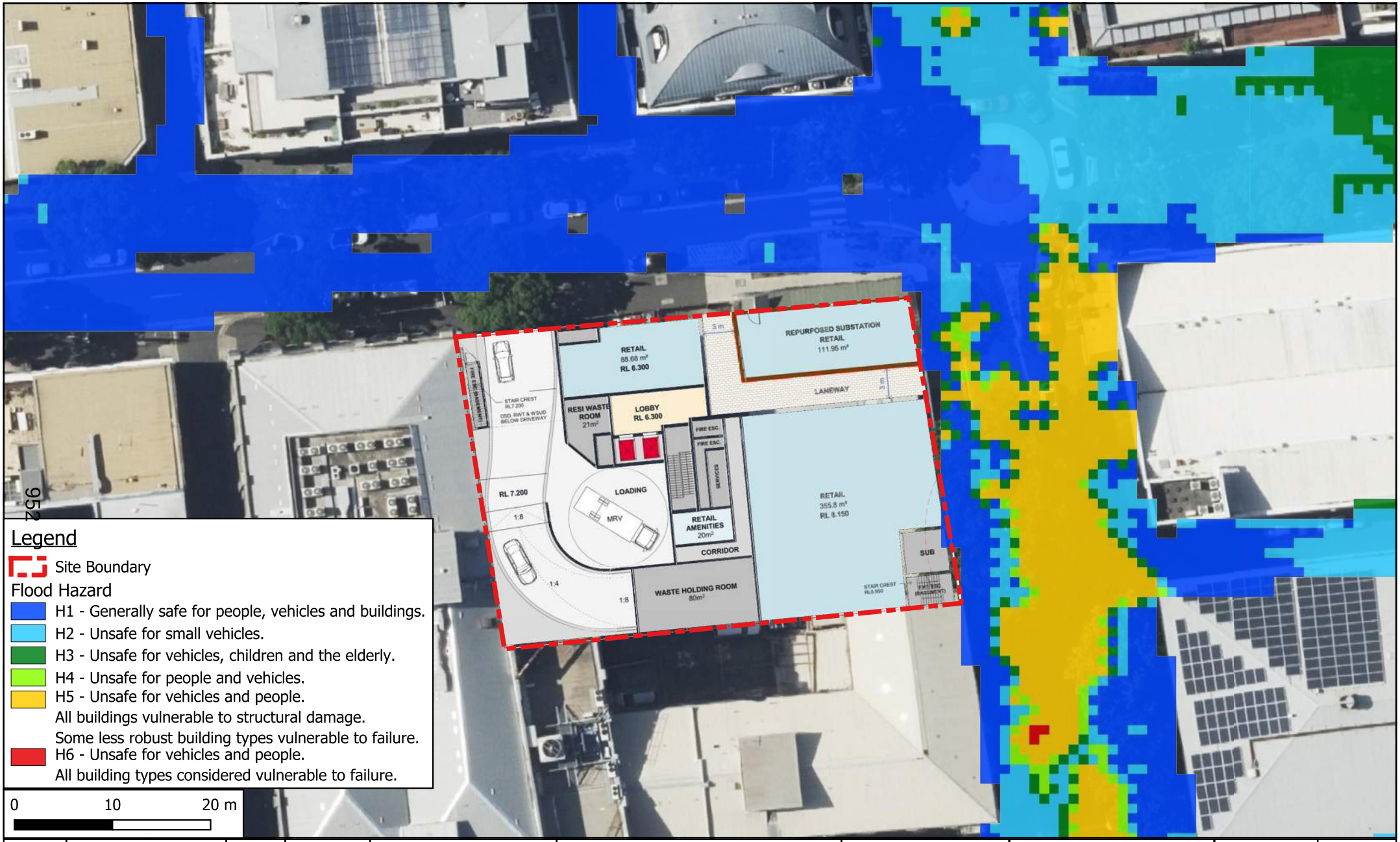

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Proposed Scenario:
1% AEP Event Flood Hazard

Scale: 1:500

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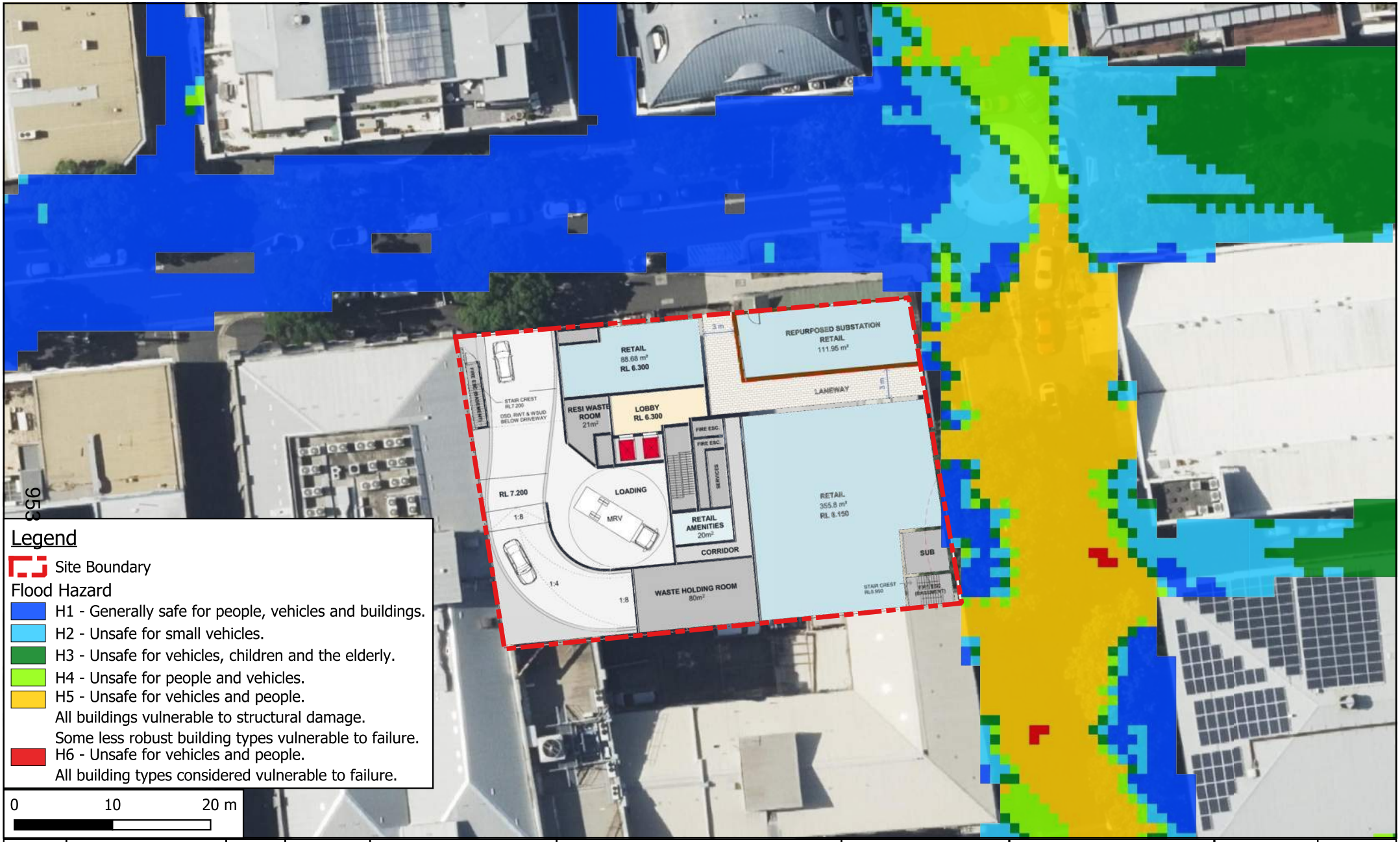

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Civil Engineering Services

Proposed Scenario:
1% Climate Change AEP Event Flood Hazard

Scale: 1:500

Drafted:	MH
Designed:	MH
Approved:	SS

Job Number: SYD3746
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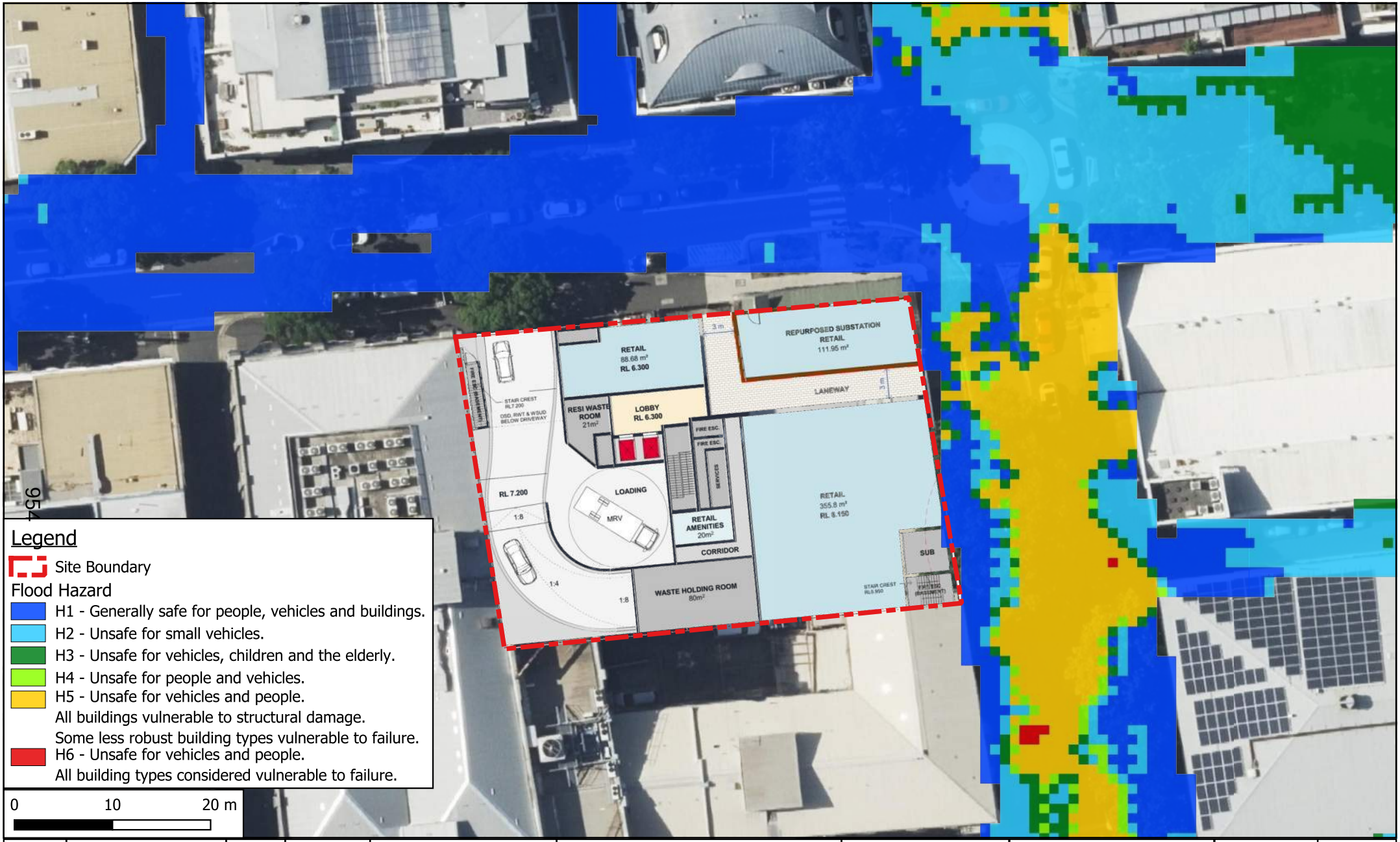

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Proposed Scenario:
0.5% AEP Event Flood Hazard

Scale: 1:500

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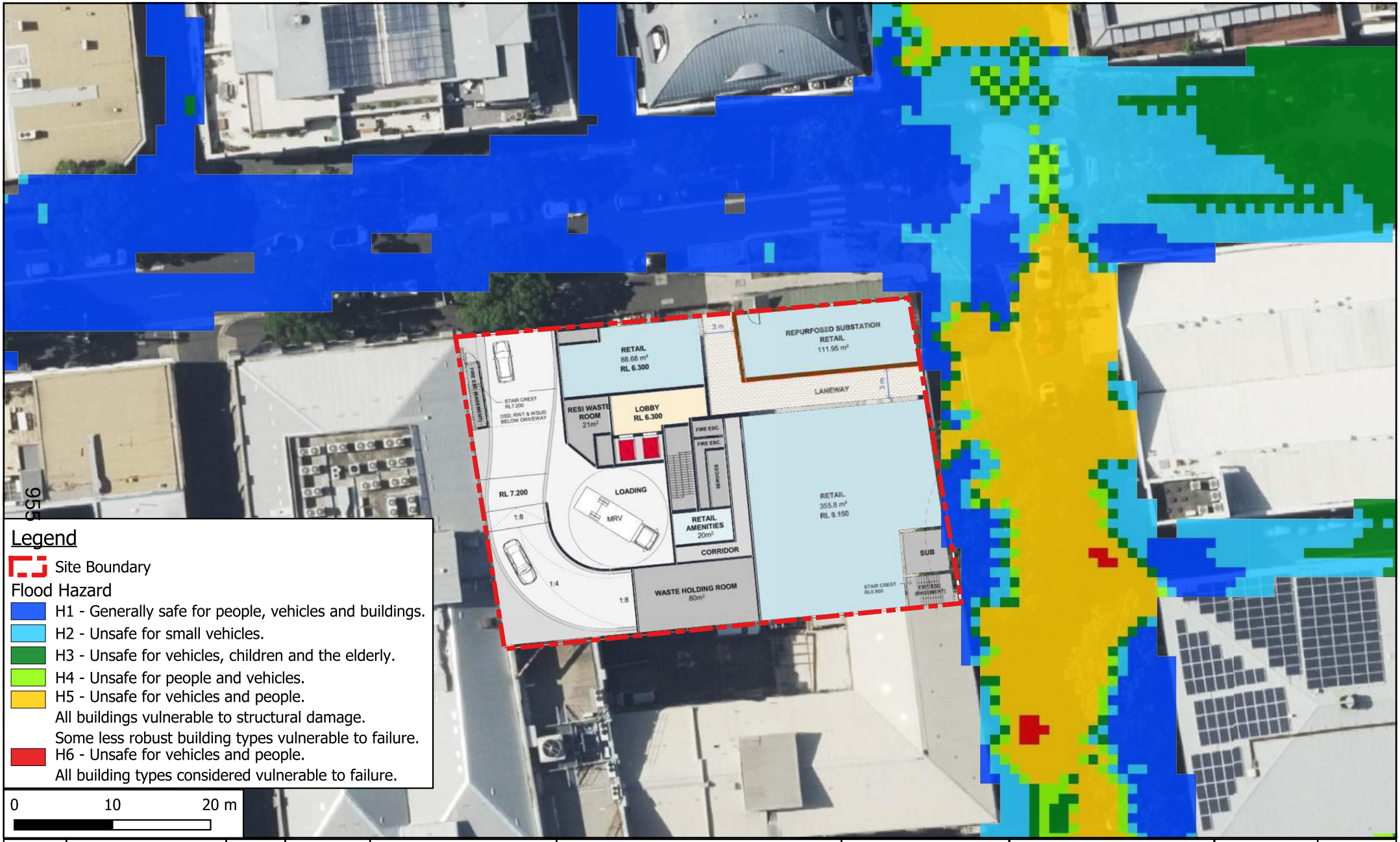

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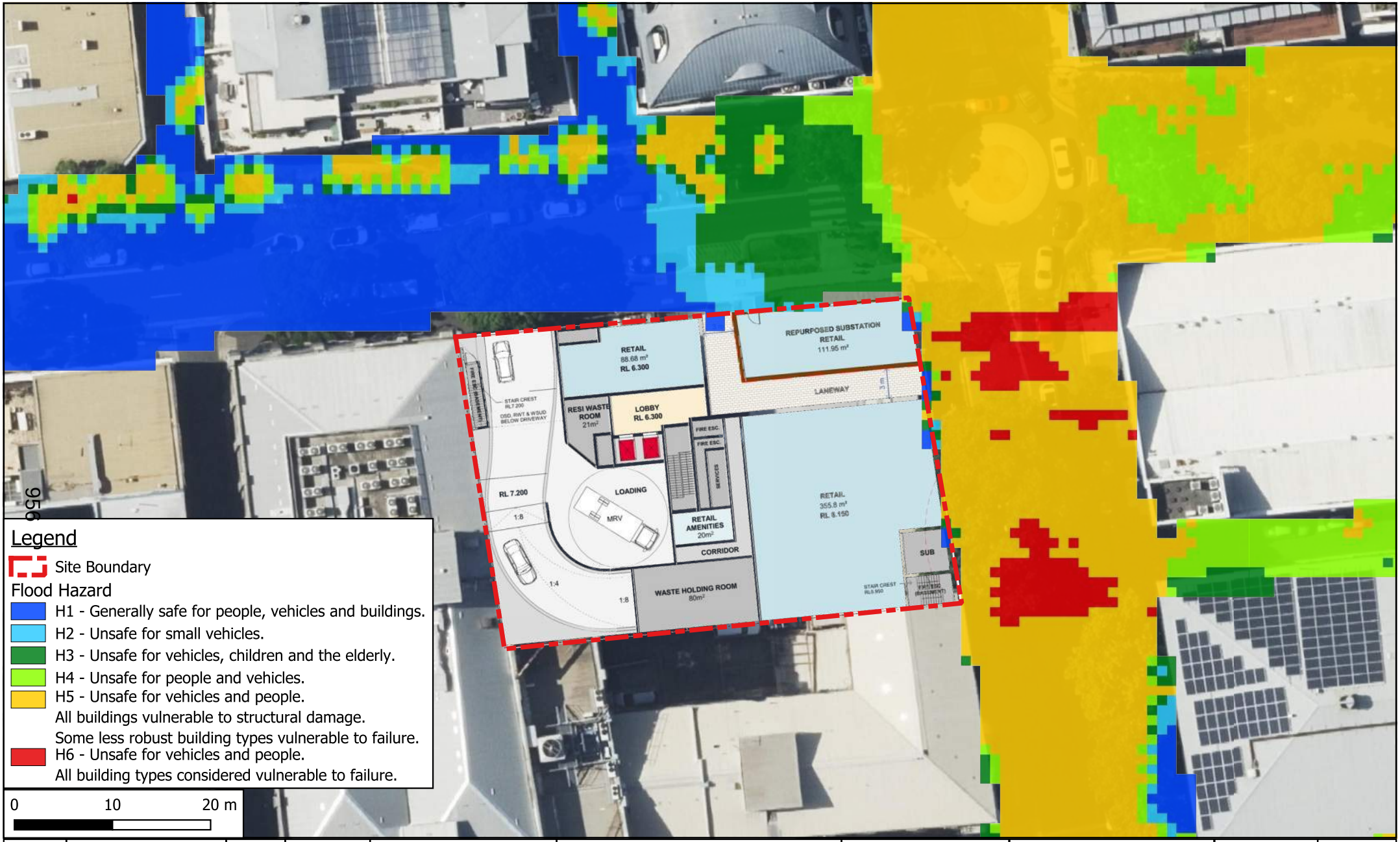

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Civil Engineering Services

Proposed Scenario:
PMF Hazard

Scale: 1:500

Drafted:	MH
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Revision: A
Date: AUG 2025

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Gold Coast
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T. +61 7 3088 4022

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Sydney NSW 2000
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London
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London WC2A 1QS
United Kingdom
T. +44 74 9478 5117

adpconsulting.com

Attachment A12

Landscape Design Concept

SUBTROPIC
design

43-49 MOUNTAIN STREET, ULTIMO

LANDSCAPE DESIGN CONCEPT

We acknowledge the Gadigal people of the Eora Nation as the Traditional Owners of Country, and recognise their continuing connection to land, water and culture. We pay our respect to their Elder past, present and emerging.

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1.2 Character Imagery 06

2.0 Design Approach

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2.2 Vegetation Management Plan - Ground 09
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2.5 Level 01 Plant Palette 12
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2.7 Communal Plant Palette 14
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961

Revision	Date	Prepared by	Approved by
[D]	31/10/2025	VZ	VB
[C]	18/09/2025	VZ	VB
[B]	16/09/2025	VZ	VB
[A]	05/09/2025	VB / VZ	VB

Prepared for:
Apt Residential
Prepared by:
Subtropic Design

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ABN 84 681 560 010

CHAPTER 1 – SITE UNDERSTANDING

963

RESPONSIVE LANDSCAPE DESIGN

Located prominently on the corner of Mountain and Smail Streets, the retention of the Mountain Street substation offers a tangible connection to the site's heritage, while also presenting an opportunity for adaptive reuse and activation along the public frontage.

The proposal retains two mature street trees along the Mountain Street frontage and introduces two additional trees on Smail Street to offset the removal of two street trees. Refurbishment of existing bio-basins and verge planting areas further contributes to the site's green infrastructure.

PROMOTE SUSTAINABILITY

A concentrated zone of soft landscaping at the street corner enhances the pedestrian experience—offering shade, visual interest, and a comfortable space to pause and engage with the heritage fabric of the building.

While no existing trees are located within the site boundary, new landscaping is strategically positioned along building edges to benefit both the public realm and adjacent properties.

CREATE BEAUTIFUL AND COMFORTABLE PLACES FOR PEOPLE

The landscape design fosters a strong sense of place through the creation of distinct outdoor rooms for occupation.

Level 01 terraces provide intimate spaces for relaxation and social connection, while communal rooftop spaces activate the north and eastern edge of the site, offering urban outlook.

Planting along building edges softens the built form and enhances the skyline when viewed from the public realm. A curated selection of endemic and native plant species will ensure year-round interest, improved biodiversity, and a rich sensory experience.

CONTRIBUTE TO AND ENHANCE THE NATURAL ENVIRONMENT AND URBAN ECOLOGY

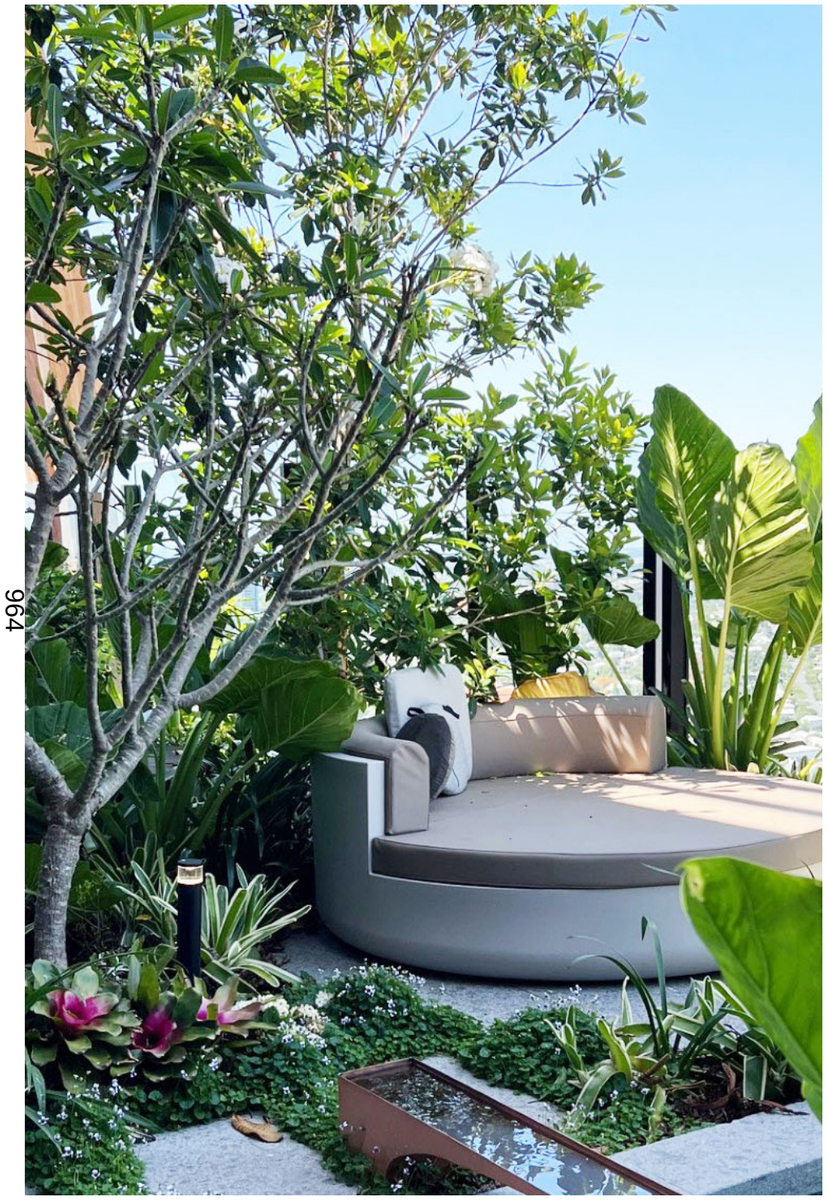
The proposal enhances existing ecological infrastructure through the refurbishment of bio-basins and verge gardens.

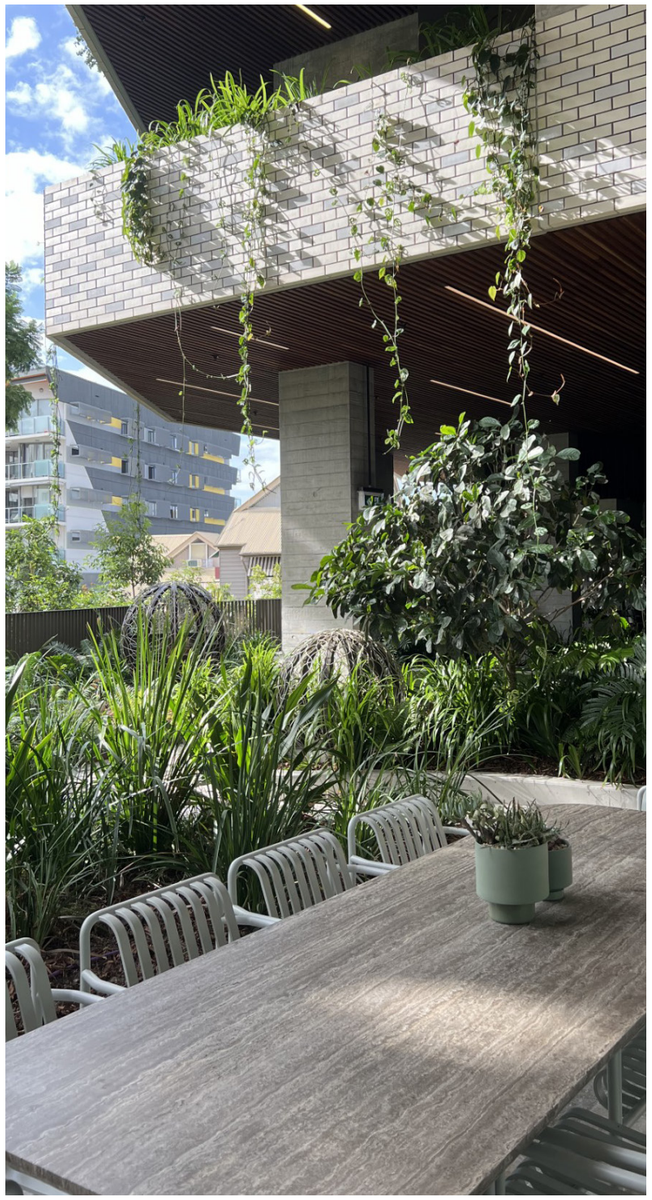
Native and endemic planting palettes are proposed throughout the site and public interfaces, delivering increased habitat opportunities, improved canopy coverage, and long-term biodiversity benefits.

PROMOTE AND IMPROVE WATER QUALITY

The development prioritizes integrated water management by refurbishing bio-basins and enhancing their performance and biodiversity.

Opportunities to capture and reuse stormwater for irrigation of podium-level planting zones will be further investigated, supporting sustainable water practices and improving site resilience.





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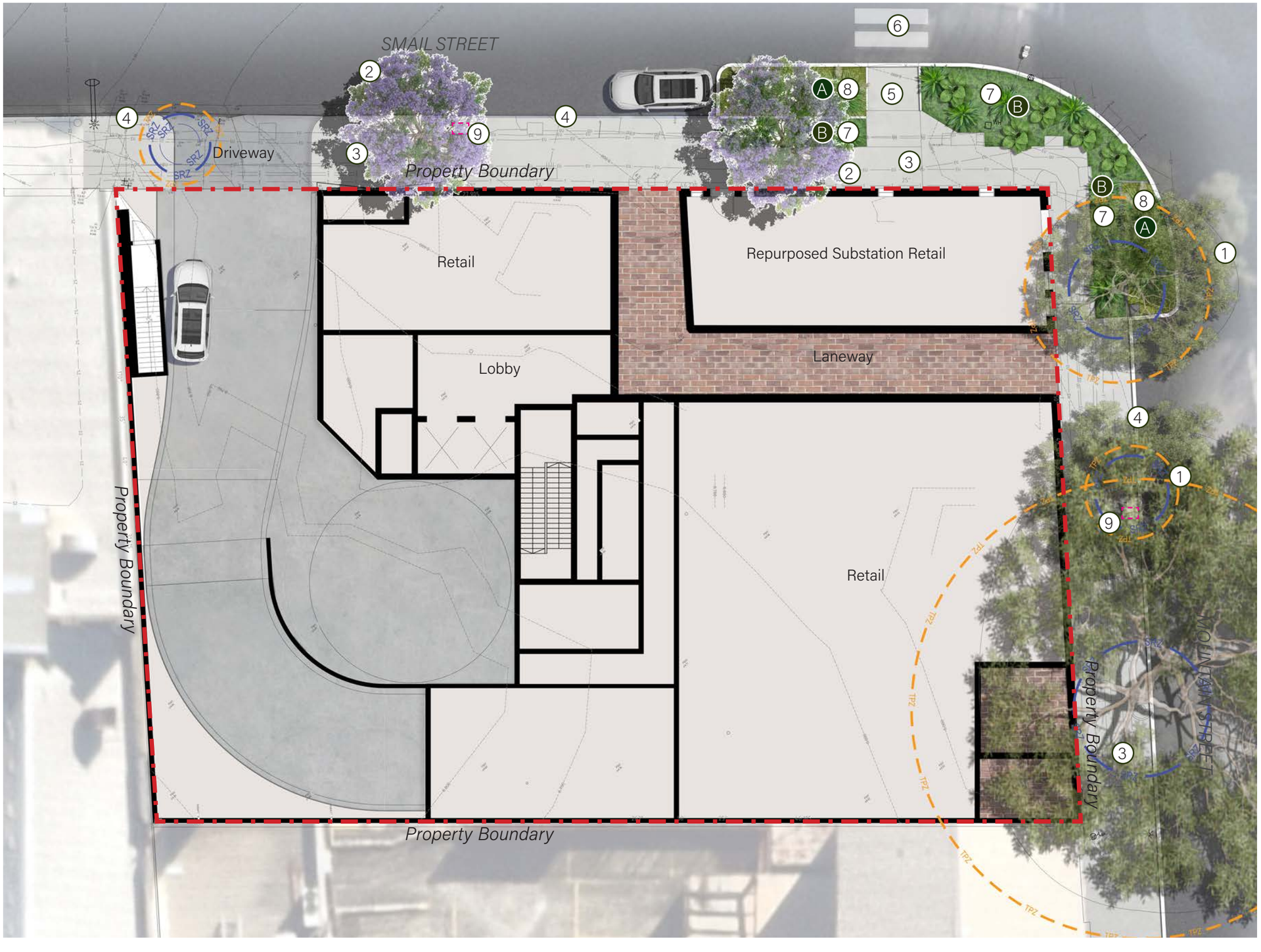
CHAPTER 2 –DESIGN APPROACH

2.1 CONCEPT PLAN

Ground Floor Plan

1:200 @ A3



legend

1. Existing street trees to be retained
2. Proposed street tree
3. Footpath
4. Existing kerb alignment to be retained
5. Kerb ramp
6. Pedestrian crossing
7. Existing verge planting area to be refurbished
8. Existing bio basin to be refurbished
9. Existing parking pay station to be retained - approx location shown

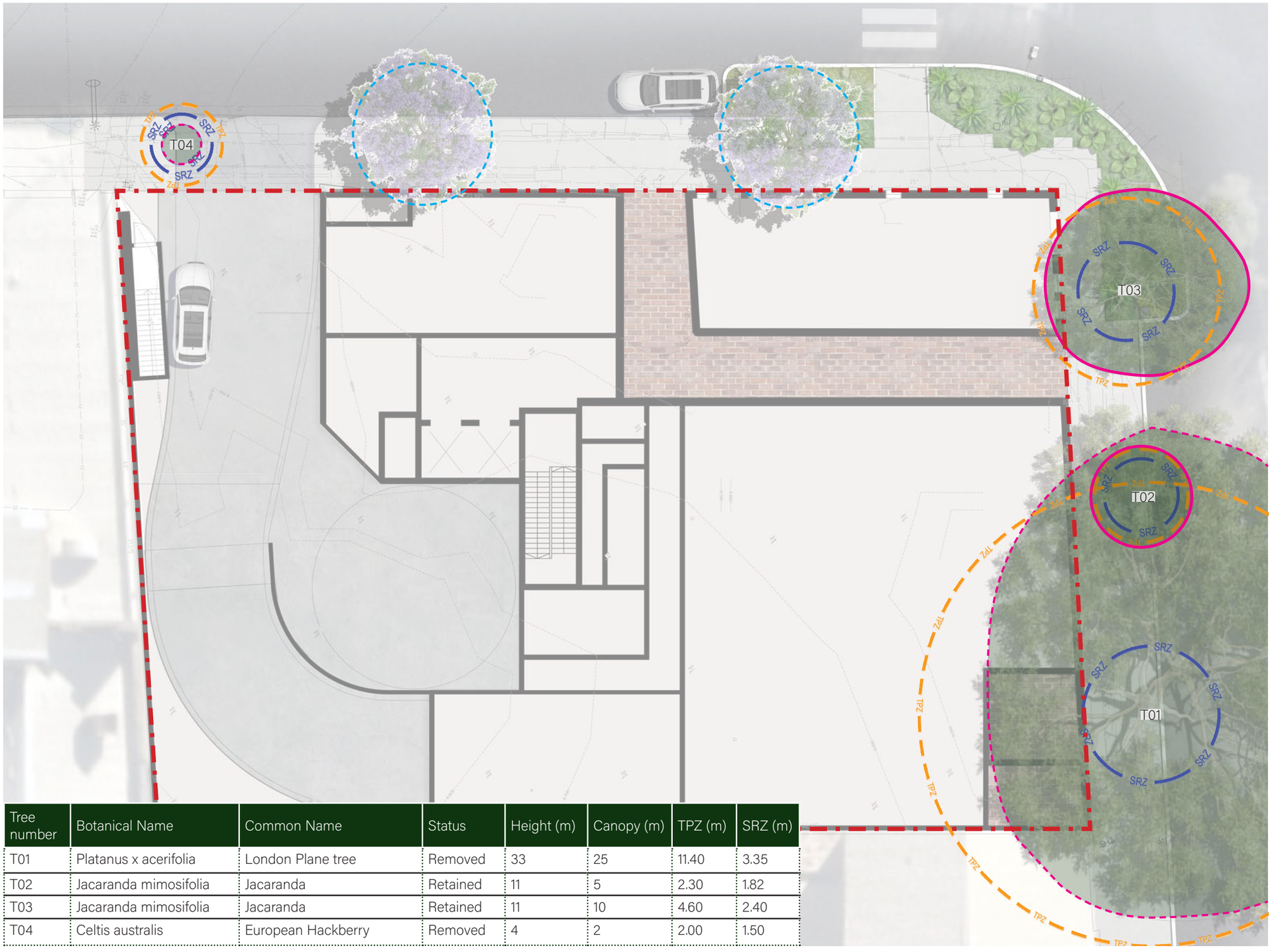
- A Refurbished bio basin to receive - tubestock at 8/m2
- B Existing verge planting area to receive - 140mm pots at 5/m2

2.2 VEGETATION MANAGEMENT PLAN

Ground Floor Plan

1:200 @ A3

SUBTROPIC design



legend

- Existing trees to be removed - extent of canopy shown
- Existing tree to be retained - extent of canopy shown
- New Street Tree - JACARANDA mimosifolia or approved similar
- TPZ (Tree Protection Zone)
- SRZ (Structual Root Zone)

Tree number	Botanical Name	Common Name	Status	Height (m)	Canopy (m)	TPZ (m)	SRZ (m)
T01	Platanus x acerifolia	London Plane tree	Removed	33	25	11.40	3.35
T02	Jacaranda mimosifolia	Jacaranda	Retained	11	5	2.30	1.82
T03	Jacaranda mimosifolia	Jacaranda	Retained	11	10	4.60	2.40
T04	Celtis australis	European Hackberry	Removed	4	2	2.00	1.50

2.3 GROUND PLANTING PALETTE

SUBTROPIC design

Verge Planting

JACARANDA mimosifolia
Jacaranda

PLECTRANTHUS parviflorus - N+
Cockspur Flower

PHILODENDRON xanadu
Xanadu

Bio-retention

BANKSIA robur - N+
Swamp Banksia

JUNCUS usitatus - N+
Common Rush

FICINIA nodosa - N+
Knobby Club Rush

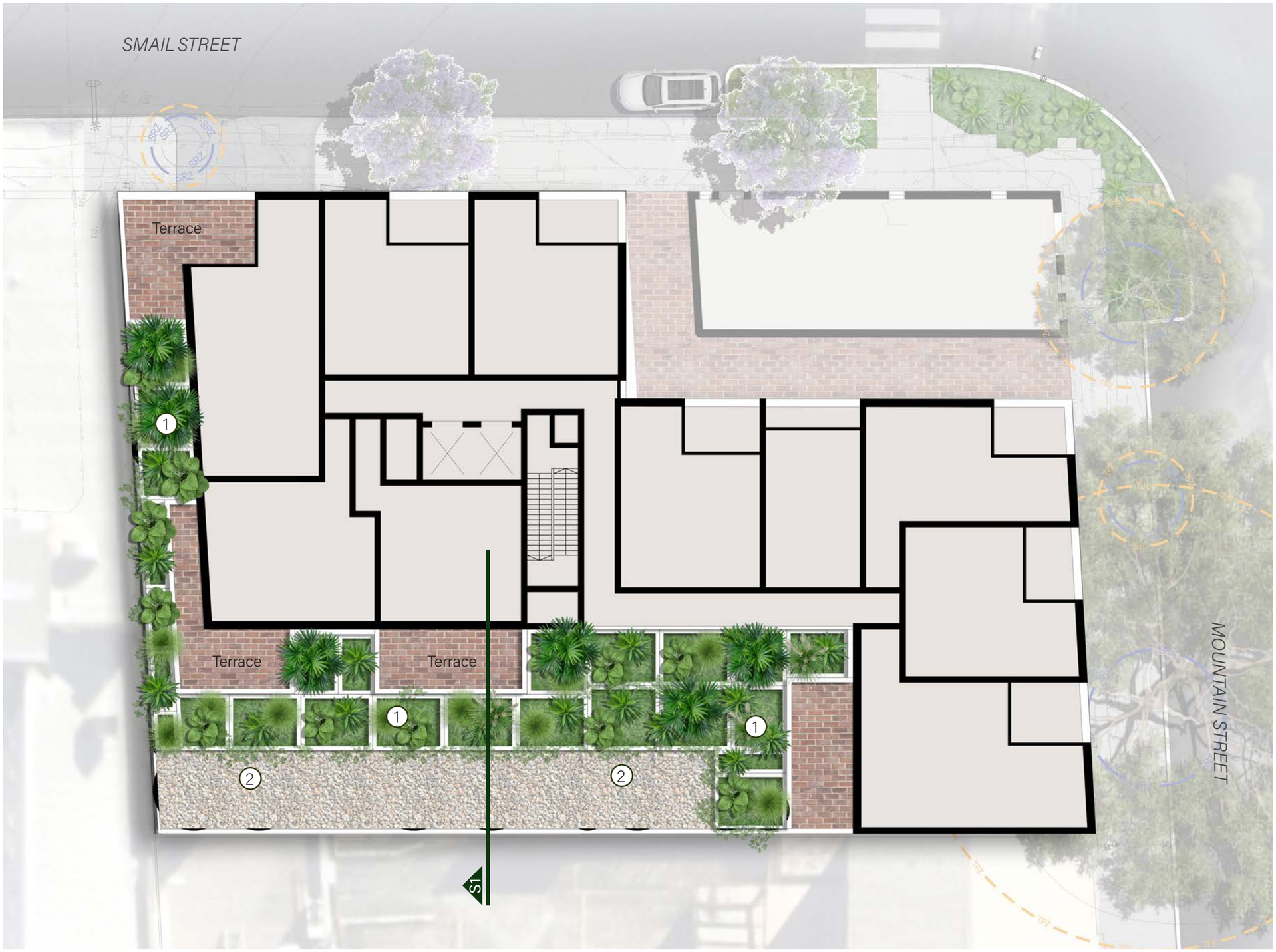
GOODENIA ovata - N+
Hop Goodenia

* Naturally occurring species identified in the LGA, *Urban Ecology Strategic Action Plan*
\+ Likely indigenous to City of Sydney, *Urban Ecology Strategic Action Plan*

2.4 CONCEPT PLAN

Level 01 Plan

1:200 @ A3



legend

1. Planting in GRC planters
2. Gravel ballast/ maintenance zone

Planting areas to receive:

Groundcovers - 140mm pots at 4/m²
Shrubs - 200mm pots at 1/m²

Levels	Area (m²)
Ground	N/A
Level 01	140m²
Level 07	35m2
Total	**175m²**

2.5 LEVEL 01 PLANTING PALETTE

SUBTROPIC design

ALOCASIA brisbanesis
Spoon Lily

MICROCORUM sp - N*
Kangaroo Fern

VIOLA hederacea - N*
Native Violet

GOODENIA ovata - N+
Hop Goodenia

ASPLENIUM australis - N*
Birds Nest Fern

PLECTRANTHUS parviflorus - N+
Cockspur Flower

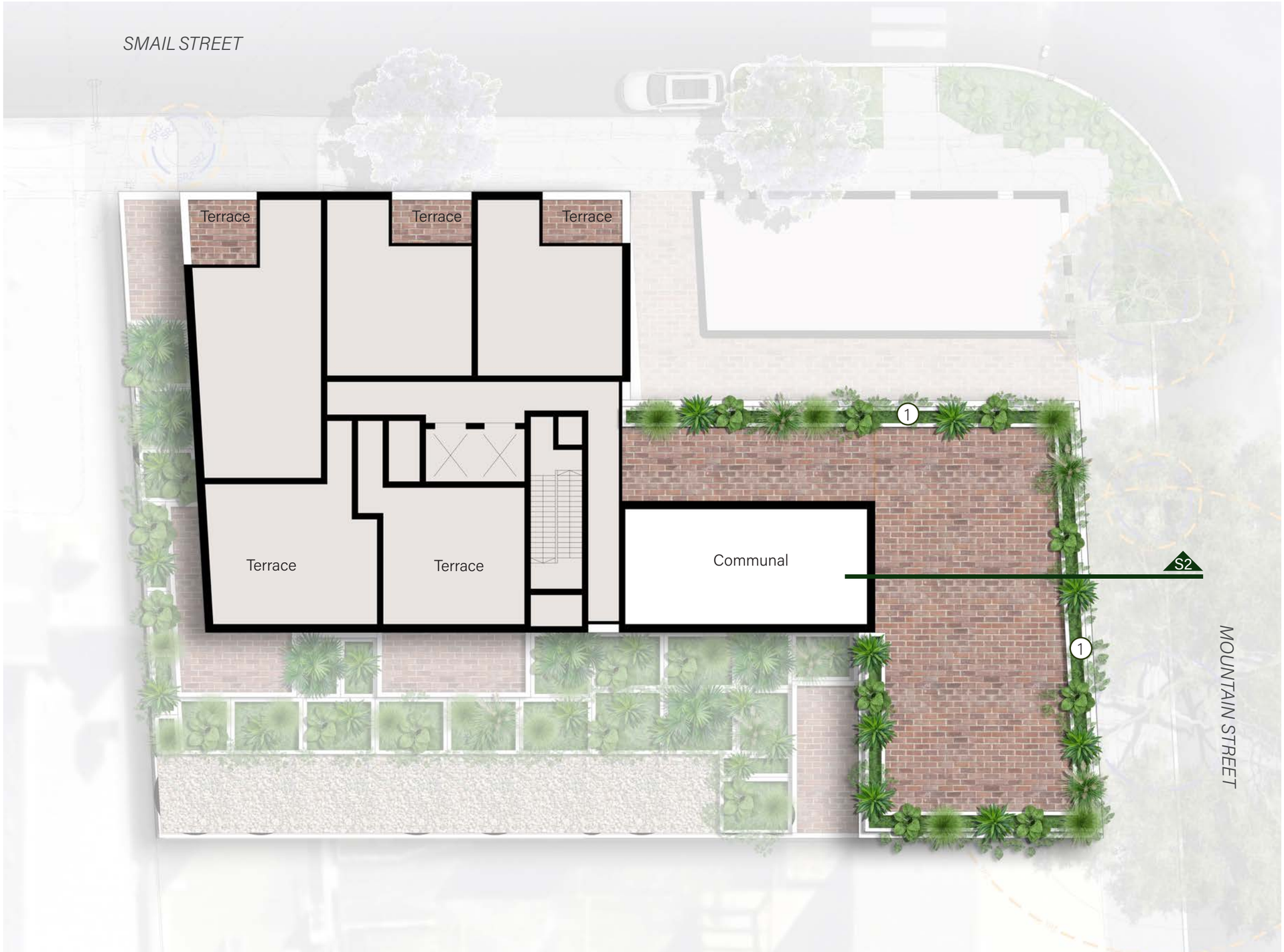
970

* Naturally occurring species identified in the LGA, *Urban Ecology Strategic Action Plan*
+ Likely indigenous to City of Sydney, *Urban Ecology Strategic Action Plan*

2.6 CONCEPT PLAN

Level 07 - Communal Plan

1:200 @ A3



legend

1. Podium planter with small shrubs, groundcovers and cascading species

Planting areas to receive:

Groundcovers - 140mm pots at 4/m²
Shrubs - 200mm pots at 1/m²

Levels	Area (m²)
Ground	N/A
Level 01	140m²
Level 07	35m2
Total	**175m²**

2.7 COMMUNAL PLANTING PALETTE

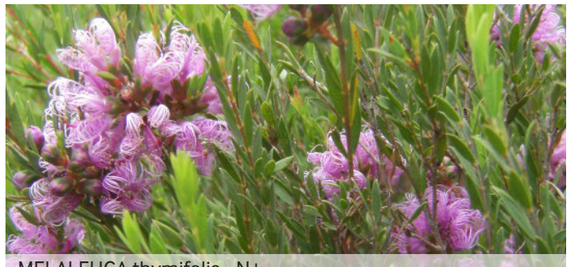
SUBTROPIC design

PLECTRANTHUS parviflorus - N+
Cockspur Flower

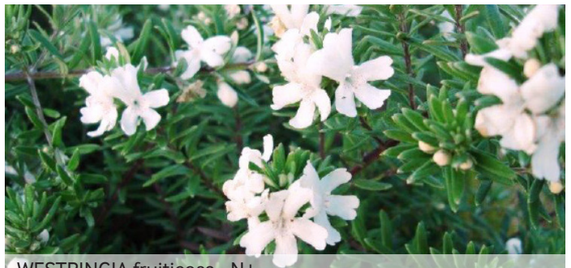
GOODENIA ovata - N+
Hop Goodenia

HARDENBERGIA violacea - N
False sarsaparilla

ASPLENIUM australis - N*
Birds Nest Fern



MELALEUCA thymifolia - N+
Thyme Honey-myrtle



WESTRINGIA fruiticosa - N+
Native Rosemary

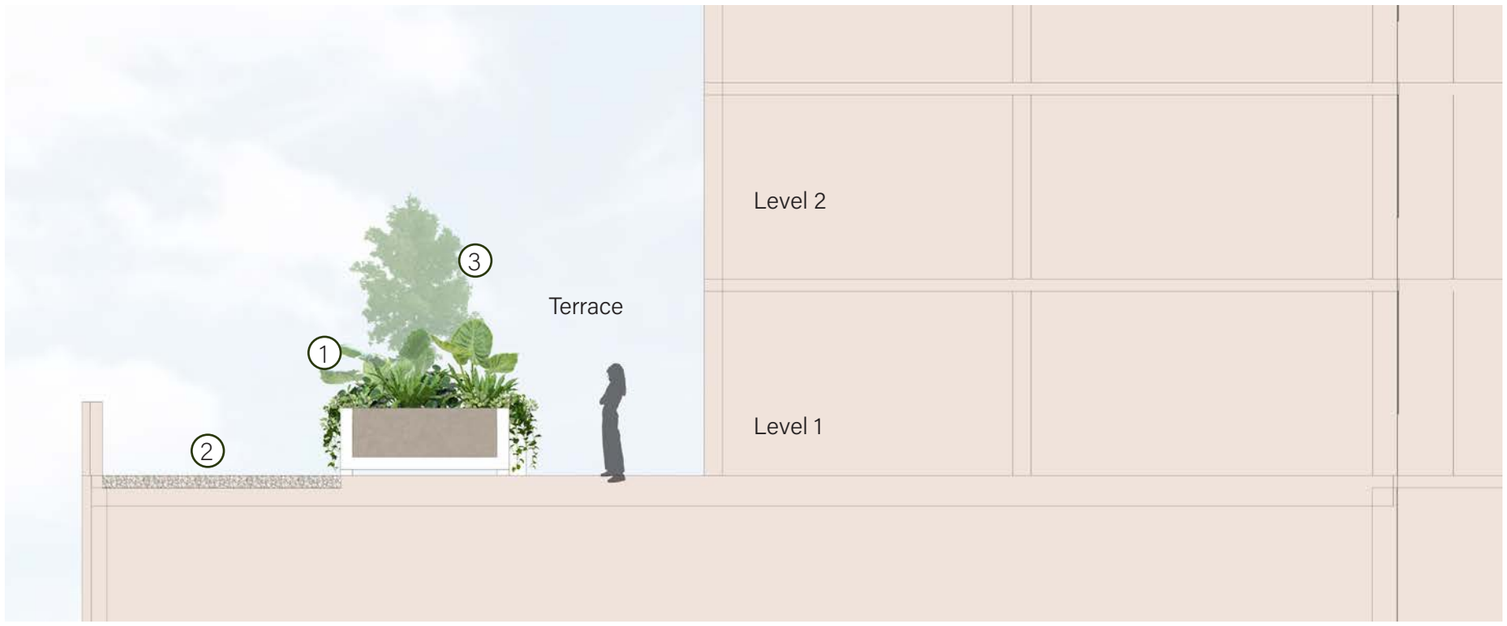
* Naturally occurring species identified in the LGA, *Urban Ecology Strategic Action Plan*
+ Likely indigenous to City of Sydney, *Urban Ecology Strategic Action Plan*

2.8 SECTIONS

1:100 @ A3

SUBTROPIC design

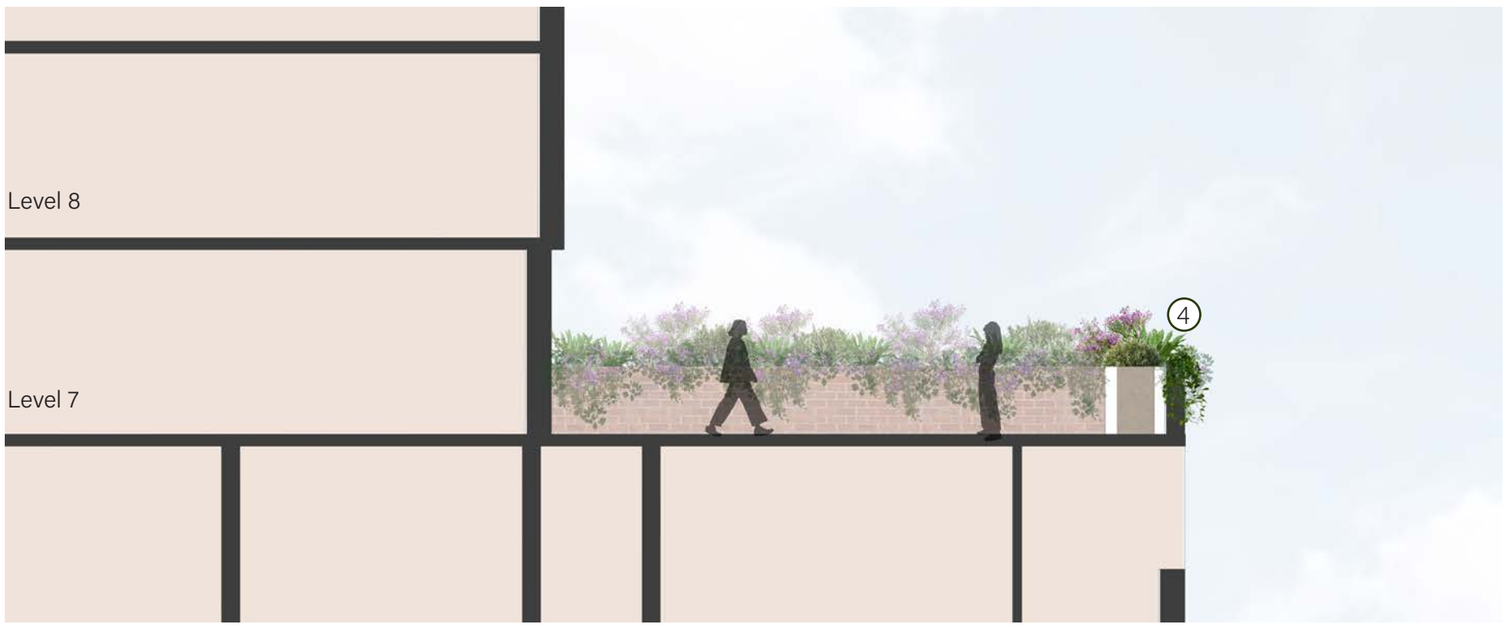
Section 1



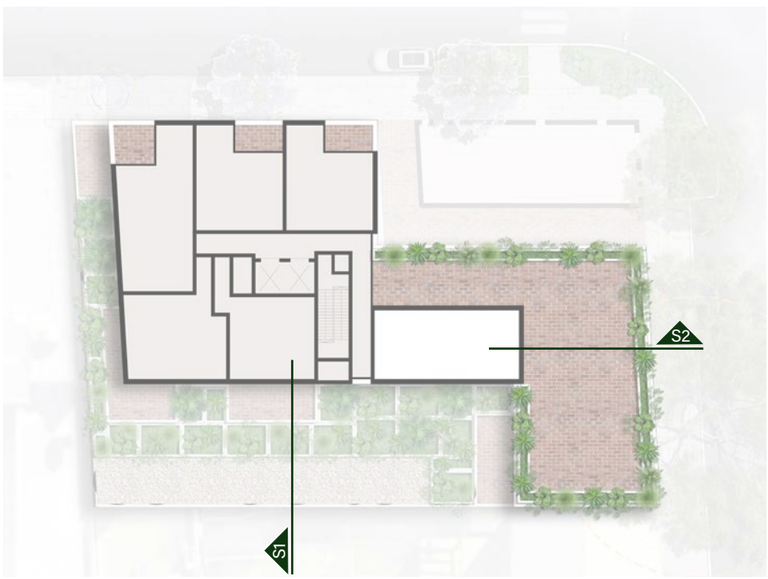
legend

1. Planting in GRC planters
2. Gravel ballast/ maintenance zone
3. Potential tree location
4. Podium planter with small shrubs, groundcovers and cascading species

Section 2



Key plan



SUBTROPIC
design

Subtropic Design

PO Box 698, LUTWYCHE QLD 4030

Contact: Vicki Barclay

E mail@subtropicdesign.com.au

W subtropicdesign.com.au

Attachment A13

Design Excellence Strategy – Prepared by Proponent

Design Excellence Strategy

41 & 43-49 Mountain Street, Ultimo

September 2025

Prepared for: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

Urbis staff responsible for this report were:

Director	Andrew Harvey
Associate Director	Stewart Doran
Project Code	P0057496
Report Number	Final

Acknowledgment of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.
We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.
We pay our respects to First Nations Elders, past and present.

Urbis is committed to incorporating our respect for First Nations cultures, peoples and storytelling in our work across the Country. We are proud to have partnered with Darug Nation artist, **Hayley Pigram**, and to profile her artwork - **Sacred River Dreaming**.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

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1 Overview

This Design Excellence Strategy (**Strategy**) has been prepared by Urbis Ltd (**Urbis**) on behalf of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 (**the Proponent**) in support of a Planning Proposal and Development Control Plan amendments to introduce a new maximum building height and maximum floor space (FSR) controls for 41 & 43-49 Mountain Street, Ultimo.

The Strategy has been prepared in accordance with Clause 1.2 of the City of Sydney Competitive Design Policy December 2020 (adopted by Council on 14 December 2020) and section 3.3.2 of the Sydney Development Control Plan 2012, this Design Excellence Strategy defines:

a) The location and extent of each competitive design process;

b) The type of competitive design process to be undertaken:

i. an architectural design competition, open or invited; or

ii. the preparation of design alternatives on a competitive basis.

c) The number of designers involved in the process;

d) How fine grain and contextually varied architectural design variety is to be achieved across large sites;

e) Whether the competitive design process is pursuing additional floor space or height;

f) Options for distributing any additional floor space area or building height which may be granted by the consent authority for demonstrating design excellence through a competitive design process;

g) The target benchmarks for ecologically sustainable development.

The proponent has elected to carry out an invited competitive design alternatives process as the competitive design process associated with the development with a minimum of three (3) invited competitors.

It is envisaged that the competitive process will begin as soon as practical after the endorsement of the Planning Proposal at the Central Sydney Planning Committee and the endorsement of the competition brief by the City of Sydney.

Note: *It is not expected that this Design Excellence Strategy represents an approval from the consent authority for a departure from the relevant SEPPs, Sydney Local Environmental Plan 2012 (Sydney LEP 2012) or Sydney Development Control Plan 2012 (Sydney DCP 2012) controls (as amended by the Planning Proposal for 41 & 43-49 Mountain Street). Where there is any inconsistency between this Strategy and the relevant SEPPs, LEP or DCP (as amended by the 41 & 43-49 Mountain Street), the relevant SEPPs, LEP or DCP (as amended) prevail.*

1.1 Objectives of the Design Excellence Strategy

The objectives of this strategy are to:

- Establish a methodology for the Proponent to implement the 'invited' competitive design alternatives process for the development of the site, prepared in accordance with the City of Sydney's Competitive Design Policy (2020).
- Enable the competitive process to operate within the framework of this Design Excellence Strategy.
- Confirm the number of architectural practices to participate in the invited competitive design process.
- Set out the approach for establishing a Competitive Design Process Brief that ensures:
    - The City of Sydney's design excellence requirements are balanced with the Proponent's objectives.
    - Achievement of design excellence and architectural diversity.
    - Procedural fairness for Competitors participating in the competitive processes.
- Set out the requirements for the proposed competitive design process for the site.
- Consider the approach for the assessment, decision making and dispute resolution within the competitive design process in accordance with the City of Sydney's Policy 2020.
- Ensure sustainability initiatives and ecologically sustainable development targets are defined and developed through the Competition, detailed design development and construction phases through to completion of the project.
- Provide that design integrity is continued in the subsequent detailed development, through to the construction phase and to the completion of the project.

2 Design Excellence Strategy

2.1 The location and extent of the competitive design process

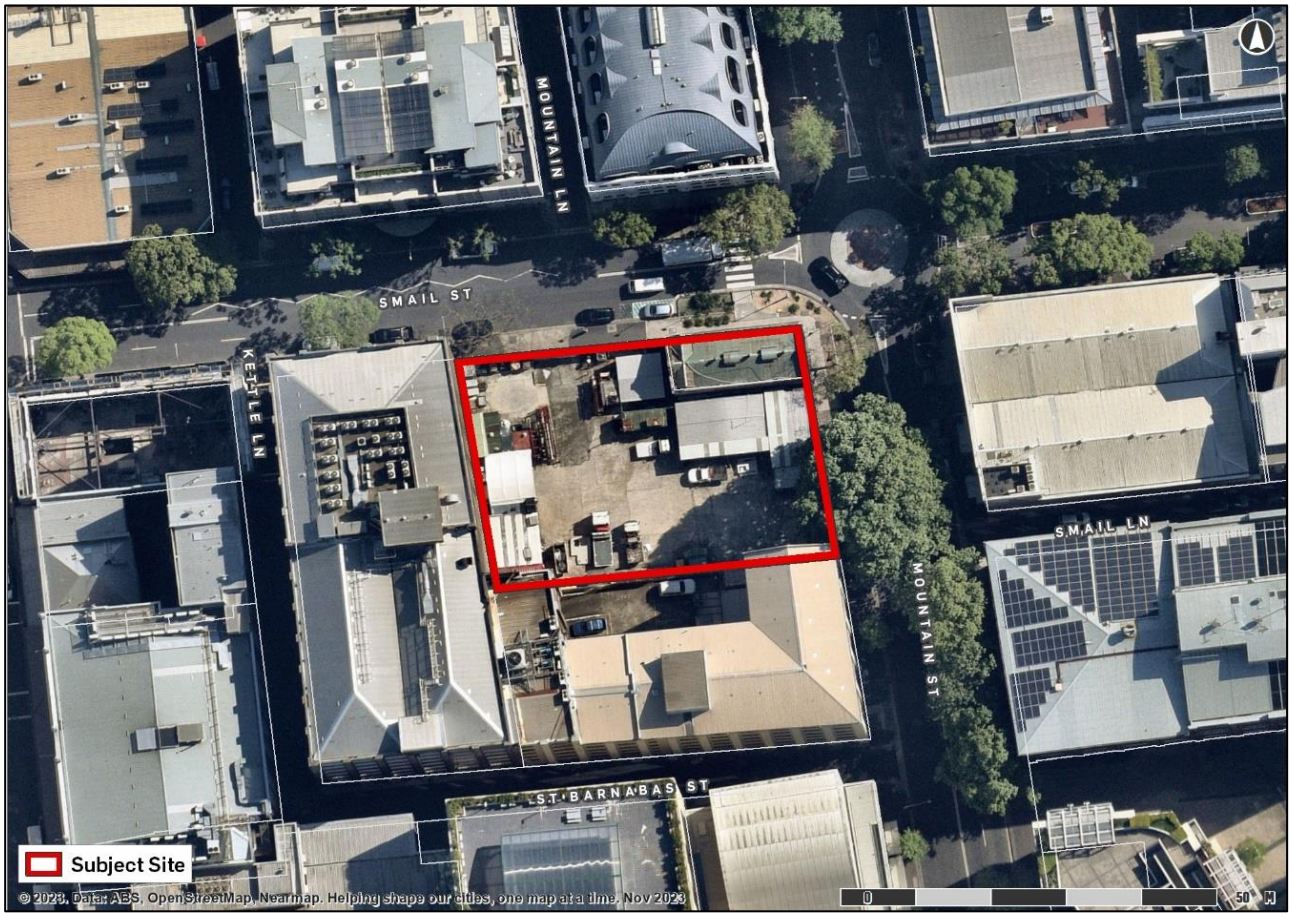
The site is located at 41 & 43-49 Mountain Street, Ultimo. It is legally described as Lot 1 in DP191928 and Lot 21 in DP5567 and has an area of approximately 1,441sqm.

The site is a rectangular shaped landholding. It has a 46.3m frontage to Smail Street to the north and a 31.7m frontage to Mountain Street east.

The site is predominantly vacant (with some existing sheds/demountable structures utilised by Ausgrid services) and with a single storey State and local heritage listed substation at the corner of Mountain Street and Smail Street. The renewal of the site seeks to adaptively re-use the heritage substation.

The competitive design process will apply to the entire site area, as outlined in 'red' in **Figure 1.**

Figure 1 Location and extent of the competitive process (aerial photograph of the site)



Source: Urbis

2.2 The type of competitive design process to be undertaken

In accordance with Section 1.2(2) of the City of Sydney *Competitive Design Policy December 2020*, the Proponent will undertake the following design excellence strategy for the redevelopment of the site:

- Undertake an 'invited' Competitive Design Alternatives Process for the site that will inform the future detailed Development Application (DA).

- Appoint a minimum three (3) competitors to participate.
- Each competitor in a competitive process must be a person, corporation or firm registered as an architect in accordance with the NSW Architects Act 2003 or, in the case of interstate or overseas competitors, eligible for registration with their equivalent association.
- Include a majority of competitors as local architectural firms.

2.3 Requirements for a competitive design process

In preparing the Competition Brief the Proponent, as per Section 2.3 of the Policy, will ensure that:

- All details about the conduct of the competitive process are contained within the Competition Brief and no other document.
- The Brief and appended documents have been reviewed and endorsed by the City prior to commencement of any associated competitive process and its distribution to Competitors; and
- The Brief is to be generally in accordance with City of Sydney's Model Competitive Design Process Brief and the Policy.

2.4 Selection Panel

In establishing a Selection Panel (Panel) for the competitive design alternatives process, the Proponent confirms the following:

- The Panel is to comprise a total of four (4) members.
    - Two (2) members nominated by the Proponent.
    - Two (2) members nominated by the City of Sydney Council.
- Selection Panel members are to:
    - Represent the public interest.
    - Be appropriate to the type of development proposed.
    - Include only persons who have expertise and experience in the design and construction professions
    - and industry; and
    - Include a majority of registered architects with urban design experience.
- The Chairperson of the Selection Panel will have expertise in architecture and urban design and be a recognised advocate of design excellence.
- The City of Sydney will nominate an impartial observer(s) to verify that the Competition design process has been followed appropriately and fairly.
- The Panel decision will be via a majority vote, should a majority vote not be achieved, the Panel Chair will make the casting vote. The decision of the Panel will not fetter the discretion of the Consent Authority in its determination of any subsequent state significant development applications associated with the development site that is the subject of the competitive process.

2.5 Proposed allocation of bonus floor space / building height

The development is not permitted to an additional 10% of floor space or building under SLEP 2012 as a result of undertaking a competitive design process in accordance with the proposed site-specific provisions under the Planning Proposal.

The Planning Proposal and Draft DCP amendments support a building envelope that can accommodate the maximum site specific permissible FSR and building height.

3 Target Benchmarks for Ecologically Sustainable Development

The Brief is to include the ecologically sustainable development (ESD) targets and design measures for the development as nominated in the supporting ESD Report.

ESD targets and sustainability initiatives will be carried through the design competition, design development and construction stages to completion of the project to deliver the ESD targets.

4 Design Integrity

The architect of the winning scheme, as selected by the Selection Panel, will be appointed by the Proponent as Design Architect.

To ensure design continuity and excellence of the winning scheme is maintained throughout the development process, as a minimum the Design Architect is to:

- Prepare a DA for the preferred design.
- Prepare the design drawings for a construction certificate for the preferred design.
- Attend all meetings that pertain to design issues with the community, authorities and other stakeholders, as required.
- Provide any documentation required by the Consent Authority verifying the design intent has been achieved at completion.
- Prepare the design drawings for contract documentation; and
- Maintain continuity during the construction phases, through to the completion of the project.

The Design Architect may work in association with other architectural practices but is to retain a leadership role over design decisions.

Disclaimer

This report is dated 23 September 2025 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 **(Instructing Party)** for the purpose of Design Excellence Strategy **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

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Shaping cities
and communities
for a better future.

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Attachment A14

Owner's Consent

apt.

Future living for
Future thinkers

41 & 43-49 Mountain Street, Ultimo NSW 2007

Owners Consent

Strictly Confidential

City of Sydney Council
Town Hall House
Gadigal Country

Sydney 2000

15 September 2025

To whom it may concern,

Owners Consent – 41 & 43-49 Mountain Street, Ultimo NSW 2007

As the registered owner of the subject property, Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 gives consent for lodgement of a planning proposal for a build-to-rent project at 41 & 43-49 Mountain Street, Ultimo NSW 2007.

If you have any queries regarding the above-mentioned property, please contact Mr Juey Thanyakittikul by email at juey.thanyakittikul@aptresidential.au

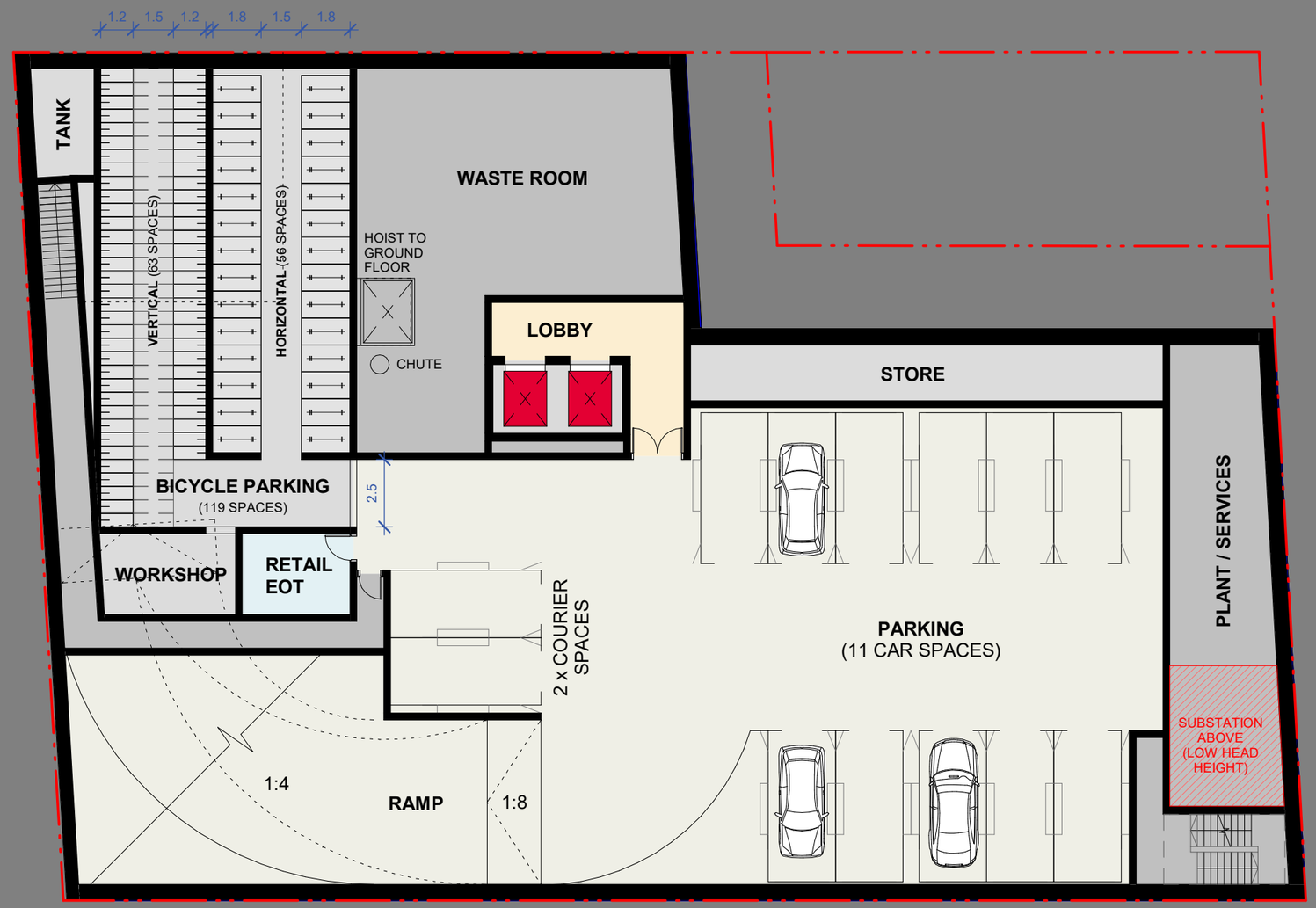
Yours sincerely,

Signed
for and on behalf of
Evolution MIT Services Pty Ltd
by a duly appointed attorney
in the presence of:

Signature of witness	Signature of attorney (I have no notice of revocation of the power of attorney under which I sign this document)
Lucy Lim	Steven Zaharis
Name of witness (please print)	Name of attorney (please print)

Attachment A15

Reference Scheme Plans



992

PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

BASEMENT 1
S12603
1 : 200 @ A3

Drawing no. PP03.B1 Rev. A

SMAIL ST

VEHICLE ENTRY / EXIT

RL 6.900

RL 6.590

RL 6.050

RL 5.500

RL 5.660

RL 6.200

1-3 SMAIL STREET

FIRE ESC (BASEMENT)

STAIR CREST RL7.200

OSD, RWT & WSUD BELOW DRIVEWAY

RETAIL
88.28 m²
RL 6.300

RESI WASTE

LOBBY
RL 6.300

3 m

REPURPOSED SUBSTATION
RETAIL
111.95 m²

LANEWAY

3 m

RL 7.200

1:8

1:4

LOADING
10.6m LONG VEHICLE

RL 7.200

FIRE ESC.

SERVICES

CORRIDOR

VISITOR BICYCLE PARKING (12)

RETAIL
355.86 m²
RL 6.150

RETAIL AMENITIES
25m²

WASTE HOLDING ROOM
80m²

SUBSTATION
MIN RL6.250

SUB

STAIR CREST
RL6.950

FIRE ESC
(BASEMENT)

55 MOUNTAIN STREET

MOUNTAIN ST

993

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GROUND FLOOR
S12603
1 : 200 @ A3

Drawing no. PP03.00

Rev. A

994

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41-49 Mountain St, Ultimo

LEVEL 1
S12603
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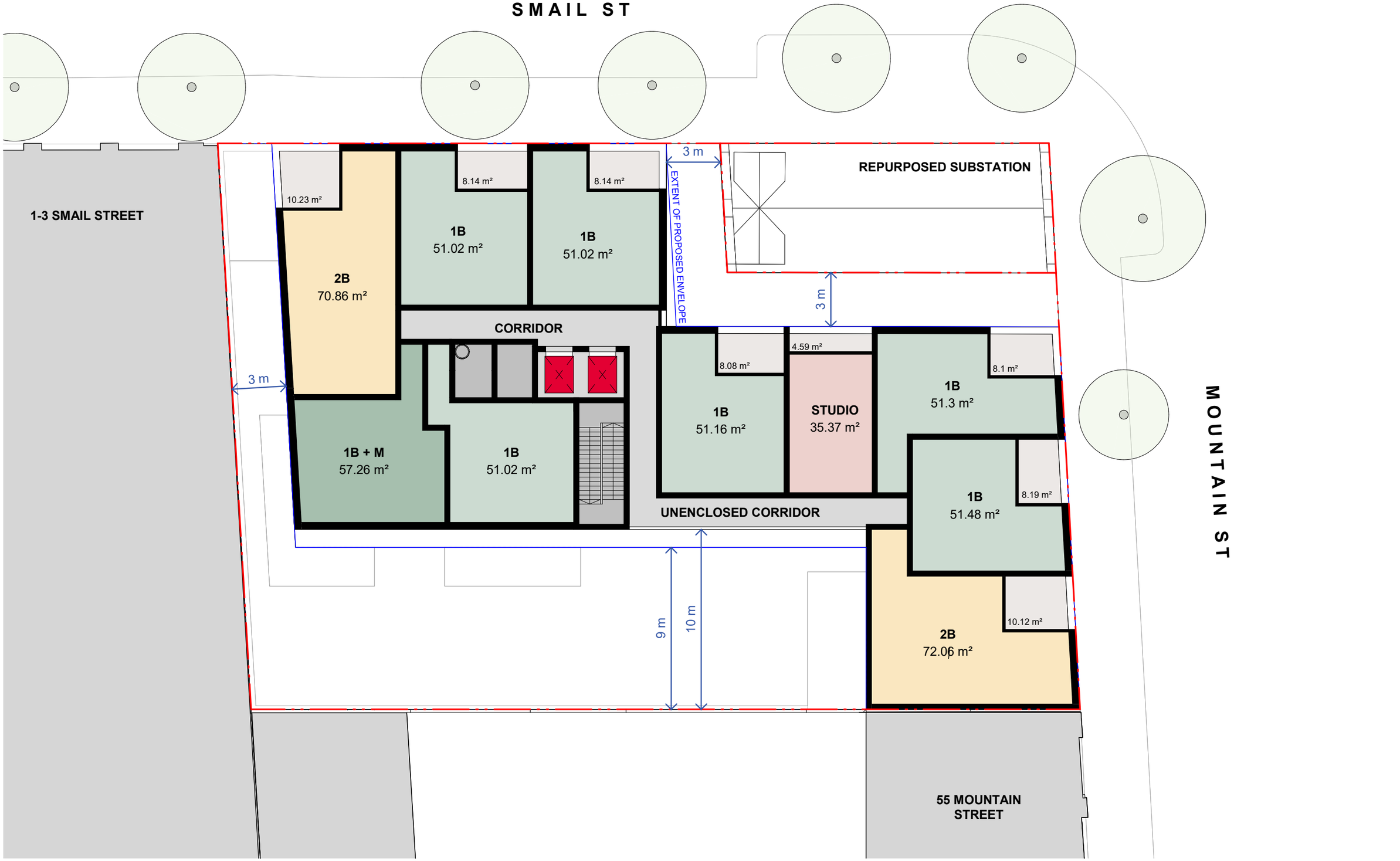
Rev. A



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LEVEL 2-6 (TYPICAL)
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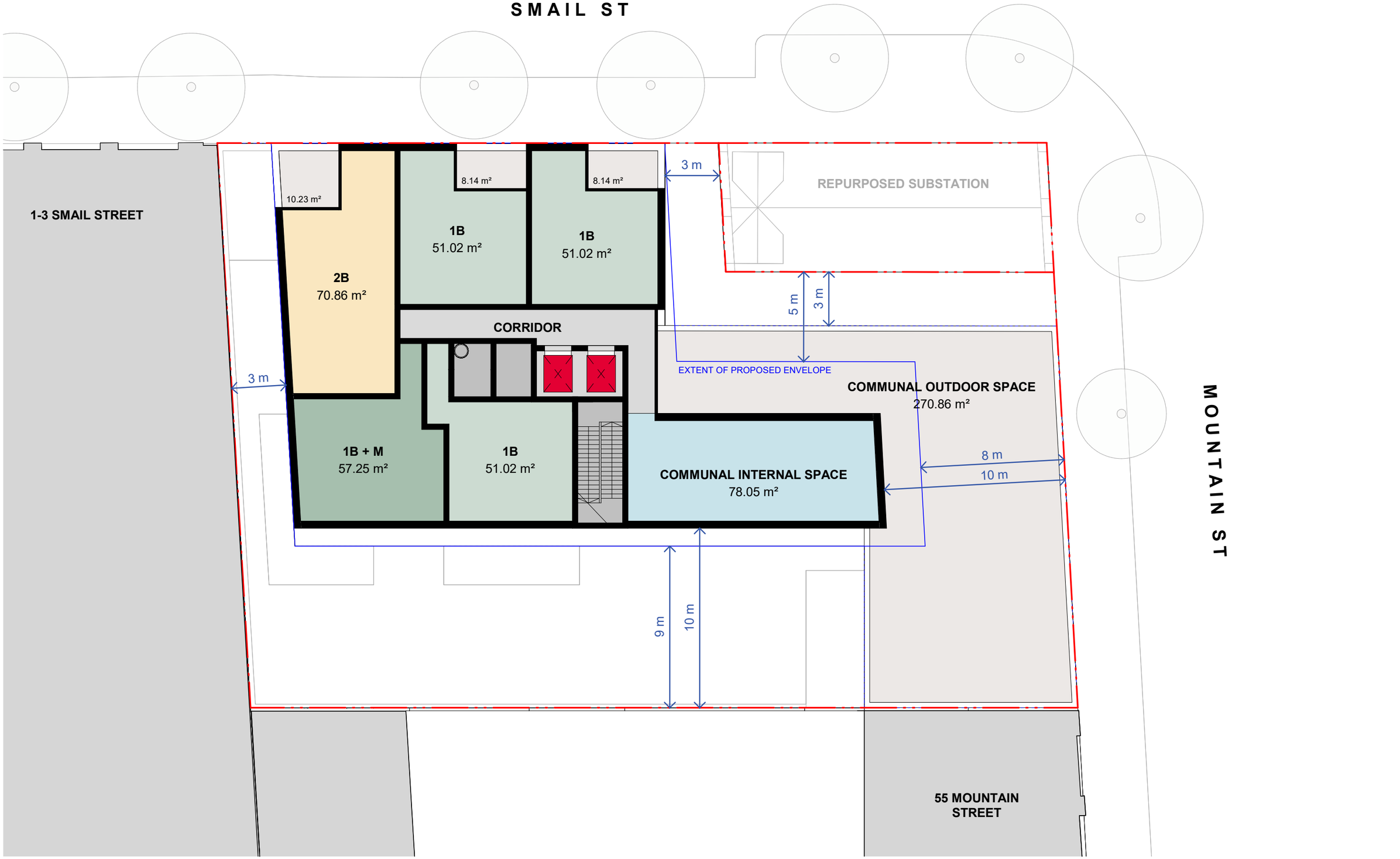
Rev. A



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41-49 Mountain St, Ultimo

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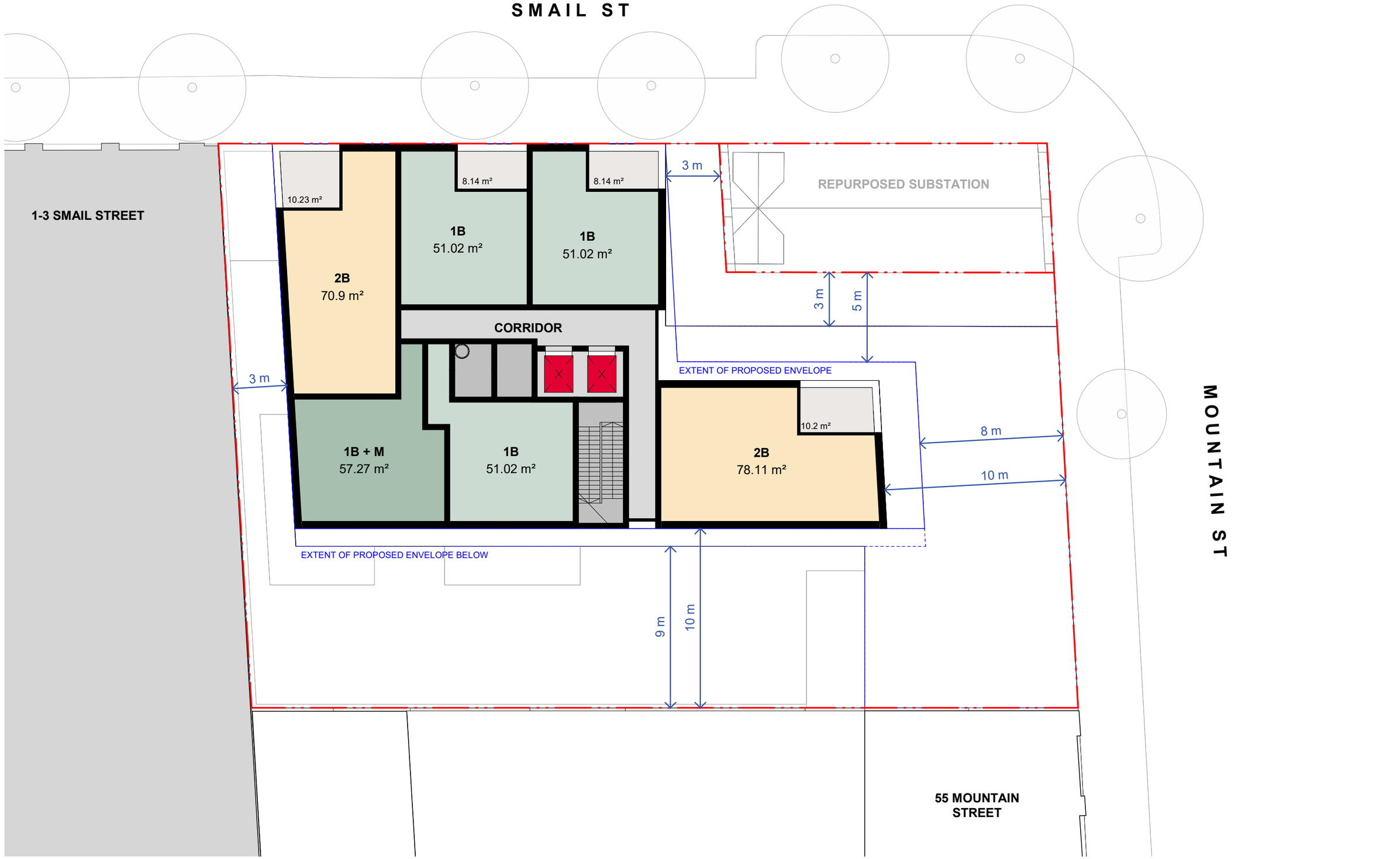

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41-49 Mountain St, Ultimo

LEVEL 8-14
S12603
1 : 200 @ A3

Drawing no. PP03.08
Rev. A

SMAIL ST

MOUNTAIN ST

998

866

1-3 SMAIL STREET

PLANT ENCLOSURE
RL 56.350

LIFT O.R

EXTENT OF PROPOSED ENVELOPE

REPURPOSED SUBSTATION

3 m

3 m

3 m

3 m

5 - 6 m

EXTENT OF PROPOSED ENVELOPE BELOW

8 m

10 m

FLAT ROOF
RL 56.350

TERRACES BELOW @ LEVEL 1
RL 12.150

9 m

10 m

COMMUNAL GARDEN
BELOW @ LEVEL 7
RL 30.750

55 MOUNTAIN
STREET

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Reg. 8498

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41-49 Mountain St, Ultimo

ROOF
S12603
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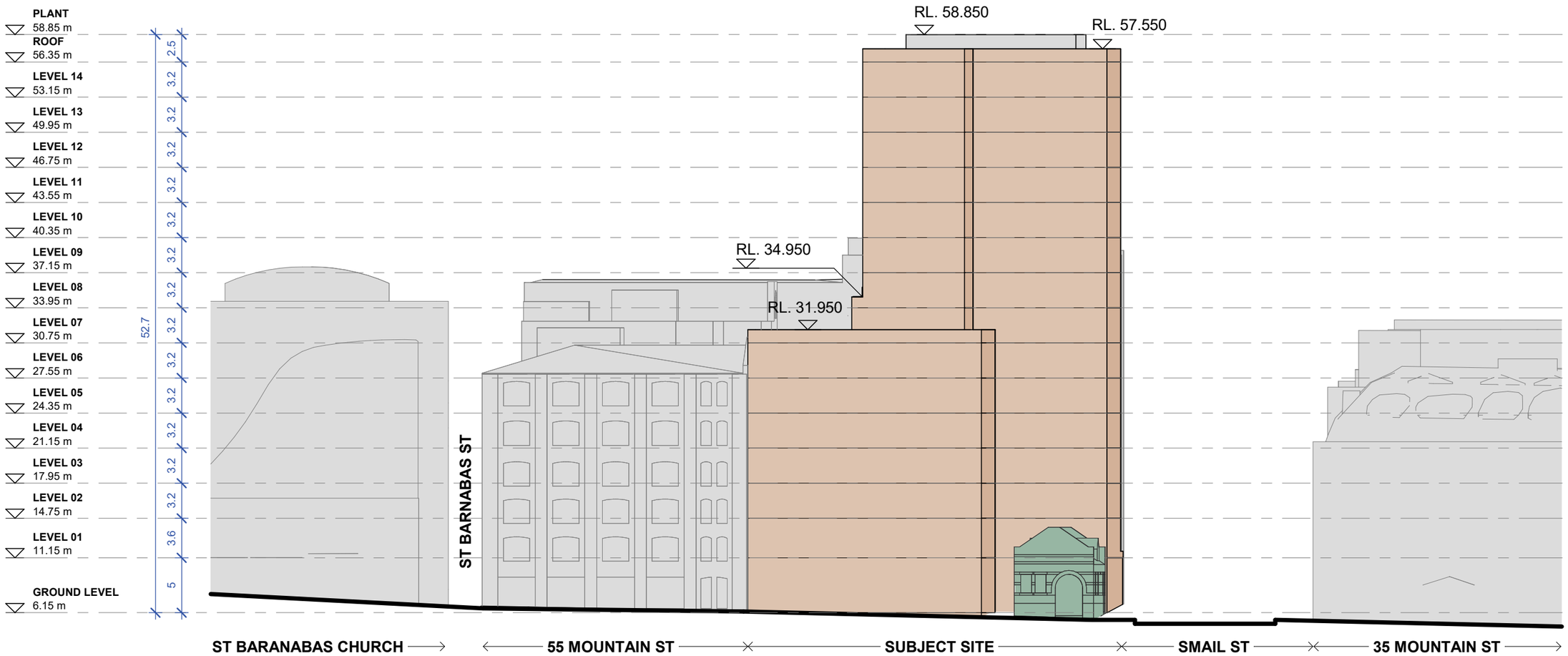
Drawing no. PP03.15

Rev. A



666

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41-49 Mountain St, Ultimo

EAST ELEVATION

S12603
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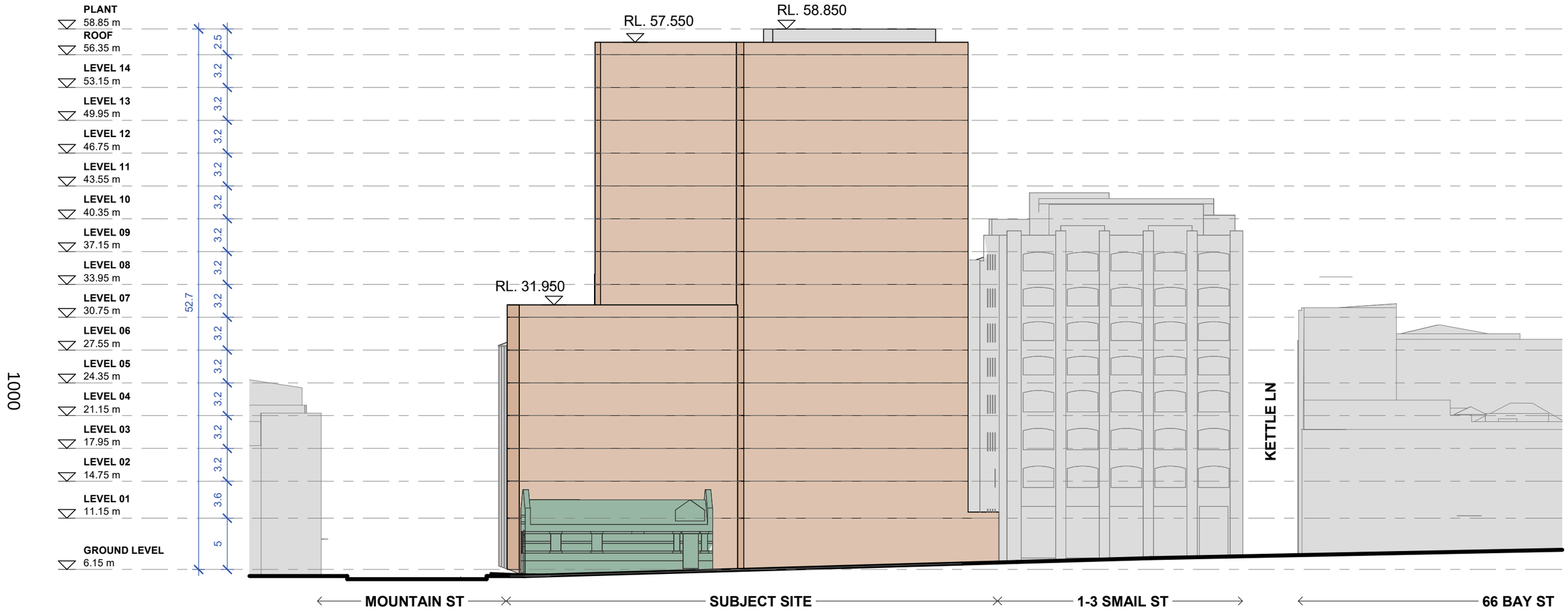
Drawing no. PP09.01

Rev.



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41-49 Mountain St, Ultimo

NORTH ELEVATION

S12603
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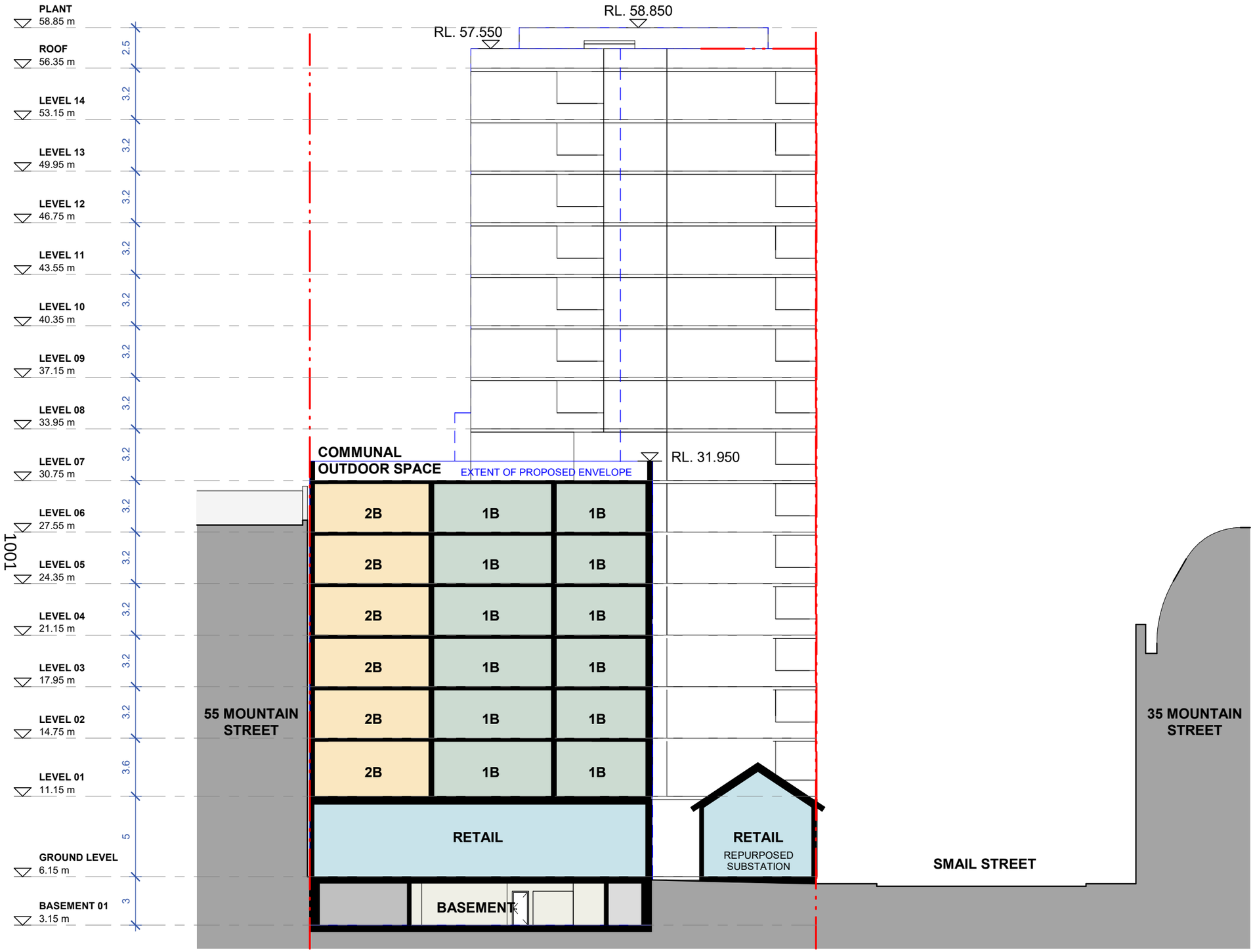
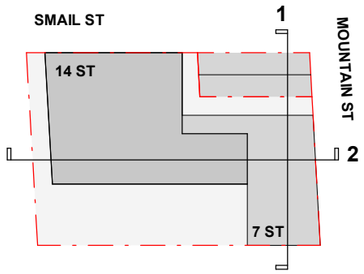
Drawing no. PP09.02

Rev.





KEY PLAN

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41-49 Mountain St, Ultimo

SECTION 1
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As indicated @ A3

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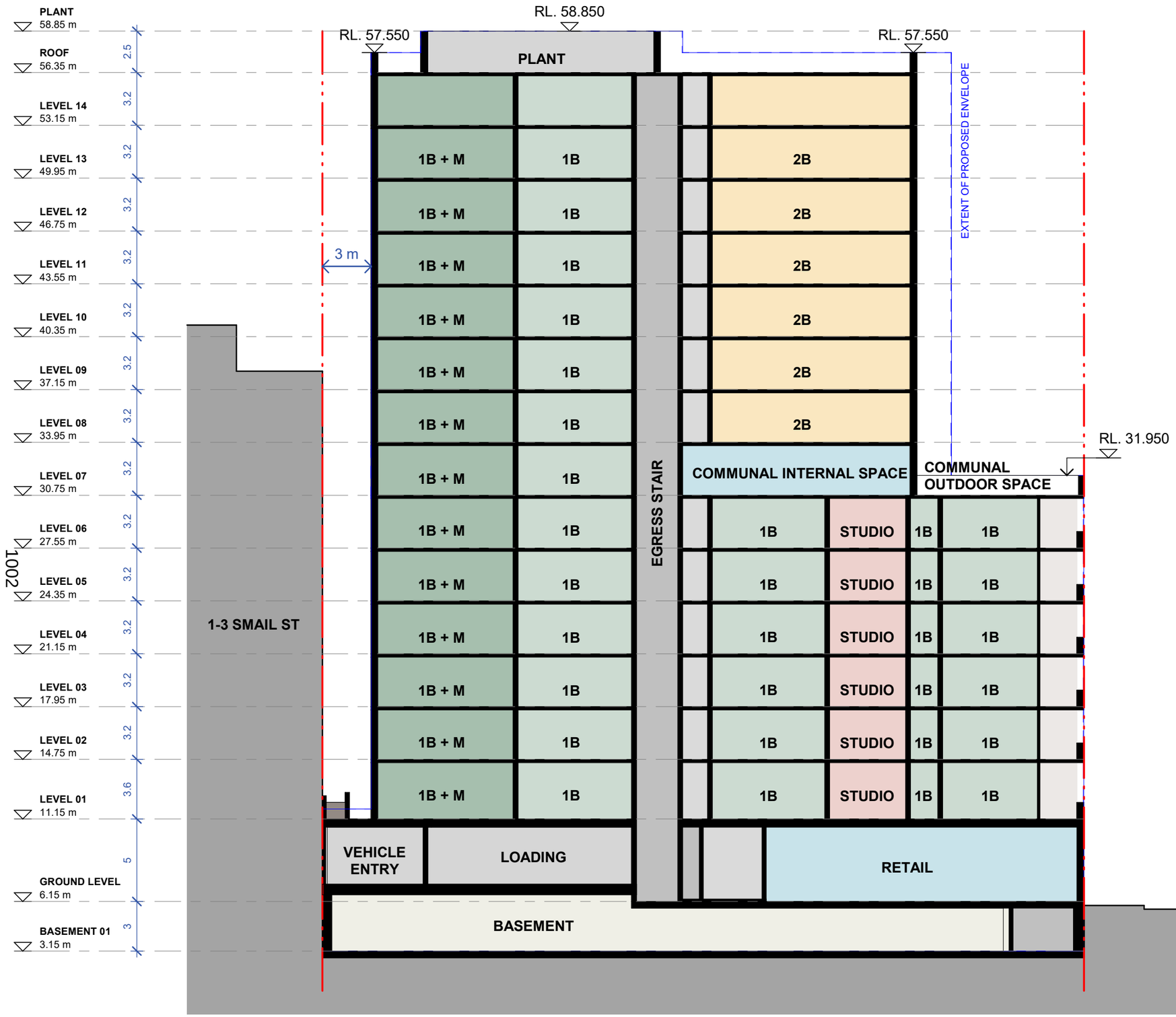
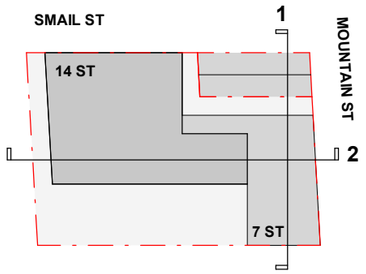
Rev. A





KEY PLAN

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41-49 Mountain St, Ultimo

SECTION 2
S12603
As indicated @ A3

Drawing no. PP10.02
Rev. A

Attachment A16

Dewatering Management Plan

Douglas PARTNERS

GROUNDED EXPERTISE

Report on Dewatering Management Plan

Proposed Mixed Use Development

41-49 Mountain Street, Ultimo NSW

Prepared for Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2

Project 231957.02

27 June 2025

Douglas Partners Pty Ltd
ABN 75 053 980 117
douglaspartners.com.au
96 Hermitage Road, West Ryde, NSW 2114
(02) 9809 0666

Document History

Details

Project No.	231957.02
Document Title	Report on Dewatering Management Plan
Site Address	41-49 Mountain Street, Ultimo NSW
Report Prepared For	Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
Filename	231957.02.R.004.Rev0

Status and Review

Status	Prepared by	Reviewed by	Date issued
Revision 0	Yeongbin Gim	Scott Easton / Nerilee Edwards	30 June 2025

Distribution of Copies

Status	Issued to
Revision 0	Juey Thanyakittikul of Apt. Residential Pty Ltd

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature	Date
Author	30 June 2025
Reviewer	30 June 2025

FS604853

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

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Appendix G: Water NSW Fact Sheet

Report on Dewatering Management Plan
Proposed Mixed Use Development
41-49 Mountain Street, Ultimo NSW

1. Introduction

This Dewatering Management Plan (DMP) has been prepared by Douglas Partners Pty Ltd (Douglas) for a proposed mixed use development at 41-49 Mountain Street, Ultimo NSW (the site). The DMP was commissioned by email instructing to proceed by Juey Thanyakittikul of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 and was undertaken in accordance with Douglas' proposal 231957.02.P.001.Rev1 dated 29 November 2024.

This DMP is required to accompany the Development Application (DA) to City of Sydney Council (the council) and will also be used as the basis for dewatering approval from WaterNSW and City of Sydney Council (Council). Details of the field work and numerical modelling are given in this report.

Based on project documentation provided by the client, it is understood that the proposed development includes construction of a ten to eleven storey mixed-use building with a single level basement for off-street carparking. The basement finished floor level is understood to be RL2.6 m AHD. The façade of a heritage-listed substation building in the northeast corner of the site will be retained, while the internal space of the building will be refurbished for retail use.

This DMP is based on the field work results of a geotechnical and hydrogeological investigation undertaken at the site in February 2025 (refer to Douglas' report 231957.02.R.001.Rev0 dated 25 March 2025). An overview of the results of the investigation is presented in this report.

It should be noted that a site dewatering plan (SDP) is required to be submitted with the application for a Construction Certificate. This SDP should be prepared by the civil engineer or contractor managing dewatering on site and would be based on the inflow results and recommendations outlined in this DMP.

This report must be read in conjunction with all appendices including the notes provided in Appendix A.

2. Site description

The site is located at 41 to 49 Mountain Street, Ultimo within City of Sydney local government area (LGA). The site is bounded by Smail Street to the north, Mountain Street to the east and multi-storey commercial / retail properties to the south and the west. The site is rectangular in shape and covers an area of about 1,460 m^2.

The general topography across the site slopes gently downwards to the northeast as part of the regional topography sloping generally northwards to Blackwattle Bay, approximately 1.1 km to the northwest of the site. Site levels range from about RL 8 m AHD in the southwest corner to

RL 6 m AHD at the northeast boundary. The site boundary and topographic contour levels obtained from NSW government mapping service are shown in Figure 1.

Figure 1: Site location (highlighted with red boundary) with topographic contours

3. Published data

3.1 Geology

The Sydney 1:100,000 Geological Series Sheet indicates that the site is underlain by man-made fill overlying alluvial and estuarine sediment of the Quaternary period.

The NSW Seamless Geology Map indicates that the site, except for the southwest portion, is underlain by anthropogenic deposits (Q_h), which include a mix of large man-made clasts (ranging from concrete blocks to building demolition rubble) and quarried natural boulders, with an interstitial sand sized to clay matrix. The southwest corner of the site is underlain by Hawkesbury Sandstone (Tuth), which typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

3.2 Hydrogeology

A groundwater bore search of the WaterNSW database was conducted for bores registered within a 500 m radius of the site to assess potential water levels and groundwater usage in the area. The search identified thirteen registered monitoring bores to the southeast of the site, with standing water level records available for six bores from 2007 and 2008. The recorded standing water levels ranged from 2.1 m to 5.9 m below ground level.

3.3 Groundwater dependant ecosystems (GDEs)

A review of Bureau of Methodology Groundwater Dependant Ecosystems Atlas indicates that there are no aquatic, subterranean or terrestrial GDEs within 1 km of the site.

4. Field work

4.1 Geotechnical investigation

A geotechnical investigation was undertaken by Douglas in February 2025. Boreholes were drilled to depths ranging between 8.7 m to 10.2 m. Based on the investigation, the site is generally underlain by pavement and fill over sandy alluvial soils then sandstone bedrock. The location of the geotechnical boreholes is shown on Drawing 1 in Appendix B together with the boreholes drilled as part of the concurrent contamination site investigation.

The observed subsurface profile during the investigation has been grouped into five geotechnical units (1 to 5). The rock units were classified in accordance with Pells et al "*Classification of Sandstone and Shale in the Sydney Region: A Forty Year Review*" (AGS Journal, June 2019), which uses a combination of rock strength and fracture spacing (and thickness) to divide the rock into five classes ranging from Class I (high strength and very few defects) to Class V (extremely low to very low strength and/or highly fractured). The interpreted depth and Reduced Level (RL) at the top of the rock classes are shown in Table 1.

Table 1: Summary of geotechnical model

Unit	Unit Description	Depth to Top of Unit[1] (m) [Reduced Level of Top of Unit (m AHD)]			
		BH101	BH102	BH103	BH101 (1-3 Smail St)
1	Concrete Pavement and Fill	0.0 [6.6]	0.0 [6.8]	0.0 [6.5]	0.0 [7.8]
2a	Alluvial - Very Loose to Loose Sand	1.2 [5.4]	1.0 [5.8]	N.E[2]	N.E
2b	Alluvial - Medium Dense to Dense Sand	2.0 [4.6]	2.0 [4.8]	1.5 [5.0]	N.E
3	Class V Sandstone	2.4 [4.2]	3.6 [3.2]	N.E	N.E
4	Class IV Sandstone	2.6 [4.0]	4.5 [2.3]	2.5 [4.0]	1.3 [6.5]
5	Class III Sandstone	8.5 [-1.9]	9.9 [-3.1]	3.0 [3.5]	2.3 [5.5]
Termination Depth		10.2 [-3.6]	10.1 [-3.3]	8.7 [-2.2]	3.8 [4.0]

Note: (1) Below current ground surface level
(2) N.E = Not Encountered
(3) Rock classification is based on Pells et al., 2019.

4.2 Groundwater investigation

Three groundwater monitoring wells were installed as part of the groundwater investigation, summarised in Table 2. The locations of the groundwater monitoring wells are shown on Drawing 1 in Appendix B. Reference should be made to the borehole logs in Appendix C for more detailed information and description for the soil and rock profile.

Table 2: Monitoring wells overview

Location ID	Surface RL (m AHD)	Screen Depth (m bgl*)	Screened Lithology
BH101	6.6	2.0 – 10.2	Silty sand from 2.0 m to 2.4 m, then extremely to moderately weathered low strength sandstone, becoming to slightly weathered medium strength sandstone.
BH102	6.8	2.0 – 10.1	Sand from 2.0 m to 2.5 m, then extremely to highly weathered very low to low strength sandstone, becoming slightly weathered medium strength sandstone.
BH103	6.5	2.0 – 5.0	Sand from 2.0 m to 2.5 m, then moderately to slightly weathered medium to high strength sandstone.

Notes: *bgl: below ground level

4.2.1 Groundwater levels

A summary of the measured groundwater levels within the site is provided in Table 3.

Data loggers have been installed in each of the monitoring wells for continuous groundwater level monitoring over a three-month period. Table 4 presents the minimum, maximum and average of the recorded levels during this monitoring period. Hydrographs showing the recorded groundwater levels are attached in Appendix D.

Table 3: Summary of manual groundwater measurements

Date of Reading	Measured Depth to Groundwater (m) [Groundwater Level (m, AHD)]		
	BH101 (12/02/2025)[1]	BH102 (13/02/2025)[1]	BH103 (14/02/2025)[1]
20/02/2025	3.5 [2.7]	2.6 [4.2]	3.9 [2.6]
26/03/2025	3.25	2.9	2.75

Date of Reading	Measured Depth to Groundwater (m) [Groundwater Level (m, AHD)]		
	BH101 (12/02/2025)[1]	BH102 (13/02/2025)[1]	BH103 (14/02/2025)[1]
	[3.35]	[3.94]	[3.75]
19/05/2025	2.8 [3.8]	2.48 [4.4]	3.12 [3.4]

Note: [1] Groundwater monitoring well installation date.

Table 4: Summary of Groundwater Monitoring Results (logger data)

Location ID	Datalogger Installation Date	Groundwater Level During Monitoring Period (RL m AHD)		
		Minimum	Maximum	Average
BH101	13/02/2025	3.30 (4/03/2025)	3.81 (5/05/2025)	3.52
BH102	14/02/2025	3.90 (4/03/2025)	4.40 (6/05/2025)	4.10
BH103	14/02/2025	2.66 (26/02/2025)	3.41 (17/05/2025)	2.93

It should be noted that groundwater levels vary over time due to seasonal, climatic and other factors.

Some of the measured water may be associated with perched seepage along the clay and rock surface and within the extremely weathered rock and not necessarily a permanent groundwater table.

4.2.2 Hydraulic conductivity testing

Rising head permeability tests were carried out in wells BH101, BH102 and BH103 on 14 February 2025. These were carried out by purging the well then measuring the rise in water level at regular time intervals using a data logger.

The detailed results of the permeability tests are attached in Appendix E. A summary of the test results is provided in Table 5.

Table 5: Interpreted hydraulic conductivity results

Well ID	Screened lithology	Interpreted k (m/s)
BH101	Sandy soil and moderately to slightly weathered, low to high strength sandstone (2–10 m bgl)	1.7×10^{-8}
BH102	Sandy soil and extremely weathered sandstone to highly weathered, low to medium strength sandstone (2–10 m bgl)	6.9×10^{-9}
BH103	Sandy soil and extremely weathered to slightly weathered sandstone, medium strength sandstone (2-5 m bgl)	1.3×10^{-8}

Note: k: hydraulic conductivity

5. Groundwater quality

5.1 Reviewed report

Groundwater quality was assessed as part of the previous detailed site (contamination) investigation (DSI) (Douglas, 2025), with pertinent information on groundwater quality at the site discussed below.

5.2 Groundwater sampling methodology

To assess the groundwater quality onsite, sampling from the three monitoring wells (GWBH101, GWBH102 and GWBH103) was undertaken. The general sampling procedure adopted for the collection of groundwater samples and subsequent laboratory analysis comprised of:

- Prior to sampling, measuring the groundwater monitoring wells using a dip meter which can detect phase separated hydrocarbons;
- Sampling using a positive displacement low flow bladder pump via the micro-purge (minimal drawdown) method. The method minimises aeration of the sample and disturbance to the water column thereby enhancing the quality of results for oxygen sensitive analytes;
- Following stabilisation of the field parameters, groundwater samples were collected in laboratory prepared bottles and vials. Samples collected for dissolved metals analysis were filtered using a 0.45 µm filter;
- Labelling each water sample container with an individual and unique identification, including project number and sample location. The containers were then placed into an ice cooled, insulated and sealed container for transport to the laboratory (with chain-of-custody); and
- Dispatching samples to Envirolab Services, which is NATA accredited laboratory for the tests performed. The samples were analysed for a combination of the potential contaminants of concern:
    - Metals (total and dissolved);
    - Total recoverable hydrocarbons (TRH);
    - Benzene, toluene, ethylbenzene and xylenes (BTEX);
    - Volatile organic compounds (VOC);
    - Polycyclic aromatic hydrocarbons (PAH);
    - Organochlorine pesticides (OCP);
    - Organophosphorus pesticides (OPP);
    - Polychlorinated biphenyls (PCB);
    - Per- and polyfluoroalkyl substances (PFAS);
    - pH / turbidity / hardness;
    - Oil and grease;
    - Total dissolved solids (TDS); and

- Total suspended solids (TSS).

Note: due to the limited water present in GWBH103 at the time of sampling, micropurging and collection of field parameters was not able to be undertaken.

Groundwater results, and relevant SAC, are shown in Table J4 in Appendix F, and the laboratory certificate and chain of custody documentation is provided in Appendix F.

5.3 Field results

No non-aqueous phase liquid was recorded by the interface meter and no hydrocarbon odour was noted during development or sampling. The purge groundwater was light brown and silty during sampling. The physical parameters recorded during sampling are summarised in Table 6.

Table 6: Summary of field parameters (groundwater and surface water)

Well / Sample ID	Temp. (°C)	DO (ppm)	Turbidity	EC (µS/cm)	pH	Redox (mV)
BH101	23.2	-0.20	75.17	12.2	3.81	409.4
BH102	22.5	-0.17	37.82	18.4	5.13	230.7
BH103	Insufficient groundwater in well to obtain parameters					

5.4 Discharge criteria

The adopted screening levels are summarised in Table 7 and are based on the following:

- ANZECC Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000);
- NHMRC Guidelines for Managing Risks In Recreational Water (NHMRC, 2008); and
- ANZG Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018).
- HEPA PFAS National Environmental Management Plan (NEMP) (HEPA, 2025)

Table 7: Summary of screening criteria (units given in µg/L unless otherwise stated)

Analyte		Marine DGV (95% LOP)	Physical Parameters
Metals	Arsenic (III / V)	24 / 13	-
	Cadmium	0.7	-
	Chromium (III / VI)	4.4	-
	Copper	1.3	-
	Mercury (inorganic)	0.1	-
	Lead	4.4	-
	Nickel	7	-

Analyte		Marine DGV (95% LOP)	Physical Parameters
	Zinc	8	-
	Manganese	80	-
TRH	C_6-C_{10}	10 (< PQL) [d]	-
	C_{10}-C_{16}	50 (< PQL) [d]	-
	C_{16}-C_{34}	100 (< PQL) [d]	-
	C_{34}-C_{40}	100 (< PQL) [d]	-
Oil and Grease		5000 (< PQL)[d]	Nonvisible
BTEX	Benzene	500 [a]	-
	Toluene	180	-
	Ethylbenzene	80	-
	Xylenes (m-, o- & p-)	75 / 350 / 200	-
PAH	Anthracene	0.01 [a]	-
	Benzo(a)pyrene	0.1 [a]	-
	Fluoranthene	1 [a]	-
	Naphthalene	50 [a]	-
	Phenanthrene	0.6 [a]	-
PCB	Aroclor 1254 (as a preliminary screen)	0.01	-
	Aroclor 1242	0.3	
OCP	Aldrin [a] (as a preliminary screen)	0.003	-
	Chlordane	0.001	-
	DDT	0.0004	-
	Dieldrin	0.01	-
	Endosulfan	0.005	-
	Endrin	0.004	-
	Heptachlor	0.0004	-
	Methoxychlor	0.004	-
OPP	Chlopyrifos [a] (as a preliminary screen)	0.009	-
	Diazinon	0.01	-
	Dimethoate	0.15	-

Analyte		Marine DGV (95% LOP)	Physical Parameters
	Fenitrothion	0.001	-
	Malathion	0.05	-
	Parathion	0.004 [e]	-
VOC	Tetrachloroethene (PCE)	70 [e]	-
	Trichloroethene (TCE)	330 [e]	-
	cis-1,2-dichloroethene (DCE)	700 [e]	-
	Chloroethene (vinyl chloride / VC)	100 [e]	-
	Tetrachloromethane (carbon tetrachloride / CT)	240 [e]	-
	Trichloromethane (chloroform / TCM)	370 [e]	-
PFAS			
	PFOS 95% LOP	0.13	-
	PFOA 95% LOP	220	-
Nutrients - Dissolved	Ammonia as N	900	
Physical Parameters	Conductivity	-	125 - 2200 µs/cm [f]
	pH	-	6-8 [f] (6.5-8.5) [h]
	Dissolved Oxygen	-	85-120 % saturation [f]
	Turbidity	-	6-50 NTU [f]
	Total Suspended Solids	-	< 50 mg/L [g]

Notes: PQL – laboratory practical quantification limit

a – 99% LOP adopted due to bioaccumulating nature of the contaminant or as otherwise recommended as per ANZG (2018)

b – unknown LOP

c – aesthetic criteria only

d – set at the laboratory PQL, example limits given

e – as an initial screen given the exhaustive list of VOC

f – given as comparative levels for lowland rivers. Typical conductivity values for coastal rivers in NSW are cited as 200-300 µs/cm (ANZECC, 2000).

g – typical levels based on experience with previous council disposal requirements

h – range of typical neutral pH conditions.

i. 95% LOP adopted for PFAS due to ambient concentrations being above the 99% LOP and the highly disturbed nature of the receiving water body.

Groundwater investigation levels for recreational water derived from NHMRC (2008) are in Table 8.

Table 8: Groundwater investigation levels for protection of recreational waters (µg/L)

Contaminant	Recreational water guideline values
Metals / metalloids	
Arsenic	100
Cadmium	20
Chromium (VI)	500
Copper	20000
Lead	100
Manganese	5000
Mercury (inorganic)	10
Nickel	200
BTEX	
Benzene	10
Ethylbenzene	3000
Xylenes	6000
Toluene	8000
PAH	
Benzo(a)pyrene	0.1
OCP	
Aldrin + Dieldrin	3
Chlordane	20
DDT	90
Endosulfan	200
Heptachlor	3
Methoxychlor	3000
OPP	
Chlorpyrifos	100
Diazinon	40
Dimethoate	70
Fenitrothion	70
Malathion	700

Contaminant	Recreational water guideline values
Parathion	200
PFAS	
PFOS + PFHxS*	2
PFOA	10
VOC	
Tetrachloroethene (PCE)	500
cis-1,2-dichloroethene (DCE)	300
Chloroethene (vinyl chloride / VC)	3
Tetrachloromethane (carbon tetrachloride / CT)	30
Trichloromethane (chloroform / TCM)	2500

5.5 Laboratory test results

The results of the laboratory testing are included in Appendix F. All results were within the recreational thresholds.

Groundwater concentrations of several dissolved metals including arsenic, cadmium, chromium, mercury and nickel as well as organic contaminants including PAH, OCP, OPP, PCB, were within the recreation land use and 95% (LOP) marine water criteria. Copper, lead, manganese and zinc exceeding the site's assessment criteria. PFOS was recorded above the 99% LOP but within the 95% LOP marine water criteria. PFAS, particularly PFOS, was found at higher levels in up-gradient and mid-gradient wells, with the highest in up-gradient well GWBH102.

The DSI considered that:

- the PFOS, copper, manganese and zinc detected above the adopted SAC were generally consistent with expected ambient background ranges; and
- the source of the lead was not known.

TRH, toluene, bromodichloromethane and chloroform were detected above the practical quality limit (PQL) in GWBH103, likely due to interference from sediment, potable and / or drilling fluids.

Low chloroform concentrations recorded in BH101 and BH102 are considered to be within expected ambient levels.

6. Conceptual hydrogeological model

The geotechnical investigation identified that the site consists of sandy alluvial and residual soils underlain by low to medium strength Hawkesbury Sandstone. Interpreted geotechnical cross-sections are provided in Appendix B. Relatively shallow groundwater levels (between 2.5 m and 4 m below ground surface) have been observed in all boreholes.

The groundwater hydraulic gradient appears to slope downward to the northeast across the site with elevations ranging between 8 m and 6 m AHD. Groundwater within the rock below about RL 1 m may be connected to the harbour and Blackwattle Bay. Based on the proposed basement floor level (RL 2.6 m AHD), it is likely the proposed basement will extend about 1.5 m below the monitored water levels.

It is expected that water inputs to the ground profile beneath the site include:

- Rainfall infiltration on the site and surrounds, including water flowing downslope laterally through the natural soils and bedrock from areas of higher topography; and
- Possible anthropogenic recharge from seepage from nearby leaking water mains and / or stormwater pipes, garden irrigation etc.

It should be noted that groundwater levels are transient and fluctuate with climatic variations and other factors (e.g. adjacent basements). Therefore, the water levels will temporarily rise during periods of heavy or prolonged rainfall and fall during dry periods.

7. Groundwater inflow assessment

7.1 Methodology

Seepage modelling was undertaken to assess the potential inflow rates into the proposed basement during and after construction, as well as induced groundwater level changes in adjacent and surrounding areas.

A 2-dimensional (2D) numerical groundwater model was developed. The modelling was carried out using the 2D finite element hydrogeological software SEEP/W (a component of GeoStudio) developed by GEOSLOPE International Ltd. The transient conditions during construction dewatering were modelled in the analysis. Long-term 'steady-state' flow analysis was not undertaken due to the 'water-tight' tanked basement proposed.

7.2 Model geometry

A cross section aligned in the west to east direction intercepting the basement footprint was selected to run the 2D analysis. The cross sections are presented in Figure 2.

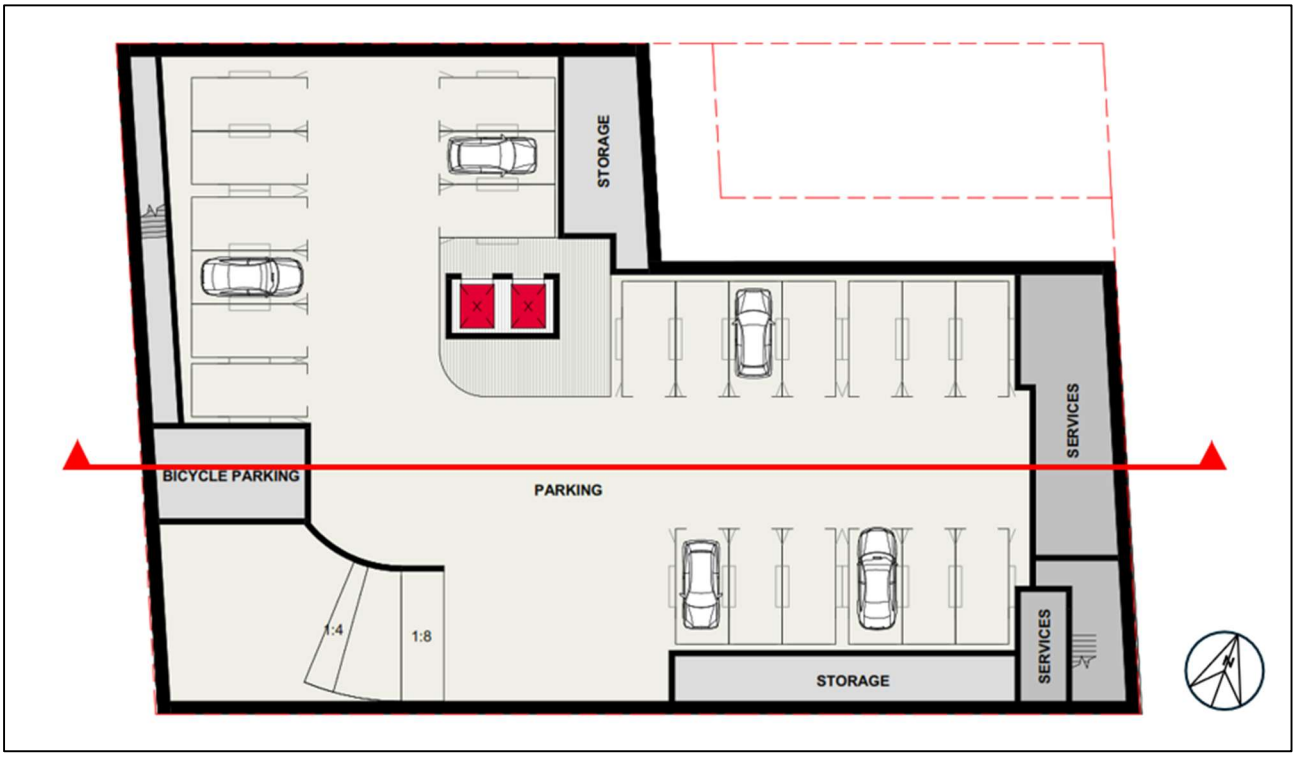

Figure 2: Model geometry and cross-section for 2D modelling

The aquifer surrounding the proposed development was simulated as a two-layer numerical model to represent the subsurface conditions beneath the site and to allow simulation of the vertical flow components. The model boundaries were extended 100 m beyond the proposed excavation boundaries.

The SEEP/W results are based on a 2D model, which assumes that the excavation is much longer than its width and provide seepage rates per unit metre. Inflow volumes were calculated through use of a shape factor based on Kavvadas (1992). For the analysis, the excavation was assumed to have an approximately rectangular configuration with effective widths of about 31.5 m (B) and lengths of about 46 m (L).

7.3 Model set-up

7.3.1 Model layers

The hydrogeological units were simulated as two layers. A combined sandy alluvial/residual soil and weathered rock layer, and a sandstone bedrock layer. The fill layer has been omitted from the model as it does not intersect the groundwater level during the proposed excavation works. Adopted hydraulic properties (baseline case) are presented in Table 9.

Parameters were selected based on the results of hydraulic conductivity testing (Section 4.2.2), range of values documented in available literature for similar lithologies (e.g. Fetter 1994 and Hoek & Bray 1981) and previous experience with similar materials.

Table 9: Model layers and adopted hydraulic properties

Layer	Material	Saturated k_h (m/s)	Anisotropy Ratio (k_v/k_h)	Saturated VWC	Material Model Adopted
1	Soil and Weathered Rock	1.0×10^{-5}	1.0	0.2	Unsaturated / Saturated
2	Sandstone	1.7×10^{-8}	0.3	0.1	Unsaturated / Saturated

Notes: k_v is vertical hydraulic conductivity
k_h is horizontal hydraulic conductivity
VWC is volumetric water content

7.3.2 Initial groundwater elevation and boundary conditions

As the proposed development is located within a residential setting with predominantly paved surroundings, a net infiltration percentage of 1% was assigned as water influx over the ground surface. Based on historical data from the Bureau of Meteorology Sydney Observatory Hill station (station number 66214), an annual rainfall of 1.2 m was adopted. This equates to a rainfall influx of 3.8 x 10-10 $m^3/sec/m^2$ over the ground surface.

The model adopted an average of the water levels recorded in the wells during long-term monitoring, resulting in a constant head boundary of RL 4.1 m AHD on the western boundary and RL 3 m AHD on the eastern boundary of the model.

7.3.3 Basement design and dewatering

The proposed basement walls (secant pile wall) were simulated as 'Seepage Faces' in SEEP/W with zero hydraulic pressure head along the full height.

It was assumed that a 600 mm diameter secant pile wall, with an effective width of 500 mm, socketed 0.5 m into the underlying sandstone below bulk excavation, will be used for shoring of the basement excavation. The required embedment depth of the secant piles should be confirmed by the project structural engineer. However, it is considered that the assumed embedment depth in the analysis will not significantly affect the results.

The lowest proposed finished floor level (FFL) of the basements is RL 2.6 m AHD. Douglas has assumed the bulk excavation level will be 0.5 m below FFL, at RL 2.1 m AHD.

It has been assumed that the construction dewatering will be required for one year for the proposed basement. The Baseline Case model set-up is presented in Figure 3.

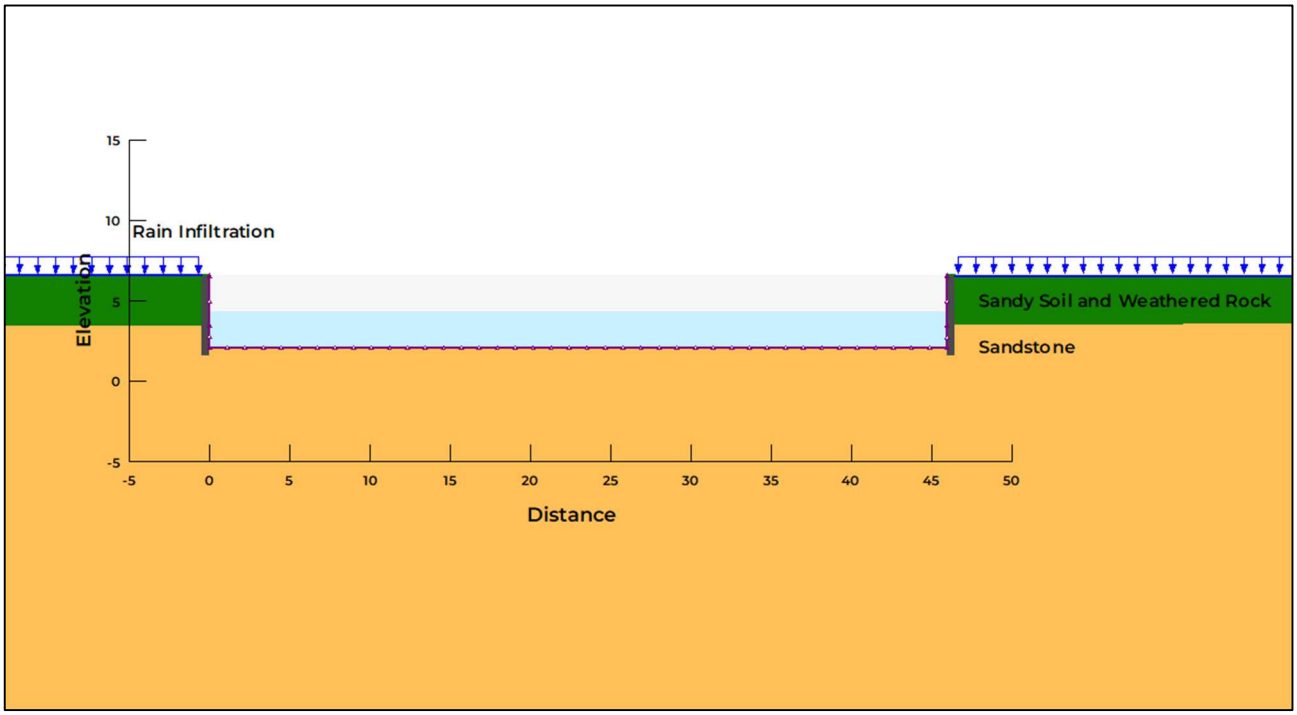

Figure 3: Model set-up (Baseline Case)

7.3.4 Simulation

To simulate the temporary dewatering required during construction, transient flow conditions were modelled in the analysis. For the purpose of the analysis, excavation was undertaken in a single stage (i.e., instantaneously) and the subsequent temporary dewatering period was assumed to be up to one year, subdivided into multiple time intervals.

7.3.5 Sensitivity analysis

Sensitivity analyses were undertaken to assess the impact of intersecting more permeable ground conditions or a shallower water table. The sensitivity cases adopted are outlined below:

- Sensitivity Case 1: higher hydraulic conductivity encountered within the excavation, with hydraulic conductivity increased to 1.0 x 10^{-4} m/s for Layer 1 (sandy soil) and 1.7 x 10^{-7} m/s for Layer 2 (sandstone bedrock); and
- Sensitivity Case 2: assuming the water table is 2 m higher than Baseline Case following heavy rainfall.

7.4 Modelling results

7.4.1 Groundwater inflow

The inflow rates from the modelling represent the estimated total rate of groundwater flowing into the excavation and the volume (per unit time) requiring extraction via the dewatering system, in order to dewater the basement during construction.

The estimated inflows from the analysis during the construction (first year) and are summarised in Table 10. The estimated inflows from sensitivity cases are summarised in Table 11.

Table 10: Simulated inflow results for Baseline Case

Elapsed Time	Baseline case – predicted inflow	
	kL/day	Cumulative (ML)
1 day	0.0	0.00
3 days	0.6	0.00
7 days	0.6	0.00
14 days	0.6	0.01
21 days	0.6	0.01
30 days	0.6	0.02
60 days	0.5	0.03
90 days	0.5	0.05
180 days	0.5	0.10
365 days	0.5	0.19

Table 11: Simulated inflow results for Sensitivity Cases

Case	Baseline case – predicted inflow	
	kL/day	Cumulative (ML)
Sensitivity Case 1 (365 days)	1.9	0.78
Sensitivity Case 2 (365 days)	0.5	0.46

The results of the groundwater inflow analysis indicate that under both baseline and sensitivity hydrogeological conditions, inflows are predicted to be less than 1 ML/year. It is noted that the precision to which the results are presented does not represent the accuracy of the predictions, the level of precision is provided to allow comparison of scenarios, the accuracy will be lower because of the inherent variability in key parameters such as hydraulic conductivity and recharge and results could range up to an order of magnitude, in which instance the flows would be less than 3 ML/year.

The inflow rates presented above are predictions only and may vary significantly to the assumptions presented. The actual flow rate will only be known once the excavation is

completed, and the inflow can be observed and measured. Appropriate planning should be put in place to monitor and compensate for greater variations in actual inflows.

7.4.2 Drawdown and settlement

The results of the analysis predict that a maximum drawdown of approximately 0.3 m adjacent to the assumed bulk excavation level, decreasing to less than 0.1 m at a distance of 100 m from the excavation.

Based on the results of the geotechnical investigation, the groundwater drawdown is expected to occur within the sandstone bedrock. Settlements on adjacent structures due to the drawdown is this rock are expected to be negligible.

8. Impact assessment

8.1 Aquifer interference policy considerations

The NSW Aquifer Interference Policy (AIP) indicates that the term "aquifer" is commonly understood to mean a groundwater system that is sufficiently permeable to allow water to move within it, and which can yield productive volumes of groundwater. A groundwater system is defined as any type of saturated geological formation that can yield low or high volumes of water. However, for the purpose of the AIP, the term aquifer has the same meaning as groundwater system and includes low yielding and saline systems.

Table 1 in Section 3.2.1 of the AIP outlines minimal impact considerations. The AIP indicates that "if predicted impacts are less than the Level 1 minimal impact considerations, then these impacts will be considered as acceptable". The following minimal impact considerations are outlined for less productive porous and fractured rock groundwater sources:

- Less than or equal to 10% cumulative variation in water table 40 m from any high priority GDE or high priority culturally significant site;
- A cumulative pressure head decline of no more than a 2 m at any water supply work; and
- Any change in groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.

8.2 Contamination

The available data, as discussed in Section 5.4, indicates that groundwater will require treatment prior to disposal.

An additional round of groundwater testing is recommended prior to commencing dewatering, to further inform treatment requirements. The DSI (Douglas, 2025) identified historical off-site commercial / industrial land uses as a potential source of contamination. This could impact groundwater quality during dewatering, including variation in quality than recorded in pre-dewatering analysis.

8.3 Risk assessment

An assessment of the potential effects of dewatering on neighbouring properties and groundwater receptors has been summarised in Table 12.

Table 12: Assessment of potential effects of dewatering

Item	Comment
Impacts on potential GDEs	No GDE is identified within 1 km radius of the site (Section 3.3). Drawdown impacts are predicted to be negligible at this distance from the site.
Water supply losses by neighbouring groundwater users	The closest registered extraction bore is 150 m southwest from the site (Section 3.2). Drawdown impacts are predicted to be insignificant at this distance from the site.
Potential subsidence of neighbouring structures	Groundwater drawdown is predicted to occur within sandstone bedrock. Therefore, risk of subsidence due to lowering of the water table is expected to be minimal.
Mounding of water upgradient of structure	As the basement is proposed to be tanked, mounding of groundwater may occur upgradient of the site but this is not expected to be significant.

9. Recommended management strategy

A tanked basement is considered suitable for this site due to the presence of a sandy soil layer, relatively shallow groundwater levels observed during long term monitoring, the underlying site geology, and the site topography. Drainage measures within the basement walls and below the basement slab will be required to collect and store water inflows for periodic discharge.

This section outlines the proposed management strategy based on the preferred methodology for dewatering and disposal.

9.1 Groundwater inflow control

Based on the inflow assessment (Section 7), seepage inflows are expected to be relatively low. These flows in the short should be readily controllable by pumping from sumps for discharge to the stormwater. Standard subfloor drainage systems should be sufficient to direct the seepage water into the sumps. It should be noted that seepage may temporarily increase following high rainfall events.

Appropriate planning should be in place to monitor and compensate for possible variations in the actual inflow rate. If higher inflows are encountered, grouting may be required to reduce the inflows.

9.2 Water quality control

Seepage water quality must be tested prior to discharge to the stormwater to prevent contamination and adverse impacts during and after construction. Based on the water testing discussed in Section 5 it is likely that some form of treatment of groundwater will be required prior to discharge.

The recommended methodology for water quality testing is as follows:

- Collection of water samples by a suitably qualified Environmental Consultant (and quality control samples) from extracted water prior and following treatment (refer to Section 9.3);
- On-site screening of water by the site contractor and / or the qualified environmental consultant for the field parameters;
- Analysis by a NATA accredited laboratory for the analytes (excluding field parameters);
- Assessment of results by the Environmental Consultant with respect to the discharge criteria (Table 13), and provision of advice to the contractor (as per contractual engagement) on the results, including and non-compliances. In the event of non-compliances the Environmental Consultant will provide recommendations with respect to the implications of the recorded results; and
- Review and update of this water quality testing methodology and analytical suite as required.

The proposed suite of analysis is provided in Table 13, below, and the analytical regime is provided in Table 14, Section 9.3.

Water quality sampling should be conducted in accordance with Geoscience Australia's Groundwater Sampling and Analysis – A Field Guide (Geoscience Australia 2009)(where relevant).

Quality assurance / quality control (QA / QC) procedures should be used to establish accurate, reliable and precise results. QA / QC procedures included: calibration of equipment, analyses of samples within holding times, keeping samples chilled and wearing gloves during sampling.

Table 13: Proposed suite of analytes for water quality monitoring

Category	Primary Analytes	Secondary Analytes
Field parameters	pH, turbidity (visual and/or field meter), oil and grease (visual)	Temperature, EC
Physical properties	TSS	TDS
Major ions	-	Calcium, magnesium, sodium, potassium, chloride, sulphate and alkalinity (total, carbonate and bicarbonate)
Metals (total)	Arsenic, aluminium, cadmium, chromium, copper, iron, mercury, manganese, nickel, lead and zinc	-

Category	Primary Analytes	Secondary Analytes
Nutrients	Nitrate	ammonia, total phosphorus and reactive phosphorus
Organics	TRH / TPH, BTEX	VOC, phenols, PAH, PCB, OCP, OPP, oil and grease

Notes: EC: electrical conductivity | TDS: total dissolved solids | TSS: total suspended solids
TRH: total recoverable hydrocarbons | TPH: total petroleum hydrocarbons
BTEX: benzene, toluene, ethylbenzene and xylenes
PAH: polycyclic aromatic hydrocarbons
VOC: volatile organic compounds

Water quality results should be compared to assessment criteria for each analytes. These assessment criteria would be selected based on baseline groundwater quality results and relevant guidelines.

9.3 Monitoring and reporting requirements

The following monitoring program and associated reporting is to be adopted until the end of excavation and construction works on-site. Groundwater level monitoring should be continued one month after construction.

Table 14: Monitoring and reporting requirements

Item	Monitoring requirements	Methodology
Visual inspection	Inspection of treated water to confirm:. • No visible oil and grease 'sheen'. • Visually 'clear' (consistent with tap water). • No significant discolouration. • No unnatural odours.	Daily inspections (contractor). **HOLD POINT - If any of the visual inspection signs are noted, then any discharge will be suspended until issue is resolved, or contingency plan implemented.**.
Groundwater level monitoring	Groundwater level recording from the three monitoring wells to assess drawdown in the vicinity of the site. This requirement may be deleted subject to approval with WaterNSW given the low impact.	Continuous groundwater level monitoring using data logger recording at six-hourly intervals in monitoring wells in the vicinity of the site. Groundwater level monitoring is to be undertaken during construction and to be continued one month after cessation of dewatering. Quarterly manual groundwater level measurements in monitoring wells.

Item	Monitoring requirements	Methodology
Water quality sampling and testing	Samples to be collected of treated water for analysis of water parameters set out in Table 13. Samples of untreated water to be collected and analysed as required to inform treatment.	Water quality testing is to be throughout dewatering prior to and during disposal to stormwater. The process for sampling and analysis is provided in Section 9.2 **Start up period** • Analysis for primary and secondary analytes. • Treated water: sampling and analysis prior to commencement of discharge, until at least three sequential results meet the discharge criteria. • Untreated water: sampling and analysis as required to inform treatment, comprising at least 3 samples prior to or within the first month of discharge. **Standard Testing Regime** Sampling from treated water • Weekly sampling and testing for primary analytes. • Fortnightly sampling and testing for secondary analytes where no elevated levels of exceedances of discharge criteria recorded in previous sampling rounds (treated or untreated water) Sampling from untreated water • Analysis of untreated water as required to inform treatment. **Review of Testing Regime** Environmental Consultant to review sampling regime periodically. Environmental Consultant may make recommendations to reduce or otherwise amend the analytical suite / sampling frequency, subject to Council approval. **HOLD POINT – If concentrations exceed discharge criteria, then contingency strategy to be adopted.**

Item	Monitoring requirements	Methodology
		Inclusion of results in a final water quality monitoring report.
Quality control sampling	Collection of replicate samples to verify quality of laboratory results. Testing suite to include: • Metals (total); • TRH; • BTEX; and • PAH.	At a rate of 10% of samples tested. Samples will be recorded using industry standard COC documentation, including the date, sample ID, name and signature of sampler, and transportation records to the NATA accredited laboratory. Inclusion of results in a final water quality monitoring report
Quantity of groundwater inflows	Measurements of groundwater volumes contained in the sumps.	Weekly monitoring and recording of dewatering volumes. **HOLD POINT - If dewatering volumes exceed those outlined in Section 7 then construction will be halted to minimise inflows (e.g., grouting of exposed basement faces). Alternatively a higher inflow limit must be approved by WaterNSW and Council. Presumably a limit up to 3 ML/year would be possible.** Weekly reporting of volumes to the Environmental Consultant. Inclusion of results in a final water monitoring report.
Dewatering completion report	To be prepared by a suitably qualified consultant upon completion of all dewatering works. The summary report will incorporate the above information and: • Any on-site records kept by the contractor (e.g., visual observations, any unexpected finds records, etc.); • All analytical results (i.e., each batch of water disposed) compared to the adopted assessment criteria; • Quality control testing; • Record of dewatering volumes (i.e., for each discharge event); and Comment on any unexpected finds or non-conformances, and / or otherwise if the dewatering works have complied with this DMP.	

Notes: Testing frequency, assessment criteria and analysis requirements may be reviewed in consultation with the Environmental Consultant based on ongoing results.

9.4 Personnel and responsibilities

Table 15 outlines the proposed project personnel and relevant responsibilities as part of the management plan.

Table 15: Nominated personnel and responsibilities

Role	Organisation	Responsibilities
Site Manager / Contractor	TBC	Routine visual inspection. Monitoring / recording of discharge volumes. Maintaining any unexpected / contingency records.
Dewatering Contractor	TBC	Design / specification and ongoing maintenance of the dewatering system.
Geotechnical Consultant	Douglas Partners – 02 9809 0666	Groundwater level monitoring and review of disposal volumes. Assist in preparation of the dewatering completion report.
Environmental Consultant	Douglas Partners – 02 9809 0666	Water quality sampling (analysis using NATA accredited laboratories). Interim advice for compliance with discharge requirements. Quality control sampling. Assist in preparation of the dewatering completion report.

9.5 Contingency plan

As per Section 9.3, at any hold point if any non-conformance is encountered then dewatering will be suspended. The following general contingency plan will be enacted:

- Notify the Site Manager / Contractor and Environmental Consultant.
- Should an exceedances of the visual inspection of discharge criteria be recorded:
  - the contractor will amend the treatment to address the issue(s) of concern;
  - the Environmental Consultant will assess the risk of unacceptable impact. Environmental Consultant to inspect the site / unexpected finds and collect additional water quality samples as required to assess the issue of concern;
- Should water quality be deemed unsuitable for disposal to stormwater pending further treatment/ assessment
- Should water quality be deemed unsuitable for disposal to stormwater pending further treatment/ assessment, suspend dewatering stormwater disposal pending receipt of advice from the Environmental Consultant that the discharge criteria are being met and associated approval from Council. Dewatering may be suspended to achieve this, or alternative disposal options adopted. These could include an application(s) to Sydney Water, for discharge to the sewer network, and / or to Water NSW, for reinjection into the ground or off-site disposal to a

liquid waste facility (noting: disposal to sewer and reinjection are unlikely to be suitable short-term options given the approval requirements); andand treat water prior to discharge to the ground;

- Should dewatering volumes be higher than predicted, suspend construction and undertake grouting to reduce groundwater inflows.

10. Conclusion

From a geotechnical engineering perspective, it is considered that a tanked basement is feasible without significant impact to surrounding groundwater systems or properties.

The results of the inflow assessment suggest groundwater inflows would be about less than 1 ML/year during the first year of construction under baseline conditions. Sensitivity cases with adverse conditions suggest the first year of construction inflows could be up to 0.5 ML/year under wet weather conditions and up to 0.8 ML/year if the hydraulic conductivity of sandy soil and the sandstone is higher than measured. These predictions are estimates based on the information available; actual flow rates may vary from these and will only be known once the excavation is complete and inflow rates can be measured.

This report has been prepared with reference to *Minimum requirements for building site groundwater investigations and reporting* (NSW DPE, 2022).

11. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at 41-49 Mountain Street, Ultimo NSW in line with Douglas' proposal dated 29 November 2024 and acceptance received from Juey Thanyakittikul of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the groundwater components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

Appendix A

About This Report

About this Report

November 2023

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

continued next page

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

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Appendix B

Drawings

1037

REV	DESCRIPTION/COMMENT	DATE	DRAWN BY
0	INITIAL ISSUE	24.03.2025	EC

SCALE: 0 2 4 6 8 10 m
1:250 @ A3

Douglas PARTNERS
OFFICE: SYDNEY
96-98 Hermitage Rd, West Ryde NSW 2114
(02)9809 0666

CLIENT: **Apt.Residential Pty Ltd**

NOTE:
1: Basemap from Metromap (Dated 27.01.2025)

COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 56

PROJECT NAME: **Proposed Mixed Use Development**

PROJECT ADDRESS: **41-49 Mountain Street, Ultimo**

DRAWING TITLE: **Test Location Plan**

PROJECT NO: **231957.02**

DRAWING NO: **1**

REVISION: **0**

A

A'

BH101 (1-3 Smail St)

APPROXIMATE SITE BOUNDARY

BH105A

BH102

BH101

BH106

BH107

BH103

APPROXIMATE SITE BOUNDARY

MOUNTAIN STREET

UNIT 1

UNIT 2A AND 2B

UNIT 3

UNIT 4

UNIT 5

PROPOSED BASEMENT LEVEL
RL 2.6m AHD

ELEVATION (AHD)

DISTANCE ALONG PROFILE (m)

UNIT 1: CONCRETE / FILL
UNIT 2: ALLUVIAL SOIL
UNIT 3: CLASS V SANDSTONE
UNIT 4: CLASS IV SANDSTONE
UNIT 5: CLASS III SANDSTONE

LEGEND

CONCRETE
NO CORE
FILL
Clayey SAND
Clayey silty SAND
Silty SAND
SANDSTONE
SC - Clayey SAND
SC-SM - Clayey SAND to Silty SAND
SM - Silty SAND
SP - Poorly Graded SAND
Piezometer
Samples
Discontinuity
SPT - Symbol

TESTS / OTHER

- ? — ? — - Interpreted geotechnical boundary
N - Standard penetration test value
- Water level

ROCK WEATHERING
FR – Fresh
SW – Slightly Weathered
MW – Moderately Weathered
HW – Highly Weathered
RS – Residual Soil
XW – Extremely weathered
DW – Distinctly Weathered

SOIL MOISTURE
D - Dry
M - Moist
W - Wet
S - Saturated

SOIL DENSITY
vl - Very Loose
l - Loose
md - Medium Dense
d - Dense
vd - Very Dense

ROCK STRENGTH
VL- Very Low
L - Low
M - Medium
H - High

REV	DESCRIPTION/COMMENT	DATE	DRAWN BY
0	Initial Issue	24.03.2025	MN

SCALE: 0 5
Horizontal Scale 1:250
Vertical Exaggeration = 4.0

Douglas PARTNERS
OFFICE: SYDNEY
96-98 Hermitage Rd, West Ryde NSW 2114
(02) 9809 0666

CLIENT:
Apt.Residential Pty Ltd

NOTES
1. Subsurface conditions are accurate at the borehole locations only. Variations in subsurface conditions may occur between borehole locations. Interpreted strata boundaries are approximate and should be used as a guide only.
2. Summary logs only and should be read in conjunction with detailed logs.
3. Horizontal and vertical scales are not equal.

PROJECT NAME:
Proposed Mixed Use Development
PROJECT ADDRESS:
41-49 Mountain Street, Ultimo

DRAWING TITLE:
Inferred Geotechnical Cross-Section A-A'

PROJECT No: **231957.02**
DRAWING No: **2**
REVISION: **0**

1038

P:\231957.02 - ULTIMO, 41-49 Mountain Street, Geo\7.0 Drawings\7.2 Out\231957.02.D.002.Rev0..CS A-A'.dwg

Appendix C

Borehole Logs

Terminology, Symbols and Abbreviations

November 2023

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style XW. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

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Soil Descriptions

Terminology
Symbols
Abbreviations

March 2024

Introduction

All materials which are not considered to be "in-situ rock" are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:

The "classification" comprises a two character "group symbol" providing a general summary of dominant soil characteristics. The "name" summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either "fine grained" (also known as "cohesive" behaviour) or "coarse grained" ("non cohesive" behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as "oversize"	
Cobble	63 - 200		
Gravel[1]	2.36 - 63	Coarse	>65%
Sand[1]	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

[1] – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer "component proportions" below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a "Sandy CLAY", this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a "primary", "secondary", or "minor" component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition[1]	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor[2]	Present in the soil, but not significant to its engineering properties	All other components	All other components

[1] As defined in AS1726-2017 6.1.4.4

[2] In the detailed material description, minor components are split into two further sub-categories. Refer "identification of minor components" below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, "INTERBEDDED Silty CLAY AND SAND".

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component [1]	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

[1] – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

Type		Particle size (mm)
Gravel	Coarse	19 - 63
	Medium	6.7 - 19
	Fine	2.36 – 6.7
Sand	Coarse	0.6 - 2.36
	Medium	0.21 - 0.6
	Fine	0.075 - 0.21

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code NDF, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as "extremely weathered material" in reports and by the abbreviation code XWM on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than 'very low' as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

The presence of particles considered to be "oversize" may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with "MIXTURE OF".

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Rock Strength

Rock strength is defined by the unconfined compressive strength, and it refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects.

The Point Load Strength Index $I_{s(50)}$ is commonly used to provide an estimate of the rock strength and site specific correlations should be developed to allow UCS values to be determined. The point load strength test procedure is described by Australian Standard AS4133.4.1-2007. The terms used to describe rock strength are as follows:

Strength Term	Unconfined Compressive Strength (MPa)	Point Load Index[1] $I_{s(50)}$ MPa	Abbreviation Code
Very low	0.6 - 2	0.03 - 0.1	VL
Low	2 - 6	0.1 - 0.3	L
Medium	6 - 20	0.3 - 1.0	M
High	20 - 60	1 - 3	H
Very high	60 - 200	3 - 10	VH
Extremely high	>200	>10	EH

[1] Rock strength classification is based on UCS. The UCS to $I_{s(50)}$ ratio varies significantly for different rock types and specific ratios may be required for each site. The point load Index ranges shown above are as suggested in AS1726 and should not be relied upon without supporting evidence.

The following abbreviation codes are used for soil layers or seams of material "within rock" but for which the equivalent UCS strength is less than 0.6 MPa.

Scenario	Abbreviation Code
The material encountered has an equivalent UCS strength of less than 0.6 MPa, and therefore is considered to be soil (as per Note 1 of Table 20 of AS 1726-2017). The properties of the material encountered over this interval are described in the "Description of Strata" and soil properties columns.	SOIL
The material encountered has an equivalent UCS strength of less than 0.6 MPa, and therefore is considered to be soil (as per Note 1 of Table 20 of AS 1726-2017). The prominence of the material is such that it can be considered to be a seam (as defined in Table 22 of AS1726-2017) and the properties of the material are described in the defect column.	SEAM

Degree of Weathering

The degree of weathering of rock is classified as follows:

Weathering Term	Description	Abbreviation Code
Residual Soil[1]	Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are no longer visible, but the soil has not been significantly transported.	RS
Extremely weathered[1]	Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible	XW
Highly weathered	The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is significantly changed by weathering. Some primary minerals have weathered to clay minerals. Porosity may be increased by leaching or may be decreased due to deposition of weathering products in pores.	HW
Moderately weathered	The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable but shows little or no change of strength from fresh rock.	MW
Slightly weathered	Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock.	SW
Fresh	No signs of decomposition or staining.	FR
Note: If HW and MW cannot be differentiated use DW (see below)		
Distinctly weathered	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching or may be decreased due to deposition of weathered products in pores.	DW

[1] The parent rock type, of which the residual/extremely weathered material is a derivative, will be stated in the description (where discernible).

Degree of Alteration

The degree of alteration of the rock material (physical or chemical changes caused by hot gasses or liquids at depth) is classified as follows:

Term	Description	Abbreviation Code
Extremely altered	Material is altered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible.	XA
Highly altered	The whole of the rock material is discoloured, usually by staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is changed by alteration. Some primary minerals are altered to clay minerals. Porosity may be increased by leaching or may be decreased due to precipitation of secondary materials in pores.	HA
Moderately altered	The whole of the rock material is discoloured, usually by staining or bleaching to the extent that the colour of the original rock is not recognisable but shows little or no change of strength from fresh rock.	MA
Slightly altered	Rock is slightly discoloured but shows little or no change of strength from fresh rock	SA
Note: If HA and MA cannot be differentiated use DA (see below)		
Distinctly altered	Rock strength usually changed by alteration. The rock may be highly discoloured, usually by staining or bleaching. Porosity may be increased by leaching or may be decreased due to precipitation of secondary minerals in pores.	DA

Degree of Fracturing

The following descriptive classification apply to the spacing of natural occurring fractures in the rock mass. It includes bedding plane partings, joints and other defects, but excludes drilling breaks. These terms are generally not required on investigation logs where fracture spacing is presented as a histogram, and where used are presented in an unabbreviated format.

Term	Description
Fragmented	Fragments of <20 mm
Highly Fractured	Core lengths of 20-40 mm with occasional fragments
Fractured	Core lengths of 30-100 mm with occasional shorter and longer sections
Slightly Fractured	Core lengths of 300 mm or longer with occasional sections of 100-300 mm
Unbroken	Core contains very few fractures

Rock Quality Designation

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

$$\text{RQD \%} = \frac{\text{cumulative length of 'sound' core sections > 100 mm long}}{\text{total drilled length of section being assessed}}$$

where 'sound' rock is assessed to be rock of low strength or stronger. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e., drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

Stratification Spacing

These terms may be used to describe the spacing of bedding partings in sedimentary rocks. Where used, these terms are generally presented in an unabbreviated format

Term	Separation of Stratification Planes
Thinly laminated	< 6 mm
Laminated	6 mm to 20 mm
Very thinly bedded	20 mm to 60 mm
Thinly bedded	60 mm to 0.2 m
Medium bedded	0.2 m to 0.6 m
Thickly bedded	0.6 m to 2 m
Very thickly bedded	> 2 m

Defect Descriptions

Defect Type

Term	Abbreviation Code
Bedding plane	B
Cleavage	CL
Crushed seam	CS
Crushed zone	CZ
Drilling break	DB
Decomposed seam	DS
Drill lift	DL
Extremely Weathered seam	EW
Fault	F
Fracture	FC
Fragmented	FG
Handling break	HB
Infilled seam	IS
Joint	JT
Lamination	LAM
Shear seam	SS
Shear zone	SZ
Vein	VN
Mechanical break	MB
Parting	P
Sheared Surface	S

Rock Defect Orientation

Term	Abbreviation Code
Horizontal	H
Vertical	V
Sub-horizontal	SH
Sub-vertical	SV

Rock Defect Coating

Term	Abbreviation Code
Clean	CN
Coating	CT
Healed	HE
Infilled	INF
Stained	SN
Tight	TI
Veneer	VNR

Rock Defect Infill

Term	Abbreviation Code
Calcite	CA
Carbonaceous	CBS
Clay	CLAY
Iron oxide	FE
Manganese	MN
Pyrite	Py
Secondary material	MS
Silt	M
Quartz	Qz
Unidentified material	MU

Rock Defect Shape/Planarity

Term	Abbreviation Code
Curved	CU
Discontinuous	DIS
Irregular	IR
Planar	PR
Stepped	ST
Undulating	UN

Rock Defect Roughness

Term	Abbreviation Code
Polished	PO
Rough	RF
Smooth	SM
Slickensided	SL
Very rough	VR

Defect Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

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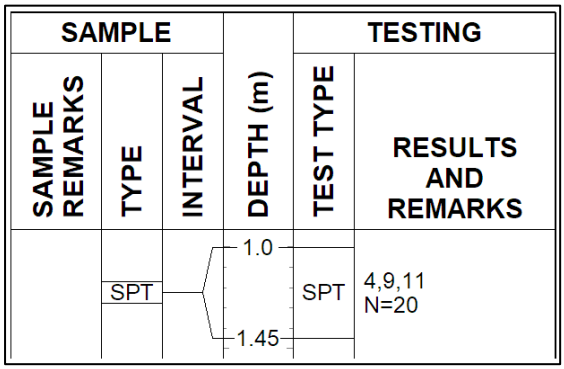
Sampling, Testing and Excavation Methodology

March 2024

Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:



Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U[1]
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

[1] – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y =x blows for y mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS

Field and laboratory testing (continued)

Test Type	Code
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(_)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150

Groundwater Observations

▷	seepage/inflow
▽	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD[1]
Air Track	AT
Diatube	DT[1]
Hand auger	HA[1]
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA[1]
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT[1]
Ripping tyne/ripper	R
Rock roller	RR[1]
Rock breaker/hydraulic hammer	EH
Sonic drilling	SON[1]
Mud/blade bucket	MB[1]
Toothed bucket	TB[1]
Vibrocore	VC[1]
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB[1]

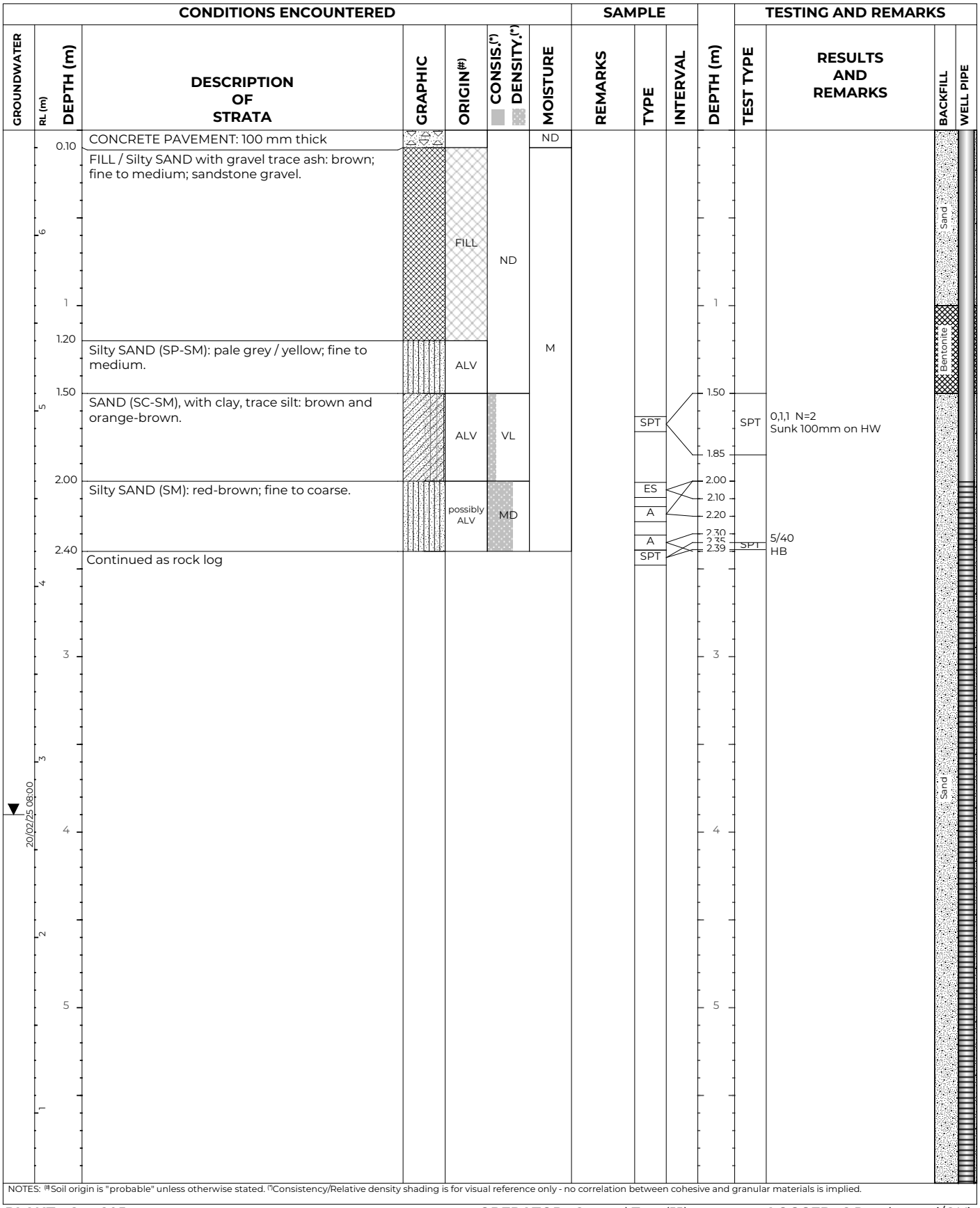
[1] – numeric suffixes indicate tool diameter/width in mm

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 1 of 3



NOTES: (#) Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.4m, NMLC to 10.2m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.4m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
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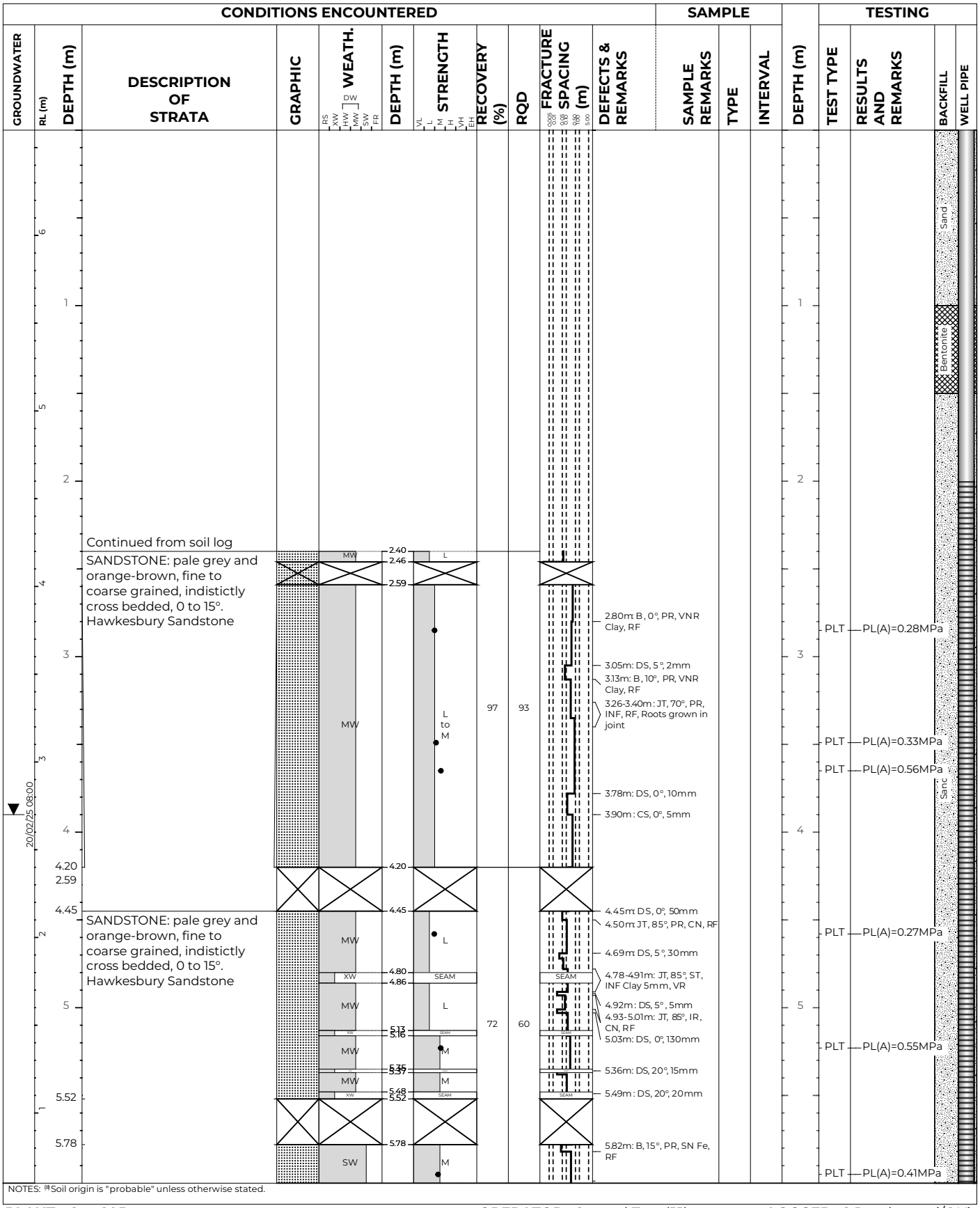
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 2 of 3



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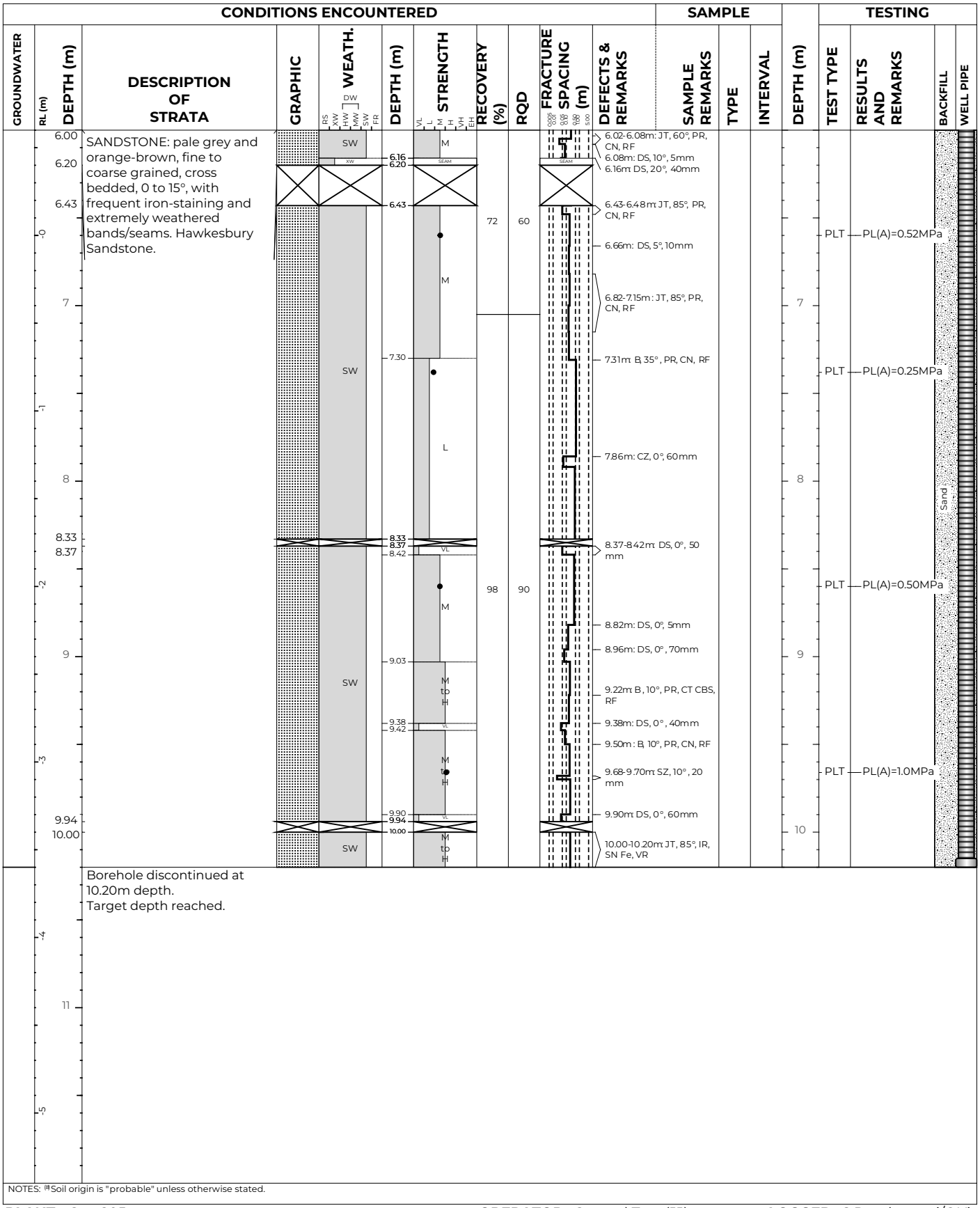
LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 3 of 3



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CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.6 AHD
COORDINATE: E:333156.6, N:6249348.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 231957.02
DATE: 12/02/25
SHEET: 1 of 1

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 1 of 3

CONDITIONS ENCOUNTERED								SAMPLE			TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL / WELL PIPE
		0.16	CONCRETE PAVEMENT: 160 mm thick				ND							
		0.30	FILL / Silty Gravelly SAND, with clay, trace asphalt, sandstone gravel, slag: brown; fine to medium.		FILL									
		1.00	FILL / Gravelly SAND with clay trace cobbles: brown; fine to medium; fine to coarse, sandstone and igneous gravel; sandstone cobbles; with asphalt, slag; and trace terracotta, tile, and rusty metal piece.		FILL	ND								
		1.50	Clayey SAND (SC): yellow / orange; fine to medium.		ALV		M				1			
		2.00	Clayey SAND (SC), trace gravel: red-brown, orange-brown and pale grey; fine to coarse; fine to medium, ironstone gravel.		ALV	VL			SPT		1.50	SPT	0,0,1/100	
		2.50	SAND (SP), trace gravel: pale grey and yellow-brown; fine to coarse; fine, sandstone gravel.		possibly ALV	MD			ES		1.80 1.90 2.00			
▼ 20/02/25 07:00		2.67	SAND with gravel trace clay: pale grey; fine to coarse; fine to medium, sandstone gravel. Hawkesbury Sandstone.			ND	ND		A		2.20 2.35	SPT	25/130 (HB)	
		3.30			XWM	(D)	NDF		SPT		2.48			
		3.58				ND	ND							
			Continued as rock log								3			
											4			
											5			

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 2 of 3

CONDITIONS ENCOUNTERED | **SAMPLE** | **TESTING**

GROUNDWATER: 20/02/25 07:00

RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH.	DEPTH (m)	STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		Continued from soil log																
		SANDSTONE: pale grey, orange-brown and red-brown, fine to coarse grained, cross bedded, 0 to 10°; with abundant iron-staining and extremely weathered seams, highly fractured. Occasional carbonaceous lenses. Hawkesbury Sandstone.		HW	3.58	VL				3.65m: DS, 10°, 180mm							Bentonite	
				XW	3.66	SEAM			SEAM									
				HW	3.83	VL to				3.87m: DS, 15°, 25mm					PLT	PL(A)=0.27MPa		
				XW	4.00	SEAM	81	43	SEAM	4.00m: DS, 0°, 480mm							Sand	
				HW	4.48	L												
				XW	4.63	SEAM			SEAM	4.63m: DS, 0°, 70mm								
				HW	4.70	L to M				4.72-4.90m: JT, 85°, PR, CN, VR					PLT	PL(A)=0.26MPa		
				XW	5.09	SEAM			SEAM	5.10m: DS, 0°, 30mm								
				HW	5.13	L to M	79	17		5.04-5.20m: JT, 75°, ST, CN, VR 5.19-5.23m: JT, 45°, PR, INF Clay 2mm, SM 5.31m: B, 5°, PR, INF Clay 2mm, SM					PLT	PL(A)=0.26MPa		
5.45					5.45													
5.71				SW	5.71	L to M									PLT	PL(A)=0.30MPa		
				XW	5.85	SEAM			SEAM	5.85m: DS, 10°, 370mm								

NOTES: [a] Soil origin is "probable" unless otherwise stated.

Generated with CORE-GS by Geroc - Split Soil-Rock Log

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
CASING: HWT to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
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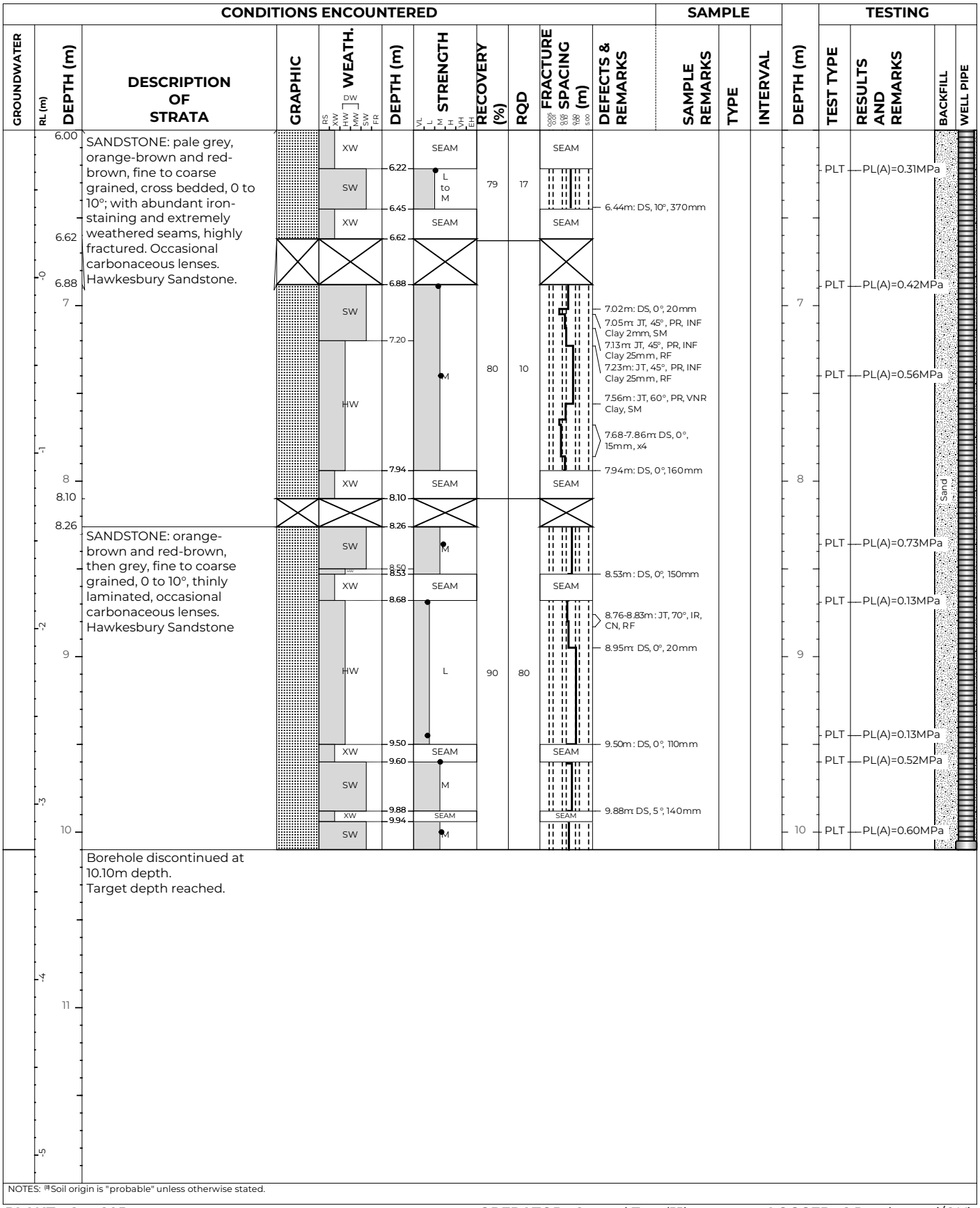
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 3 of 3



NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 205
METHOD: VE to 1.5m, AD/T to 2.5m, NMLC to 10.1m
REMARKS:

OPERATOR: Ground Test (JJ)

LOGGED: S.Pourkazemi/C.Yip
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Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.8 AHD
COORDINATE: E:333148.3, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 231957.02
DATE: 13/02/25
SHEET: 1 of 1

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 1 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		0.08	CONCRETE PAVEMENT: 80 mm thick											Sand	
			FILL / Clayey SAND, with silt, trace ash, asphalt, broken glass pieces: brown/yellow; fine to medium.		FILL	ND	ND								
		0.40	FILL / SAND, trace clay, trace gravel: brown and grey-brown; fine to medium; fine to medium, igneous, sandstone and ironstone gravel.		FILL	MD					1	SPT	4,3,7 N=10	Bentonite	
		1.50	SAND (SP), with clay, trace gravel: red-brown and orange-brown; fine to coarse; fine, sandstone gravel.		possibly RS	MD to D	M		A/ASS		1.30 1.50 1.70 2.00 2.20				
▼ 20/02/25 13:00		2.50	Continued as rock log						A/ASS		2.50 3			Sand	
											4				
											5			Bentonite	

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

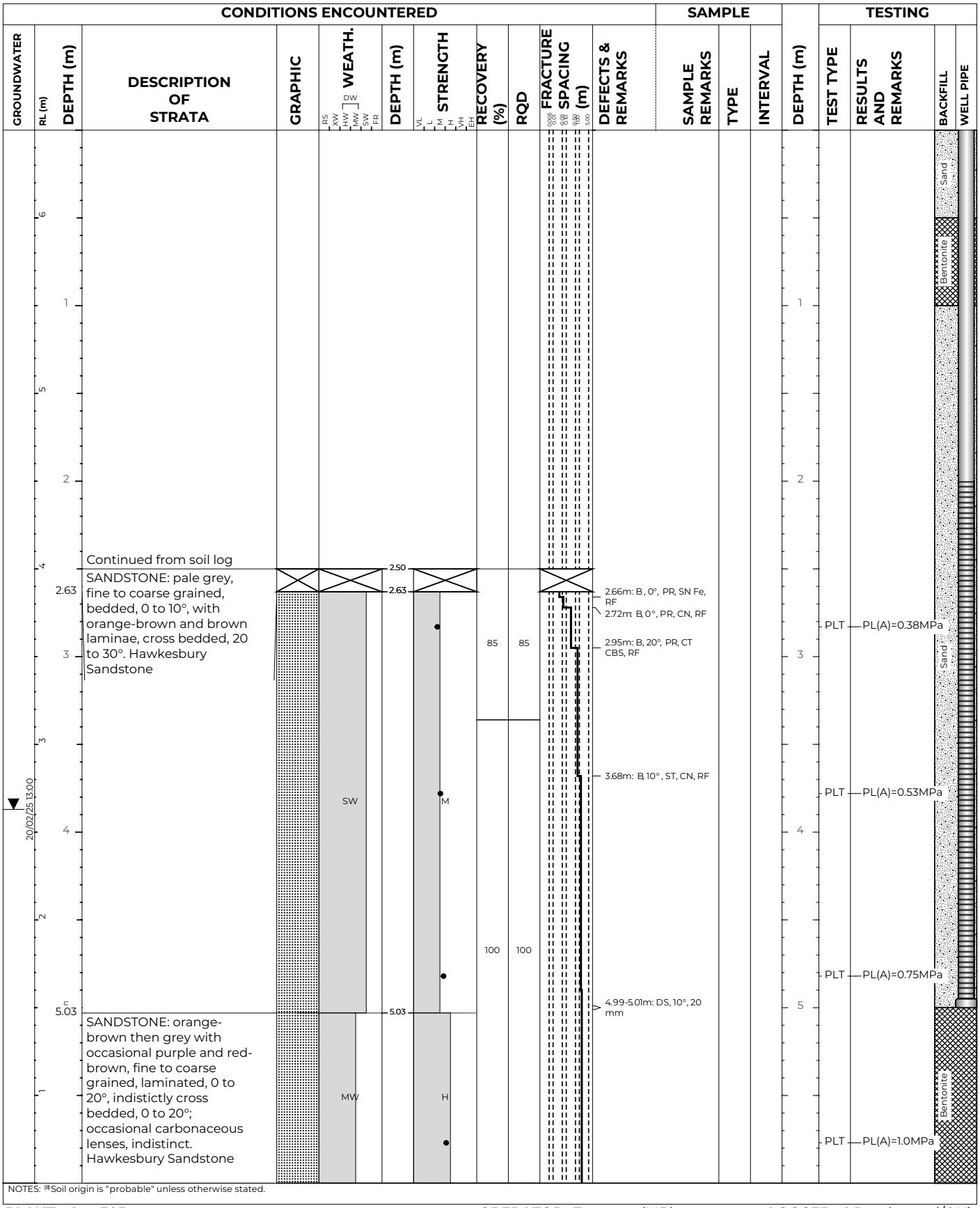
Douglas PARTNERS

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 2 of 3



Generated with CORE-GS by Geroc - Split Soil-Rock Log

NOTES: [#] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Refer to explanatory notes for symbol and abbreviation definitions

BOREHOLE LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 3 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	WEATH. (PS, XW, HW, MW, SW, FR; DW)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.03, 0.06, 0.20, 0.60, >0.60)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	-0		[CONT] SANDSTONE: orange-brown then grey with occasional purple and red-brown, fine to coarse grained, laminated, 0 to 20°, indistictly cross bedded, 0 to 20°; occasional carbonaceous lenses, indistinct. Hawkesbury Sandstone				H	100	100		6.42-6.44m: CS, 0-10°, PR, SN Fe, VR								
						6.41					6.58-6.61m: CS, 0°, 30mm								
											6.65m: B, 20°, CU, VNR Clay, SM					PLT	PL(A)=0.30MPa		
											6.80m: DS, 20°, 10mm								
											6.85m: DS, 30°, 10mm								
		7									6.97m: B, 10°, PR, VNR Clay, SM				7				
	-1				MW		M	100	89		7.13-7.22m: CZ, 90mm					PLT	PL(A)=0.53MPa		
											7.50m: B, 5°, PR, CT CBS, RF								
											7.92m: B, 10°, PR, VNR Clay, SM								
		8									8.07-8.10m: DS, 10°, 30 mm				8	PLT	PL(A)=0.64MPa		
	-2										8.26m: B, 20°, CU, VNR Clay, SM								
											8.30m: IS, 0°, 20mm								
											8.44m: B, 5°, PR, VNR Clay, SM								
											8.50m: DS, 0°, 15mm								
						8.60					8.60-8.68m: JT x2, 60°, PR, SN Fe, VR, JTs Cross each other					PLT	PL(A)=4.7MPa		
			Borehole discontinued at 8.78m depth. Target depth reached.				VH												
	-3	9																	
		10																	
	-4																		
		11																	
	-5																		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Geo 305
METHOD: VE to 0.8m, AD/T to 2.5m, HQ to 8.78m
REMARKS:

OPERATOR: Terratest (MB)

LOGGED: S.Pourkazemi/C.Yip
CASING: PWT to 2.5m

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

CORE PHOTO LOG

CLIENT: Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
PROJECT: Proposed Mixed Use Development
LOCATION: 41-49 Mountain Street, Ultimo, NSW

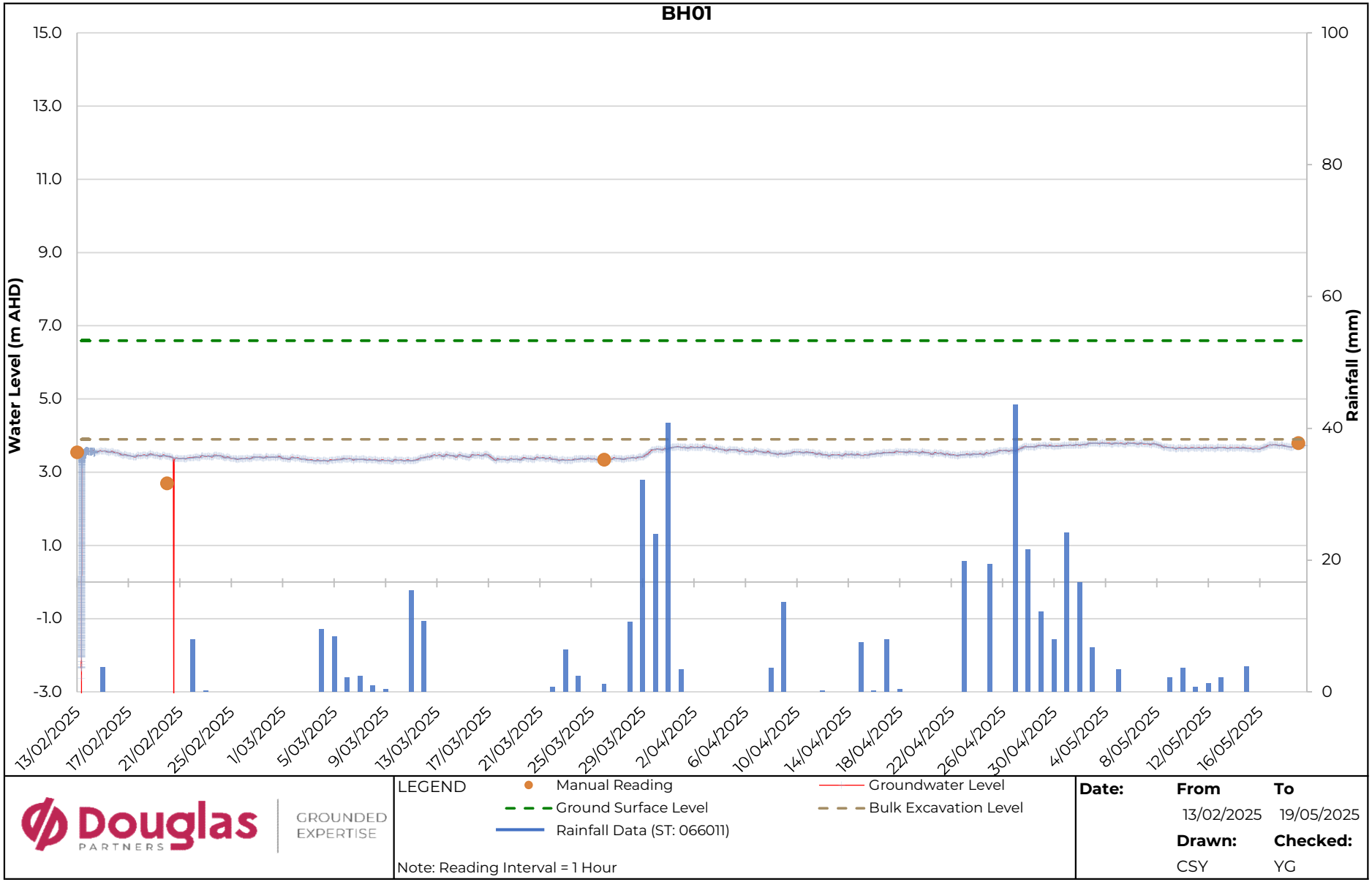
SURFACE LEVEL: 6.5 AHD
COORDINATE: E:333174.7, N:6249336.8
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

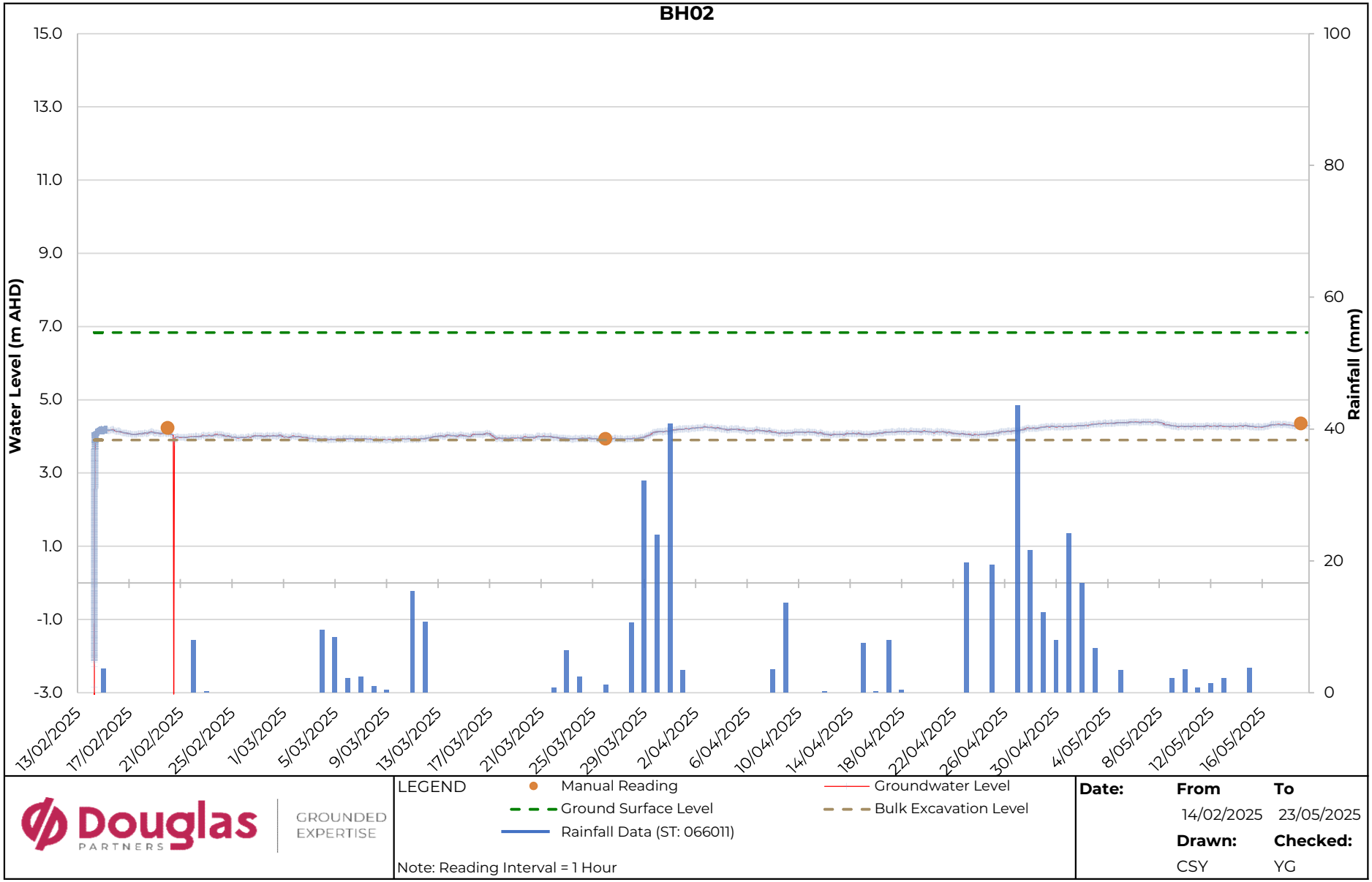
LOCATION ID: BH103
PROJECT No: 231957.02
DATE: 14/02/25
SHEET: 1 of 1

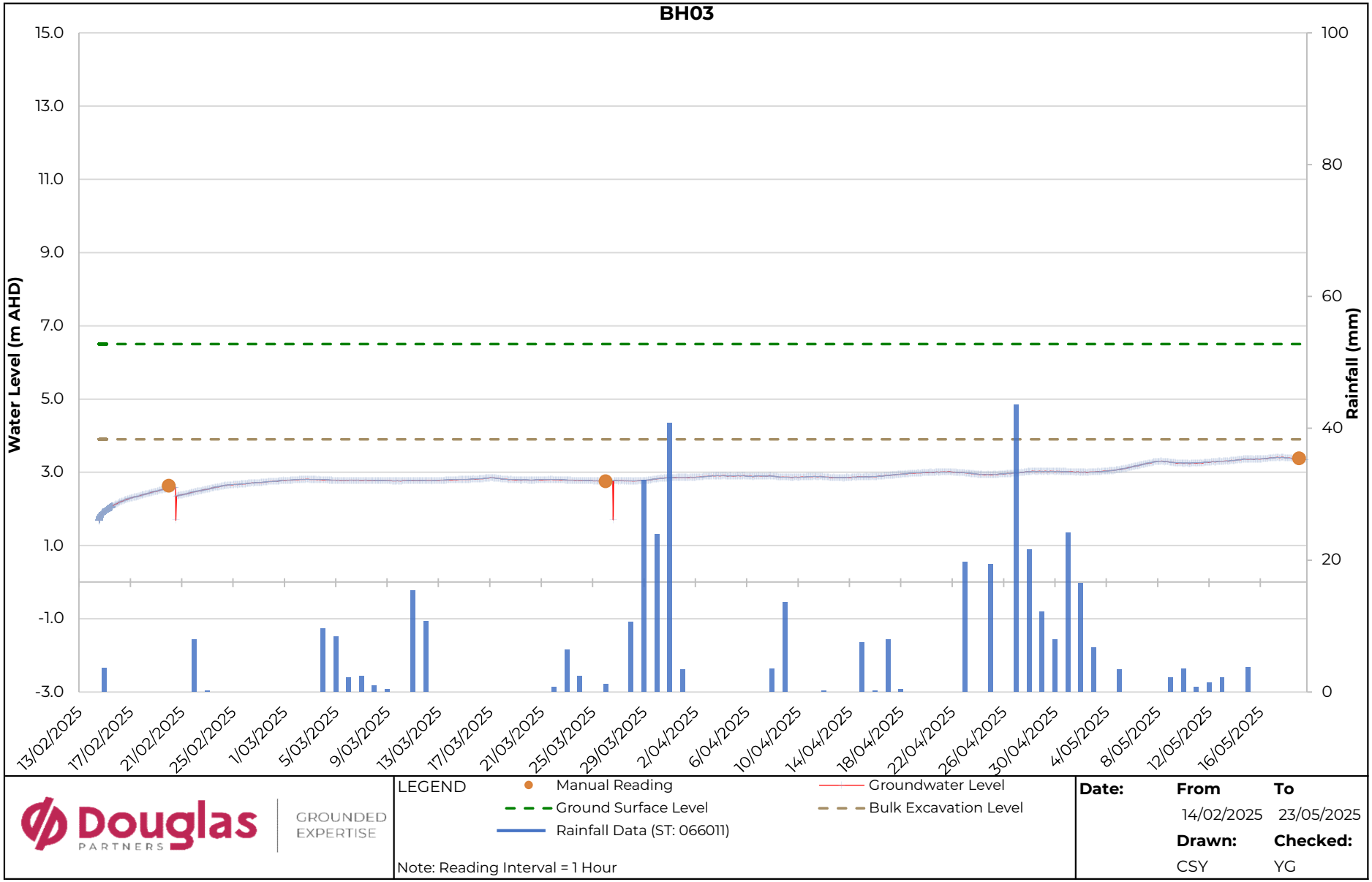
Generated with CORE-GS by Geroc - Split Soil-Rock Log

Appendix D

3-Month Groundwater Monitoring Hydrographs


BH01
Water Level (m AHD)
Rainfall (mm)
15.0
13.0
11.0
9.0
7.0
5.0
3.0
1.0
-1.0
-3.0
100
80
60
40
20
0
13/02/2025
17/02/2025
21/02/2025
25/02/2025
1/03/2025
5/03/2025
9/03/2025
13/03/2025
17/03/2025
21/03/2025
25/03/2025
29/03/2025
2/04/2025
6/04/2025
10/04/2025
14/04/2025
18/04/2025
22/04/2025
26/04/2025
30/04/2025
4/05/2025
8/05/2025
12/05/2025
16/05/2025
Douglas PARTNERS
GROUNDED EXPERTISE
LEGEND
Manual Reading
Groundwater Level
Ground Surface Level
Bulk Excavation Level
Rainfall Data (ST: 066011)
Note: Reading Interval = 1 Hour
Date:
From
13/02/2025
To
19/05/2025
Drawn:
CSY
Checked:
YG


BH02
Water Level (m AHD)
Rainfall (mm)
15.0
13.0
11.0
9.0
7.0
5.0
3.0
1.0
-1.0
-3.0
100
80
60
40
20
0
13/02/2025
17/02/2025
21/02/2025
25/02/2025
1/03/2025
5/03/2025
9/03/2025
13/03/2025
17/03/2025
21/03/2025
25/03/2025
29/03/2025
2/04/2025
6/04/2025
10/04/2025
14/04/2025
18/04/2025
22/04/2025
26/04/2025
30/04/2025
4/05/2025
8/05/2025
12/05/2025
16/05/2025
Douglas PARTNERS
GROUNDED EXPERTISE
LEGEND
Manual Reading
Groundwater Level
Ground Surface Level
Bulk Excavation Level
Rainfall Data (ST: 066011)
Note: Reading Interval = 1 Hour
Date:
From
To
14/02/2025
23/05/2025
Drawn:
Checked:
CSY
YG


BH03
Water Level (m AHD)
Rainfall (mm)
15.0
13.0
11.0
9.0
7.0
5.0
3.0
1.0
-1.0
-3.0
100
80
60
40
20
0
13/02/2025
17/02/2025
21/02/2025
25/02/2025
1/03/2025
5/03/2025
9/03/2025
13/03/2025
17/03/2025
21/03/2025
25/03/2025
29/03/2025
2/04/2025
6/04/2025
10/04/2025
14/04/2025
18/04/2025
22/04/2025
26/04/2025
30/04/2025
4/05/2025
8/05/2025
12/05/2025
16/05/2025
Douglas PARTNERS
GROUNDED EXPERTISE
LEGEND
Manual Reading
Groundwater Level
Ground Surface Level
Bulk Excavation Level
Rainfall Data (ST: 066011)
Note: Reading Interval = 1 Hour
Date:
From
To
14/02/2025
23/05/2025
Drawn:
Checked:
CSY
YG

Appendix E

Hydraulic Conductivity Test Results

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au

Permeability Testing - Rising Head Test Report

Client:	Apt. Residential Pty Ltd	Project No:	231957.02
Project:	Propsoed Mixed Use Development	Test date:	14-Feb-25
Location:	41-49 Mountain Street, Ultimo NSW	Tested by:	CSY

Test Location

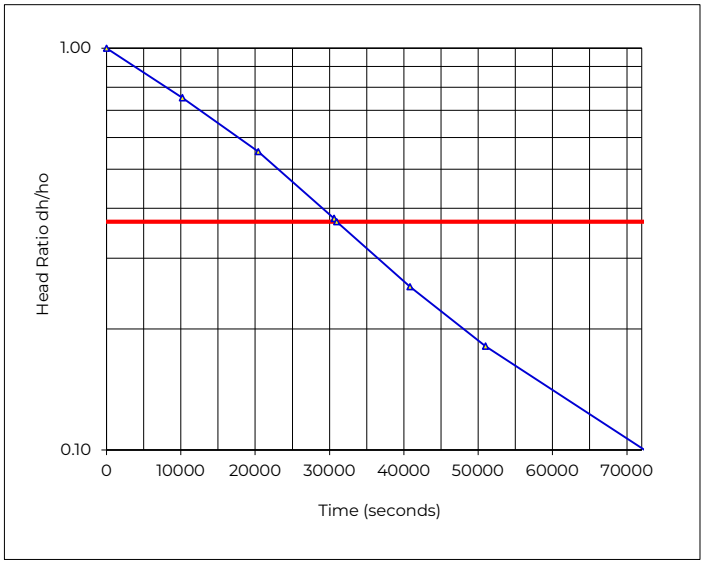
Description:	Rising Head Test in well installed within borehole	**Test No.**	BH101	
Material type:	Sandstone	Easting:	333156.6	m
		Northing	6249348.6	m
		Surface Level:	6.6	m AHD

Details of Well Installation

Effective diameter (2re)	76	mm	Depth to water before test	3.05	m
borehole diameter (2R)	76	mm	Depth to water at start of test	8.8	m
Effective Length of well screen (Le)	7.15	m	Depth of top of PVC standpipe	2.0	m
			Depth of base of PVC standpipe	10.2	m

Test Results

Time (sec)	Depth (m)	Change in Head dH (m)	dH/Ho
0.00	8.80	5.75	1.000
10200.00	7.3786	4.33	0.753
20400.00	6.2281	3.18	0.553
30600.00	5.2168	2.17	0.377
30960.00	5.1768	2.13	0.370
40800.00	4.5145	1.46	0.255
51000.00	4.0929	1.04	0.181
75600.00	3.575	0.53	0.091



To = 516.0 mins
30960 secs

Theory: Falling Head Permeability calculated using equation by Hvorslev

$k = [r^2 \ln(Le/R)]/2Le\ To$

where r = radius of casing
R = radius of well screen
Le = length of well screen
To = time taken to rise or fall to 37% of initial change

Hydraulic Conductivity	**k =**	**1.7E-08**	m/sec
	=	**0.001**	m/day

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au

Permeability Testing - Rising Head Test Report

Client:	Apt. Residential Pty Ltd	Project No:	231957.02
Project:	Propsoed Mixed Use Development	Test date:	14-Feb-25
Location:	41-49 Mountain Street, Ultimo NSW	Tested by:	CSY

Test Location

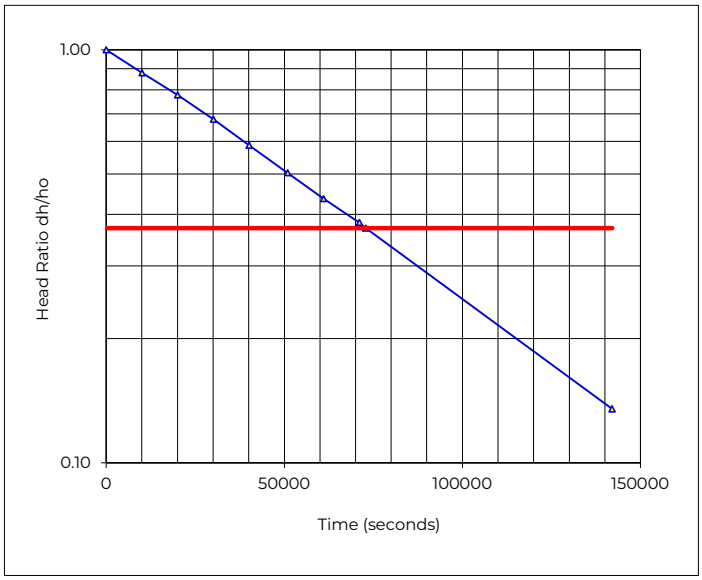
Description:	Rising Head Test in well installed within borehole	**Test No.**	BH102	
Material type:	Sandstone	Easting:	333148.3	m
		Northing	6249336.8	m
		Surface Level:	6.8	m AHD

Details of Well Installation

Effective diameter (2re)	76	mm	Depth to water before test	2.55	m
borehole diameter (2R)	76	mm	Depth to water at start of test	8.9	m
Effective Length of well screen (Le)	7.55	m	Depth of top of PVC standpipe	2.1	m
			Depth of base of PVC standpipe	10.1	m

Test Results

Time (sec)	Depth (m)	Change in Head dH (m)	dH/Ho
0.00	8.85	6.30	1.000
10020.00	8.1382	5.59	0.880
20040.00	7.49	4.94	0.778
30060.00	6.8605	4.31	0.679
40080.00	6.2831	3.73	0.588
51000.00	5.7482	3.20	0.504
61020.00	5.3188	2.77	0.436
71040.00	4.9742	2.42	0.382
72840.00	4.9006	2.35	0.370
142080.00	3.4078	0.86	0.135



To = 1214.0 mins
72840 secs

Theory: Falling Head Permeability calculated using equation by Hvorslev

$k = [r^2 \ln(Le/R)]/2Le\ To$

where r = radius of casing
R = radius of well screen
Le = length of well screen
To = time taken to rise or fall to 37% of initial change

Hydraulic Conductivity	**k =**	**6.9E-09**	m/sec
	=	**0.001**	m/day

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au

Permeability Testing - Rising Head Test Report

Client:	Apt. Residential Pty Ltd	Project No:	231957.02
Project:	Propsoed Mixed Use Development	Test date:	14-Feb-25
Location:	41-49 Mountain Street, Ultimo NSW	Tested by:	CSY

Test Location

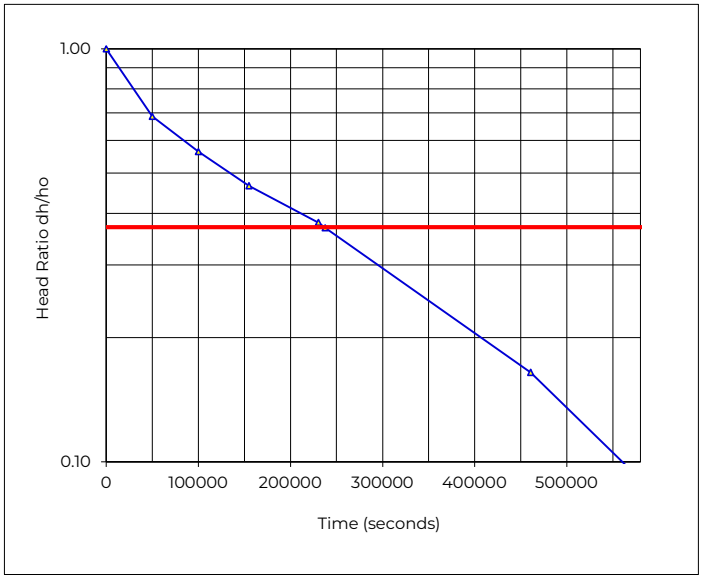
Description:	Rising Head Test in well installed within borehole	**Test No.**	BH103	
Material type:	Sandstone	Easting:	333174.7	m
		Northing	6249336.8	m
		Surface Level:	6.5	m AHD

Details of Well Installation

Effective diameter (2re)	96	mm	Depth to water before test	3.75	m
borehole diameter (2R)	96	mm	Depth to water at start of test	4.9	m
Effective Length of well screen (Le)	1.25	m	Depth of top of PVC standpipe	2.0	m
			Depth of base of PVC standpipe	5.0	m

Test Results

Time (sec)	Depth (m)	Change in Head dH (m)	dH/Ho
0.00	4.80	1.05	1.000
50000.00	4.5388	0.79	0.686
100080.00	4.3982	0.65	0.564
154800.00	4.286	0.54	0.466
230400.00	4.1867	0.44	0.380
237600.00	4.1736	0.42	0.368
460800.00	3.9393	0.19	0.165
1137600.00	3.7564	0.01	0.006



To = 3960.0 mins
2.38E+05 secs

Theory: Falling Head Permeability calculated using equation by Hvorslev

$k = [r^2 \ln(Le/R)]/2Le\ To$

where r = radius of casing
R = radius of well screen
Le = length of well screen
To = time taken to rise or fall to 37% of initial change

Hydraulic Conductivity	**k =**	**1.3E-08**	m/sec
	=	**0.001**	m/day

Appendix F

Laboratory Results for Water Analysis

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 373722

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231957.01, Ultimo**
Number of Samples	6 Water
Date samples received	21/02/2025
Date completed instructions received	21/02/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	28/02/2025
Date of Issue	28/02/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Nick Sarlamis, Assistant Operation Manager
Sean McAlary, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in water				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date Extracted	-	24/02/2025	26/02/2025	24/02/2025
Date Analysed	-	25/02/2025	27/02/2025	25/02/2025
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	1	2	7
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	81
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1

VOCs in water				
Our Reference		373722-1	373722-2	373722-3
Your Reference	UNITS	BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	110	100	110
Surrogate Toluene-d8	%	96	91	97
Surrogate 4-Bromofluorobenzene	%	104	102	105

vTRH(C6-C10)/BTEXN in Water						
Our Reference		373722-1	373722-2	373722-3	373722-4	373722-5
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220	TS/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/02/2025	26/02/2025	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	25/02/2025	27/02/2025	25/02/2025	25/02/2025	25/02/2025
TRH C_6 - C_9	µg/L	<10	<10	84	<10	[NA]
TRH C_6 - C_{10}	µg/L	<10	<10	90	<10	[NA]
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	[NA]
Benzene	µg/L	<1	<1	<1	<1	116%
Toluene	µg/L	<1	<1	81	<1	117%
Ethylbenzene	µg/L	<1	<1	<1	<1	121%
m+p-xylene	µg/L	<2	<2	<2	<2	114%
o-xylene	µg/L	<1	<1	<1	<1	117%
Naphthalene	µg/L	<1	<1	<1	<1	[NA]
Surrogate Dibromofluoromethane	%	110	100	110	98	110
Surrogate Toluene-d8	%	96	91	97	96	102
Surrogate 4-Bromofluorobenzene	%	104	102	105	104	101

vTRH(C6-C10)/BTEXN in Water		
Our Reference		373722-6
Your Reference	UNITS	TB/20250220
Date Sampled		20/02/2025
Type of sample		Water
Date extracted	-	24/02/2025
Date analysed	-	25/02/2025
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	80
Surrogate Toluene-d8	%	97
Surrogate 4-Bromofluorobenzene	%	103

svTRH (C10-C40) in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	26/02/2025	26/02/2025	26/02/2025	26/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
TRH C_{10} - C_{14}	µg/L	<50	<50	120	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	140	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	260	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	120	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	120	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	180	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	300	<50
Surrogate o-Terphenyl	%	94	106	104	88

PAHs in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	26/02/2025	26/02/2025	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025	27/02/2025	27/02/2025
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	85	91	91	90

OCPs in Water - Trace Level			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
alpha-BHC	µg/L	<0.001	<0.001
HCB	µg/L	<0.001	<0.001
beta-BHC	µg/L	<0.001	<0.001
gamma-BHC	µg/L	<0.001	<0.001
Heptachlor	µg/L	<0.001	<0.001
delta-BHC	µg/L	<0.001	<0.001
Aldrin	µg/L	<0.001	<0.001
Heptachlor Epoxide	µg/L	<0.001	<0.001
gamma-Chlordane	µg/L	<0.001	<0.001
alpha-Chlordane	µg/L	<0.001	<0.001
Endosulfan I	µg/L	<0.002	<0.002
pp-DDE	µg/L	<0.001	<0.001
Dieldrin	µg/L	<0.001	<0.001
Endrin	µg/L	<0.001	<0.001
Endosulfan II	µg/L	<0.002	<0.002
pp-DDD	µg/L	<0.001	<0.001
Endrin Aldehyde	µg/L	<0.001	<0.001
pp-DDT	µg/L	<0.001	<0.001
Endosulfan Sulphate	µg/L	<0.001	<0.001
Methoxychlor	µg/L	<0.001	<0.001
Surrogate 4-Chloro-3-NBTF	%	88	84

OP in water LL ANZECCF/ADWG			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Dichlorvos	µg/L	<0.05	<0.05
Mevinphos	µg/L	<0.05	<0.05
Phorate	µg/L	<0.05	<0.05
Dimethoate	µg/L	<0.1	<0.1
Diazinon	µg/L	<0.01	<0.01
Disulfoton	µg/L	<0.05	<0.05
Chlorpyriphos-methyl	µg/L	<0.05	<0.05
Parathion-Methyl	µg/L	<0.05	<0.05
Ronnel	µg/L	<0.05	<0.05
Fenitrothion	µg/L	<0.05	<0.05
Malathion	µg/L	<0.05	<0.05
Chlorpyriphos	µg/L	<0.009	<0.009
Fenthion	µg/L	<0.05	<0.05
Parathion	µg/L	<0.004	<0.004
Bromophos ethyl	µg/L	<0.05	<0.05
Methidathion	µg/L	<0.05	<0.05
Fenamiphos	µg/L	<0.05	<0.05
Ethion	µg/L	<0.05	<0.05
Phosalone	µg/L	<0.05	<0.05
Azinphos-methyl (Guthion)	µg/L	<0.02	<0.02
Coumaphos	µg/L	<0.05	<0.05
Surrogate 4-Chloro-3-NBTF	%	88	84

PCBs in Water - Trace Level			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date extracted	-	26/02/2025	26/02/2025
Date analysed	-	28/02/2025	28/02/2025
Aroclor 1016	µg/L	<0.01	<0.01
Aroclor 1221	µg/L	<0.01	<0.01
Aroclor 1232	µg/L	<0.01	<0.01
Aroclor 1242	µg/L	<0.01	<0.01
Aroclor 1248	µg/L	<0.01	<0.01
Aroclor 1254	µg/L	<0.01	<0.01
Aroclor 1260	µg/L	<0.01	<0.01
Surrogate 2-Fluorobiphenyl	%	84	87

Total Phenolics in Water					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date extracted	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Date analysed	-	28/02/2025	28/02/2025	28/02/2025	28/02/2025
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05	<0.05	<0.05

HM in water - total					
Our Reference		373722-1	373722-2	373722-3	373722-4
Your Reference	UNITS	BH101	BH102	BH103	GWD1/20250220
Date Sampled		20/02/2025	20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025	27/02/2025
Arsenic-Total	µg/L	3	14	11	1
Cadmium-Total	µg/L	<0.1	0.9	0.2	<0.1
Chromium-Total	µg/L	19	98	93	4
Copper-Total	µg/L	30	460	220	10
Iron-Total	µg/L	4,300	41,000	31,000	1,200
Mercury-Total	µg/L	<0.05	2.5	<0.05	<0.05
Manganese-Total	µg/L	37	400	560	27
Nickel-Total	µg/L	30	72	170	31
Lead-Total	µg/L	24	720	66	15
Zinc-Total	µg/L	56	1,100	250	25

HM in water - dissolved			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date prepared	-	26/02/2025	26/02/2025
Date analysed	-	26/02/2025	26/02/2025
Arsenic-Dissolved	µg/L	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1
Chromium-Dissolved	µg/L	2	<1
Copper-Dissolved	µg/L	8	2
Iron-Dissolved	µg/L	860	730
Mercury-Dissolved	µg/L	<0.05	<0.05
Manganese-Dissolved	µg/L	25	110
Nickel-Dissolved	µg/L	28	20
Lead-Dissolved	µg/L	9	<1
Zinc-Dissolved	µg/L	23	72

Miscellaneous Inorganics				
Our Reference	UNITS	373722-1	373722-2	373722-3
Your Reference		BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date prepared	-	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	24/02/2025	24/02/2025	24/02/2025
pH	pH Units	4.5	5.9	INS
Electrical Conductivity	µS/cm	640	830	INS
Turbidity	NTU	610	NT	INS
Total Dissolved Solids (grav)	mg/L	420	440	INS
Total Suspended Solids	mg/L	940	5,800	INS
Oil & Grease (LLE)	mg/L	<5	7	INS
Ammonia as N in water	mg/L	0.44	0.095	INS
Nitrate as N in water	mg/L	13	13	INS
Nitrite as N in water	mg/L	0.016	0.17	INS
NOx as N in water	mg/L	13	13	INS
Total Nitrogen in water	mg/L	21	22	INS
TKN in water	mg/L	8.2	9.3	INS
Organic Nitrogen as N	mg/L	7.7	9.2	INS

Ion Balance				
Our Reference		373722-1	373722-2	373722-3
Your Reference	UNITS	BH101	BH102	BH103
Date Sampled		20/02/2025	20/02/2025	20/02/2025
Type of sample		Water	Water	Water
Date prepared	-	24/02/2025	24/02/2025	24/02/2025
Date analysed	-	24/02/2025	24/02/2025	24/02/2025
Calcium - Dissolved	mg/L	29	87	47
Potassium - Dissolved	mg/L	28	30	10
Sodium - Dissolved	mg/L	32	25	88
Magnesium - Dissolved	mg/L	8.8	10	5.4
Hardness (calc) equivalent $CaCO_3$	mg/L	110	260	140
Hydroxide Alkalinity (OH^-) as $CaCO_3$	mg/L	<5	<5	INS
Bicarbonate Alkalinity as $CaCO_3$	mg/L	8	210	INS
Carbonate Alkalinity as $CaCO_3$	mg/L	<5	<5	INS
Total Alkalinity as $CaCO_3$	mg/L	8	210	INS
Sulphate, SO4	mg/L	160	140	INS
Chloride, Cl	mg/L	31	25	INS
Ionic Balance	%	0	-5.0	[NT]

PFAS in Water TRACE Short			
Our Reference	UNITS	373722-1	373722-2
Your Reference		BH101	BH102
Date Sampled		20/02/2025	20/02/2025
Type of sample		Water	Water
Date prepared	-	25/02/2025	25/02/2025
Date analysed	-	25/02/2025	25/02/2025
Perfluorobutanesulfonic acid	µg/L	0.011	0.0069
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0090	0.0051
Perfluorooctanesulfonic acid PFOS	µg/L	0.028	0.060
Perfluorooctanoic acid PFOA	µg/L	0.0098	0.010
6:2 FTS	µg/L	0.016	0.051
8:2 FTS	µg/L	<0.0004	<0.0004
Surrogate $^{13}C_8$ *PFOS*	%	113	121
Surrogate $^{13}C_2$ *PFOA*	%	90	86
Extracted ISTD $^{13}C_3$ *PFBS*	%	56	61
Extracted ISTD $^{18}O_2$ *PFHxS*	%	73	78
Extracted ISTD $^{13}C_4$ *PFOS*	%	83	86
Extracted ISTD $^{13}C_4$ *PFOA*	%	79	84
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	121	183
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	154	161
Total Positive PFHxS & PFOS	µg/L	0.037	0.066
Total Positive PFOS & PFOA	µg/L	0.037	0.071
Total Positive PFAS	µg/L	0.074	0.13

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell.
Inorg-003	Oil & Grease - determine gravimetrically following extraction with Hexane, in accordance with APHA latest edition, 5520-B.
Inorg-006	Alkalinity - determined titrimetrically in accordance with APHA latest edition, 2320-B.
Inorg-018	Total Dissolved Solids - determined gravimetrically. The solids are dried at 180+/-10°C. NOTE: Where the EC of the sample is <100µS/cm, the TDS will typically be below 70mg/L (as the sample is very likely to be at least drinking water quality). Therefore to ensure data quality for TDS, the TDS is typically calculated as per the equation below:- TDS = EC * 0.6
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.
Inorg-022	Turbidity - measured nephelometrically using a turbidimeter, in accordance with APHA latest edition, 2130-B.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-040	The concentrations of the major ions (mg/L) are converted to milliequivalents and summed. The ionic balance should be within +/- 15% ie total anions = total cations +/-15%.
Inorg-055	Nitrate - determined colourimetrically. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055	Nitrite - determined colourimetrically based on APHA latest edition NO2- B. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a water extraction.
Inorg-055/062/127	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen. Alternatively analysed by combustion and chemiluminescence.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-062	TKN - determined colourimetrically based on APHA latest edition 4500 Norg. Alternatively, TKN can be derived from calculation (Total N - NOx).
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.

Method ID	Methodology Summary
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS.
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date Extracted	-			24/02/2025	1	24/02/2025	26/02/2025		24/02/2025	[NT]
Date Analysed	-			25/02/2025	1	25/02/2025	27/02/2025		25/02/2025	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	100	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	1	1	<1	0	101	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	97	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
Dibromomethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	109	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	101	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	107	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
Bromoform	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	109	[NT]
Styrene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	1	110	101	9	81	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	96	91	5	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	102	1	104	102	2	99	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/02/2025	1	24/02/2025	26/02/2025		24/02/2025	[NT]
Date analysed	-			25/02/2025	1	25/02/2025	27/02/2025		25/02/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	<10	<10	0	108	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	<10	<10	0	108	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	104	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	108	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	109	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	110	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	1	110	101	9	81	[NT]
Surrogate Toluene-d8	%		Org-023	96	1	96	91	5	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	102	1	104	102	2	99	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			27/02/2025	[NT]	[NT]	[NT]	[NT]	27/02/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate o-Terphenyl	%		Org-020	104	[NT]	[NT]	[NT]	[NT]	135	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	71	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	77	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	69	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	65	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	81	[NT]	[NT]	[NT]	[NT]	74	[NT]

QUALITY CONTROL: OCPs in Water - Trace Level						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
alpha-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	80	[NT]
HCB	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	70	[NT]
gamma-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	70	[NT]
delta-BHC	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Heptachlor Epoxide	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
gamma-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-Chlordane	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Dieldrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Endrin	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	60	[NT]
Endosulfan II	µg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	75	[NT]
Endrin Aldehyde	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	71	[NT]
Endosulfan Sulphate	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methoxychlor	µg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	78	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: OP in water LL ANZECCF/ADWG					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Dichlorvos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	78	[NT]
Mevinphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	µg/L	0.01	Org-022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	77	[NT]
Fenitrothion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Malathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	84	[NT]
Chlorpyriphos	µg/L	0.009	Org-022/025	<0.009	[NT]	[NT]	[NT]	[NT]	82	[NT]
Fenthion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	µg/L	0.004	Org-022/025	<0.004	[NT]	[NT]	[NT]	[NT]	94	[NT]
Bromophos ethyl	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	79	[NT]
Phosalone	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	µg/L	0.02	Org-022/025	<0.02	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	µg/L	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	78	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: PCBs in Water - Trace Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Aroclor 1016	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	118	[NT]
Aroclor 1260	µg/L	0.01	Org-021/022/025	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	86	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: Total Phenolics in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Date analysed	-			28/02/2025	[NT]	[NT]	[NT]	[NT]	28/02/2025	[NT]
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-031	<0.05	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: HM in water - total						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			27/02/2025	3	27/02/2025	27/02/2025		27/02/2025	[NT]
Date analysed	-			27/02/2025	3	27/02/2025	27/02/2025		27/02/2025	[NT]
Arsenic-Total	µg/L	1	Metals-022	<1	3	11	[NT]		99	[NT]
Cadmium-Total	µg/L	0.1	Metals-022	<0.1	3	0.2	[NT]		102	[NT]
Chromium-Total	µg/L	1	Metals-022	<1	3	93	[NT]		101	[NT]
Copper-Total	µg/L	1	Metals-022	<1	3	220	[NT]		106	[NT]
Iron-Total	µg/L	10	Metals-022	<10	3	31000	[NT]		98	[NT]
Mercury-Total	µg/L	0.05	Metals-021	<0.05	3	<0.05	<0.05	0	102	[NT]
Manganese-Total	µg/L	5	Metals-022	<5	3	560	[NT]		96	[NT]
Nickel-Total	µg/L	1	Metals-022	<1	3	170	[NT]		101	[NT]
Lead-Total	µg/L	1	Metals-022	<1	3	66	[NT]		114	[NT]
Zinc-Total	µg/L	1	Metals-022	<1	3	250	[NT]		101	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date prepared	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Date analysed	-			26/02/2025	[NT]	[NT]	[NT]	[NT]	26/02/2025	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Iron-Dissolved	µg/L	10	Metals-022	<10	[NT]	[NT]	[NT]	[NT]	89	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	117	[NT]
Manganese-Dissolved	µg/L	5	Metals-022	<5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			24/02/2025	2	24/02/2025	24/02/2025		24/02/2025	[NT]
Date analysed	-			24/02/2025	2	24/02/2025	24/02/2025		24/02/2025	[NT]
pH	pH Units		Inorg-001	[NT]	2	5.9	[NT]		101	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	2	830	[NT]		100	[NT]
Turbidity	NTU	0.1	Inorg-022	<0.1	2	NT	[NT]		103	[NT]
Total Dissolved Solids (grav)	mg/L	5	Inorg-018	<5	2	440	[NT]		103	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	2	5800	5500	5	97	[NT]
Oil & Grease (LLE)	mg/L	5	Inorg-003	<5	2	7	[NT]		89	[NT]
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	2	0.095	[NT]		88	[NT]
Nitrate as N in water	mg/L	0.005	Inorg-055	<0.005	2	13	[NT]		96	[NT]
Nitrite as N in water	mg/L	0.005	Inorg-055	<0.005	2	0.17	[NT]		96	[NT]
NOx as N in water	mg/L	0.005	Inorg-055	<0.005	2	13	[NT]		96	[NT]
Total Nitrogen in water	mg/L	0.1	Inorg-055/062/127	<0.1	2	22	23	4	118	[NT]
TKN in water	mg/L	0.1	Inorg-062	<0.1	2	9.3	[NT]		[NT]	[NT]
Organic Nitrogen as N	mg/L	0.2	Inorg-055/062/127	<0.2	2	9.2	[NT]		[NT]	[NT]

QUALITY CONTROL: Ion Balance					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			24/02/2025	[NT]	[NT]	[NT]	[NT]	24/02/2025	[NT]
Date analysed	-			24/02/2025	[NT]	[NT]	[NT]	[NT]	24/02/2025	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
Potassium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	86	[NT]
Sodium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	98	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	88	[NT]
Hydroxide Alkalinity (OH^-) as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bicarbonate Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbonate Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Total Alkalinity as $CaCO_3$	mg/L	5	Inorg-006	<5	[NT]	[NT]	[NT]	[NT]	107	[NT]
Sulphate, SO4	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chloride, Cl	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: PFAS in Water TRACE Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			25/02/2025	[NT]	[NT]	[NT]	[NT]	25/02/2025	[NT]
Date analysed	-			25/02/2025	[NT]	[NT]	[NT]	[NT]	25/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	104	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	101	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	113	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	75	[NT]	[NT]	[NT]	[NT]	75	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	73	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	118	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

VOC vials have headspace

Turbidity: Sample 2 could not be analysed due to the high concentration of solid matter.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231957.01	**Suburb:**	Ultimo	**To:**	Envirolab Services
Project Manager:	Nerilee Edwards	**Order Number:**		**Sampler:** SP	12 Ashley St, Chatswood NSW 2067
Email:	Nerilee.Edwards@douglaspartners.com.au; Setareh.pourkazemi@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time: ☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day					(02) 9910 6200 samplereceipt@envirolab.com.au
Prior Storage: ☑ Fridge ☐ Freezer ☐ Esky ☐ Shelf		**Do samples contain 'potential' HBM?** ☑ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)			

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: CW008_T	CW004_T	Dissolved metals	BTEX, TRH	PFAS	VOC	Anions and cations	pH, EC, turbidity, TDS, TSS	nitrogen suite	Hardness	oil and grease			Notes/ Preservation/ Additional Requirements
1	BH101	-	-	20/02/25	W	G/P	x		x		x	x	x	x	x	x	x			PFAS, trace level, short suite.
2	BH102	-	-	20/02/25	W	G/P	x		x		x	x	x	x	x	x	x			OCP, OPP, PCB trace level
3	BH103	-	-	20/02/25	W	G/P		x				x	x	x	x	x	x			PAH low level
4	GWD1/20250220	-	-	20/02/25	W	G/P		x												Metals: pls see below
5	TS/20250220	-	-	20/02/25	W	Vials				BTEX										Sample 103 - pls analyse analytes from left to right until you run out of sample
6	TB/20250220	-	-	20/02/25	W	Vials				x										

Metals to analyse:	As, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Zn	**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:** Courier	**Lab Ref. No:**	373722
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Katy Wayne
Address:	96 Hermitage Road, West Ryde NSW 2114 **Phone:** (02) 9809 0666	**Date & Time:**	21/02/25 1400
Relinquished by:	SP **Date:** 21/02/2025 **Signed:** Setareh Pourkazemi	**Signed:**	

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Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 373722

Date Received: 21/02/25
Time Received: 1400
Received By: KW
Temp: Cool/Ambient
Cooling: Ice/Icepack 12°C
Security: Intact/Broken/None

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Nerilee Edwards

Sample Login Details

Your reference	231957.01, Ultimo
Envirolab Reference	373722
Date Sample Received	21/02/2025
Date Instructions Received	21/02/2025
Date Results Expected to be Reported	28/02/2025

Sample Condition

Samples received in appropriate condition for analysis	VOC vials have headspace
No. of Samples Provided	6 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	OCPs in Water - Trace Level	OP in water LL ANZECCF/ADWG	PCBs in Water - Trace Level	Total Phenolicsin Water	HM in water - total	HM in water - dissolved	pH	Electrical Conductivity	Turbidity	Total Dissolved Solids(grav)	Total Suspended Solids	Oil & Grease (LLE)	Ammonia as N in water	Nitrate as N in water	Nitrite as N in water	NOx as N in water	Total Nitrogen in water	TKN in water	Organic Nitrogen as N	Calcium - Dissolved	Potassium - Dissolved	Sodium - Dissolved	Magnesium - Dissolved	Hardness (calc) equivalent CaCO3	Hydroxide Alkalinity (OH-) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Sulphate, SO4	Chloride, Cl	Ionic Balance	PFAS in Water TRACE Short
BH101	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH102	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH103	✓	✓	✓	✓				✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
GWD1/20250220		✓	✓	✓				✓	✓																										
TS/20250220		✓																																	
TB/20250220		✓																																	

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The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Table J4 : Summary of Laboratory Results of Groundwater Analysis

		Metals - Total										Metals - Dissolved										TRH			
		Total Arsenic	Cadmium	Total Chromium	Copper	Iron	Lead	Manganese	Mercury (inorganic)	Nickel	Zinc	Total Arsenic	Cadmium	Total Chromium	Copper	Iron	Lead	Manganese	Mercury (inorganic)	Nickel	Zinc	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
	PQL	1	0.1	1	1	10	1	5	0.05	1	1	1	0.1	1	1	10	1	5	0.05	1	1	10	50	100	100
NHMRC (2012) Recreation		100	20		20,000		100	5,000	10	200		100	20		20,000		100	5,000	10	200					
ANZG (2018) 95% LOP Marine			5.5	4.4	1.3		4.4	80	**0.1**	70	8		5.5	4.4	1.3		4.4	80	**0.1**	70	8				
HEPA (2018) 99% LOP Marine																									
HEPA (2018) 95% LOP Marine																									
NEPC (2013) HSL 2-4m																						6,000	NL		
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	3	<0.1	19	30	4,300	24	37	<0.05	30	56	<1	<0.1	2	**8**	860	**9**	25	<0.05	28	**23**	<10	<50	<100	<100
GWD1/20250220	20/02/25	1	<0.1	4	10	1,200	15	27	<0.05	31	25	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100
BH102	20/02/25	14	0.9	98	460	41,000	720	400	2.5	72	1,100	<1	<0.1	<1	**2**	730	<1	**110**	<0.05	20	**72**	<10	<50	<100	<100
BH103	20/02/25	11	0.2	93	220	31,000	66	560	<0.05	170	250	-	-	-	-	-	-	-	-	-	-	<10	**120**	**180**	<100

Notes:

- No criterion / not defined / not tested / not applicable
* QA/QC replicate of sample listed directly below the primary sample
NL Not limiting
PQL Practical quantitation limit
Shaded cell is exceedance of guideline value
Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m
ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
HEPA (2018) PFAS National Environmental Management Plan, 99% level of protection for Marine water aquatic ecosystems
NHMRC (2018) Australian Drinking Water Guidelines 6 2011, drinking water aesthetic-based criteria
NHMRC (2008) Guidelines for Managing Risk in Recreational Water
ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table J4 : Summary of Laboratory Results of Groundwater Analysis

		BTEX						PAH																			
		Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (B(a)P)	Benzo(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of detected PAH	DDE	DDT	DDD	Aldrin	Dieldrin
	PQL	1	1	1	1	2	1	0.1	0.1	0.1	0.1	1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.001	0.001	0.001
NHMRC (2012) Recreation		10	8,000	3,000			6,000						0.1												90			
ANZG (2018) 95% LOP Marine		700	180	80		75				**0.01**		70	**0.1**					**1**			**0.6**				**0.0004**		**0.003**	
HEPA (2018) 99% LOP Marine																												
HEPA (2018) 95% LOP Marine																												
NEPC (2013) HSL 2-4m		5,000	NL	NL			NL					NL																
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
GWD1/20250220	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
BH103	20/02/25	<1	**81**	<1	<1	<2	<1	<0.1	<0.1	<0.1	<0.1	<1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-

Notes:

-	No criterion / not defined / not tested / not applicable
*	QA/QC replicate of sample listed directly below the primary sample
NL	Not limiting
PQL	Practical quantitation limit
	Shaded cell is exceedance of guideline value
	Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded
	NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m
	ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]
	HEPA (2018) PFAS National Environmental Management Plan, 99% level of protection for Marine water aquatic ecosystems
	NHMRC (2018) Australian Drinking Water Guidelines 6 2011, drinking water aesthetic-based criteria
	NHMRC (2008) Guidelines for Managing Risk in Recreational Water
	ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
	Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
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	ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		OCP																	OPP								
		Aldrin + Dieldrin (calculated)	alpha-chlordane	gamma-Chlordane	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	alpha-BHC	beta-BHC	delta-BHC	Lindane	Sum of detected OCP	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Ronnel (fenchlorphos)
	PQL	0.001	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.02	0.05	0.009	0.05	0.01	0.05	0.1	0.05	0.05
NHMRC (2012) Recreation		3								3							100		300	100	100		40	50	70	40	
ANZG (2018) 95% LOP Marine								**0.004**		**0.0004**		0.1	**0.004**				0.007				**0.009**						
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05	<0.01	<0.05	<0.1	<0.05	<0.05
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

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HEPA (2018) PFAS National Environmental Management Plan, 99% level of protection for Marine water aquatic ecosystems

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

										PCB																
		Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Sum of detected OPP	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Sum of detected PCB	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	tetrachloroethene (PCE)	1,1,2-trichloroethane	1,1,2-trichloroethylene	1,1-dichloroethane	1,1-Dichloroethene (DCE)	1,1-dichloropropene	1,2,3-trichlorobenzene
	PQL	0.05	0.05	0.05	0.004	0.05	0.05	0.05	0.004	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1	1	1	1	1	1	1	1	1	1
NHMRC (2012) Recreation		70	70	700	200	7	60	5													500				300		
ANZG (2018) 95% LOP Marine		0.001																	270	400	70	1,900	330		700		
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		VOC (excluding BTEX)																								
		1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethyl benzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethyl benzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	4-isopropyl toluene	Bromobenzene	Bromochloromethane	Bromodichloroethane	Bromoform	carbon tetrachloride	Chloroethane	Vinyl Chloride	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
	PQL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	10	1	10	1	1
NHMRC (2012) Recreation						15,000	30					400									30		3	2500			
ANZG (2018) 95% LOP Marine			**20**				1,900	900			1,100										240		100	770			
HEPA (2018) 99% LOP Marine																											
HEPA (2018) 95% LOP Marine																											
NEPC (2013) HSL 2-4m																											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	**1**	<10	<1	<1
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	**2**	<10	<1	<1
BH103	20/02/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1	<1	<10	<10	**7**	<10	<1	<1

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

																			PFAS						
		Isopropylbenzene (cumene)	Cyclohexane	dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,2-dibromoethane	hexachlorobutadiene	Bromomethane	Monochlorobenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene (vinylbenzene)	Tert-butyl benzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Sum of detected VOC	PFOS	PFOA	PFHxS	Perfluorobutanesulfonic acid	6:2 FTS	8:2 FTS	Sum of detected PFAS
	PQL	1	1	1	1	10	1	1	10	1	1	1	1	1	1	1	1	10	1	0.0002	0.0002	0.0002	0.0004	0.0004	0.0004	0.0002
NHMRC (2012) Recreation							10	7	10	3,000				300							10					
ANZG (2018) 95% LOP Marine		30								55																
HEPA (2018) 99% LOP Marine																				**0.00023**	**19**					
HEPA (2018) 95% LOP Marine																				**0.13**	**220**					
NEPC (2013) HSL 2-4m																										
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**1**	**0.028**	**0.0098**	**0.009**	**0.011**	**0.016**	<0.0004	**0.074**
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**2**	**0.06**	**0.01**	**0.0051**	**0.0069**	**0.051**	<0.0004	**0.133**
BH103	20/02/25	<1	<1	<1	<1	<10	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**8**	-	-	-	-	-	-	-

Notes:

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Table J4 : Summary of Laboratory Results of Groundwater Analysis

		Nutrients							Physical Parameters						Anions & Cations						Anions & Cations - Dissolved			
		Nitrogen	Ammonia as N	TKN in water	Nitrate as N	Nitrite as N	NOx as N	Organic Nitrogen as N	Total dissolved solids	pH	Electrical Conductivity	Total Suspended Solids (TSS)	Oil & Grease	Turbidity	Bicarbonate Alkalinity as CaCO3	Chloride	Hydroxide Alkalinity (OH-) as CaCO3	Ionic Balance	Sulphate	Total Alkalinity as CaCO3	Calcium	Magnesium	Potassium	Sodium
	PQL	100	5	100	5	5	5	200	5,000	-	1	5,000	5,000	0.1	5,000	1000	5,000		1000	5,000	500	500	500	500
NHMRC (2012) Recreation					500,000	30,000																		
ANZG (2018) 95% LOP Marine			910																					
HEPA (2018) 99% LOP Marine																								
HEPA (2018) 95% LOP Marine																								
NEPC (2013) HSL 2-4m																								
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH Units	µS/cm	µg/L	µg/L	ntu	µg/L	µg/L	µg/L	%	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH101	20/02/25	21,000	440	8,200	13,000	16	13,000	7,700	420,000	4.5	640	940,000	<5000	610	8,000	31,000	<5000	-	160,000	8,000	29,000	8,800	28,000	32,000
GWD1/20250220	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102	20/02/25	22,000	95	9,300	13,000	170	13,000	9,200	440,000	5.9	830	5,800,000	7,000	-	210,000	25,000	<5000	-5	140,000	210,000	87,000	10,000	30,000	25,000
BH103	20/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,000	5,400	10,000	88,000

Notes:

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Appendix G

Water NSW Fact Sheet

Fact sheet

Construction dewatering

Information for councils and applicants

This fact sheet provides local government authorities and applicants with information about construction dewatering and which approvals may be required to authorise dewatering. It also helps those seeking development consent to determine whether a development application is an integrated development application because of the need to obtain approvals relating to dewatering.

What is construction dewatering?

Construction work that requires excavation (such as basements, tunnels and trenches) can often encounter groundwater, particularly where the groundwater table is high or the excavation is particularly deep. Where construction activities will interfere with groundwater aquifers, the groundwater will either build up on the construction site (and potentially adjoining land) or will need to be extracted from the water table. In either case, the groundwater will need to be removed (by bore, pump or other means) - this is referred to as **dewatering**.

The removal of the groundwater from its water source and the taking/using of water (even if the take and use is for disposal) may require approval under the *Water Management Act 2000* (WMA).

Where a development application is lodged for development which requires approvals under the WMA, the development will be an integrated development and local government authorities will typically manage the WMA approval process in conjunction with WaterNSW.

All construction activities that will impact on groundwater aquifers should be referred to WaterNSW as part of the integrated development process to streamline the assessment processes. From 1 January 2020, this should be done via the NSW Planning Portal at https://www.planningportal.nsw.gov.au.

If the need for WMA approvals only becomes apparent following development consent, applicants should be referred directly to WaterNSW.

What approvals are likely to be required to dewater a construction site?

The following approvals are likely required under the WMA to dewater a site:

1. **Water supply work approval** to construct and use the work(s) required to remove, transport, store, and dispose of the water from a groundwater source, e.g. pumps, bores drainage works.
2. **Water access licence (WAL)** which will authorise a licence holder to take water from a specific groundwater source. WALs usually have an allocation of water attached to them which determines the amount of water that can be taken. Usually, this is in the form of units. The Minister for Water determines annually the amount of water (in megalitres (ML)) which a unit represents for a year. Usually, 1 unit represents 1 ML.

   Typically, a WAL has a NIL allocation when it is first issued. A WAL and/or units for a WAL, or the annual allocations referable to a particular unit, can be purchased in the market for the relevant water source. Importantly, a WAL is not an approval which is part of the integrated development process. It must be addressed separately.
3. **Water use approval** to use or dispose of the water taken from the groundwater source.

Construction dewatering
Information for councils and applicants

Both work approvals and water use approvals under the WMA trigger the integrated development process. When a development application (DA) requires either of these approvals, the DA must be referred to WaterNSW.

Some particular dewatering activities may be exempt from the above requirements. There are certain requirements that the applicant must meet and comply with in order to take advantage of the exemptions. Refer to the Exemptions fact sheet for more information.

Approvals under the WMA to construct and use work(s) to remove groundwater require a dewatering management plan.

What happens once an application is submitted to WaterNSW?

WaterNSW refers all construction dewatering applications to the Department of Planning, Industry and Environment (DPIE).

Once received, DPIE undertakes a hydrogeological assessment of the application and provides a hydrogeological report to WaterNSW.

WaterNSW considers the hydrogeological report as part of the assessment process to assist in determining whether the WMA approvals should be granted.

Information required for DPIE to undertake a hydrogeological assessment

- Geotechnical investigation report describing the results of intrusive investigations at the site
- Survey plan of the site
- Architectural plan illustrating accurate design dimensions of the proposed basement and sections (oriented approximately at right angles) illustrating the design depth of the proposed basement(s).
- Environmental site assessment report identifying the contamination status of the property and the general quality characteristics of the groundwater beneath the site.
- Acid sulfate soils assessment and management report identifying the nature, extent and management of acid sulfate soils (where present).

ff additional information is required, WaterNSW will contact the applicant directly.

General terms of approvals

Once WaterNSW has received the hydrogeological report for the application and considered all relevant matters, it will determine whether the WMA approvals can be granted.

If the approvals are granted for integrated development, WaterNSW will provide the local council with general terms of approval (GTAs). View the General terms of approval fact sheet for more information.

If the local council proposes to grant development consent for the DA, then it must include the WaterNSW GTAs as conditions of the development consent.

The applicant must still separately apply to WaterNSW for the relevant WMA approvals for the particular activity. However, the WMA approvals will be required to be granted in accordance with the development consent.

What if more time is needed to complete dewatering?

WaterNSW typically grants WMA approvals for dewatering activities for a period of two years. If there are issues completing dewatering within two years, the applicant may submit an application to extend the approval.

If an extension is warranted, WaterNSW will generally extend the approval for a further 12 months. The applicant will be required to submit an interim report to confirm the construction activity is underway. The interim report requires the same information as the completion report. Please refer to the Completion report fact sheet for more information.

Approvals must usually be extended before the expiry date of the original approval. Approvals which have expired without extension may be referred to NRAR for investigation.

More information

Contact our Customer Service team on 1300 662 077 or email Customer.Helpdesk@waternsw.com.au

Disclaimer:

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Attachment A17

Water Cycle and Stormwater Management

Broadway 2

Water Cycle and Stormwater Management Report

Prepared for: APT Residential

Project No: SYD3746
Date: 18 September 2025
Revision: B

Project:	Broadway 2
Location:	41-49 Mountain Street Ultimo NSW 2007
Prepared by:	ADP Consulting Pty Ltd Level 6, 33 Erskine Street Sydney NSW 2000
Project No:	SYD3746
Revision:	B
Date:	18 September 2025

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisa-tion & QA	Signature
A	05.09.2025		K.C.		S.S.		S.S.	
B	18.09.2025		K.C.		S.S.		S.S.	

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1. Introduction

This Water Cycle and Stormwater Management Report has been prepared by ADP Consulting Engineers to support the Planning Proposal for the lots at 41-49 Mountain Street, Ultimo NSW 2007. The site is currently zoned Mixed Use (MU1) and APT Broadway aims to obtain appropriate rezoning of the Site to enable residential development with mixed use ground floor.

1.1 Site Context

The site is located on 41 - 49 Mountain Street, Ultimo NSW 2007 and is approximately 1,450 sqm in size. The site is located at the corner of Smail St and Mountain St and is current used as a depot area. The majority of the site open hardstand, with the exception of an existing substation in the northeast corner of the site which is to be retained and repurposed as part of this development (refer to Appendix A).

1.2 Existing Stormwater Infrastructure

Existing below ground stormwater infrastructure has been identified around the site based on Before You Dig Australia (BYDA) information, which has been further confirmed by the survey has been conducted by "Geosurv" dated to 10/01/2025.

1.3 Flood Planning

The site is located within the Blackwattle Bay catchment and is covered by the 2020 Blackwattle Bay Catchment Flood Study Model Update – ARR2019 Hydrology by "WMAwater". This report identifies the site as flood impacted. To assess and manage the flood risk, a flood study has been conducted and outlined in a Flood Impact Risk Assessment by ADP.

2. Stormwater Management

This section of the report discusses the strategy to allow for stormwater runoff across the site to be conveyed to the designated legal point of discharge. The guidelines outlined in the 2012 City of Sydney Development Control Plan (DCP), Sydney Streets Technical Specifications, and Sydney Water On-site Detention: Guidelines, have been considered as part of the stormwater design strategy.

2.1 Site Drainage and Legal Point of Discharge

Runoff generated by within the existing site is currently discharged to the kerb along Mountain and Smail St, or into the existing inground stormwater infrastructure system at the northeast corner of the site.

As part of the proposed stormwater drainage strategy for the proposed development, an extension of the existing inground system has been proposed to allow for the development to discharge directly to the inground system only. The discharge of stormwater from the site into the Councils drainage system is to be controlled by gravity and an On-Site Detention (OSD) tank sized for storm events up to the 1% AEP.

The Civil stormwater management drawings shown in Appendix B demonstrate the strategy and overall design intent for the treatment of site runoff.

2.2 Stormwater Quantity

The proposed OSD tank has been designed in accordance with advice received from Sydney Water dated 25/07/2025 (Appendix C), indicating a required volume of 24m^3, and a Permissible Site Discharge of 55L/s. The required volume has been provided and shown in Appendix B, further detailed design will follow as part of a future application.

2.3 Water Pollutant Reduction Targets

In accordance with the City of Sydney DCP, Section 3.7.3, the following pollutant loads must be retained on the site:

Table 1 Pollutant Reduction Targets

Pollutant Type	Percentage Retention of Post-Development Loads:
Total Suspended Solids (TSS)	85%
Total Phosphorus (TP)	65%
Total Nitrogen (TN)	45%
Gross Litter	90%

2.4 Water Treatment Train

The proposed site layout consists of 100% roof area, split into trafficable and non-trafficable areas. A 3kL rainwater tank has been proposed to capture and reuse the runoff generated within the non-trafficable areas as part of the water quality treatment train. This volume is subject to BASIX requirements. Overflow from the rainwater tank will then drain towards the proposed stormwater treatment train systems and undergo a series of water quality treatment procedures before being discharged to council's existing below ground drainage system. Trafficable roof areas are to be conveyed directly to the water quality treatment procedures before being discharged to council's existing below ground drainage system. The proposed water quality treatment train consists of a combination of Atlan Stormsacks for primary treatment and Atlan Filter cartridges for tertiary treatment. A catchment plan showing the catchment area and water quality details has been prepared and incorporated into Appendix B.

2.4.1 Atlan Stormsack

Stormsack gross pollutant traps by Atlan or approved equivalent have been proposed for the primary treatment of gross pollutants and suspended solids.

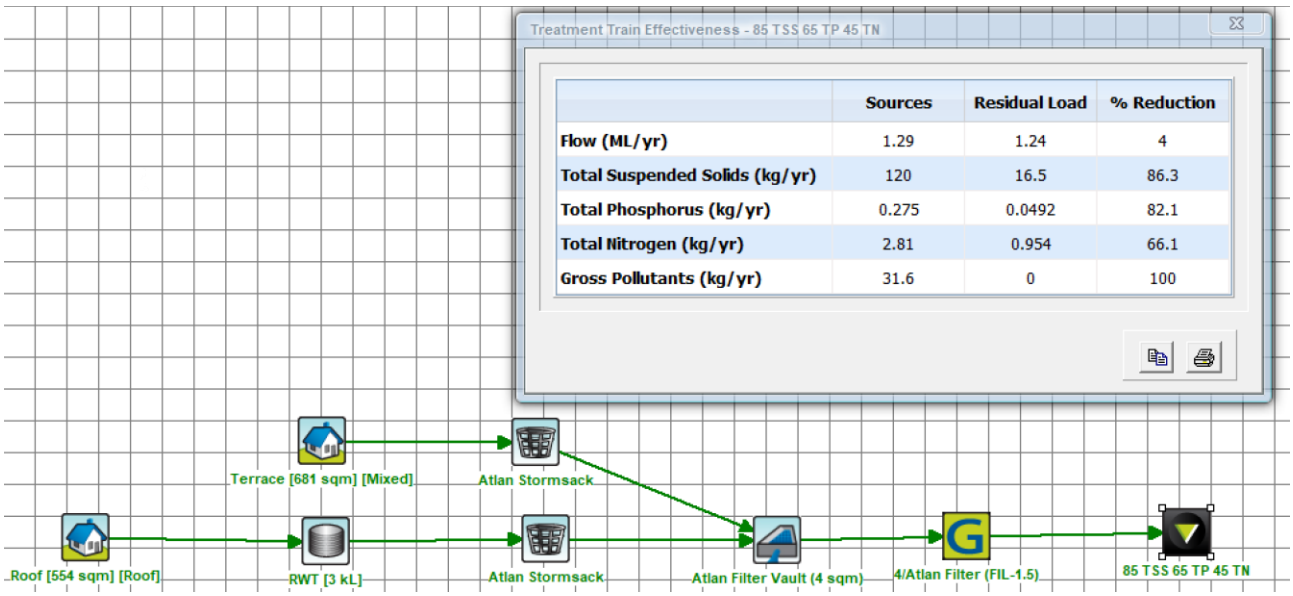
2.4.2 Atlan Filter

Atlan filter cartridges by Atlan or approved equivalent have been proposed for the tertiary treatment of heavy metals, nutrients and soluble pollutants.

2.5 Water Quality Modelling and Results

The stormwater treatment train was modelled in MUSIC, and it has been demonstrated that the stormwater quality targets required by Council has been achieved. Please see Stormwater Management Plan in Appendix B, and MUSIC extracts below.

Figure 1 MUSIC Treatment Train and Results



2.6 Maintenance

2.6.1 Atlan Stormsack

In accordance with the manufacturer's specifications and requirements, the proposed Stormsack would need to be maintained regularly. Please see required maintenance schedule from the manufacturer.

2.6.2 AtlanFilter

Similarly, the AtlanFilter cartridges would need to be inspected and maintained regularly, at a frequency of 4 months. Please see required maintenance schedule from the manufacturer.

2.6.3 Riparian Zones

The proposed site is not located near a riparian corridor and is therefore unimpacted by associated riparian zones.

3. Appendices

3.1 Appendix A – Architectural Plan

SMAIL ST

VEHICLE ENTRY / EXIT

RL 6.900

RL 6.590

RL 6.050

RL 5.500

RL 5.660

RL 6.200

1-3 SMAIL STREET

FIRE ESC (BASEMENT)

STAIR CREST RL7.200

OSD, RWT & WSUD BELOW DRIVEWAY

RETAIL
88.68 m²
RL 6.300

3 m

REPURPOSED SUBSTATION
RETAIL
111.95 m²

LANEWAY

3 m

RESI WASTE ROOM
21m²

LOBBY
RL 6.300

FIRE ESC.

FIRE ESC.

SERVICES

RL 7.200

LOADING

MRV

1:8

1:4

1:8

RETAIL
AMENITIES
20m²

CORRIDOR

RETAIL
355.8 m²
RL 6.150

WASTE HOLDING ROOM
80m²

SUB

STAIR CREST RL6.950

FIRE ESC (BASEMENT)

55 MOUNTAIN STREET

MOUNTAIN ST

TREE TO BE REMOVED

1127

PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

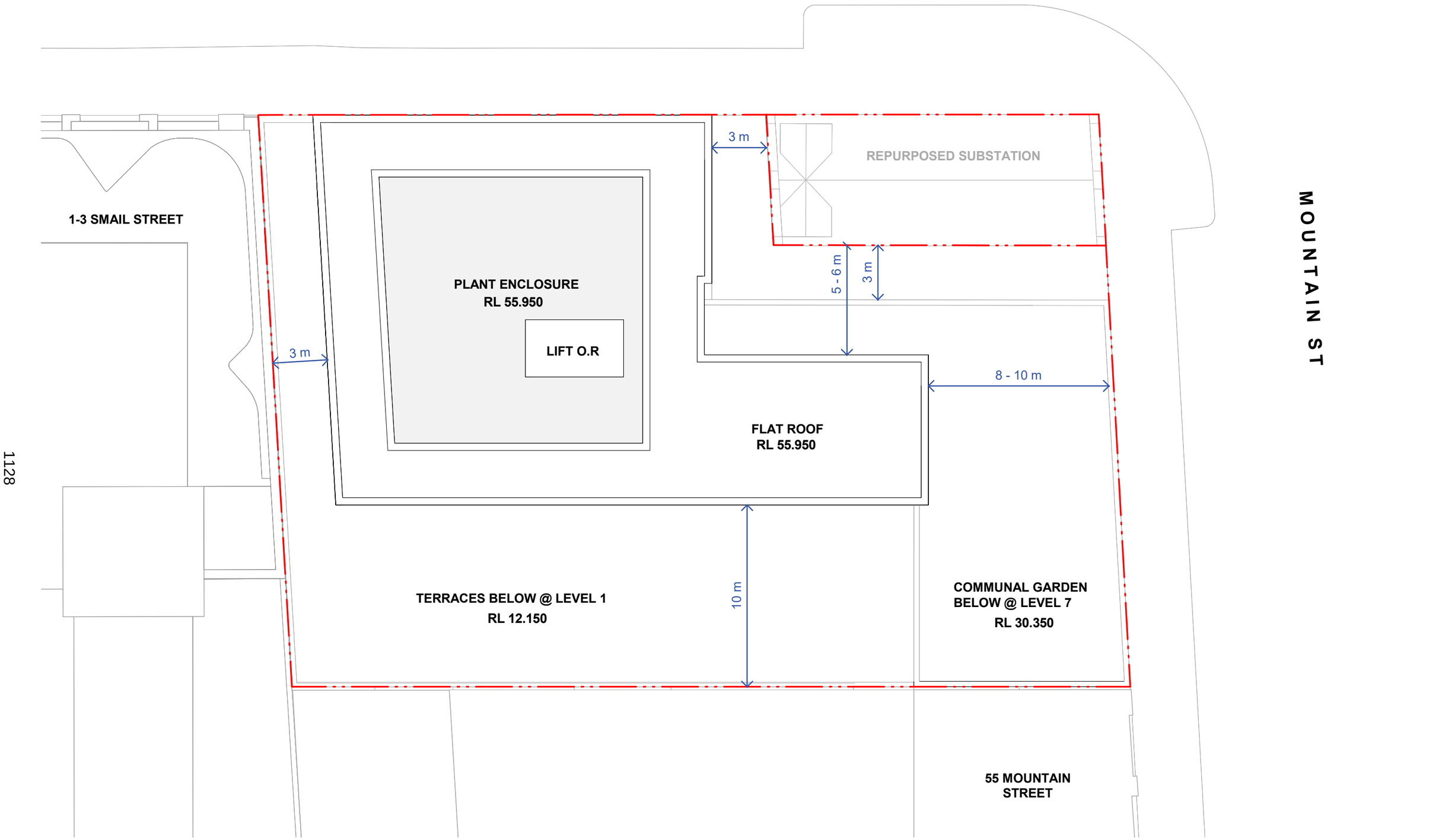
Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

GROUND FLOOR
S12603
1 : 200 @ A3

Drawing no. PP03.00

Rev. A



PRELIMINARY

BATESSMART™

NSW Nominated Responsible Architects:
Kellie Payne Reg. 6454 / Philip Vivian Reg. 6696 / Guy Lake Reg. 7119 / Matthew Allen Reg. 8498

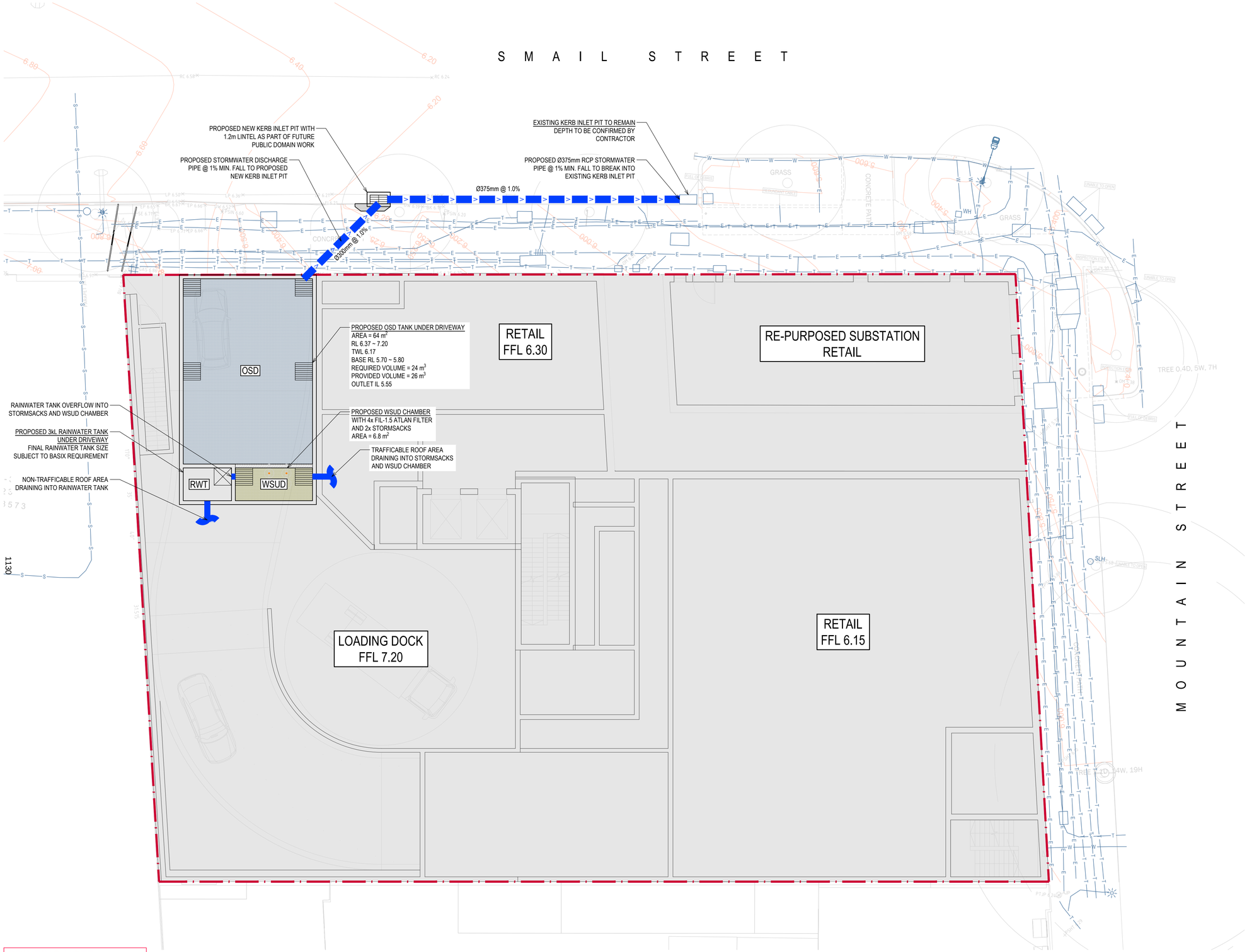
Bates Smart Architects Pty Ltd ABN 68 094 740 986

41-49 Mountain St, Ultimo

ROOF
S12603
1 : 200 @ A3

Drawing no. PP03.15
Rev. A

3.4 Appendix B – Stormwater Management Plan



LEGEND

- SITE BOUNDARY
- 35.50 EXISTING CONTOUR (0.Xm)
- PROPOSED STORMWATER PIPE
- EXISTING STORMWATER PIPE
- SS SUBSOIL PIPE
- RM STORMWATER RISING MAIN
- OUTLINE OF LEVEL BELOW
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- GTD GRATED DRAIN
- PIT A02 STORMWATER PIT NAME
- RL X.XX FINISHED RL
- OVERLAND FLOW DIRECTION
- E EXISTING ELECTRICAL LINE
- G EXISTING GAS LINE
- T EXISTING TELECOMMUNICATION LINE
- S EXISTING SEWER LINE
- W EXISTING WATER LINE
- FO EXISTING FIBRE OPTIC LINE
- OH EXISTING OVERHEAD POWER LINE

NOTES:
1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL REDUCED LEVELS ARE IN mAHD.
3. SURVEY INFORMATION OBTAINED FROM GEOSURV'S DRAWING TITLED 'SUBSURFACE UTILITY INVESTIGATION, BOUNDARY AND DETAIL SURVEY', DATED 10/01/2025.
4. PROPOSED STORMWATER PIPES TO HAVE MINIMUM PIPE FALLS AS PER BELOW:
   A. DIAMETER ≤ 150mm: 1.0% FALL.
   B. DIAMETER ≥ 225mm: 0.5% FALL.
5. SLAB/PAVEMENT TO HAVE MINIMUM 1% FALL TOWARDS STORMWATER INLETS AS PER AS2890 REQUIREMENTS.
6. REFER TO CIVIL PUBLIC DOMAIN WORKS PACKAGE 2XXXXX-CXXX SERIES FOR ALL WORKS OUTSIDE SITE BOUNDARY.

PRINTING NOTE:
THIS DRAWING TO BE PRINTED IN COLOUR.

STORMWATER MANAGEMENT PLAN - GROUND FLOOR
SCALE 1:100

A1 0 1 2 3 4 5 6 7 8 9 10 1:100

Revision	Description	Initial	Date
P2	ISSUE FOR INFORMATION	AD	18.09.2025
P1	ISSUE FOR INFORMATION	AD	05.09.2025

Client
APT RESIDENTIAL
LEVEL 16, 56 PITT ST, SYDNEY, 2000

Architect
BATESSMART
43 BRISBANE ST, SURRY HILLS, 2010

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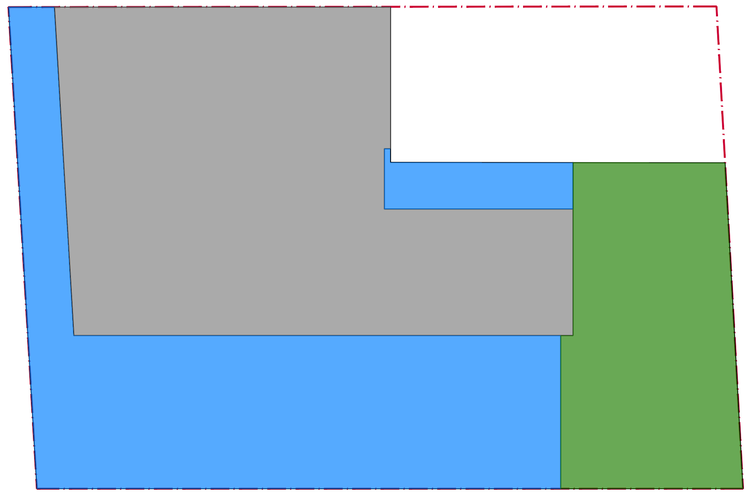
Project
43-49 MOUNTAIN ST, ULTIMO
NEW SOUTH WALES, 2007

Drawing Title
CIVIL ENGINEERING SERVICES
STORMWATER PLAN - GROUND FLOOR

FOR INFORMATION

Drafted	Designed	Approved	Date	Scale	Sheet Size
AD	MH	SS	SEP 2025	1:100 @	A1

Job Number	Drawing Number	Revision	North Point
SYD3746	CE100	P2	



STORMWATER CATCHMENT PLAN
SCALE 1:200

LEGEND

SITE BOUNDARY

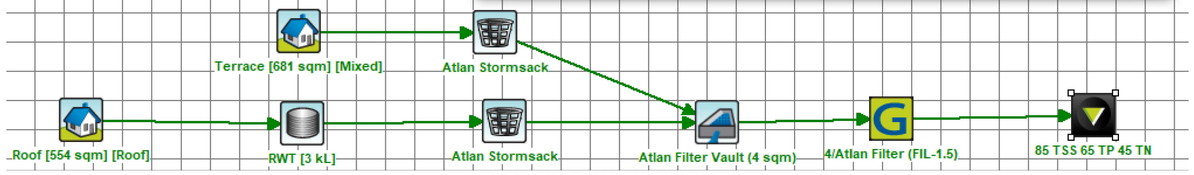
ROOF AREA DRAINING TO RAINWATER TANK
THEN WSUD CHAMBER = 554 m²

TERRACE AREA DRAINING
TO WSUD CHAMBER = 447 m²

GARDEN AREA DRAINING
TO WSUD CHAMBER = 234 m²

Treatment Train Effectiveness - 85 TSS 65 TP 45 TN

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.29	1.24	4
Total Suspended Solids (kg/yr)	120	16.5	86.3
Total Phosphorus (kg/yr)	0.275	0.0492	82.1
Total Nitrogen (kg/yr)	2.81	0.954	66.1
Gross Pollutants (kg/yr)	31.6	0	100



MUSIC TREATMENT TRAIN AND RESULTS
NOT TO SCALE

PRINTING NOTE:
THIS DRAWING TO BE PRINTED IN COLOUR.

FOR INFORMATION

Revision	Description	Initial	Date
P2	ISSUE FOR INFORMATION	AD	18.09.2025
P1	ISSUE FOR INFORMATION	AD	05.09.2025

Client
APT RESIDENTIAL
LEVEL 16, 56 PITT ST, SYDNEY, 2000

Architect
BATESSMART
43 BRISBANE ST, SURRY HILLS, 2010

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Project
43-49 MOUNTAIN ST, ULTIMO
NEW SOUTH WALES, 2007

Drawing Title
CIVIL ENGINEERING SERVICES
CATCHMENT PLAN & RESULTS

Drafted	Designed	Approved	Date	Scale	Sheet Size
AD	MH	SS	SEP 2025	NTS @	A1

Job Number	Drawing Number	Revision	North Point
SYD3746	CE200	P2	

1131

3.5 Appendix C – Sydney Water Advice

Kenaz Chan

From: Michael Haditio
Sent: Thursday, 4 September 2025 4:11 PM
To: Kenaz Chan
Subject: FW: [External] Sydney Water OSD Parameters Enquiry 41-49 Mountain St Ultimo

Michael Haditio
Engineer | Civil

ADP Consulting, an Ayesa company
P: +61 2 8043 7885 | E: m.haditio@adpconsulting.com
W: www.adpconsulting.com
London | Sydney | Melbourne | Brisbane | Adelaide | Gold Coast

---

From: Stormwater <Stormwater@sydneywater.com.au>
Sent: Wednesday, 25 June 2025 8:30 AM
To: Michael Haditio <m.haditio@adpconsulting.com>
Cc: Scott Sharma <s.sharma@adpconsulting.com>
Subject: RE: [External] Sydney Water OSD Parameters Enquiry 41-49 Mountain St Ultimo

Hi Michael,

The On Site Detention requirements for the 1500 square meters site at 41-49 Mountain St Ultimo, are as follows:

- On Site Detention 24 cubic meter
- Permissible Site Discharge 55 L/s

The approval for the On Site Detention would only be given as part of the Section 73 application for this development. The On Site Detention is to be designed according to the above values and submitted to Sydney Water for approval with the Section 73 application. The following details are to be included in your submission for On Site Detention approval:

- Location of the On Site Detention in relation to the development
- Location of the On Site Detention in relation to overall stormwater network of the property
- Plan and Elevation of the On Site Detention tank with all dimensions
- Orifice plate calculation

Best regards,

Saman Seyd Mohammadi
Senior Capability Assessor
Growth & Development

Sydney WATER Saman.Seydmohammadi@sydneywater.com.au

From: Michael Haditio <m.haditio@adpconsulting.com>
Sent: Monday, 23 June 2025 11:17 AM
To: Stormwater <Stormwater@sydneywater.com.au>
Cc: Scott Sharma <s.sharma@adpconsulting.com>
Subject: [External] Sydney Water OSD Parameters Enquiry 41-49 Mountain St Ultimo

CAUTION: This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

To whom it may concern,

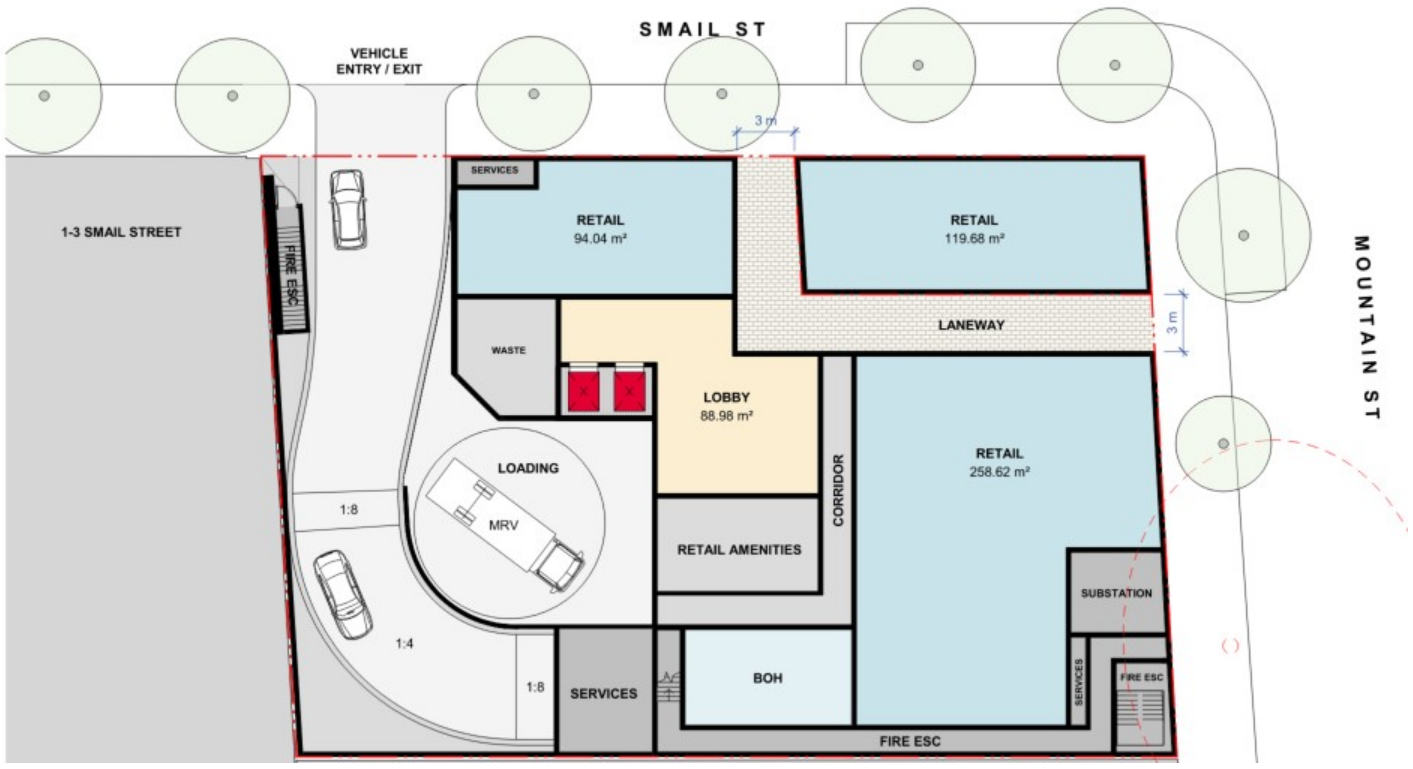
I am writing this email on behalf of ADP Consulting.

We have been engaged by our client to prepare stormwater advice as part of a Massing study for a proposed mixed-use development at 41-49 Mountain St, Broadway. The site is located within City of Sydney LGA.

We are writing this email to seek advice from Sydney Water regarding On-Site detention requirements for the site.

Development address	: 41-49 Mountain Street, Ultimo NSW 2007 (Lot 21 DP5567)
Total site area	: 1,500 sqm
Existing pre-development impervious area	: 1,500 sqm
Proposed post-development impervious area	: 1,500 sqm

The existing site consists of an existing building, which the client is looking to retain, and hardstand carparking area. The proposed mixed-use development will be constructed over the existing hardstand carparking area.



Thank you for your time, and we hope to hear back from you soon.

Kind regards,

Michael Haditio
Engineer | Civil

ADP Consulting, an Ayesa company
P: +61 2 8043 7885 | E: m.haditio@adpconsulting.com
W: www.adpconsulting.com
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ADP
Consulting : Engineering

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London WC2A 1QS
United Kingdom
T. +44 74 9478 5117

adpconsulting.com

Attachment A18

Site Survey and Adjoining Elevations

MGA NORTH

N

CONSULTANT

geosurv
with you from beginning to end

Level 1/11 Montgomery St, Kogarah NSW 2217

1300 554 675 | infol@geosurv.com.au

CLIENT

APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

NOTES

1. (P) SUBSTATION PREMISES - No. 35658 - Name: *ST. BARNABAS KETTLE* (GROUND FLOOR)
   (R) RIGHT OF WAY 1.16 WIDE, 1.175 WIDE, 2.115 WIDE AND 2.125 WIDE
   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⊐
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY & DETAIL SURVEY PLAN

REV.	DESCRIPTION	DATE
A	SUI, boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	18.09.24
C	New SUI Survey added for Issue	10.01.25
D	New Boundaries added for Issue	22.07.25
E	Site Title and Survey area added for Issue	01.10.25

QUALITY ASSURANCE

Surveyor	Anthony Kellner	Date of Survey	22.07.25
Checked by	Anthony K. & Richard A.	Date	01.10.25
Approved by	Marnus Streak	Date	01.10.25
Drafter	Amanda Santos	Date of Plan	01.10.25

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1:200

0 4 8 12 16 20

GRAPHIC SCALE:
1:200

Type of Survey	SUI, BOUNDARY & DETAIL SURVEY	Sheet	Page 1 of 11
Job Number			Current Revision
ASP240496-SUI-DS-BDY-05[E]			E

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SURVEY NOTES

LOCATING QUALITY LEVEL DESCRIPTION

This information helps users understand how data was collected, allowing for appropriate reliance and effective management of project risks related to underground utilities.

Quality Level A (QLA):

Direct visual confirmation of service, position, and depth. Recommended before construction or excavation.

Quality Level B (QLB):

Locates services using radio detection with an accuracy range of 300mm for position and 500mm for depth.

Quality Level C (QLC):

Infers service lines from surface features like hydrants and gas markers, without specific indications of location or depth.

Quality Level D (QLD):

Services digitized solely from BYDA plans; plan offsets provide rough service indications, but no confirmation of service presence.

GEOSURV DISCLAIMER:

Boundary survey conducted. Further surveys are recommended for any construction near boundaries or to meet local government requirements. Boundary information is derived from official property plans.

Tree spreads, trunk radii, and heights are approximate and diagrammatic; specific details should be requested if critical to design.

Contours are indicative with 0.20m intervals; spot levels are preferred for accuracy. Refer to digital model for 3D DTM, Tri meshed service string and feature survey. On Tri meshed (BIM) model some service size will be represented diagrammatically only. Indicated in the attributes comment.

The plan describes subterranean features based on field techniques and data from utility authorities.

While care has been taken in preparing this survey plan, GeoSurv cannot guarantee its flawlessness and disclaims liability for any errors, omissions, or consequences arising from reliance on this plan. Users are encouraged to verify subterranean feature locations through vacuum excavation techniques.

For additional details, refer to the locate report.

Refer to *'ASP240496-BIM-01[A] - v22'* for BIM modeling of the building.

The new SUI QLA/B re-investigation are located on sheet 10 & 11. Refer to locate report, ASP240496-LR-261124-DT, for more information.

Site Title and Survey area added.

WARNING REGARDING SERVICES

This plan displays only those service locations identified by GeoSurv based on ground markings and visible evidence. The services shown are indicative of the underground positions.

Underground services were located according to Class B standards, with depths measured electronically. Pipe sizes and duct configurations are derived from "Before You Dig Australia" (BYDA).

Details and positions of services, including duct sizes and configurations, must be confirmed with relevant authorities and BYDA before design and construction activities.

The represented service routes are diagrammatic and approximate, subject to verification by exposing the service lines.

The survey was conducted using information from BYDA and visible surface evidence. Some companies with underground assets are not part of D.B.Y.D., and their services are not located in this survey.

GeoSurv does not guarantee that all services have been identified. Some underground services may not be locatable by electronic means or visible on site.

It is recommended to perform pot-holing to confirm service locations where potential conflicts with construction or design may occur. Caution is advised during excavation where utilities might be present.

BEFORE YOU DIG www.byda.com.au

1140

STANDARD FEATURE NAMES FOR SURVEY AND SUI (RMS LEGEND)

E BDGE (BRIDGE STRUCTURES)
- ABUTMENT BOTTOM (AB)
- ABUTMENT BOTTOM POINT (PABB)
- ABUTMENT TOP (AT)
- ABUTMENT TOP POINT (PABT)
- CAP-PILE (PBCP)
- DECK (BR)
- EXPANSION JOINT (XJ)
- EXPANSION PLATE (XP)
- HEADSTOCK (HS)
- PIER-COLUMN (BC)
- PIER-COLUMN POINT (PBPI)
- UNDERNEATH CLEARANCE (UC)
- WING WALL (WW)

E BDYS (BOUNDARIES)
- DIGITAL CADASTRE (ACCURACY 1.0m) (BM)
- DIGITISING EXTENT (PHOTO) (DE)
- DP OVERLAY (ACCURACY 0.1m) (BO)
- EASEMENT (BE)
- FIELD COMPLETION BOUNDARY (PHOTO) (NF)
- FIELD SURVEY EXTENT (PHOTO) (FS)
- LOCAL GOVERNMENT (BL)
- PARISH (BP)
- TITLE (ACCURACY 0.02m) (BT)

E BUIL (BUILDINGS & STRUCTURES)
- AWNING (AW)
- AWNING - POINT (PAWN)
- BOTTOM OF WALL (BW)
- BUILDING EAVES (BV)
- BUILDING WALLS (BU)
- CEMETERY (OC)
- CONCRETE SLAB AT GROUND LEVEL (VS)
- CORNER OF BUILDING AT NS (PCBU)
- DOORWAY (DO)
- FLOOR LEVEL (PFLR)
- GENERAL BUILT-UP AREA (OB)
- LOADING BAY-DOCK (LB)
- MISCELLANEOUS STRUCTURE (OM)
- RETAINING WALL (RW)
- RUIN (OR)
- SILO OR TANK (OS)
- SPORTING ARENA (OO)
- STAIRS - OUTSIDE (SO)
- SWIMMING POOL (OT)
- TOP OF WALL (TW)

E COMM (COMMUNICATIONS)
- ABOVE GROUND JOINING POST (PTJP)
- ITS CABLE (IT)
- OPTICAL FIBRE - ABOVE GROUND (OA)
- OPTICAL FIBRE - DIGITISED (OZ)
- OPTICAL FIBRE - UNDERGROUND (OU)
- OPTICAL FIBRE CABLE MARKER (POFM)
- OPTICAL FIBRE CONDUIT (OO)
- OPTICAL FIBRE JUNCTION BOX (POFJ)
- OPTICAL FIBRE PIT (POFP)
- STD 1.1m BY 1.1m MAIN PIT (PTMP)
- TELEPHONE - HOUSE CONNECTION (TY)
- TELEPHONE BOX (PTBX)
- TELEPHONE CABLE MARKER (PTCM)
- TELEPHONE DISTRIBUTION PILLAR (PTDP)
- TELEPHONE CONDUIT (TD)
- TELEPHONE LINE (TN)
- TELEPHONE LINE - DIGITISED (TZ)
- TELEPHONE POLE (PTPL)
- TELEPHONE SINGLE CONCRETE PIT (PTSP)
- TELEPHONE SUMP (TS)
- TELEPHONE TRANSMITTER - MOBILE (PMPT)
- TELEPHONE TRIPLE CONCRETE PIT (PTTP)
- TELEPHONE TWIN CONCRETE PIT (PTTP)

E CONT (PHOTOGRAMMETRY)
- CONTOUR - AUX (DECIMETRE) (YD)
- CONTOUR - AUX (WHOLE METRE) (Y)
- CONTOUR - INDEX (Z)
- CONTOUR - INDEX DEPRESSION (XD)
- CONTOUR - INTER DEPRESSION (ZD)
- CONTOUR - STANDARD-INTER (X)

E CULT (CULTURAL)
- BIN - LARGE (BI)
- BOLLARD (AC)
- BUS SHELTER (BH)
- BUS STOP (PBUS)
- FENCE (FE)
- FENCE LINE (FL)
- FENCE MANPROOF (FM)
- FENCE OTHER (FC)
- FENCE POST-GUIDE POST (POST)
- FIREPLACE (PFPL)
- FLAG POLE (PFLG)
- GATE (AG)
- HEADSTONE (PHST)
- HISTORICAL POINT OF INTEREST (PHIS)

E CULT (CULTURAL) Continued
- LARGE SIGN (SI)
- MAILBOX (PMBX)
- PARKING METER (PKME)
- PEDESTRIAN FENCE-RAIL (SF)
- PICNIC TABLE (TA)
- PUMP (PWEP)
- RUBBISH BIN (PBIN)
- SEAT (SE)
- SIGN (PSGN)
- SIGN - DOUBLE SIDED (PSDS)
- SIGN WITH OUTREACH (SO)
- WINDMILL (OW)
- WINDMILL - POINT (PWML)

E DRAIN (STORMWATER)
- BATTER DRAIN IGI FLUME (DF)
- BOX CULVERT - 150 HIGH (BX)
- BOX CULVERT - 225 HIGH (BH)
- BOX CULVERT - 300 HIGH (BZ)
- BOX CULVERT - 375 HIGH (BB)
- BOX CULVERT - 450 HIGH (BH)
- BOX CULVERT - 600 HIGH (BB)
- BOX CULVERT - 750 HIGH (BF)
- BOX CULVERT - 900 HIGH (BB)
- BOX CULVERT - 1050 HIGH (DX)
- BOX CULVERT - 1200 HIGH (DY)
- BOX CULVERT - 1500 HIGH (DZ)
- BOX CULVERT - 1800 HIGH (DB)
- BOX CULVERT - 2100 HIGH (DA)
- BOX CULVERT - 2400 HIGH (DB)
- BOX CULVERT - 2700 HIGH (DB)
- BOX CULVERT - 3000 HIGH (DF)
- BOX CULVERT - 3300 HIGH (DB)
- BOX CULVERT - 3600 HIGH (DB)
- BOX CULVERT - DIGITISED (YY)
- BOX CULVERT - UNSPECIFIED HEIGHT (UB)
- DIGITISED (DZ)
- DISH DRAIN (DD)
- DRAIN-TABLE DRAIN (DT)
- DRAINAGE BOX (DX)
- DRAINAGE JUNCTION MANHOLE (PDJM)
- DRAINAGE PIT (DP)
- END OF WINGWALL (PEWW)
- FLOOD HEIGHT (PFHT)
- GULLY PIT (DF)
- GULLY PIT POINT (PGUL)

E DRAIN (STORMWATER) Continued
- HEADWALL BOTTOM (HB)
- HEADWALL BOTTOM POINT (PHWB)
- HEADWALL TOP (HW)
- HEADWALL TOP POINT (PHWT)
- INLET TO SUMP (PILT)
- INVERT - 225 DIA (PI21)
- INVERT - 300 DIA (PI22)
- INVERT - 375 DIA (PI23)
- INVERT - 450 DIA (PI24)
- INVERT - 525 DIA (PI25)
- INVERT - 600 DIA (PI26)
- INVERT - 750 DIA (PI27)
- INVERT - 900 DIA (PI28)
- INVERT - 1050 DIA (PI10)
- INVERT - 1200 DIA (PI12)
- INVERT - 1350 DIA (PI13)
- INVERT - 1500 DIA (PI15)
- INVERT - 1650 DIA (PI16)
- INVERT - 1800 DIA (PI18)
- INVERT OF PIPE (PINV)
- INVERT OF SUBSOIL DRAIN OUTLET (PSDO)
- KERB INLET (KI)
- OBVERT OF PIPE (POBV)
- PIPE - 225 DIA (LI1)
- PIPE - 300 DIA (LI2)
- PIPE - 375 DIA (LI3)
- PIPE - 450 DIA (LI4)
- PIPE - 525 DIA (LI5)
- PIPE - 600 DIA (LI6)
- PIPE - 675 DIA (LI7)
- PIPE - 750 DIA (LI8)
- PIPE - 825 DIA (LI9)
- PIPE - 900 DIA (LI10)
- PIPE - 1050 DIA (V1)
- PIPE - 1200 DIA (V2)
- PIPE - 1350 DIA (V3)
- PIPE - 1500 DIA (V3)
- PIPE - 1650 DIA (V8)
- PIPE - 1800 DIA (V8)
- PIPE - UNSPECIFIED DIAMETER (LU)
- SUBSOIL DRAIN FLUSH POINT (PSFP)
- TOP OF CONCRETE JUNCTION BOX (PJBX)
- WATER COURSE (WC)
- WATER LEVEL POINT (PWLP)

E ELEC
- CABLE JUNCTION BOX (PEJB)
- CABLE MANHOLE (PEMH)
- CABLE MARKER (PECM)
- CONDUIT (EC)
- DISTRIBUTION FUSE POINT (PEFP)
- HIGH TENSION PYLON (PHTT)
- HOUSE CONNECTION (EY)
- GARDEN LIGHT (PLGN)
- LIGHT WITH OUTREACH (LI)
- LINE - DIGITISED (EZ)
- LINE - MAJOR TRANSMISSION (UC)
- LINE - MINOR TRANSMISSION (UL)
- LINE - UNDERGROUND (EU)
- MAIN SUMP (STH)
- POLE - LIGHT (PLPL)
- POLE - POWER (PPPL)
- POLE - POWER AND LIGHT (PPLP)
- POLE - POWER AND TRANSFORMER (PPTR)
- POWER SERVICE PILLAR - UNDERGROUND (PEUP)
- PYLON LEG (LL)
- STAY ANCHOR POLE (PSAP)
- STAY POLE (PSPL)
- SUSPENDED LIGHT (PLSL)
- TRANSFORMER CABINET (EC)
- TRANSFORMER CABINET CENTRE (PETC)

E FOTO (PHOTOGRAMMETRY)
- HORIZONTAL CONTROL POINT (PHCP)
- MINOR CONTROL POINT (PMCP)
- PHOTO CENTRE (PPCN)
- VERTICAL CONTROL POINT (PVCP)

E GAS
- HOUSE CONNECTION (DO)
- MAIN - DIGITISED (ZG)
- MAIN - LOW PRESSURE (LG)
- MAIN - NYLON (NG)
- MAIN - POLYETHELENE (YG)
- MANHOLE COVER (PGHL)
- METER (PGMR)
- PIPELINE - ETHANE (HA)
- PIPELINE - HIGH PRESSURE (HG)
- PIPELINE MARKER (PGPM)
- PIPELINE MARKER - HIGH PRESSURE (PGHM)
- REGULATOR BOX (PGRB)
- TEST POINT (PGTP)
- VALVE BOX (PGAB)
- VENT PIPE (PGVP)

E HERI (HERITAGE)
- ENDANGERED COMMUNITY (PHEC)
- ENDANGERED ECOLOGICAL COMMUNITY (PHEC)
- HAZARDOUS SITE (PHAZ)
- INDIGENOUS HERITAGE AREA (PHIA)
- NON INDIGENOUS HERITAGE SITE (PHNI)
- TREE (TRUNK Ø, SPREAD, HEIGHT)

E LNMK
- ARROW - LEFT TURN (AL)
- ARROW - RIGHT TURN (AR)
- ARROW - STRAIGHT AHEAD (AS)
- ARROW - STRAIGHT AND LEFT (AE)
- ARROW - STRAIGHT AND RIGHT (AI)
- BARRIER AND SEPARATION BSI (BSI)
- BARRIER AND SEPARATION BSI (BSI)
- CHEVRON MARKING LEFT (CV)
- CHEVRON MARKING RIGHT (CY)
- CLEARWAY (3x3) (CW)
- CONTINUITY (1x3) (CC)
- DOUBLE BARRIER (DB)
- GIVEWAY-TURN (CG)
- LANE (3x6) (LL)
- PEDESTRIAN CROSSING (SIGNALS) AND STOP LINE (CX)
- PEDESTRIAN CROSSING (ZEBRA) (CZ)
- PEDESTRIAN CROSSING APPROACH (250 ZAG) (CA)
- SEPARATION (3x6) (CN)
- 40 SPEED ZONE - 40KM/H (S4)
- 50 SPEED ZONE - 50KM/H (S5)
- 60 SPEED ZONE - 60KM/H (S6)
- 70 SPEED ZONE - 70KM/H (S7)
- 80 SPEED ZONE - 80KM/H (S8)
- 90 SPEED ZONE - 90KM/H (S9)
- 100 SPEED ZONE - 100KM/H (S1)
- 110 SPEED ZONE - 110KM/H (S2)
- TRAFFIC MARKER (SILENT COP) (PTMX)
- UNBROKEN (CO)

E MARK (SURVEY MARKS)
- ALIGNMENT PIN (PAPN)
- BENCH MARK (PBMK)
- BOLT (PBLT)
- BOUNDARY PEG (PBPG)
- BROAD ARROW (PBBR)
- DRILL HOLE AND WING (PDHL)
- DUMPY PEG (PDPY)
- G I NAIL (PGIN)
- G I PIPE (PGIP)
- MISCELLANEOUS SURVEY MARK (PMSM)
- NAIL (PNAL)
- PERMANENT MARK (PPMK)
- PM CONCRETE BLOCK (PPMB)
- RTA CONTROL MARK (PCMK)
- SPIKE (PSKI)
- STAR PICKET (PSTA)
- STATE SURVEY MARK (PSSM)
- TRIG STATION-CONCRETE PILLAR (PTSG)
- WATER BOARD PM (PDSM)

E MISC
- BORE HOLE (PBHO)
- CAMERA - FLASH UNIT (PCFL)
- CHECK STRING (CC)
- GATIC COVER LID (PGAT)
- GOLF COURSE (GC)
- HIGH PRESSURE OIL PIPELINE (HO)
- HIGH PRESSURE OIL PIPELINE MARK (POFM)
- HOTSPOT (HP)
- JOIN LINE (BOUNDARY) (JL)
- MX BREAK STRINGS (PBRK)
- PARK OR OPEN SPACE (OP)
- PETROL PUMP (PPET)
- POT HOLE - NULL LEVEL (PHNL)
- POT HOLE - WITH RL (PHRL)
- RED LIGHT-SPEED-TRAFFIC CAMERA (PCAM)
- SEISMIC LINE (SL)
- SEISMIC TEST SHOT (PSTS)
- SERVICE-JUNCTION BOX (LB)
- STOCK GRID (SG)
- STOCKPILE (CH)
- TEST PIT (PCEO)
- UNIDENTIFIED PIPELINE (UP)
- UNIDENTIFIED POLE (PHOL)
- UNIDENTIFIED SERVICE (PUSR)
- UNDERGROUND TANK (UT)
- UNDERGROUND TANK POINT (PUTP)

E RAIL
- RAILWAY CONTROL BOX (PRBX)
- RAILWAY FORMATION EDGE (RF)
- RAILWAY RAMP (RR)
- RAILWAY SIGNAL (PRSG)
- RAILWAY SIGNAL TROUGH (RS)
- RAILWAY SIGNAL TROUGH - POINT (PRSC)
- RAILWAY STANCHION (PRST)
- RAILWAY TRACK CENTRE (RT)
- RAILWAY TRACK MONUMENT (PRTM)
- TOP OF RAIL (RA)
- TOP OF RAIL - POINT (PRAL)
- TOP OF RAILWAY PLATFORM (RP)

E ROAD
- BACK OF KERB (BK)
- CENTRE OF ROAD (RC)
- DRIVEWAY (DW)
- EDGE OF FORMATION (EU)
- EDGE OF MEDIAN (EM)
- EDGE OF PAVEMENT (EP)
- EDGE OF TRACK (EK)
- EDGE OF UNSEALED ROAD (UR)
- FOOTPATH (FP)
- GUTTER FLOW LINE (FI)
- LIP LINE (LP)
- OFFSET CROWN-CROWN (CF)
- PRAM RAMP (KR)
- STEEL WIRE ROPE BARRIER (SW)
- TOP OF KERB (KB)
- TOP OF MEDIAN (TM)
- TYPE F BARRIER (CJ)
- VEHICULAR TRACK EDGE (VT)
- W BEAM - THREE BEAM BARRIER (FC)

E SEWR
- HOUSE CONNECTION (SY)
- LAMPHOLE (PSLH)
- MAIN (SW)
- MAIN - DIGITISED (SZ)
- MANHOLE COVER (PSMH)
- SEWAGE POND (SP)
- SEPTIC TANK (ST)
- VENT PIPE (PSVP)

E STNS
- AP-CH-GI-PIPE OR RMCB (PSSZ)
- BOLT-DUMPY-NAIL-SPIKE (PSSE)
- DEFAULT MX SURVEY MARK (PSSA)
- PEG (PSSC)
- PM SSM OR CONTROL MARK (PSSG)
- TRIG STATION (PSSF)

E TCS
- SIGNAL DETECTOR (SD)
- TRAFFIC CONTROL SIGNAL (PSCL)
- TRAFFIC LIGHT WITH OUTREACH (TO)
- TRAFFIC SIGNAL CONTROLLER (PSCL)
- TRAFFIC SIGNAL DETECTOR (PSDR)
- TRAFFIC SIGNAL JUNCTION BOX (PSJX)

E TEXT (Height determined by user)
- Text 1 ORANGE (*1)
- Text 2 BLACK (*2)
- Text 3 RED (*3)
- Text 4 BLUE (*4)
- Text 5 GREEN (*5)
- Text 7 CYAN (*7)

E TOPO
- BOTTOM OF BANK-EMBANKMENT (BB)
- BREAKLINE OR RIDGE (NB)
- CLIFF-ESCARPMENT (VC)
- CULTIVATION PASTURE (JC)
- EDGE OF GARDEN (EG)
- FORD (FO)
- GRASSLAND (JG)
- LAKE (WL)
- LANDSLIDE-ERODED BANK (VL)
- NATURAL SURFACE (NS)
- NATURAL SURFACE POINT (PNSS)
- ORCHARD (JO)
- RESERVOIR (RE)
- RIVER OR CREEK EDGE (WR)
- ROCK AREA (JR)
- SPOT HEIGHT (PSHT)
- SWAMP OUTLINE (JW)
- SWAMP-MARSH (PSWA)
- TIMBER OR SCRUB (DENSE) (JD)
- TIMBER OR SCRUB (MEDIUM) (JM)
- TIMBER OR SCRUB (SCATTERED) (JS)
- TOP OF BANK (TC)
- TOP OF CUTTING (CU)
- WATER EDGE-LEVEL (WE)

E WATR
- AIR VALVE (PWAV)
- AIR VALVE - RECYCLED (PWAV)
- EARTH TERMINAL (PWET)
- EARTH TERMINAL - RECYCLED (PRET)
- FIRE HYDRANT (PWFB)
- HOUSE CONNECTION (WY)
- HYDRANT (PWHY)
- HYDRANT - RECYCLED (PRHY)
- MAIN (WW)
- MAIN - DIGITISED (WZ)
- MAIN - RECYCLED (RM)
- MAIN MARKER (PWMM)
- MAIN MARKER - RECYCLED (PRMM)
- METER (PWMR)
- METER - RECYCLED (PRMR)
- OVERHEAD PIPELINE (UO)
- STOP VALVE (PWSV)
- STOP VALVE - RECYCLED (PRSV)
- TAP (PWTP)
- TAP - RECYCLED (PRTP)

MGA NORTH

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APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

NOTES

1. (P) SUBSTATION PREMISES - No. 35658 - Name: *ST. BARNABAS KETTLE* (GROUND FLOOR)
   (R) RIGHT OF WAY 1.16 WIDE, 1.175 WIDE, 2.115 WIDE AND 2.125 WIDE
   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TITLE INFORMATION

Lot	23/21/1
Plan No.	DP1128573/DP5567/DP191928
Title / Folio	23/1128573 - 21/5567 - 1/191928
L.G.A.	City of Sydney

SURVEY CERTIFICATE

I hereby certify the boundaries shown hereon are true and correct and are surveyed boundaries.

.....

Signed: Anthony Kellner
Registered Land Surveyor: SUI001399
Surveying & Spatial Information Act 2002

DRAWING TITLE

COVER SHEET

REV.	DESCRIPTION	DATE
A	SUI, boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	18.09.24
C	New SUI Survey added for Issue	10.01.25
D	New Boundaries added for Issue	22.07.25
E	Site Title and Survey area added for Issue	01.10.25

QUALITY ASSURANCE

Surveyor	Anthony Kellner	Date of Survey	22.07.25
Checked by	Anthony K. & Richard A.	Date	01.10.25
Approved by	Marnus Streak	Date	01.10.25
Drafter	Amanda Santos	Date of Plan	01.10.25

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			

Type of Survey	SUI, BOUNDARY & DETAIL SURVEY	Sheet	Page 2 of 11
Job Number			Current Revision
ASP240496-SUI-DS-BDY-05[E]			E

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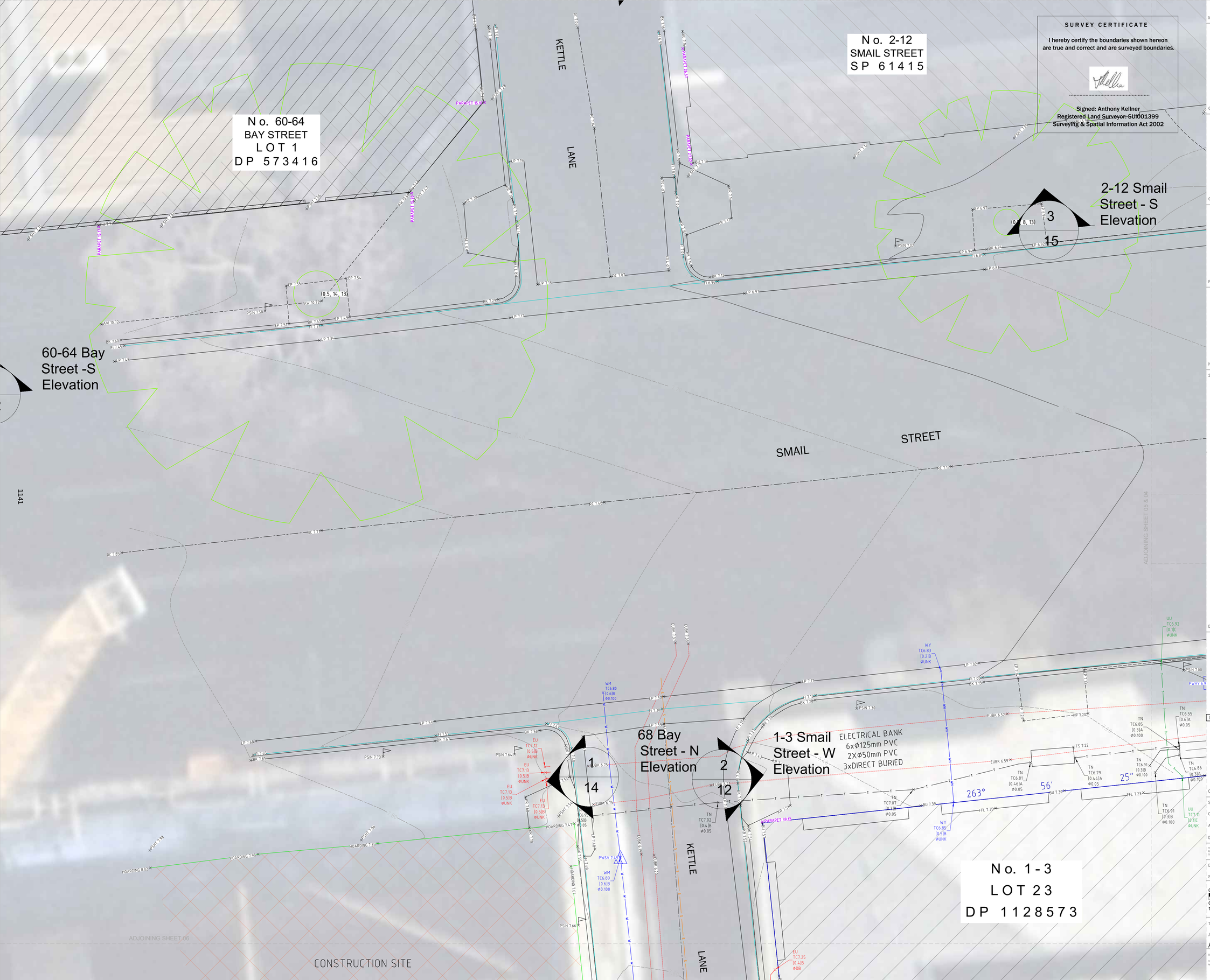

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PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

NOTES

1. (P) SUBSTATION PREMISES - No. 35658 - Name: *ST. BARNABAS KETTLE* (GROUND FLOOR)
   (R) RIGHT OF WAY 1.16 WIDE, 1.175 WIDE, 2.115 WIDE AND 2.125 WIDE
   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⌋
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY &
DETAIL SURVEY
PLAN

REV.	DESCRIPTION	DATE
A	SUI, boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	18.09.24
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0 1 2 3 4 5
GRAPHIC SCALE:
1:50

Type of Survey	SUI, BOUNDARY & DETAIL SURVEY	Sheet	Page 3 of 11
Job Number		Current Revision	
ASP240496-SUI-DS-BDY-05[E]		E	

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SURVEY CERTIFICATE

I hereby certify the boundaries shown hereon are true and correct and are surveyed boundaries.

.....

Signed: Anthony Kellner
Registered Land Surveyor: SUI001399
Surveying & Spatial Information Act 2002

N o. 2-12
SMAIL STREET
S P 6 1 4 1 5

MOUNTAIN LANE

1
17
35 Mountain Street - W Elevation

2
15
2-12 Smail Street - E Elevation

SMAIL STREET

ADJOINING SHEET 03

ADJOINING SHEET 05

MGA NORTH

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APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

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   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⌋
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY &
DETAIL SURVEY
PLAN

REV.	DESCRIPTION	DATE
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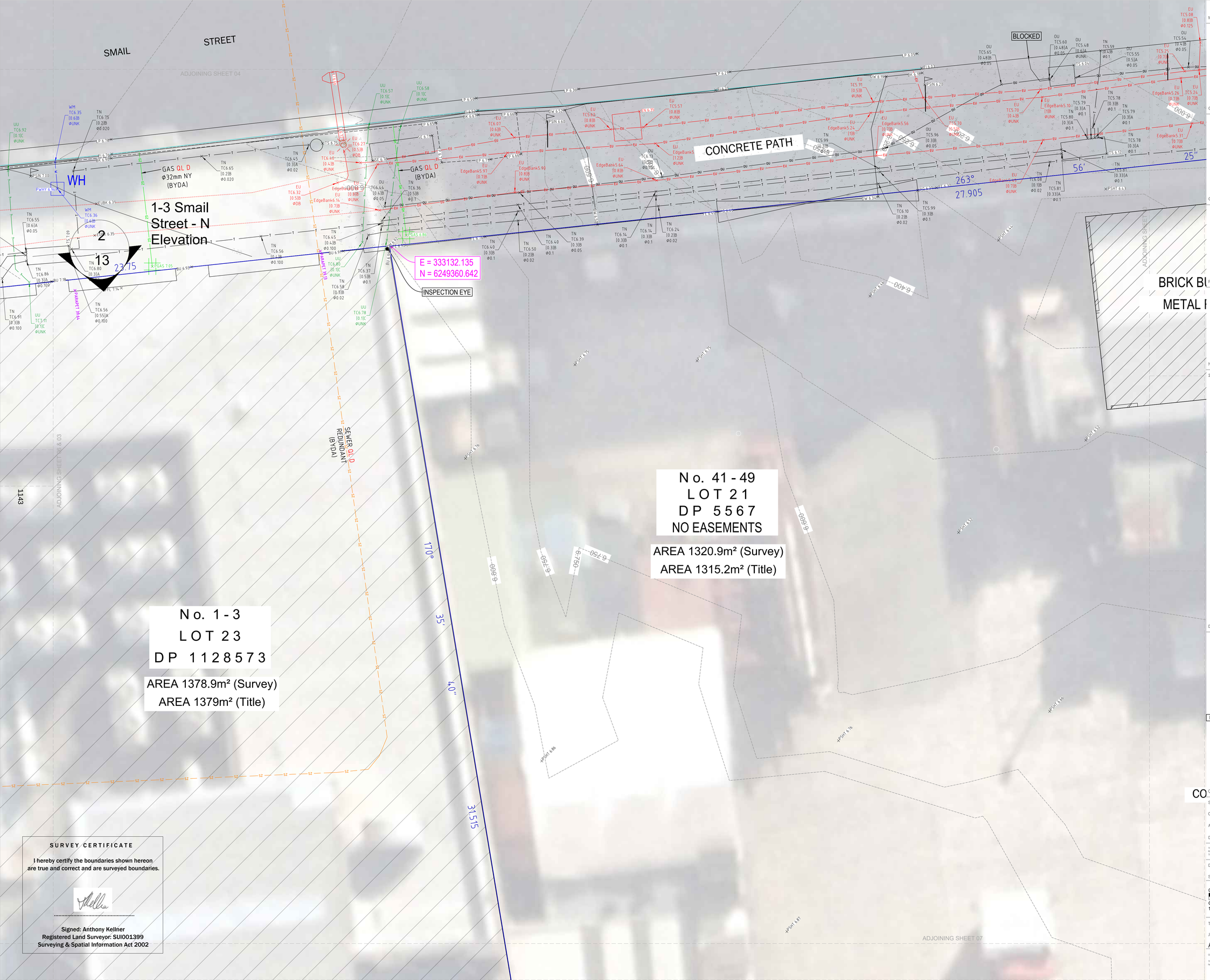

SURVEY CERTIFICATE

I hereby certify the boundaries shown hereon are true and correct and are surveyed boundaries.

Signed: Anthony Kellner
Registered Land Surveyor: SUI001399
Surveying & Spatial Information Act 2002

MGA NORTH

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APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY INVESTIGATION, BOUNDARY AND DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

NOTES

1. (P) SUBSTATION PREMISES - No. 35658 - Name: *ST. BARNABAS KETTLE* (GROUND FLOOR)
   (R) RIGHT OF WAY 1.16 WIDE, 1.175 WIDE, 2.115 WIDE AND 2.125 WIDE
   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⊐
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY & DETAIL SURVEY PLAN

REV.	DESCRIPTION	DATE
A	SUI, boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	18.09.24
C	New SUI Survey added for Issue	10.01.25
D	New Boundaries added for Issue	22.07.25
E	Site Title and Survey area added for Issue	01.10.25

QUALITY ASSURANCE

Surveyor	Anthony Kellner	Date of Survey	22.07.25
Checked by	Anthony K. & Richard A.	Date	01.10.25
Approved by	Marnus Streak	Date	01.10.25
Drafter	Amanda Santos	Date of Plan	01.10.25

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Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1:50

0 1 2 3 4 5
GRAPHIC SCALE: 1:50

Type of Survey	SUI, BOUNDARY & DETAIL SURVEY	Sheet	Page 5 of 11
Job Number			Current Revision
ASP240496-SUI-DS-BDY-05[E]			E

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CONSTRUCTION SITE

ADJOINING SHEET 03

No. 66
BAY STREET
LOT101
DP 1104203

No. 68
BAY STREET
LOT1
DP 83054

No. 1-3
LOT 23
DP 1128573

AREA 1378.9m² (Survey)
AREA 1379m² (Title)

ELECTRICAL BANK 9x⌀150mm PVC / 1X⌀50mm PVC

KETTLE LANE

SEWER QL D
REDUNDANT
(BYDA)

HOARDING 7.71

HOARDING 8.01

PARAPET 31.59

PARAPET 31.66

PARAPET 30.64

PARAPET 39.17

PARAPET 36.54

SM IL5.92 [2.65]A ⌀0.225

SM IL5.99 [2]A ⌀0.225

SM IL6.01 [1.9]A ⌀0.225

OM 7.97

WM TC7.43 [0.5]B ⌀0.100

WM TC7.53 [0.5]B ⌀0.100

WM TC7.95 [0.3]B ⌀0.100

WM TC8.10 [0.3]B ⌀0.100

PWHY 8.40

WH

PWV 8.10

EU TC7.25 [0.4]B ⌀DB

EU TC7.35 [0.4]B ⌀DB

EU TC7.52 [0.4]B ⌀DB

EU TC7.78 [0.4]B ⌀DB

EU TC7.85 [0.4]B ⌀DB

EU TC7.85 [0.4]B ⌀DB

EU TC8.02 [0.4]B ⌀DB

54.37

4.5"

ADJOINING SHEET 07 & 05

ADJOINING SHEET 08

1144

SURVEY CERTIFICATE

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.....

Signed: Anthony Kellner
Registered Land Surveyor: SUI001399
Surveying & Spatial Information Act 2002

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APT RESIDENTIAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

NOTES

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   (E) EASEMENT FOR ELECTRICITY PURPOSES 2.16 WIDE

TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⌐
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

DRAWING TITLE

SUI, BOUNDARY &
DETAIL SURVEY
PLAN

REV.	DESCRIPTION	DATE
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QUALITY ASSURANCE

Surveyor	Anthony Kellner	Date of Survey	22.07.25
Checked by	Anthony K. & Richard A.	Date	01.10.25
Approved by	Marnus Streak	Date	01.10.25
Drafter	Amanda Santos	Date of Plan	01.10.25

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Job Number		Current Revision	
ASP240496-SUI-DS-BDY-05[E]		E	

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SURVEY CERTIFICATE

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.....

Signed: Anthony Kellner
Registered Land Surveyor: SUI001399
Surveying & Spatial Information Act 2002

ADJOINING SHEET 05

ADJOINING SHEET 07 & 08

ADJOINING SHEET 06

ADJOINING SHEET 09

No. 41 - 49
MOUNTAIN STREET
L O T 2 1
D P 5 5 6 7

No. 1 - 3
L O T 2 3
D P 1 1 2 8 5 7 3

No. 51-55
MOUNTAIN STREET
S P 7 0 0 0 5

1-3 Smail Street - E Elevation

1
13

+PSHT 6.84

+PSHT 6.82

+PSHT 6.85

+PSHT 6.81

PARAPET 6.76

PARAPET 6.71

5.868

1145

170°

31'

50"

22.995

AREA OUT OF SCOPE OF WORK

TS OF WAY AND EASEMENT

MGA NORTH

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GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
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ADJOINING SHEET 05

No. 80
BAY STREET
LOT 1
DP 1043629

No. 1-3
LOT 23
DP 1128573

BAY STREET

1-3 Small Street - S Elevation

86-90 Bay St - N Elevation

SUBSTATION PREMISES, RIGHTS OF WAY AND EASEMENT (GROUND FLOOR) (P)

ADJOINING SHEET 08 & 07

E = 333114.244
N = 6249304.066

No. 86-90
BAY STREET
SP 21479

1146

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DRAINAGE	D
ELECTRICAL	E
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SEWER	S
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BOUNDARY	
EASEMENT	
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ELECTRICAL EDGE OF BANK	EUBK
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ASP240496-SUI-DS-BDY-05[E]			E

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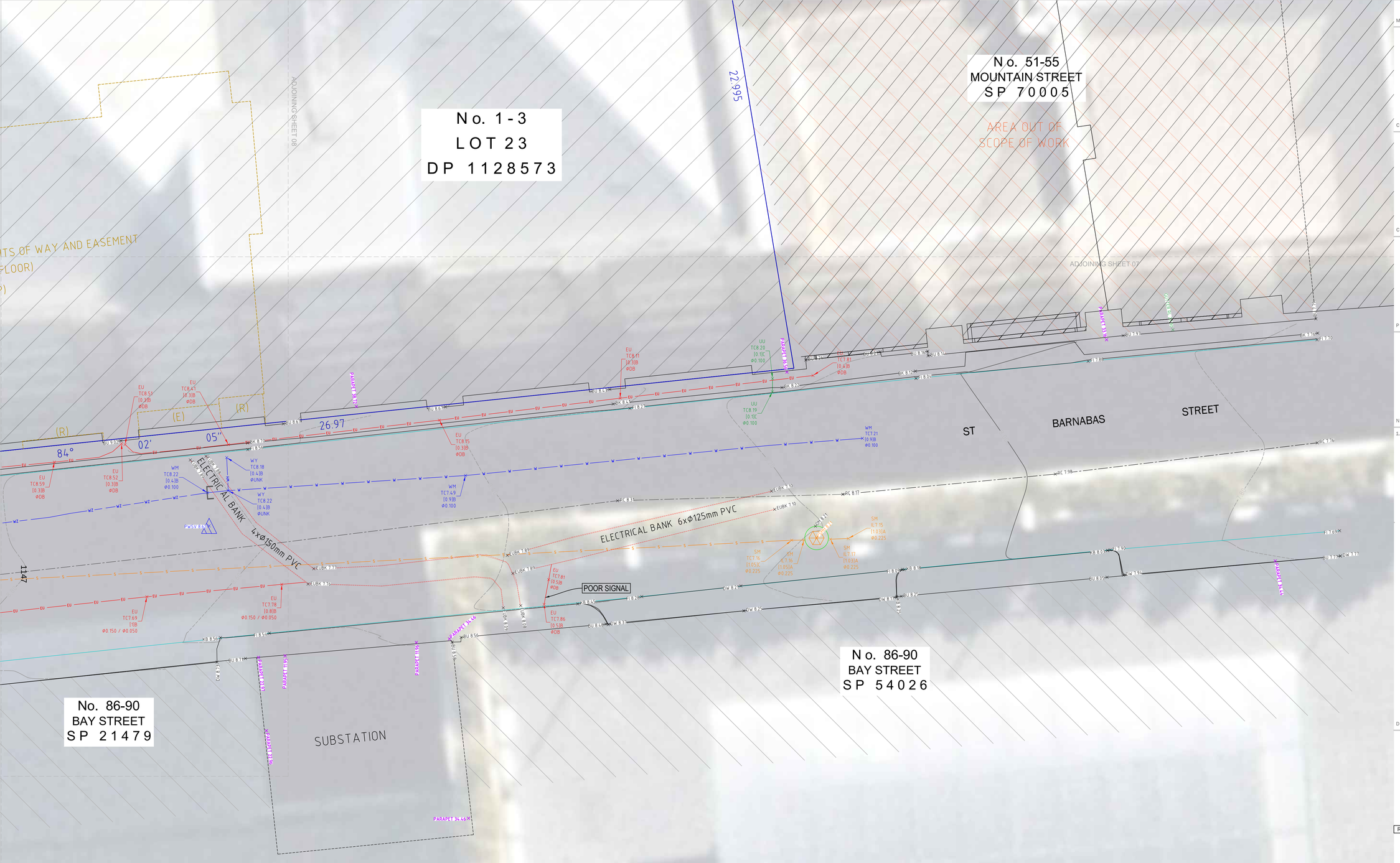

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GAS	G
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SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
BOUNDARY	
EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⌋
SERVICE CODE	TD
"IL" INVERT LEVEL "TC" TOP CENTRE RL	IL2.00
"UNK" SERVICE DEPTH & QUALITY UNKNOWN	[3.00]A
DIAMETER	Ø0.1

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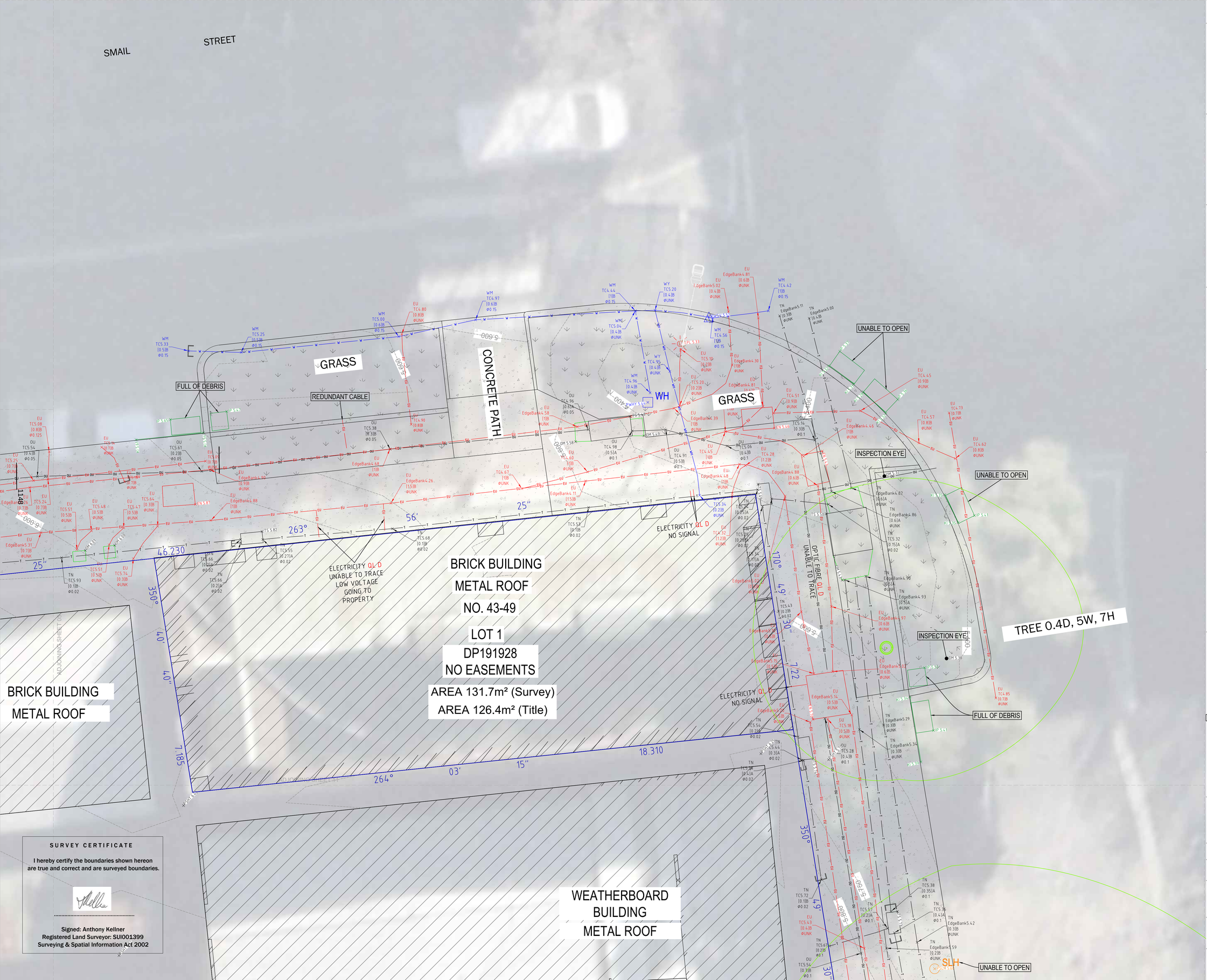
SMAIL
STREET
GRASS
FULL OF DEBRIS
REDUNDANT CABLE
CONCRETE PATH
WH
GRASS
UNABLE TO OPEN
INSPECTION EYE
UNABLE TO OPEN
INSPECTION EYE
TREE 0.4D, 5W, 7H
FULL OF DEBRIS
UNABLE TO OPEN
BRICK BUILDING
METAL ROOF
NO. 43-49
LOT 1
DP191928
NO EASEMENTS
AREA 131.7m² (Survey)
AREA 126.4m² (Title)
BRICK BUILDING
METAL ROOF
WEATHERBOARD
BUILDING
METAL ROOF
ELECTRICITY QL D
UNABLE TO TRACE
LOW VOLTAGE
GOING TO
PROPERTY
ELECTRICITY QL D
NO SIGNAL
OPTIC FIBRE QL D
UNABLE TO TRACE
ELECTRICITY QL D
NO SIGNAL
ADJOINING SHEET
ADJOINING SHEET
263°
56'
25"
46.230
350°
40"
7.185
264°
03'
15"
18.310
350°
49"
30"
7.22
170°
49"
30"
5.600
5.600
5.600

STREET

SMAIL

WEATHERBOARD BUILDING

METAL ROOF

ADJOINING SHEET 10

CONCRETE PATH

CONCRETE

UNABLE TO OPEN

TREE 1.1D, 14W, 19H

55 Mountain Street - N Elevation

2
16

46.105

263°

58'

25"

350°

30"

24.395

6.750

6.800

6.600

6.400

6.500

11.49

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TYPICAL SUI LEGEND

GAS	G
COMMUNICATION	C
DRAINAGE	D
ELECTRICAL	E
WATER	W
SEWER	S
ELECTRICAL EDGE OF BANK	
CONTOUR MINOR	0.25
CONTOUR MAJOR	1.00
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EASEMENT	
DIRECT BURIED	DB
ELECTRICAL EDGE OF BANK	EUBK
END OF TRACE (EOT)	⌐
SERVICE CODE	TD
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"UNK" SERVICE DEPTH & QUALITY UNKNOWN	(3.00)A
DIAMETER	Ø0.1

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QUALITY ASSURANCE

Surveyor	Anthony Kellner	Date of Survey	22.07.25
Checked by	Anthony K. & Richard A.	Date	01.10.25
Approved by	Marnus Streak	Date	01.10.25
Drafter	Amanda Santos	Date of Plan	01.10.25

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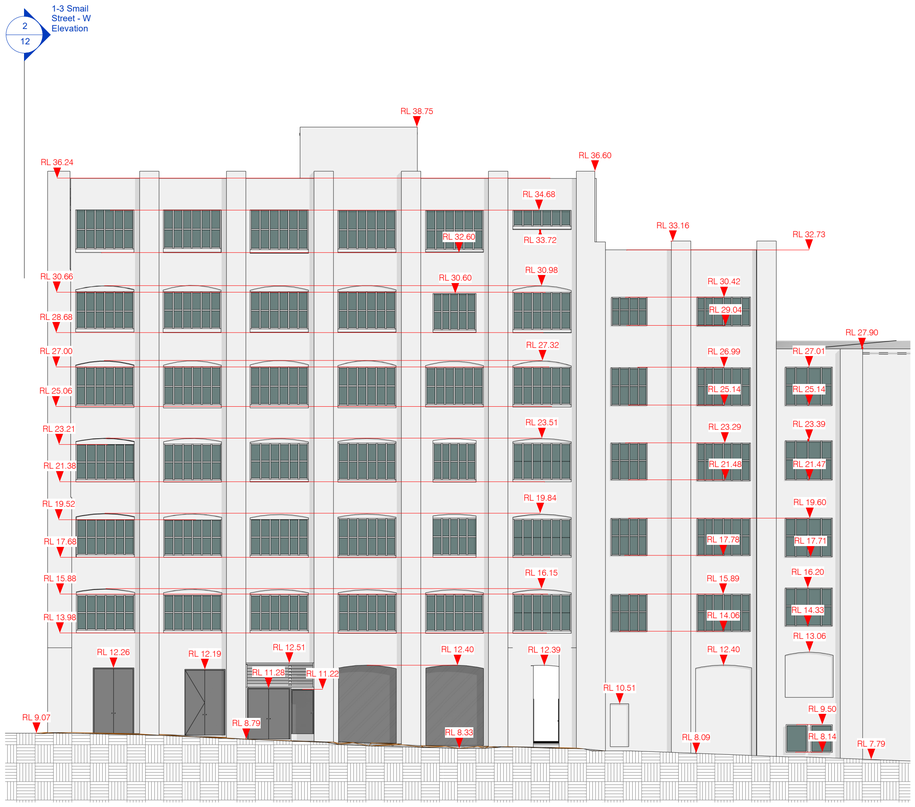

1 1-3 Smail Street - S Elevation
1 : 150

2 1-3 Smail Street - W Elevation
1 : 150

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PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

DRAWING TITLE

1-3 Smail Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	29.08.24
Approved by	Marnus Streak	Date	29.08.24
Date of Survey	28.08.24	Date of Plan	29.08.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 150

0 1 2 3 4 5 10 15
GRAPHIC SCALE: 1:150

Project Type	SUI, Boundary & Detail Survey	Sheet	12 of 23
Job Number	ASP240496	Current Revision	Rev B

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1 86-90 Bay St - N Elevation

1 : 100

1151

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PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

86-90 Bay Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 100

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GRAPHIC SCALE: 1:100

Project Type	SUI, Boundary & Detail Survey	Sheet	23 of 23
Job Number	ASP240496	Current Revision	Rev C

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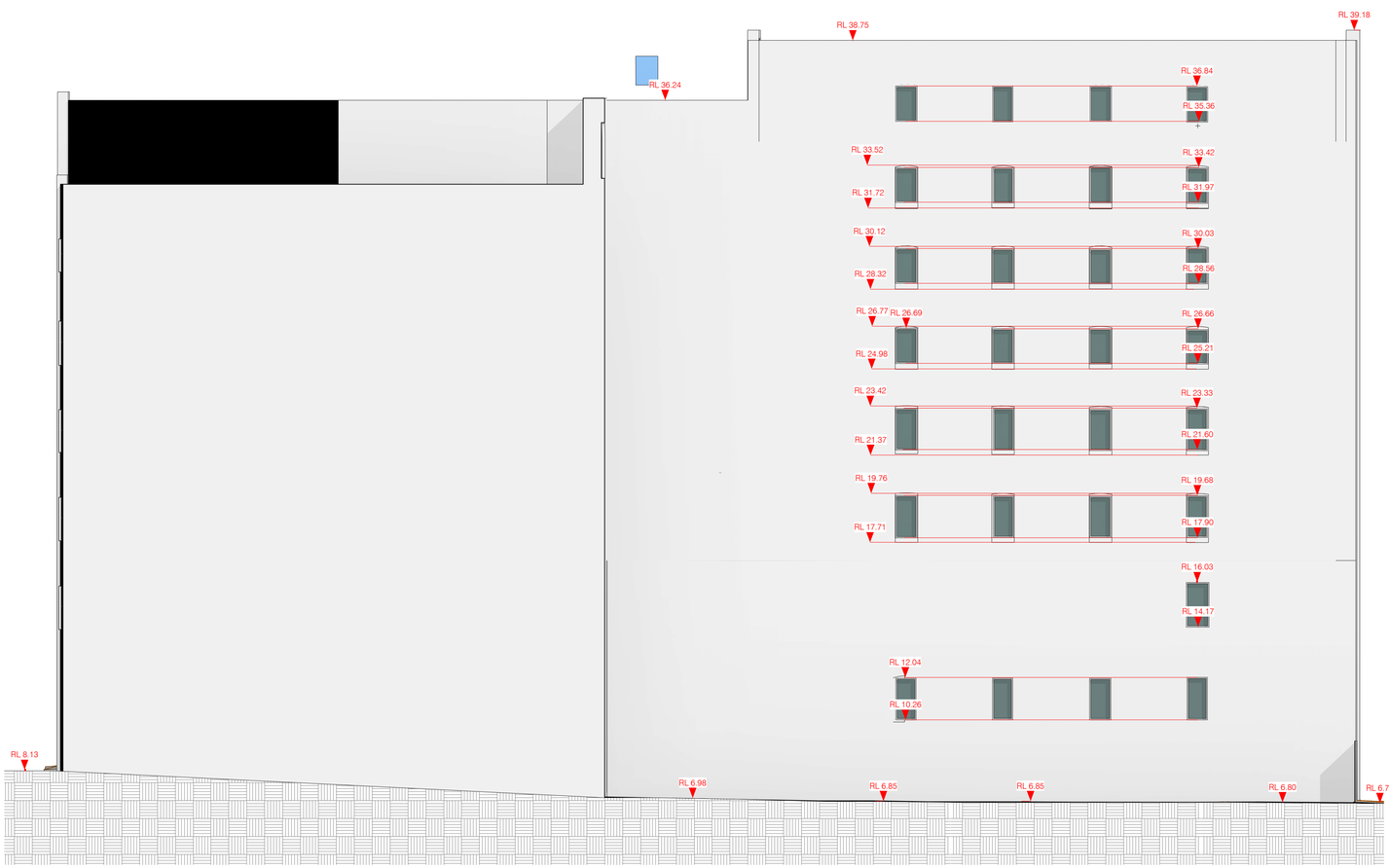
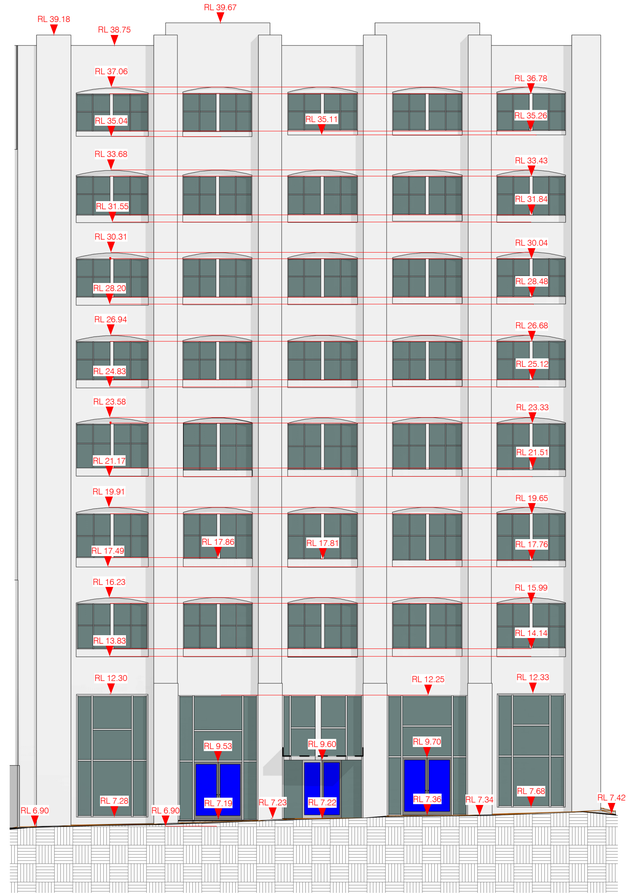


1 1-3 Smail Street - E Elevation
1 : 125



2 1-3 Smail Street - N Elevation
1 : 125

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INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

DRAWING TITLE

1-3 Smail Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	19.07.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 125

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GRAPHIC SCALE 1:125

Project Type	SUI, Boundary & Detail Survey	Sheet	13 of 23
Job Number	ASP240496	Current Revision	Rev C

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1 68 Bay Street - N Elevation

1 : 100

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INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

68 Bay Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	29.08.24
Approved by	Marnus Streak	Date	29.08.24
Date of Survey	19.07.24	Date of Plan	29.08.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 100

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GRAPHIC SCALE: 1:100

Project Type	SUI, Boundary & Detail Survey	Sheet	14 of 23
Job Number	ASP240496	Current Revision	Rev B

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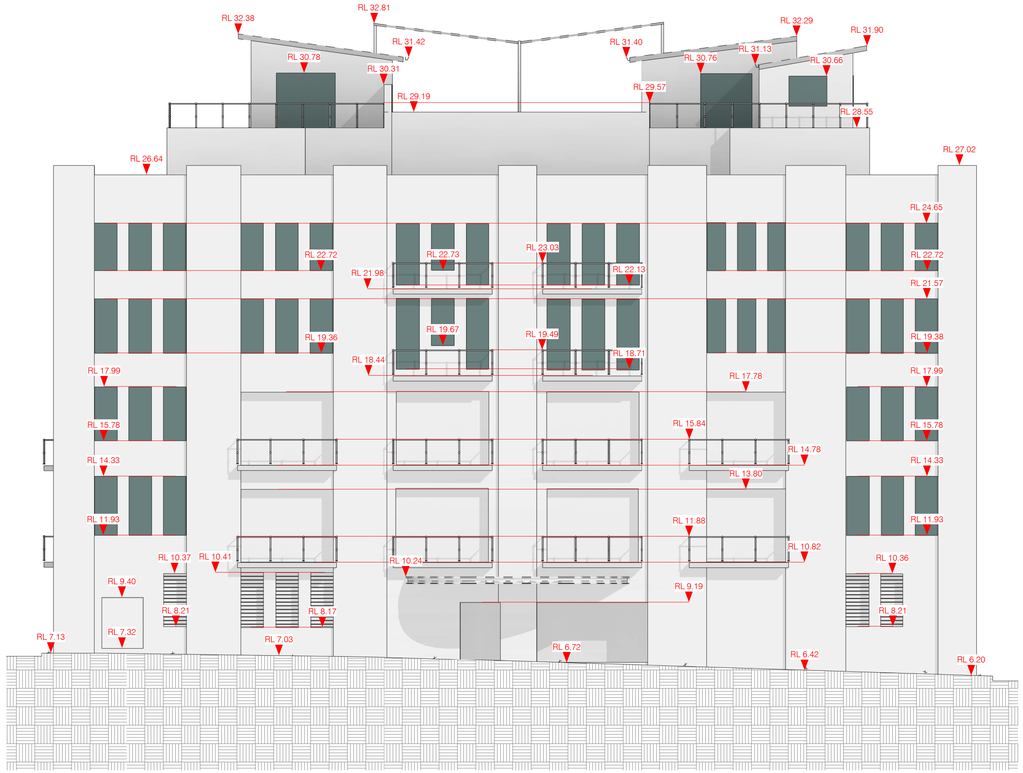
1 2-12 Smail Street - W Elevation
1 : 125

2 2-12 Smail Street - E Elevation
1 : 125



3 2-12 Smail Street - S Elevation
1 : 125

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INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

DRAWING TITLE

2-12 Smail Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 125

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GRAPHIC SCALE 1:125

Project Type	SUI, Boundary & Detail Survey	Sheet	15 of 23
Job Number	ASP240496	Current Revision	Rev C

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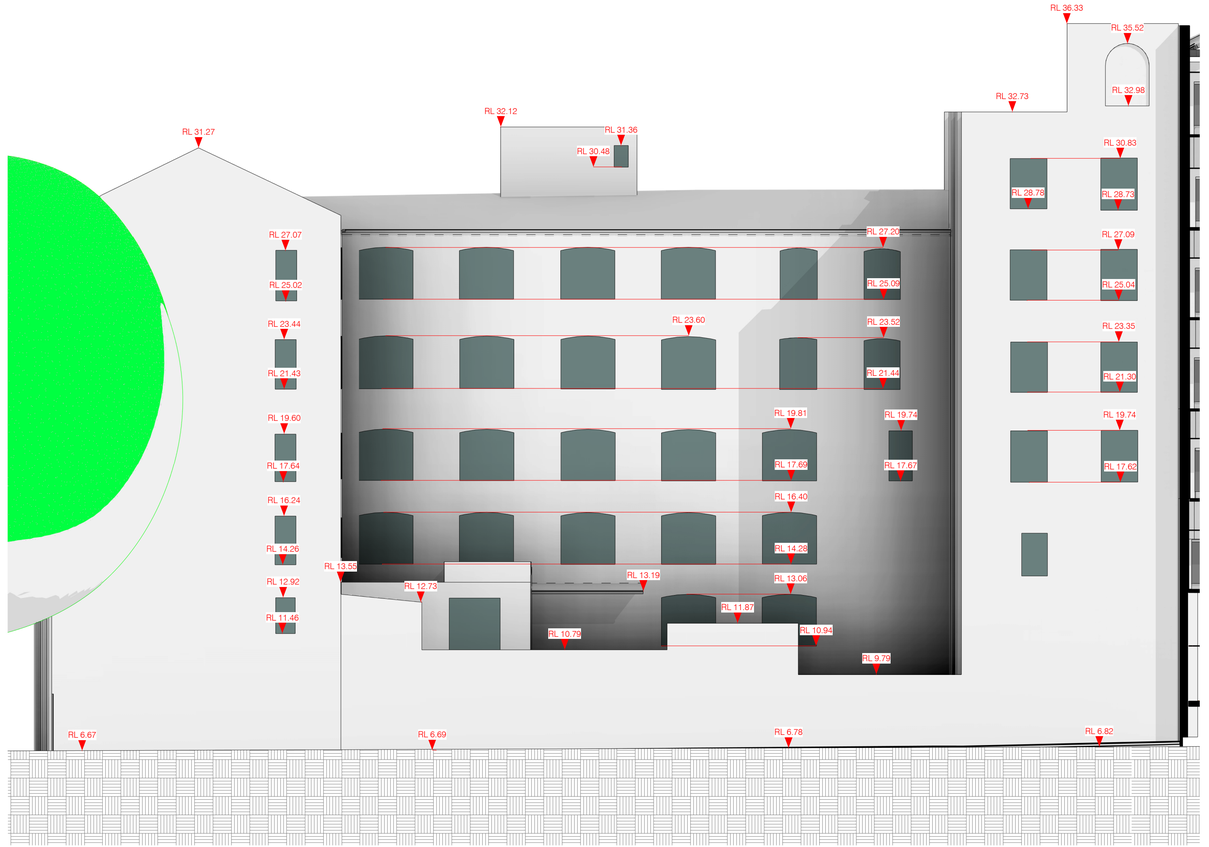
1154

1155

1 55 Mountain Street - E Elevation

1 : 125



2 55 Mountain Street - N Elevation

1 : 125

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SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

55 Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 125

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GRAPHIC SCALE 1:125

Project Type	SUI, Boundary & Detail Survey	Sheet	16 of 23
Job Number	ASP240496	Current Revision	Rev C

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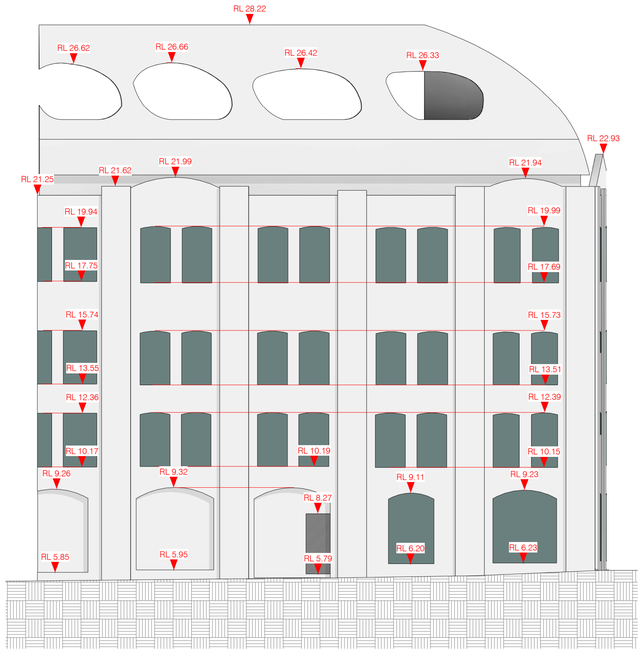
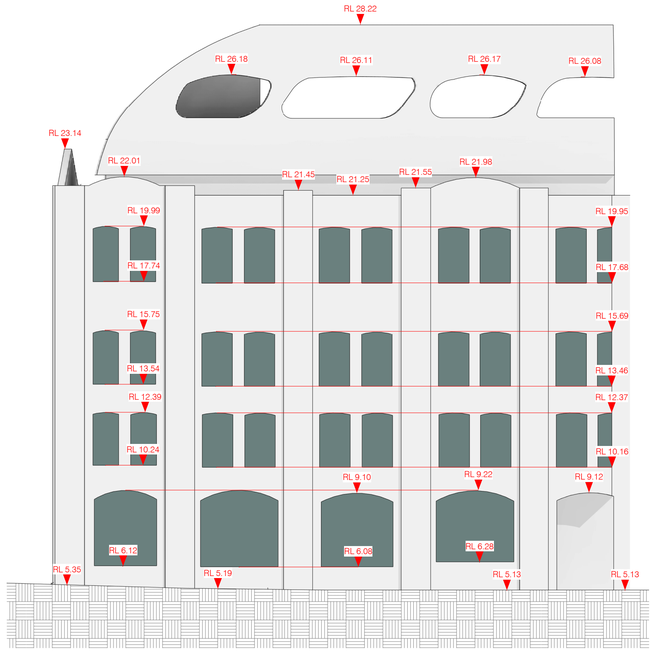
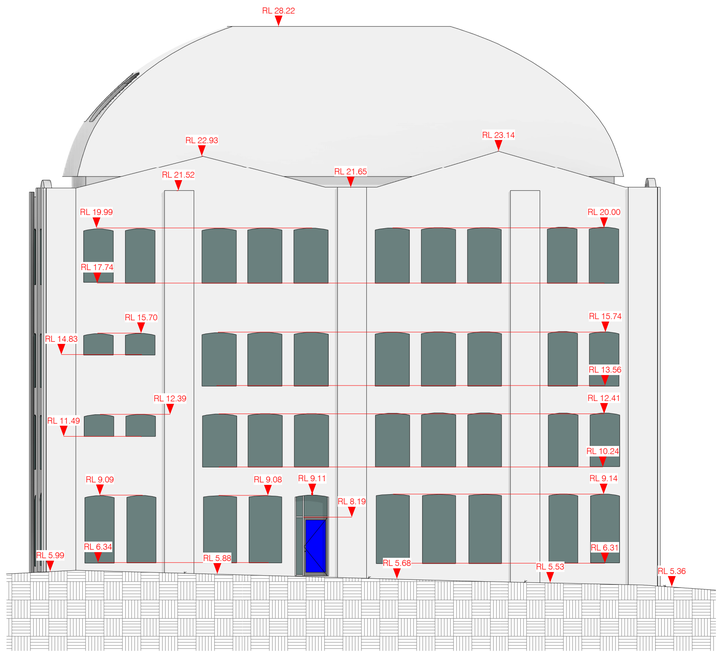


1 35 Mountain Street - W Elevation
1 : 125



2 35 Mountain Street - E Elevation
1 : 125



3 35 Mountain Street- S Elevation
1 : 125

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PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

35 Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 125

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GRAPHIC SCALE 1:125

Project Type	SUI, Boundary & Detail Survey	Sheet	17 of 23
Job Number	ASP240496	Current Revision	Rev C

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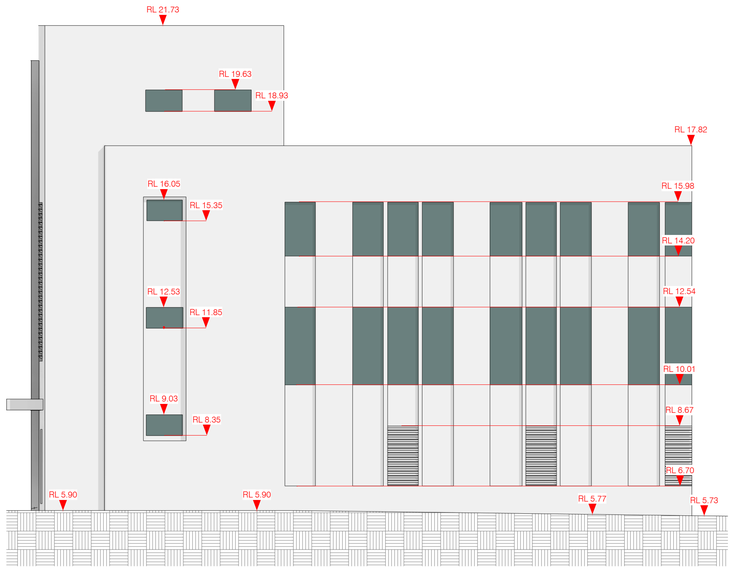
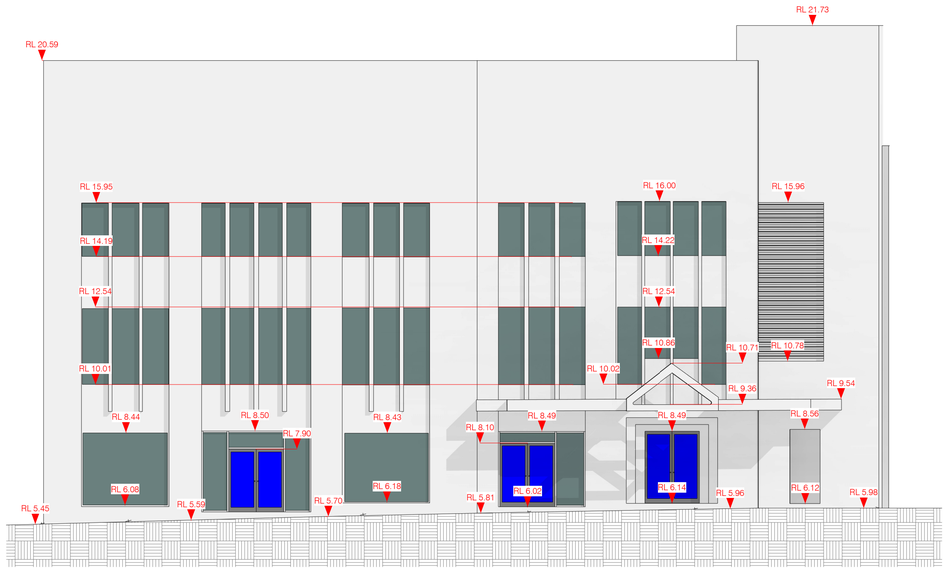
1156



1 44 Mountain Street - S Elevation
1 : 100



2 44 Mountain Street - W Elevation
1 : 100

3 44 Mountain Street - N Elevation
1 : 100

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SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

44 Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 100

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GRAPHIC SCALE: 1:100

Project Type	SUI, Boundary & Detail Survey	Sheet	18 of 23
Job Number	ASP240496	Current Revision	Rev C

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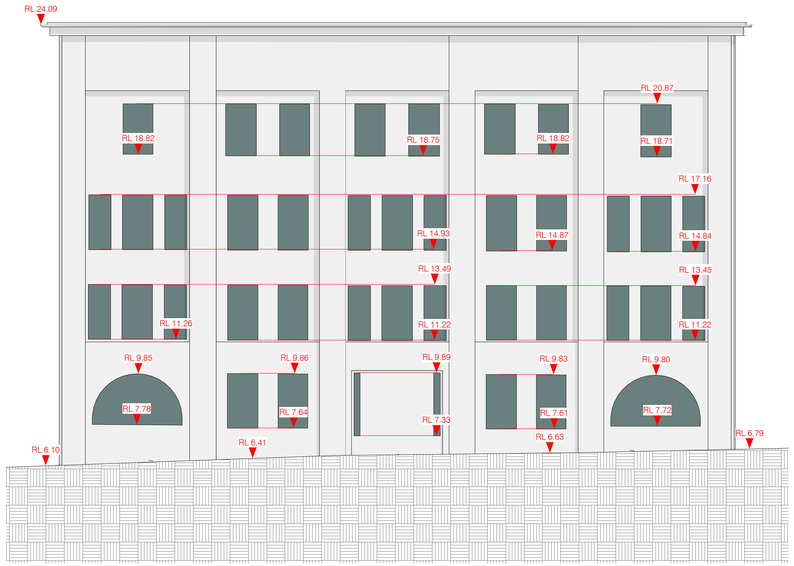
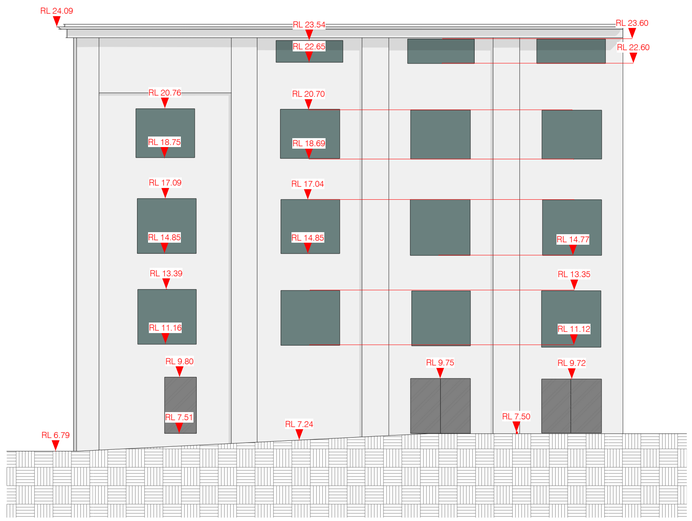


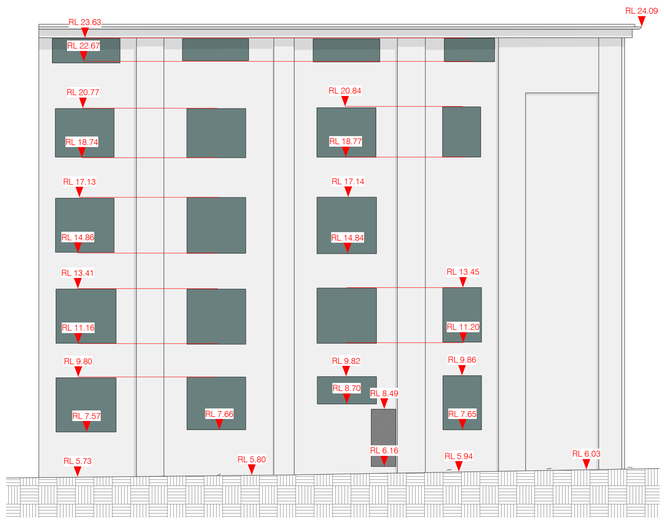
1 46-52 Mountain Street - W Elevation

1 : 125



2 46-52 Mountain Street - S Elevation

1 : 125



3 46-52 Mountain Street - N Elevation

1 : 125

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PROJECT

SUBSURFACE UTILITY INVESTIGATION, BOUNDARY AND DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

46-52 Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 125

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GRAPHIC SCALE 1:125

Project Type	SUI, Boundary & Detail Survey	Sheet	19 of 23
Job Number	ASP240496	Current Revision	Rev C

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1 **20-36 Mountain Street - S Elevation**
1 : 100

2 **20-36 Mountain Street - W Elevation**
1 : 100

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PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
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1-3 Smail Street,
Ultimo NSW 2007

DRAWING TITLE

20-36 Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 100

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GRAPHIC SCALE: 1:100

Project Type	SUI, Boundary & Detail Survey	Sheet	20 of 23
Job Number	ASP240496	Current Revision	Rev C

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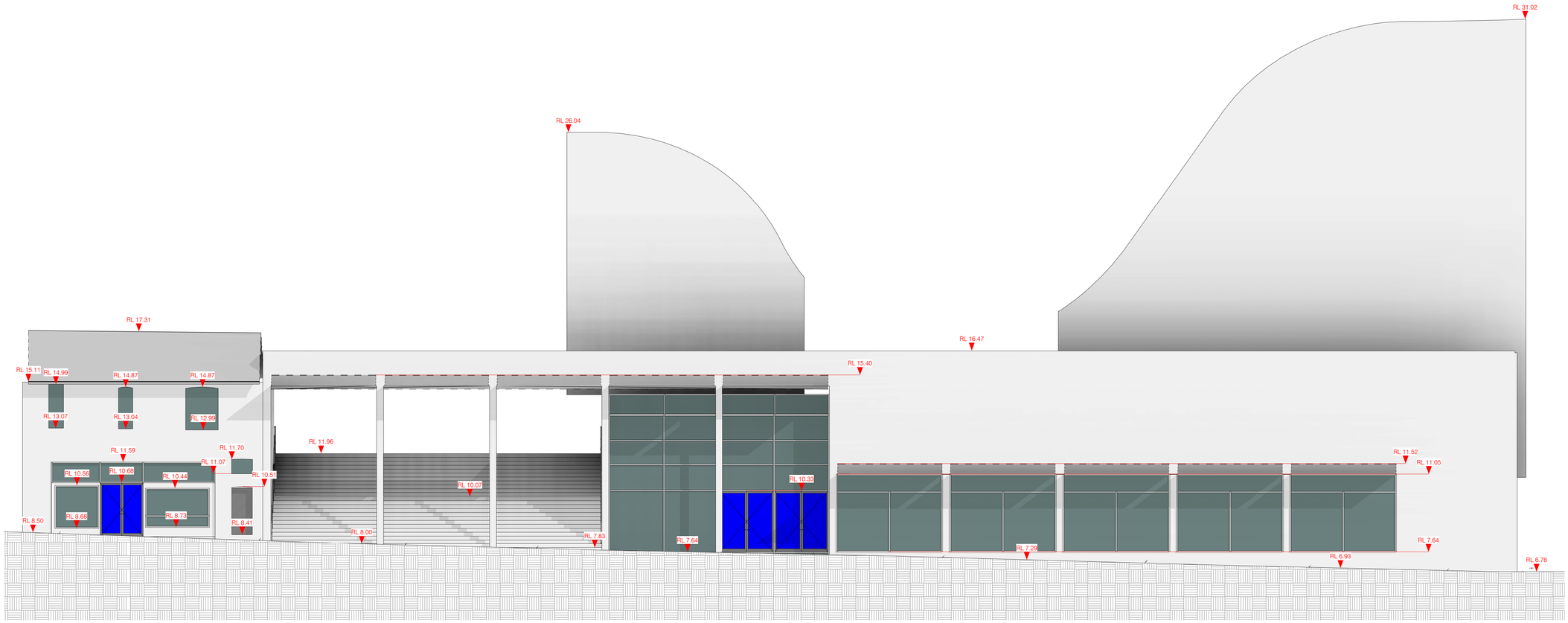
1159

1160



1 57-61 St Mountain Street - E Elevation

1 : 100

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PROJECT

SUBSURFACE UTILITY INVESTIGATION, BOUNDARY AND DETAIL SURVEY

1-3 Smail Street,
Ultimo NSW 2007

DRAWING TITLE

57-61 St Mountain Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 100

0 1 2 3 4 5 10 15

GRAPHIC SCALE: 1:150

Project Type	SUI, Boundary & Detail Survey	Sheet	21 of 23
Job Number	ASP240496	Current Revision	Rev C

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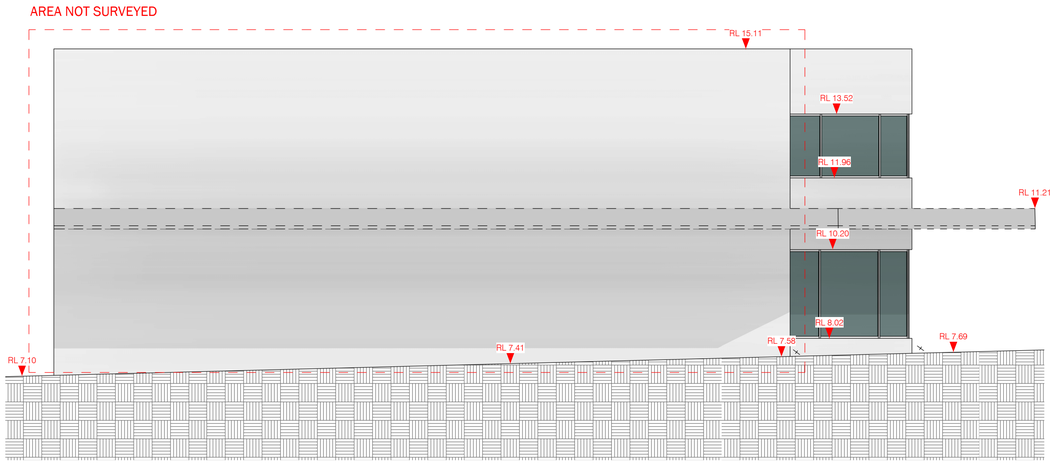
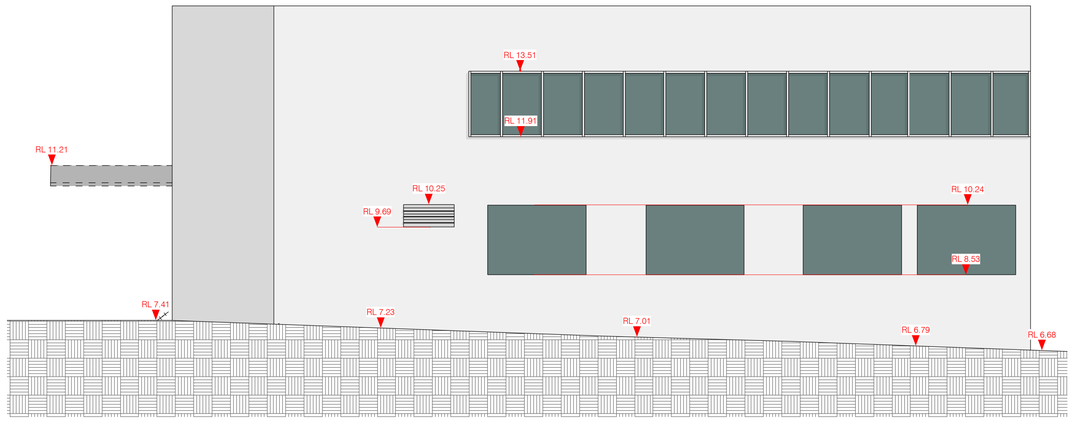
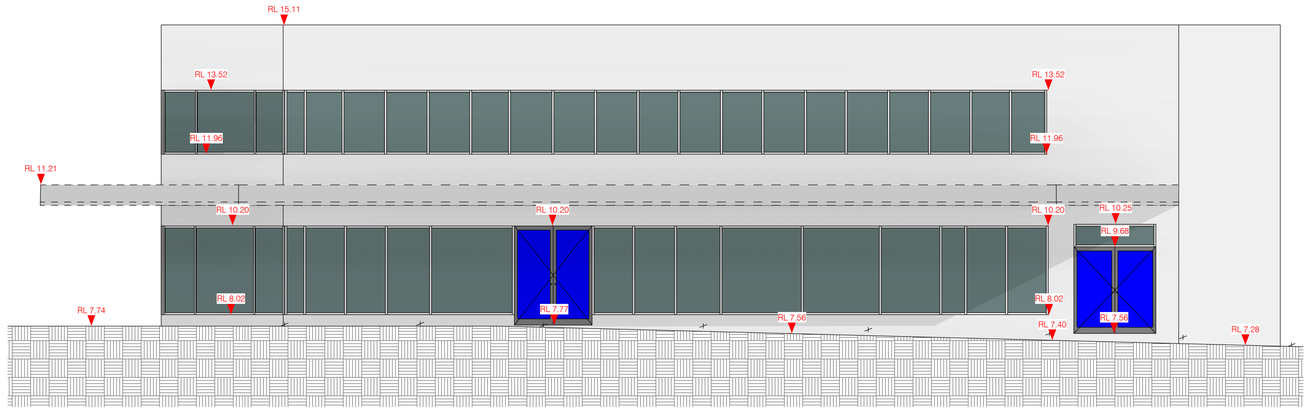


1 60-64 Bay Street - W Elevation
1 : 75



2 60-64 Bay Street - E Elevation
1 : 75



3 60-64 Bay Street -S Elevation
1 : 75

TRUE NORTH

CONSULTANT

geosurv
with you from beginning to end
Level 1/11 Montgomery St, Kogarah NSW 2217
1300 554 675 | info@geosurv.com.au

CLIENT

APT RESIDENTAL

PROJECT

SUBSURFACE UTILITY
INVESTIGATION, BOUNDARY AND
DETAIL SURVEY

1-3 Small Street,
Ultimo NSW 2007

DRAWING TITLE

60-64 Bay Street Elevation Plans

REV.	DESCRIPTION	DATE
A	SUI, Boundary & Detail Survey for Issue	08.08.24
B	Detail Survey added for Issue	29.08.24
C	Updated Model	11.12.24

QUALITY ASSURANCE

Geospatial	Pavel Ursu	BIM	Daniel Bonsu
Checked by	Marnus Streak	Date	11.12.24
Approved by	Marnus Streak	Date	11.12.24
Date of Survey	02.12.24	Date of Plan	11.12.24

THE SUCCESSFUL COMPLETION OF QUALITY ASSURANCE CONFIRMS THAT THE SURVEY WORK AND DRAWINGS COMPLY WITH THE REQUIREMENTS OUTLINED IN THE QUALITY PLAN. UNTIL QUALITY ASSURANCE IS FULLY COMPLETED, ALL INFORMATION CONTAINED IN THESE DRAWINGS SHOULD BE CONSIDERED PRELIMINARY AND UNCHECKED.

Datum Origin	AHD71 (PM42343)	Coordinates	MGA2020 Z56
Sheet Size A1 @ Scale			1 : 75

0 0.5 1 1.5 2 2.5 5 7.5
GRAPHIC SCALE: 1:75

Project Type	SUI, Boundary & Detail Survey	Sheet	22 of 23
Job Number	ASP240496	Current Revision	Rev C

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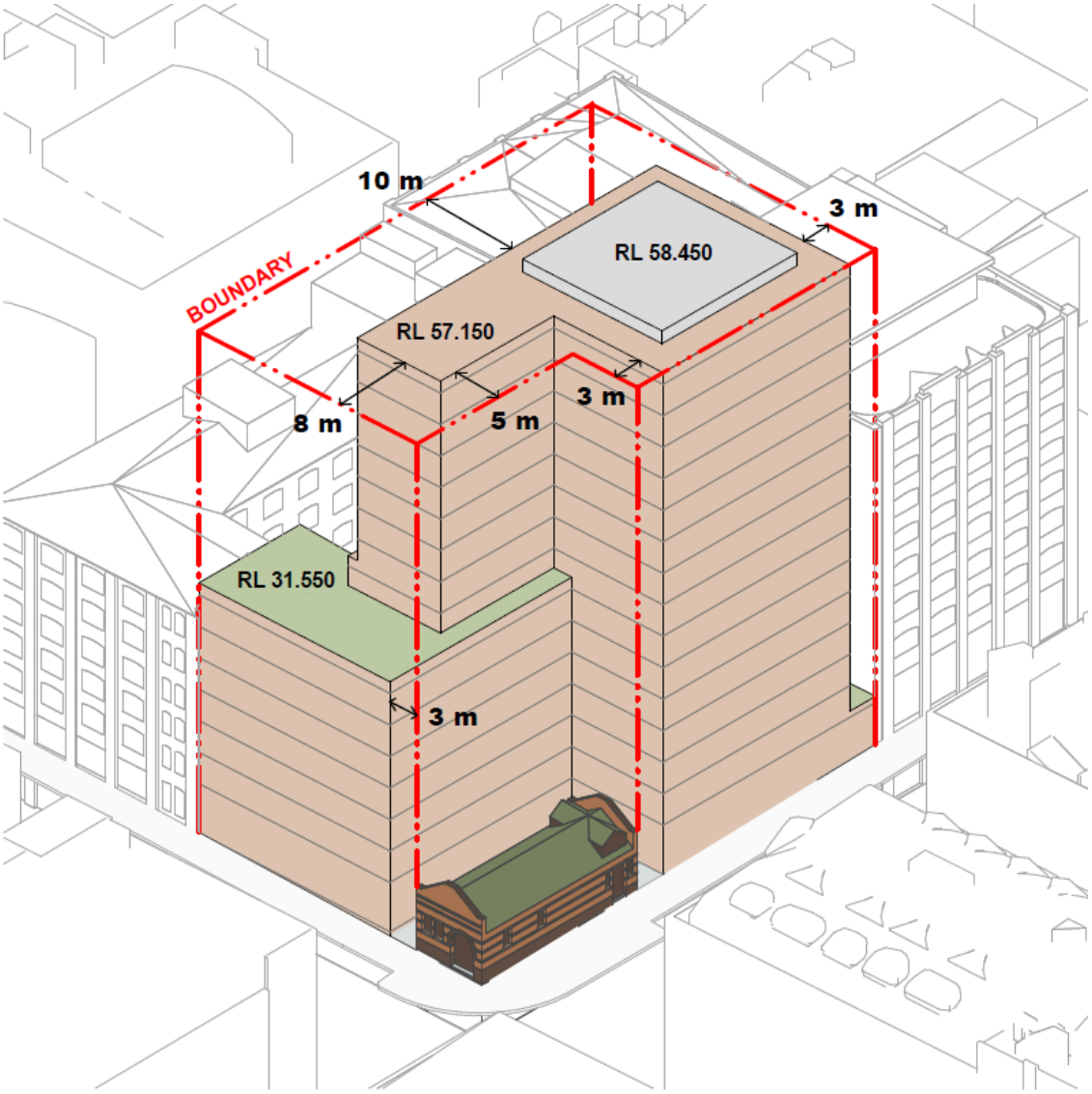
Attachment B

Draft Sydney Development Control Plan 2012 - 41-49 Mountain Street, Ultimo

CITY OF SYDNEY

Sydney Development Control Plan 2012 – 41-49 Mountain Street, Ultimo



Sydney DCP Plan 2012 – 41-49 Mountain Street, Ultimo
February 2026

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Purpose of this Development Control Plan

The purpose of this Development Control Plan (DCP) is to amend the *Sydney Development Control Plan 2012*, which was adopted by Council on 14 May 2012 and came into effect on 14 December 2012.

The amendment provides objectives and provisions to inform future development on the site at 41-49 Mountain Street, Ultimo.

This plan is to be read in conjunction with draft Planning Proposal: 41-49 Mountain Street, Ultimo.

Citation

This amendment may be referred to as *Sydney Development Control Plan 2012 – 41-49 Mountain Street, Ultimo.*

Land covered by this plan

This land applies to the land identified as 41-49 Mountain Street, Ultimo which comprises two lots known as Lot 21 DP 5567 and Lot 1 DP 191928.

Relationship of this plan to Sydney Development Control Plan 2012

This plan amends the Sydney Development Control Plan 2012 in the manner set out in Schedule 1 below.

Amendments to Sydney Development Control Plan 2012

This plan amends the Sydney Development Control Plan 2012 by:

1. Amending Figure 6.1 Specific sites maps to include 41-49 Mountain Street, Ultimo.
2. Insert a new section 6.3.X 41-49 Mountain Street, Ultimo as shown at Schedule 1.
3. Updating figure numbers as required.

Schedule 1 – Amendment to Sydney Development Control Plan 2012

6.3.X 41-49 Mountain Street, Ultimo

The following objectives and provisions apply to 41-49 Mountain Street, Ultimo as shown in 'Figure 6.1 Specific sites map', where relevant site specific provisions of the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) are implemented.

Clause 6.XX of the Sydney LEP 2012 enables development to exceed the height and floor space ratio shown in the height of buildings and floor space ratio maps up to a prescribed amount, providing the subject site is developed for shop top housing used for build-to-rent housing in accordance with Chapter 3, Part 4 of State Environmental Planning Policy (Housing) 2021, and affordable housing provided in accordance with the City of Sydney's affordable housing program.

If a development at 41-49 Mountain Street, Ultimo, seeks to utilise additional height or floor space ratio permitted by clause 6.XX of the Sydney LEP 2012, then the provisions in this section also apply to the assessment of the proposed development and override other provisions in this DCP where there is an inconsistency.

Objectives

(a) Deliver a high-quality urban form within a defined maximum building envelope that:

  (i) is of appropriate bulk, scale and modulation for this location

  (ii) respects the State heritage listed former substation on the site and supports its sensitive adaptive reuse;

  (iii) provides setbacks to achieve acceptable levels of wind comfort, solar access, daylight, and visual and acoustic privacy; and

  (iv) provides for safe and efficient vehicular access, and on-site loading and waste collection.

(b) Maximise active frontages with retail premises at ground level.

(c) Deliver a pedestrian link through the site to support pedestrian permeability and location for public art.

(d) Provide high quality residential amenity and urban greening.

(e) Ensure development achieves ecologically sustainable development.

(f) Manage risks to life and property from flooding.

Provisions

6.3.X.1 Maximum Building Envelope

(1) Development is not to exceed the building envelope heights and setbacks shown in 'Figure 6.xx 41-49 Mountain Street, Ultimo – envelope setbacks' and 'Figure 6.xx 41-49 Mountain Street, Ultimo – envelope heights and setbacks – axonometrics'. In the figures, setback dimensions are minimums and RLs are maximums.

(2) Maximum building height in storeys is to be in accordance with 'Figure 6.XX 41-49 Mountain Street, Ultimo – envelope heights in storeys'.

(3) The two building wings are to be set at different heights, with a lower height adjoining Mountain Street, to strengthen the curtilage around the State listed heritage item and relate to the conservation area and surrounding built form.

Figure 6.XX 41-49 Mountain Street, Ultimo –envelope setbacks

Figure 6.XX 41-49 Mountain Street, Ultimo – envelope heights and setbacks – axonometrics

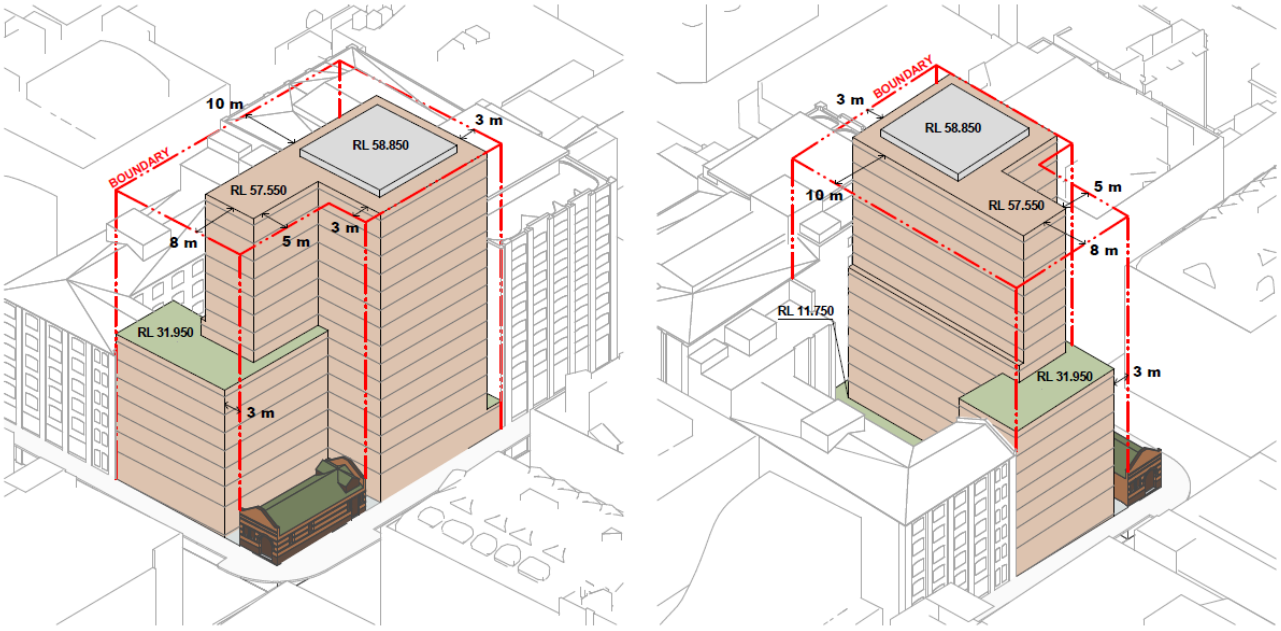
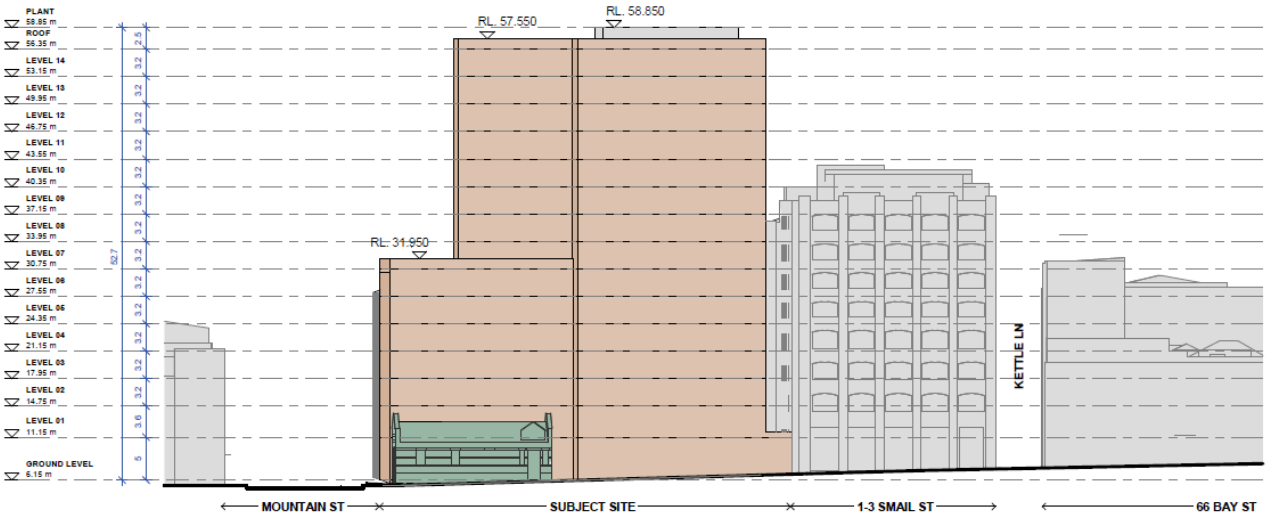


Figure 6.XX 41-49 Mountain Street, Ultimo – envelope heights in storeys



6.3.x.2 Heritage

(1) The architectural design and quality of new development is to respect the heritage significance of the heritage item on the site through consideration of design measures including:

(a) maximising the separation between the heritage item and the new building

(b) façade design of the new building to provide a sympathetic transition to the heritage item

(c) responding to the established street wall height in Smail or Mountain Streets through the use of materials

(d) conservation of the heritage item in accordance with an approved conservation management plan.

(2) New development must provide a change in materiality for levels above the adjoining street wall height, in either Mountain Street or Smail Street. The materiality of the lower floors is to relate to that of the adjoining development.

(3) Conservation and adaptive reuse of the heritage item is to be undertaken in accordance with an approved conservation management plan prepared to the satisfaction of Council.

6.3.X.3 Access, loading, and servicing

(1) Vehicular access to the basement is to be from a single crossover from Smail Street.

(2) Loading and servicing facilities, including waste trucks up to 10.6m in length, are to be accommodated wholly within the site.

(3) Development is to be in accordance with the transport and parking amendment to the Sydney DCP 2012 as adopted by Council on 23 June 2025.

6.3.X.4 Ground floor level and street activation

(1) Maximise lengths of active uses and frontages along Mountain Street, Smail Street and the pedestrian link through the site.

(2) Where building entrances cannot be provided from the street due to flood risk, ground floor uses are to incorporate other design features to support activation of the street.

6.3.X.5 Pedestrian link through the site

(1) A pedestrian link is to be provided through the site, adjoining the State heritage listed building, that it has a minimum unencumbered width of 3m.

(2) The pedestrian link may include a glazed awning to manage wind impacts, subject to heritage considerations. The awning must be visually lightweight so as to not detract from the significance of the adjoining heritage item.

(3) The pedestrian link is to be publicly accessible at all times by way of a public access easement.

(4) The design of the pedestrian link is to:

  (a) provide opportunities for public art;

  (b) maintain clear entrance points that are visible from the public domain; and

  (c) be of high quality materials in accordance with the City's Public Domain Codes.

(5) Any public art located in the through-site link area must not unreasonably restrict sunlight access or impede on the accessibility and functionality of the space.

6.3.X.6 Residential amenity

(1) Where Apartment Design Guide minimum requirements for design criteria under Part 4 cannot be met, especially for unit sizes and configuration, balconies and storage, then additional communal open spaces and shared facilities and services need to offset the reduced residential amenity by:

  (a) exceeding minimum Apartment Design Guide requirements for communal and public open space to cater for each non-compliant dwelling, and

  (b) demonstrating that the additional spaces and facilities within the building or elsewhere on the site are of a quantity and standard that suitably offset these impacts and achieve quality amenity for residents.

(2) Visual and acoustic privacy treatments are to be provided if unenclosed access corridors are used.

6.3.X.7 Landscaping

(1) Communal open spaces that do not have deep soil are to be landscaped in accordance with the urban ecology amendment to the Sydney DCP 2012 as adopted by Council on 23 June 2025.

6.3.X.8 Sustainability

(1) The building is to be designed to:

(a) achieve 5 star Green Star Buildings v1 certified rating; and

(b) be in accordance with the ecologically sustainable development amendment to Sydney DCP 2012 as adopted by Council on 23 June 2025.

6.3.X.9 Flooding

(1) Development is to be in accordance with the water and flood management amendment to Sydney DCP 2012 as adopted by Council on 23 June 2025.

Attachment C

Public Benefit Offer letter
dated 10 November 2025

apt.

Future living for
Future thinkers

10 November 2025

Ms Monica Barone
General Manager
Council of the City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Attention: Mr Graham Jahn AM, Chief Planner / Executive Director City Planning Development & Transport

Dear Mr Jahn,

41 and 43-49 Mountain Street, Ultimo – Planning Proposal Public Benefit Offer

Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2 (the Proponent) is the registered owner and developer of 41 and 43-49 Mountain Street Ultimo NSW.

This letter is an offer to enter into a planning agreement with the Council of the City of Sydney (City) for the proposed development of the site.

The offer relates to a planning proposal seeking a change to planning controls set out in the *Sydney Local Environmental Plan 2012* for the site, to enable:

- The maximum floor space ratio of the site to increase from 2:1 to 5.4:1.
- The maximum height of buildings across the site to increase from 18 metres to RL58.450.

This offer is for the provision of a material public benefit in the form of affordable housing and construction of a publicly accessible through-site link.

This offer is provided in confidence, is indicative in nature and a formal draft planning agreement is intended to be prepared and entered into with the City prior to the gazettal of revised planning controls for the site.

Affordable Housing

In accordance with the City of Sydney Affordable Housing Program, additional contributions to affordable housing are required where Planning Proposals seek an uplift in development standards.

The affordable housing contribution would be:

- three per cent of the gross floor area of the development, and
- 17 per cent of the portion of the gross floor area of the development that exceeds the gross floor area that would be permitted under a 2:1 maximum floor space ratio.

The affordable housing contribution will be subject to a restrictive covenant on title that the affordable housing component must be used for affordable housing, in perpetuity, in accordance with the City of Sydney Affordable Housing Program adopted by the Council on 26 June 2023.

However, the requirement that (where more than 10 affordable rental dwellings are being provided in the development) that at least 25 per cent of dwellings are to be allocated to Very Low-Income Households and 25 per cent of dwellings to Low-Income households will not apply.

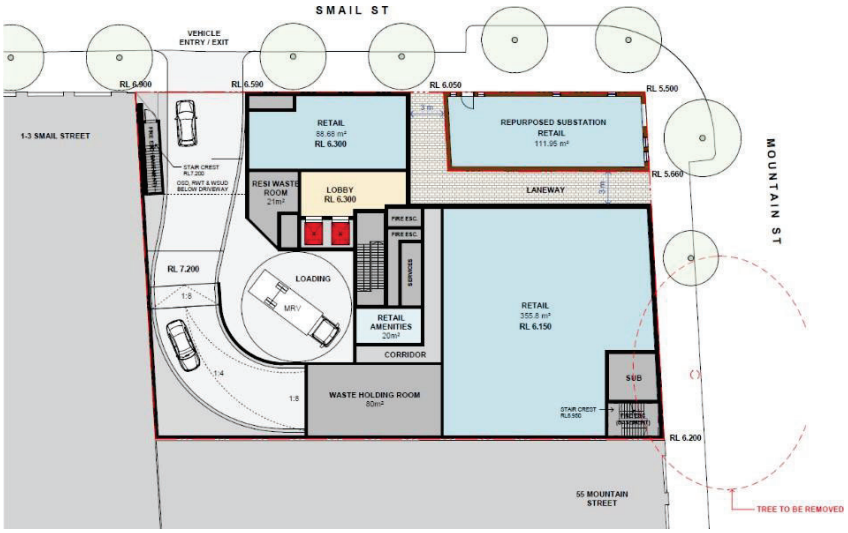
The Proponent will commit to at least 50% of the allocation to be earmarked for Moderate Income

Households, no less than 5% dedicated to Very Low-Income households and the balance allocated to Low-Income households. The final allocation including percentages of affordable housing between Moderate, Low and Very Low Income Households is to be agreed with Council.

The practical completion of the affordable housing apartments will be achieved prior to the issue of an occupation certificate for the development.

Through-site link

The through-site link will be of a size and location generally in accordance with the area marked 'laneway' in the below extract of the plan prepared by Bates Smart:



An easement in gross will be defined in stratum and will extend from the finished trafficable surface to a height of 3m above.

The practical completion of the through-site link will be achieved prior to the issue of an occupation certificate for the development. The approximate values of the through-site link works will be negotiated as part of the drafting process (subject to updating prior to the finalisation of the planning agreement).

Please note that the intention of this letter of offer is not to exclude local infrastructure contributions under section 7.11 or section 7.12, and housing and productivity contributions under division 7.1, subdivision 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). These will be addressed as part of the future development application.

We trust this indicative letter of offer associated with the development is met with support. Should you have any further queries, please do not hesitate to contact Juey Thanyakittikul at juey.thanyakittikul@aptresidential.au or 0468 527 874.

Limitation of liability of the Trustee

(a) Evolution MIT Services Pty Ltd ("**Trustee**") enters into and performs this document and the transactions contemplated by it only as trustee of Apt Hold Trust 2 ("**Trust**") and in no other capacity. To the extent permitted by law, the Trustee's liability to pay any amount or satisfy any obligation under or in connection with this document is limited to the extent to which the Trustee is actually indemnified out of the assets of the Trust. This limitation applies despite any other provision of this document and extends to all liabilities and obligations of the Trustee in any way connected with any representation, warranty, conduct, omission, agreement or transaction related to this document or its performance.

(b) No party to this document may sue the Trustee in any capacity other than as trustee of the Trust, seek the appointment of a receiver, liquidator, administrator or other similar

person to the Trustee or seek to prove in any liquidation, administration or arrangement of or affecting the Trustee other than in its capacity as trustee of the Trust and in respect of the assets of the Trust from which the Trustee is actually indemnified.

(c) The provisions of this clause do not apply to any obligation or liability of the Trustee to the extent that the Trustee's right to be indemnified out of the assets of the Trust has been reduced by fraud, negligence or a material breach of trust provided that nothing in this paragraph (b) shall make the Trustee liable to any claim for an amount greater than that which each person would have been able to recover from the assets of the Trust were it not for the reduction of the Trustee's right of indemnity.

(d) The Trustee is not obliged to do or refrain from doing anything under this document (including, without limitation, incur any liability or enter into any document) unless the Trustee's liability is limited in the same manner as set out in this clause.

Yours sincerely,

Signed
for and on behalf of
Evolution MIT Services Pty Ltd as trustee for Apt Hold Trust 2
by a duly appointed attorney
in the presence of:

Signature of witness

Signature of attorney (I have no notice of revocation of the power of attorney under which I sign this document)

Thamesh Vijayamanne

Name of witness (please print)

Steven Zaharis

Name of attorney (please print)

Signed by Apt.Residential Pty Ltd

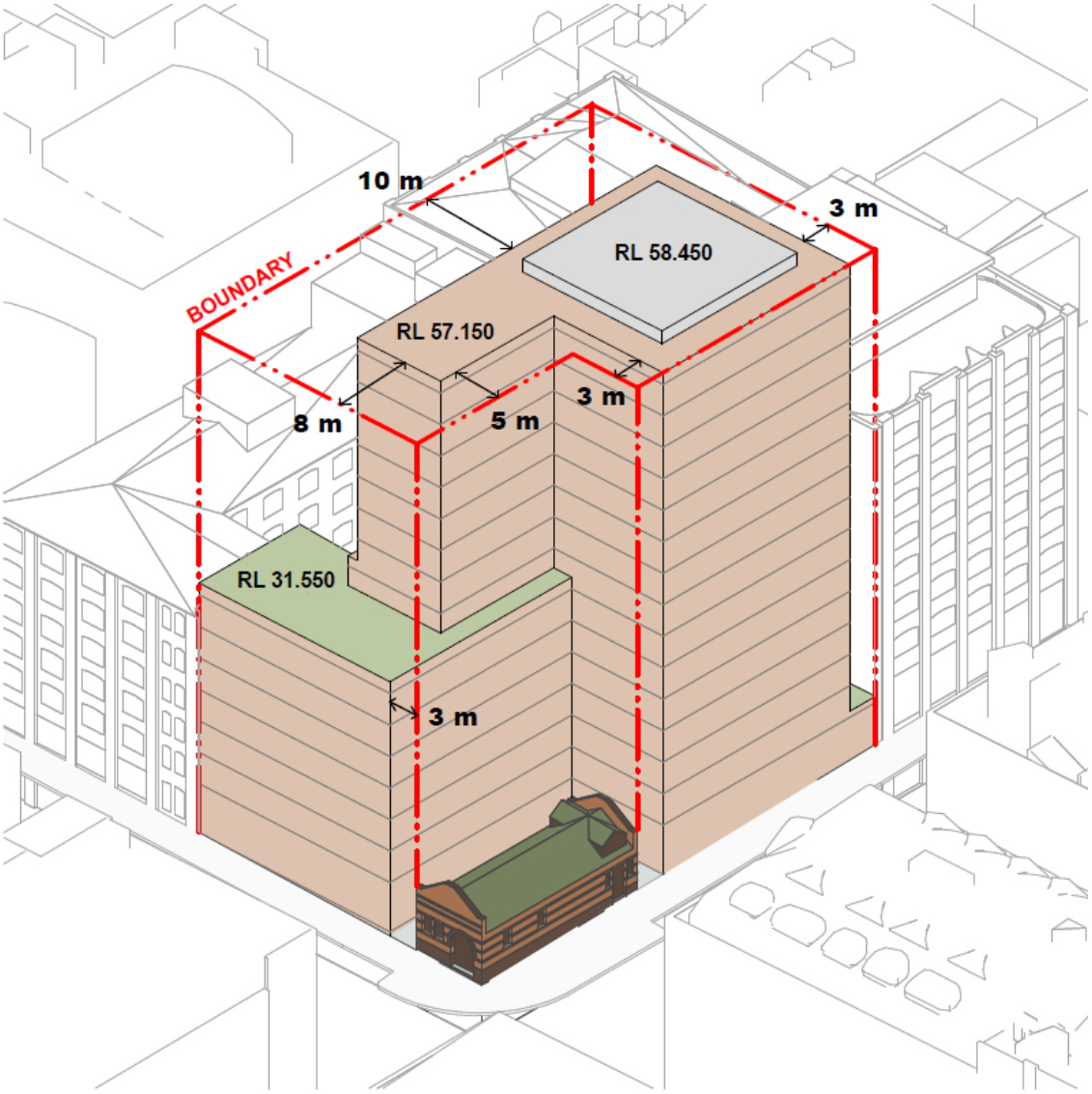
Matt Carolan – Director

Attachment D

Design Excellence Strategy - 41-49 Mountain Street, Ultimo

CITY OF SYDNEY

Design Excellence Strategy – 41-49 Mountain Street, Ultimo



Design Excellence Strategy – 41-49 Mountain Street, Ultimo
February 2026

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Introduction

This Design Excellence Strategy relates to the planning proposal prepared for 41-49 Mountain Street, Ultimo following a request by the proponent, Apt.residential, to amend the Sydney Local Environmental Plan 2012 and the Sydney Development Control Plan 2012 as they apply to the site.

Future development using the controls proposed under this planning proposal will be subject to a competitive design process under Clause 6.21D of the Sydney LEP 2012, which currently requires a competitive design process for buildings greater than 25m on this site, or 35 metres in accordance with the amendment to the LEP adopted by Council on 23 June 2025.

This document is to be read in conjunction with draft Planning Proposal: 41-49 Mountain Street, Ultimo dated February 2026 and draft Development Control Plan: 41-49 Mountain Street, Ultimo dated February 2026.

The site

The site consists of two lots, known as Lot 21 DP 5567 and Lot 1 DP 191928. It is a corner site with frontages to Mountain Street to the east and Smail Street to the north. The site has a combined total area of 1,452.6m^2.

Existing development on the site consists of a single storey State heritage listed former electrical substation located on Lot 1 DP 191928 in the north-eastern corner of the site. The remainder of site is generally vacant, with the exception of some single storey ancillary sheds, with buildings demolished in 2007 for a commercial development that did not proceed.

The site is located within the Mountain Street heritage conservation area. Surrounding development consists of a large number of former warehouses, as well as more recent buildings used for a mixture of residential, commercial, retail and educational uses.

Figure 1. Site location

Concurrent process

The planning proposal under consideration is to allow a new development for build-to-rent housing in accordance with Chapter 3, Part 4 of the Housing SEPP, and for affordable housing consistent with the City's affordable housing program. The maximum height is approximately 52m above ground level.

The City is using this project to trial a process where the planning proposal and development application can be exhibited concurrently. This approach is permitted under the Environmental Planning and Assessment Act 1979 and may reduce housing delivery times where appropriate.

Under this compressed timeline, the design competition is brought forward and carried out prior to the planning controls being finalised at the developer's sole risk. At this time only the planning proposal has been lodged, although work on the design competition brief is progressed. This design excellence strategy has been prepared as a standalone item so it can be approved in principle to allow for the commencement of the competitive design process ahead of the finalisation of the planning controls.

The trial process is being undertaken at the request of the proponent. There remains the risk for the proponent of completing the design competition and lodging a DA before the planning proposal has been finalised, however the proponent understands this and is willing to fully accept this risk.

Key controls

(1) A competitive design process for the entire site is to be undertaken in accordance with clause 6.21D of the Sydney LEP 2012 and the City of Sydney Competitive Design Policy.

(2) The competitive design process is to include:

  (a) no less than three (3) competitors invited to participate;

  (b) include a range of emerging and established architectural firms;

  (c) minimum of 50% of Australian based architects; and

  (d) competitors with demonstrated capabilities in design excellence by being the recipient of an Australian Institute of Architects (AIA) award or commendation, or in the case of overseas competitors the same with their equivalent professional association.

(3) The jury is to comprise a total of four (4) members comprised of:

  (a) two (2) jurors with architecture and urban design expertise nominated by the proponent including one independent member (a person who has no pecuniary interest, nor is a pending or contracted employee or consultant to the proponent);

  (b) two (2) jurors nominated by the City of Sydney, who have no pecuniary interests in the development proposal or involvement in approval processes; and

  (c) at least one of the above members is to have heritage expertise.

(4) Any additional floor space pursued for a building demonstrating design excellence under clause 6.21D of the Sydney LEP 2012 is to be accommodated within the maximum floor space ratio permitted for the site and be within the maximum building envelope under section 6.3.X.1 of the draft DCP for the site.

(5) No additional building height under clause 6.21D(3)(a) is to be awarded as a result of the competitive design process.

Item 7.

Summary of Applications to be Reported to the Central Sydney Planning Committee

File No: S042755-02

Summary

The purpose of this report is to inform members of the Central Sydney Planning Committee of development applications currently under assessment that are to be determined by the Central Sydney Planning Committee.

Recommendation

It is resolved that the subject report be received and noted.

Attachments

Attachment A. Applications to be Reported to the Central Sydney Planning Committee

Attachment B. Statistical Information about Applications to be Reported to the Central Sydney Planning Committee

Background

1. There are 376 development related applications, including 183 development applications, under assessment. Other applications include applications to modify or review a determination, subdivision certificates, heritage works and footway applications.

2. The total value of all developments under assessment is $1.17 billion as of 3 February 2026.

3. There are 177 development applications under assessment that are to be determined under delegation or referred to the Local Planning Panel.

4. There are currently 6 development applications to be considered by the Central Sydney Planning Committee (CSPC) with a combined value of $843.5 million.

5. The applications to be reported to the CSPC are detailed in Attachment A to the subject report.

6. Trend graphs showing application numbers and value of development proposed, as well as the average number of outstanding days of development applications to be considered by the CSPC at end of each quarter are provided in Attachment B to the subject report. The graphs represent the period from third quarter of 2023/24 to the end of the second quarter of 2025/26.

Relevant Legislation

7. City of Sydney Act 1988.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

James Farrar, Information and Systems Officer

Attachment A

Applications to be Reported to the Central Sydney Planning Committee

Applications to be considered by the Central Sydney Planning Committee

DA Number	Address	Lodged	Proposal	Cost $m	Target meeting date
D/2025/675	136-140 Elizabeth Street SYDNEY	22/07/2025	Demolition of existing building, excavation and construction of a 17-storey mixed use building comprising 2 storeys of community floor space and 15 storeys of co-living residential uses (251 rooms).	$105.07M	19/02/2026
D/2025/1160	65 Martin Place SYDNEY	20/11/2025	Substantial redevelopment of the existing building, including further remediation, retention of the existing basement and steel frame structure, installation of new slabs and external facades, construction of a new building core and a new roof pavilion, reconstruction of the Malcolm Munro Garden on Macquarie Street, and associated internal works, heritage works, landscaping, and public domain works.	$401.63M	19/03/2026
D/2025/942	4-6 Wentworth Avenue SURRY HILLS	03/10/2025	Substantial alterations and additions to existing heritage buildings at 4-22 Wentworth Avenue to deliver a mixed-use commercial development comprising active ground floor food and beverage uses, commercial office space on upper levels, rooftop plant and PV cells, and a basement/lower ground level incorporating a loading dock, parking, waste areas, end-of-journey facilities, and mechanical services. Proposed scope of works include construction of a tower addition atop 4-6, 8 and 10-12 Wentworth Avenue, a 2-storey podium addition extending atop 10-12, 14 and 16-22 Wentworth Avenue, and refurbishment of internal areas and podium levels. The application includes site amalgamation of the 5 existing lots into a single lot.	$71.91M	23/04/2026
D/2025/920	216-220 Wyndham Street ALEXANDRIA	01/10/2025	Stage 2 application for demolition of existing structures, tree removal and construction of a 11-storey mixed-use building for the purpose of affordable housing and ground floor commercial uses, and associated land subdivision.	$76.47M	14/05/2026

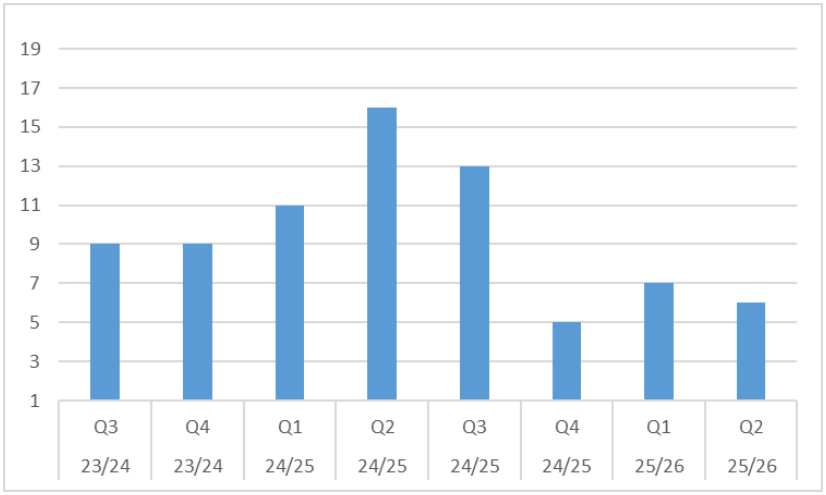
DA Number	Address	Lodged	Proposal	Cost $m	Target meeting date
D/2025/1070	20 Bourke Road ALEXANDRIA	05/11/2025	Early works and site preparation, demolition of existing structures, retention of existing building at 26 Bourke Road, construction of a new 15 storey mixed use development comprising non-residential uses on ground floor and affordable housing above and associated landscape and public domain works.	$116.83M	25/06/2026
D/2025/944	224-228 Young Street WATERLOO	01/10/2025	Demolition of existing structures and construction of a 7 storey mixed-use co-living development and ground floor retail space. The proposal includes land dedication and public domain works.	$71.67M	25/06/2026

List as at 2 February 2026

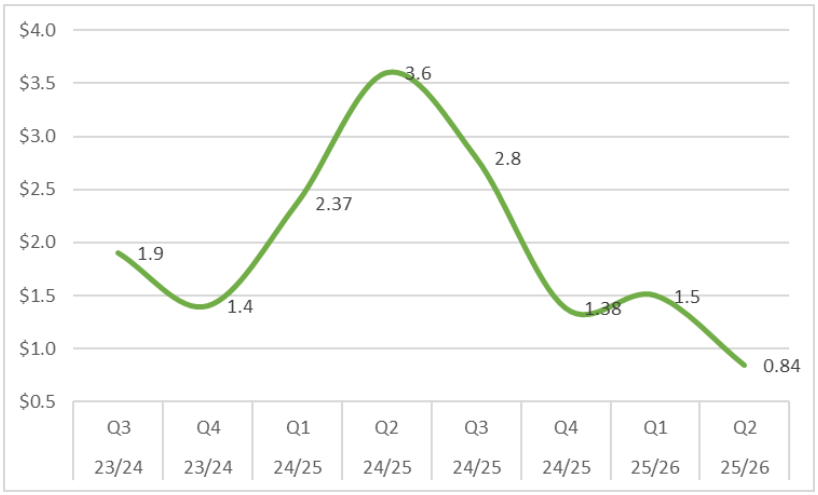
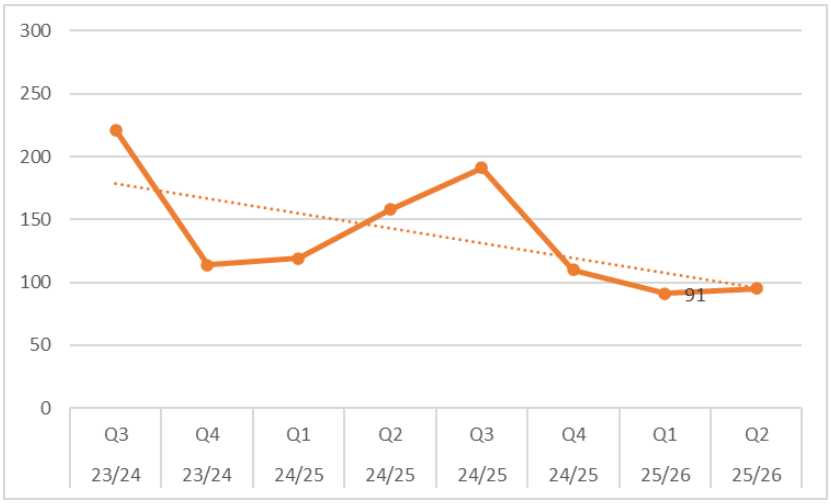
Attachment B

Statistical Information about Applications to be Reported to the Central Sydney Planning Committee

Number of applications to be reported to the CSPC



Value of DAs under assessment to be reported to the CSPC ($ billion)



Average age of DAs under assessment to be reported to the CSPC (total days)