CITY OF SYDNEY

19 October 2026

At the conclusion of the Innovation, Business and Economy Committee

Transport, Heritage and Planning Committee

Agenda

1. **Confirmation of Minutes**

2. **Statement of Ethical Obligations and Disclosures of Interest**

3. **Public Exhibition - Planning Proposal - Ultimo Pyrmont Stage 2 - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment**

4. **Public Exhibition - Planning Proposal - 84-86 and 88-94 Parramatta Road, Camperdown - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment**

5. **Fire Safety Reports**

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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 3 minute time limit for each speaker (with a warning bell at 2 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 3 representatives to speak on your behalf and to indicate how many people they are representing.

Committee meetings can continue until very late, particularly when there is a long agenda and a large number of speakers. This impacts on speakers who have to wait until very late, as well as City staff and Councillors who are required to remain focused and alert until very late. At the start of each Committee meeting ,the Committee Chair may reorder agenda items so that those items with speakers can be dealt with first.

Committee reports are available at https://meetings.cityofsydney.nsw.gov.au/

Item 1.
Confirmation of Minutes

Minutes of the following meetings of the Transport, Heritage and Planning Committee are submitted for confirmation:

Meeting of 14 September 2026

Item 2.

Statement of Ethical Obligations

In accordance with section 233A of the Local Government Act 1993, the Lord Mayor and Councillors are bound by the Oath or Affirmation of Office made at the start of the Council term to undertake their civic duties in the best interests of the people of the City of Sydney and the City of Sydney Council and to faithfully and impartially carry out the functions, powers, authorities and discretions vested in them under the Local Government Act 1993 or any other Act, to the best of their ability and judgement.

Disclosures of Interest

Pursuant to the provisions of the Local Government Act 1993, the City of Sydney Code of Meeting Practice and the City of Sydney Code of Conduct, Councillors 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 3.

Public Exhibition - Planning Proposal - Ultimo Pyrmont Stage 2 - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment

File No: X128367

Summary

In October 2025, Council approved a new planning framework for Ultimo/Pyrmont which included:

- new planning controls for between 1,262 and 1,524 homes in residential flats, mixed-use developments and small-lot housing, designed to ensure good access to sunlight and natural ventilation
- new planning controls with the capacity to accommodate between 3,603 and 6,970 jobs in a range of building typologies in highly accessible locations and align with the types of commercial buildings industry have told us are in high demand
- new planning controls that facilitate opportunities to increase publicly accessible open space, widen footpaths, accommodate over 250 new trees, 2,000sqm of new green roofs, and minimise overshadowing to existing residents and important public parks and places
- a new local infrastructure contributions plan for Ultimo/Pyrmont that will align growth with the delivery of new and improved local infrastructure

Together with existing development approvals and State Significant sites, the approved planning framework exceeds the targets in the NSW Government's Pyrmont Peninsula Place Strategy (the Place Strategy), contributing between 4,555 and 4,817 homes and 23,637 and 27,000 jobs.

The new planning framework will commence imminently with the NSW Government's approval of the planning controls and local infrastructure contributions plan. Development applications currently with the City of Sydney (the City) at either the pre-application or lodgement stage for 3 sites are expected to deliver around 366 new dwellings.

Council also endorsed a Stage 2 review of additional sites. These sites were not included in the City's Stage 1 proposal because they were either:

- not identified for new controls in the NSW Government Place Strategy
- constrained by an existing strata scheme, or
- social or affordable housing sites where the owners at that time had not requested new controls.

In other cases, landowner requests for new controls were different from what was exhibited under Stage 1.

This report outlines the outcomes of the City's Stage 2 review and recommends changes be made to the Ultimo/Pyrmont planning framework. These changes will facilitate up to 1,240 additional homes, including 150 new social and affordable homes; provide space for 400 new jobs, in new retail frontages; and create opportunities to expand publicly accessible open space, widen footpaths, accommodate over 270 new trees and 450sqm of new green roofs.

Together with the Stage 1 planning proposal, existing development approvals and State Significant sites, the existing and proposed planning framework meets the NSW Government's the Place Strategy targets for the area, contributing well over 5,500 homes and potential for over 27,000 jobs to align with the future Metro service.

Consistent with the NSW Government's Pyrmont Peninsula Place Strategy, the proposed Stage 2 planning framework will also embed new solar protection controls for key public parks, open spaces and civic places across Ultimo and Pyrmont. Through amendments to Sydney LEP 2012 and Sydney Development Control Plan 2012, the proposal will ensure future growth and increased density can be accommodated while protecting the amenity, usability and attractiveness of valued public spaces, including Pirrama Park, Union Square and Mary Ann Street Park. The controls will maintain appropriate solar access during periods of peak public use and support healthy tree canopy and grass growth, helping to sustain the environmental quality and long-term functionality of the area's public open space network.

As outlined in the City's Housing for All Discussion Paper, Ultimo/Pyrmont is well placed to house more people with excellent access to Central Sydney, a new Metro station in 2032, more usable public open space at a renewed Wentworth Park, and great access to the harbour and entertainment precincts.

This report recommends Council approve the public exhibition of Planning Proposal - Ultimo/Pyrmont Stage 2 (Attachment A) and draft Sydney Development Control Plan 2012 - Ultimo/Pyrmont Stage 2 (Attachment B) and seek a Gateway Determination to exhibit from the Department of Planning, Housing and Infrastructure (the Department).

This proposal is supported by 3 studies: an Urban Design Study (Attachment C), which underpins the proposed planning changes; and two studies undertaken in collaboration with the Department - a Flood Study (Attachment D), to establish appropriate flood planning levels for the additional sites, and a Precinct Transport Study (Attachment E) to justify the proposed increase in density.

The Precinct Transport Study makes the following recommendations for the area:

- reduce speed limits, reclassify roads and reallocate road space from vehicle traffic to deliver wider footpaths, more crossings, separated cycleways and improve pedestrian comfort and safety

- deliver separated cycleways on key north-south corridors Harris Street and Wattle Street to connect the length of the peninsula

- provide space for an everyday supermarket and fresh food offering within new development to reduce private vehicle trips out of the peninsula.

Most of the recommendations of the Precinct Transport Study will require the NSW Government to approve and deliver. An appropriate recommendation has been included. Those that are within the scope of local planning controls have been included in the draft Planning Proposal and DCP.

Recommendation

It is resolved that:

(A) Council approve Planning Proposal – Ultimo Pyrmont Stage 2, 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) Council approve Planning Proposal – Ultimo Pyrmont Stage 2, 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) Council seek authority from the Department of Planning, Housing and Infrastructure to exercise the delegation of all functions under the relevant local plan making authority under Section 3.36 of the Environmental Planning and Assessment Act 1979 to make the local environmental plan and put into effect the Planning Proposal – Ultimo Pyrmont Stage 2

(D) Council approve draft Sydney Development Control Plan – Ultimo Pyrmont Stage 2, shown at Attachment B to the subject report, for public authority consultation and public exhibition together with the Planning Proposal

(E) authority be delegated to the Chief Executive Officer to make any minor variations to Planning Proposal – Ultimo Pyrmont Stage 2, draft Development Control Plan – Ultimo Pyrmont Stage 2 and to update the Urban Design Study to ensure maximum clarity for the purposes of public consultation, correct any drafting errors or to ensure consistency with the Gateway Determination

(F) the Lord Mayor be requested to write to the Minister for Transport, the Minister for Roads, the Minister for Planning and the NSW Treasurer, requesting that:

  (i) the Western Distributor Road Network Improvements project be terminated in full

  (ii) the NSW Government commit to the delivery of place improvements on Harris Street, Wattle Street, Union Street and Pyrmont Bridge Road in line with the NSW Department of Planning, Housing and Infrastructure's Precinct Transport Study

  (iii) the scope of these place improvements be agreed with the City of Sydney

  (iv) the place improvements need to be funded by the NSW Government

  (v) that the NSW Government note that without these place improvements opportunities to deliver additional housing in Ultimo and Pyrmont will be significantly constrained.

Attachments

Attachment A. Planning proposal – Ultimo Pyrmont Stage 2

Attachment B. Draft Sydney development control plan – Ultimo Pyrmont Stage 2

Attachment C. Urban design study

Attachment D. Flood impact and risk assessment

Attachment E. Precinct transport study

Background

Our Stage 2 proposal builds upon our previous work, approach and community engagement

1. The City's work with the community and landowners on the Stage 1 Ultimo and Pyrmont planning framework revealed more opportunities for more and better homes in Ultimo/Pyrmont, including social and affordable housing. Council resolved to investigate these sites in October 2025.

2. A full background of the City's Stage 1 proposal, Place Strategy history, our community engagement, design considerations and approach can be viewed at:

    - for December 2023 Stage 1 pre-exhibition report to the Transport, Heritage, Environment and Planning Committee at https://meetings.cityofsydney.nsw.gov.au/ieListDocuments.aspx?CId=137&MId=4185& Ver=4 (see Item 5)

    - for October 2025 Stage 1 post-exhibition report to the Transport, Heritage, Environment and Planning Committee at https://meetings.cityofsydney.nsw.gov.au/ieListDocuments.aspx?CId=137&MId=4641&Ver=4 (see Item 4).

The Pyrmont Peninsula Place Strategy remains relevant to the assessment of planning proposals

3. In July 2026, the Minister for Planning issued a revised section 9.1 Ministerial Direction for local plan making. The revised Direction no longer includes requirements relating to Ultimo, Pyrmont, the Place Strategy, or the Pyrmont Peninsula Economic Development Strategy (Economic Development Strategy).

4. In July 2026, the Department confirmed that, under the NSW Government's Local Environmental Plan Making Guideline (July 2026), a plan-making authority must consider whether a planning proposal has strategic merit, including whether it gives effect to relevant regional plans and any strategy or place strategy endorsed by the Planning Secretary, which includes the Place Strategy and Economic Development Strategy.

5. The continued relevance of the Place Strategy is reflected in the Sydney Plan (August 2026), which identifies Ultimo/Pyrmont as a priority area for housing growth. The Sydney Plan notes that, supported by the return of (Greyhound) open space at Wentworth Park, Ultimo/Pyrmont has further major housing opportunities that should be rezoned for greater uplift in the short term.

Ultimo/Pyrmont is well placed to accommodate growth

6. The City's Housing for All Discussion Paper identified Ultimo/Pyrmont as an opportunity for additional housing given Council's resolution to investigate further sites.

7. Community feedback on the Housing for All Discussion Paper supported this approach. Of the 315 responses about Ultimo/Pyrmont, 70% supported additional housing. Feedback included:

   (a) strong support for a place-based approach to accommodating growth, where opportunities for additional housing are considered as part of broader planning for the area

   (b) the western side of Harris Street presents an opportunity for residential renewal with underutilised sites capable of accommodating additional housing and public domain improvements

   (c) additional housing should be supported by improvements to public space, tree canopy, walking and cycling infrastructure

   (d) concerns about ad-hoc planning decisions, overdevelopment and increased traffic and on-street parking pressures.

Housing renewal can improve homes and neighbourhoods

8. This new planning proposal provides an opportunity to deliver additional housing while supporting the renewal of ageing residential buildings and improving neighbourhood amenity. The proposed planning controls will facilitate:

   - additional housing in locations well served by infrastructure, services and public transport
   - modern, well-designed homes that are healthier, safer and more sustainable
   - adaptation and renewal of ageing building stock that is increasingly costly to maintain
   - improved landscaping, increased tree canopy and more attractive streetscapes
   - more active and pedestrian-friendly neighbourhoods through better street frontages and public domain outcomes
   - housing growth that contributes to broader liveability, environmental and community benefits.

Planning controls and development outcomes

The proposal provides for new height and FSR controls

9. New planning controls are proposed for 10 development sites across Ultimo/Pyrmont, based on the Urban Design Study at Attachment C. The proposed planning controls address the individual characteristics of each site resulting in various building envelopes, heights and floor space ratios. This variety is consistent with the existing variety of building forms in the area.

344 Bulwara Road (Tivoli Gardens)

10. Tivoli Gardens was constructed in 1986 by Meriton and comprises a mixed-use building of 3 to 4 storeys. It includes 98 residential apartments above 4 business tenancies that front Macarthur Street, Bulwara Road and Hackett Street.

11. The building has a zero setback to Bulwara Road, where the footpath is narrow and further constrained by street trees, parking meters and light poles. The Bulwara Road frontage is inactive, with much of the street edge dominated by a partially above-ground basement car park.

12. The building also has a zero setback to Hackett Street, which functions as a 6m-wide service lane and has no formal footpath. This frontage is similarly inactive, characterised by at-grade parking and a full-storey above-ground basement car park along much of the boundary. The site contains no deep soil landscaping, with only limited planting incorporated into the built form.

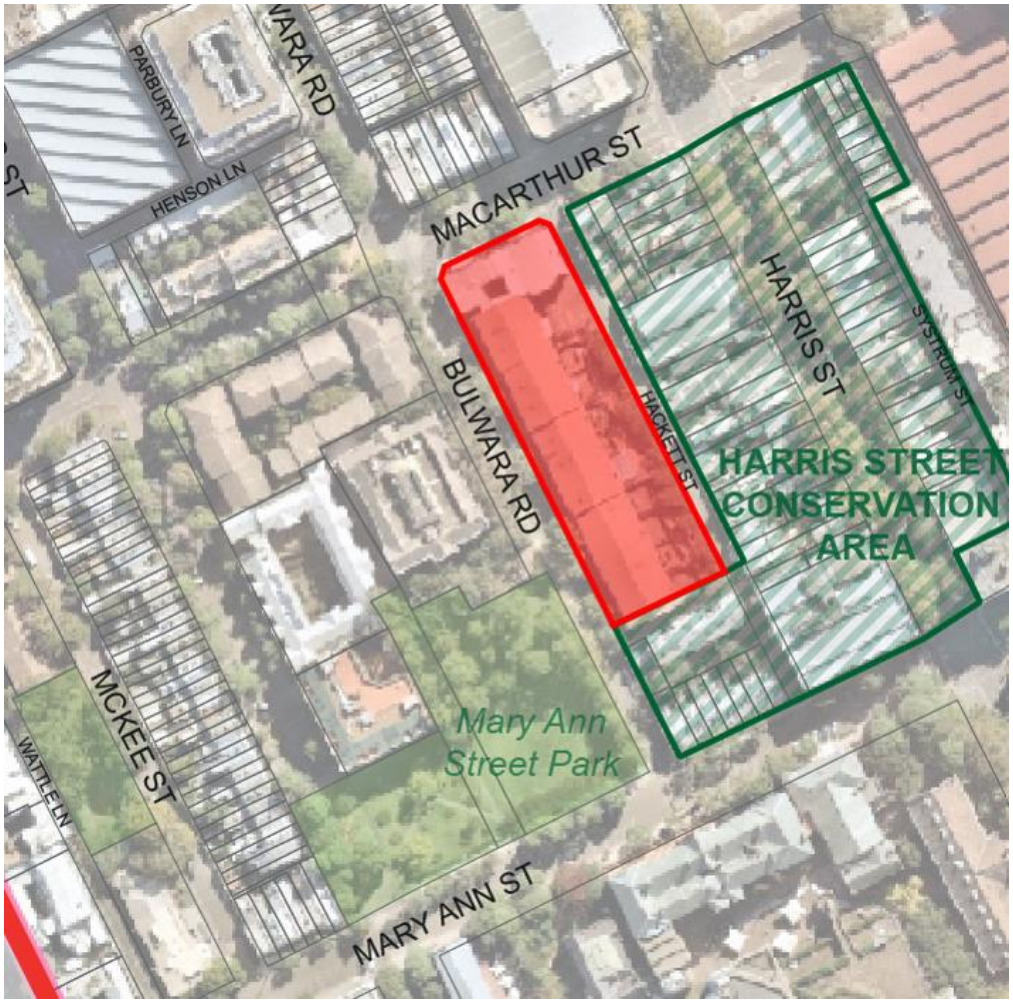


Figure 1: Location map of 344 Bulwara Road



Figure 2: Bulwara Road frontage



Figure 3: Hackett Street frontage

13. The City has developed draft planning controls for the site in response to a request from residents within the building. The proposed controls enable a new 4 to 12 storey mixed-use development with approximately 194 residential apartments above ground-floor businesses fronting Macarthur Street and a new Bulwara Road retail frontage.

14. The building height steps down from north to south to minimise overshadowing to Mary Ann Street Park. A 6m setback from Bulwara Road is proposed to allow for footpath widening and to create space for outdoor dining, planting and retail activity. Deep soil landscaping for more trees and screening of neighbours is along Hackett Street.

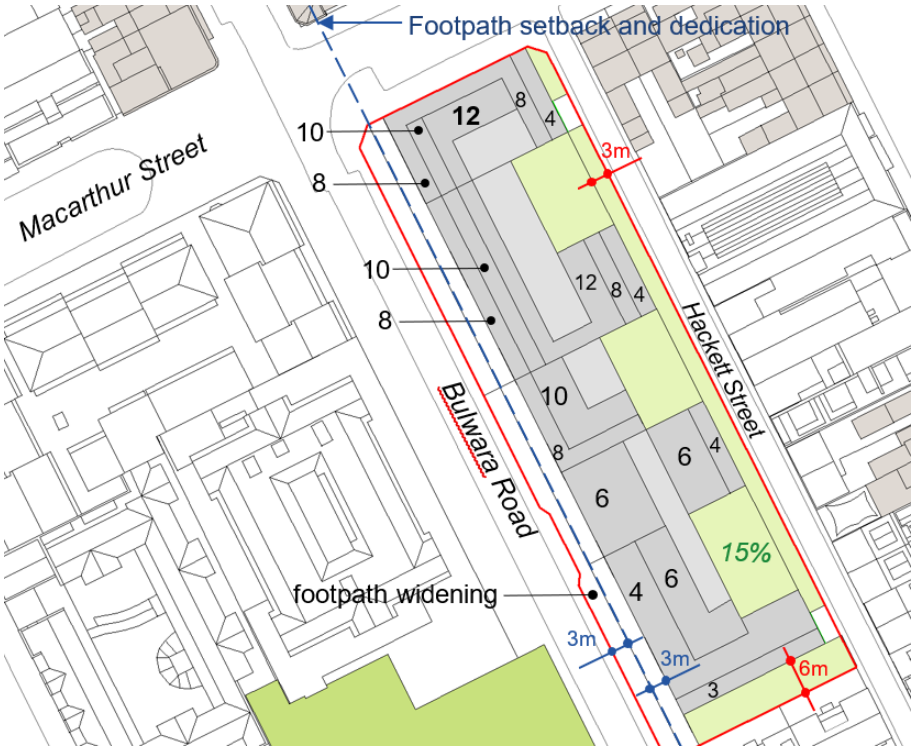


Figure 4: Site plan showing proposed planning controls at 344 Bulwara Road

463-467 Harris Street

15. The landowner's request to review the controls noted Stage 1 introduced controls for 6 sites immediately to the south (469–483 Harris Street) and that a similar approach for this site could enable a more cohesive urban design outcome, including a consistent street wall along Harris Street.

16. The existing development was constructed in 1985 and comprises a 3-storey commercial building. It includes retail and commercial frontages to Harris Street and the Harris and Quarry street corner, with building and car park access from Quarry Street and commercial units located above. The site does not contain any deep soil landscaping.



Figure 5: Location map of 463-467 Harris Street



Figure 6: Harris Street frontage

17. The proposed controls enable a new 2 to 7 storey mixed-use development, consistent with 469-483 Harris Street and including approximately 11 apartments above ground-floor businesses on Harris Street.

18. The building heights step down from east to west to minimise overshadowing to neighbouring residential properties. Deep soil landscaping is to be located in the centre of the site providing more trees and visual screening for neighbours.



Figure 7: Site plan showing proposed planning controls at 463-467 Harris Street

336-374 Jones Street, 1-7 Henry Avenue (Henry Avenue Flats) and 370-374 Jones Street (Quarry Lane Streetscape)

19. The street block comprises 4 elements:

- 336-342 Jones Street is owned by Homes NSW. It is a 2-storey residential flat building constructed by the City in 1985 on the site of a former council park and playground. It is identified as a neutral building within the Ultimo Heritage Conservation Area and contains 8 apartments. Access is from the rear via Fig Lane, a shared zone accommodating at grade parking and waste storage. The apartments have access to private rear gardens with deep soil landscaping.

- 344-368 Jones Street is owned by Homes NSW. It comprises 13 x 2-storey Victorian-era terrace houses that are contributory buildings within the Ultimo Heritage Conservation Area. Each terrace is individually accessed from Jones Street and includes rear gardens with deep soil. The terraces underwent renovations and rear alterations and additions in 1984.

- Quarry Lane Streetscape is a pocket park located on the south-western corner of the block. It comprises hard landscaped areas, 8 established trees, understorey planting and seating. The space functions as a passive recreation area and is primarily used for sitting. Its location at the southern end of the block means it is subject to existing overshadowing. The land is zoned RE1 Public Recreation and is classified as community land.

- Henry Avenue Flats is a 3-storey residential flat building constructed in 1960. It is a neutral building within the Ultimo Heritage Conservation Area and contains 28 residential apartments accessed from Henry Avenue. The apartments have access to rear garden areas with deep soil landscaping. The building was designed by City Architect Albert Smillie and constructed by the City.

20. Social housing sites managed by the City of Sydney were transferred to the NSW Government in January 1989. Following the transfer of this block from the City to the NSW Government, the Quarry Lane Streetscape was transferred back to the City in 1990 and subsequently declared a public reserve.



Figure 8: Location map of 336-368 Jones Street and Henry Avenue Flats



Figure 9: Part 344-368 Jones Street and Quarry Lane Streetscape



Figure 10: Henry Avenue Flats

21. The City has developed draft planning controls for the site in response to a request from Homes NSW. The proposed controls enable:

    - two new, connected residential developments
    - retention of the 13 existing terrace houses on Jones Street, with demolition of their rear wings and construction of a new 2-storey rear addition
    - three additional 2-storey infill terraces at the northern and southern ends of the row
    - retention of the Henry Avenue Flats, with a 3-storey addition above the existing building.



Figure 11: Site plan showing proposed planning controls at 336-374 Jones Street, Henry Avenue Flats and Quarry Lane Streetscape

22. The 2 developments are to be linked by a central shared pedestrian walkway providing universal access to all levels of both developments. It also supports reconfiguration of the 2-storey terraces into universally accessible single-level apartments at ground- and first-floor.

23. The existing Quarry Lane Streetscape pocket park would be relocated to the northern end of the site, where it would form an extension of Fig Lane Park. This new location would provide improved access to sunlight compared with the park's current southern position and would create a larger, more usable area of publicly accessible open space. Relocating the park would also enable the site to accommodate additional social housing compared with retaining the park in its existing location.

24. In total, the site would accommodate approximately 82 social housing dwellings, comprising 34 homes on Jones Street and 48 homes on Henry Avenue. Deep soil landscaping would be consolidated in the central portion of the site, supporting an increased tree canopy and providing visual separation and screening between the 2 developments.

25. While the proposed reference scheme assumes the relocation of the existing pocket park, the planning proposal does not seek to reclassify the existing Quarry Lane Streetscape from community land to operational land. Any future reclassification required to facilitate the relocation of the park would be considered through a separate process at a later stage, once redevelopment of the sites is sufficiently progressed and the delivery of the replacement public open space is certain.

313-369 Harris Street (Darling Harbour Apartments)

26. Darling Harbour Apartments was constructed in 1980 as a 5-storey mixed-use residential flat building with 136 apartments above 20 business tenancies fronting Harris Street.

27. The building includes a basement with almost 100% site coverage, resulting in minimal deep soil landscaping. While the building is setback from Harris Street, this area is dominated by hard paving and basement ventilation structures, limiting opportunities for active use and engagement with the public domain.



Figure 12: Location map of 313-369 Harris Street, shown in red



Figure 13: Harris Street frontage

28. The City has developed draft planning controls for the site in response to a request from residents within the building. The proposed controls would enable a new 8 to 18 storey mixed-use development with about 251 apartments above ground-floor businesses fronting Harris Street and Ada Place.



Figure 14: Site plan showing proposed planning controls at 313-369 Harris Street, shown in outline red

29. The predominant building height reflects the surrounding built form, which generally ranges from 8 to 10 storeys. Taller elements of 12 and 18 storeys are carefully positioned to minimise overshadowing of nearby residential properties. Deep soil landscaping is concentrated within a 6m setback to Harris Street, supporting an increased tree canopy and providing visual screening for properties to the east.

30. A 3m setback is proposed along Ada Place. When combined with the proposed setbacks for 1-19 Allen Street, this will contribute to a wider and more activated pedestrian through-site link, as described below.

1-19 Allen Street (Headingley)

31. Headingley was constructed in 1985 as a 4-storey residential flat building containing 78 apartments. Half of the apartments are exposed to high noise levels and reduced air quality from the Western Distributor.

32. The building includes a basement with almost 100% site coverage, resulting in limited deep soil landscaping. The partially above-ground basement reduces activation of the surrounding public domain. The building has a nil setback to Ada Place, a City-owned pedestrian through-site link.

33. While the link is well landscaped, it is poorly activated and due to its length and configuration, experiences limited passive surveillance. There is a lack of clear distinction between public and private space and few nearby activity generators such as shops, building entrances or community uses. As a result, pedestrian activity declines significantly at certain times of the day and night.

34. The City has developed draft planning controls for the site in response to a request from residents within the building. The proposed controls will enable an 11 to 12 storey mixed-use development for about 207 apartments above a supermarket with floor frontages to Allen Street, Ada Place, and a new 900sqm publicly accessible park.

35. The increased building height allows for additional housing while minimising overshadowing of surrounding residential properties. Deep soil landscaping is concentrated within the new park, supporting increased tree canopy and providing visual screening for neighbouring properties to the east.

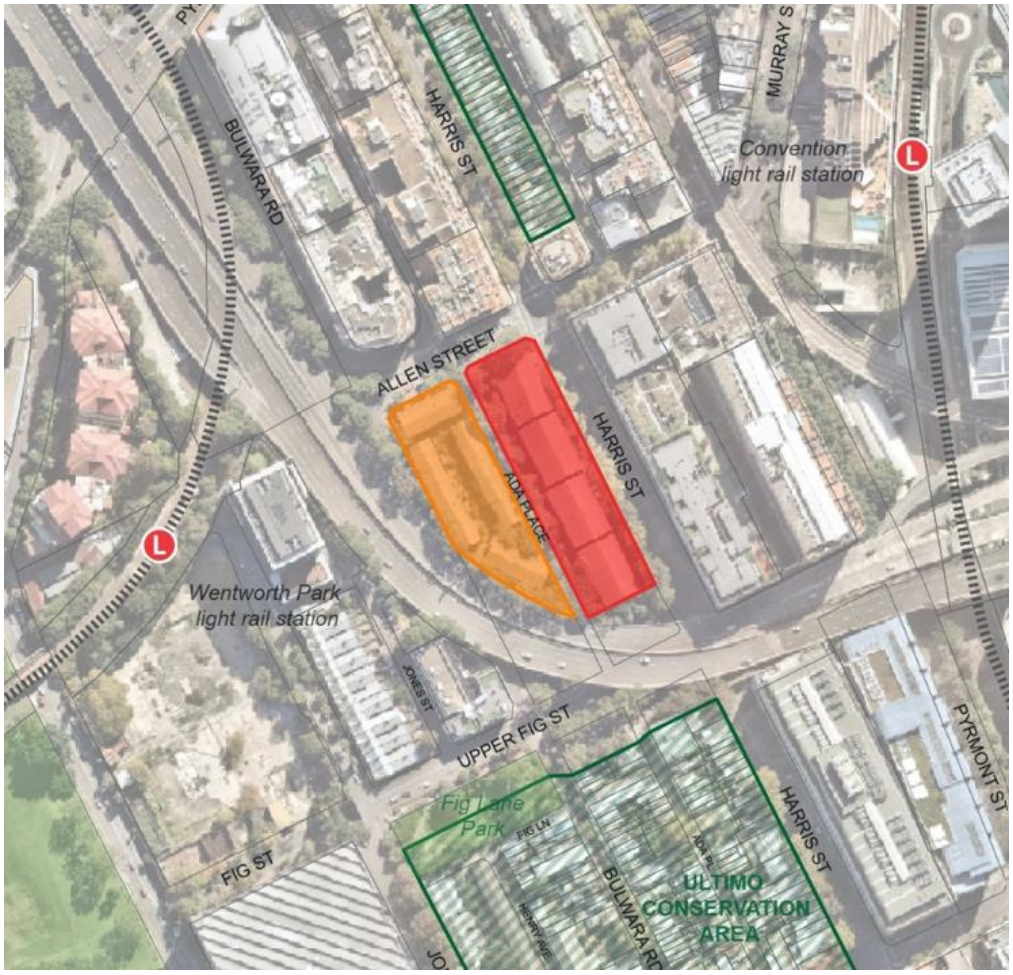


Figure 15: Location map of 1-19 Allen Street, shown in orange



Figure 16: Allen Street frontage



Figure 17: Ada Place

36. The arrangement and orientation of the development will act as an acoustic buffer, shielding the park, adjoining streets and apartments from noise from the Western Distributor. In addition, the design reorients apartments so that living rooms and balconies primarily face east, improving access to sunlight and air while reducing exposure to traffic noise and pollution.

37. A 3m setback is proposed along Ada Place. When combined with the setback for 313-369 Harris Street, this will create a pedestrian through-site link approximately 12m wide.

38. The widened link would be activated by business uses on both sides, enabling the retention of significant existing trees, improving sightlines, and increasing opportunities for outdoor dining. This approach will enhance pedestrian comfort and safety by improving spatial definition, encouraging activity throughout the day and evening, and supporting better circulation through Ada Place.



Figure 18: Site plan showing proposed planning controls at 1-19 Allen Street, shown in outline orange

100 Harris Street

39. The planning controls for 100 Harris Street were reviewed and amended as part of the Stage 1 proposal. The site owner has since tested the controls through detailed design development for a hotel proposal, which has been to a greater level of detail than when the City prepares planning controls. This has demonstrated that additional floor space can be accommodated within the exhibited maximum building height controls through the addition of 2 levels. This outcome is achievable because hotel development typically requires lower floor-to-floor heights than the commercial development assumed by the City when preparing the controls.

40. The proposed amendments respond to this design development by allowing additional floor space within the approved height envelope. This would enable additional hotel rooms, support more employment opportunities, and improve the site's development potential. Minor changes are also proposed to the DCP building envelope to achieve a more practical and efficient built form, while continuing to minimise overshadowing of properties to the south and securing 450sqm of green roof.



Figure 19: Site plan showing proposed planning controls at 1-19 Allen Street, shown in outline orange

26-52 Mount Street

41. The site is owned by Homes NSW and comprises 3 distinct elements:

- 26-52 Mount Street is a combination of 2-storey terraces and 2-storey apartment buildings constructed in 1990, containing 28 apartments.
- 73-85 Harris Street is a 3-storey residential flat building on Harris Street constructed in 1990 containing 10 apartments.
- 85 Harris Street is a heritage item, the former CSR manager's house, designed by J W Manson built in c.1909. It is a 2-storey Federation Queen Ann style house with a multi-gabled roof. It contains 10 bedrooms and 5 community rooms. The building is currently used for emergency accommodation. It is located in the centre of the site.

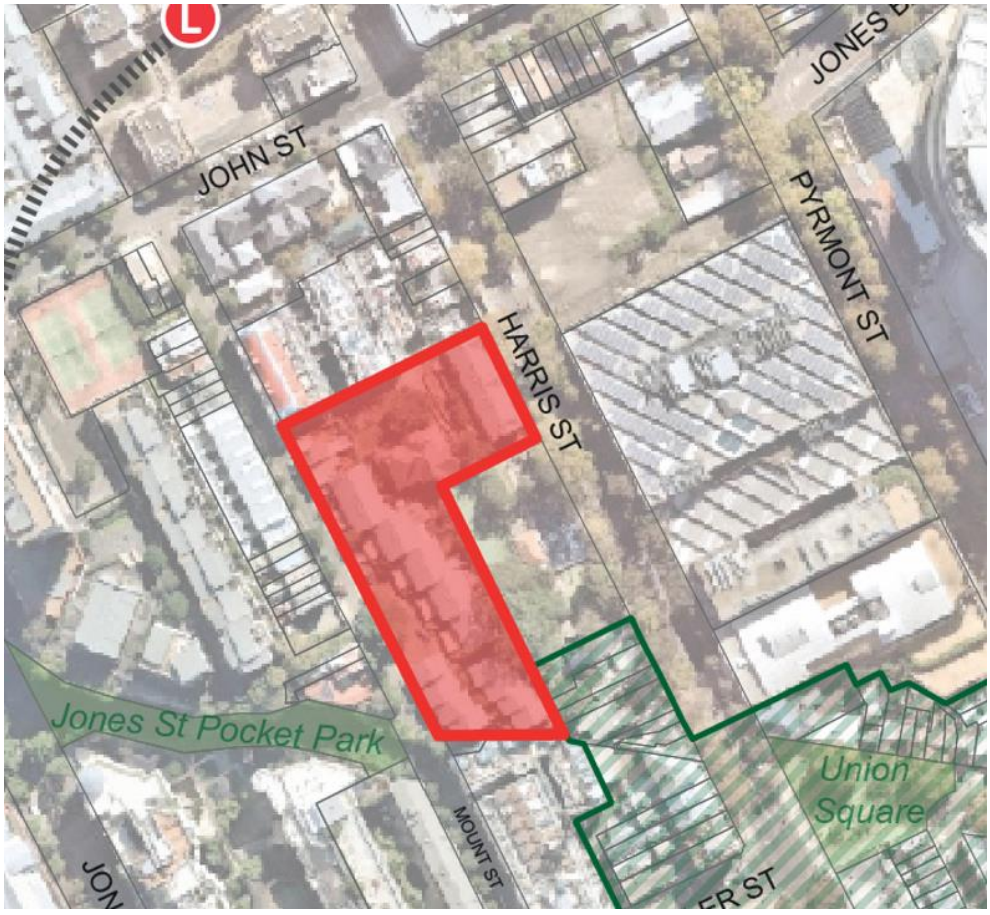


Figure 20: Location map of 26-52 Mount Street



Figure 21: Mount Street frontage

42. The City has developed draft planning controls for the site in response to a request from Homes NSW. The proposed controls retain the existing buildings at 73-85 Harris Street and 85 Harris Street, while enabling 2 new residential flat buildings of up to 7 storeys at 26-52 Mount Street.

43. The proposed controls provides approximately 109 social and affordable housing dwellings. The buildings are arranged to minimise overshadowing of existing properties to the south and west. Deep soil landscaping is to be provided around the perimeter of the site, retaining significant existing trees along Mount Street and within the City's Maybanke Community Centre. The proposal also provides appropriate separation from the heritage-listed former CSR Manager's House. An east-west pedestrian through-site link connecting Mount Street and Harris Street would be delivered as part of the development.



Figure 22: Site plan showing proposed planning controls at 26-52 Mount Street

1-33 Saunders Street

44. The planning controls for 1-33 Saunders Street were reviewed and changed as part of the Stage 1 proposal. The owner of the site has tested the new planning controls through detailed design development and has demonstrated that additional floor space and height is achievable while achieving the City's design considerations.



Figure 23: Location map of 1-33 Saunders Street

45. The proposed controls enable 3 distinct elements:

- An 11 to 19 storey barrier building to the Western Distributor which is generally consistent in height with that approved under the Stage 1 proposal. The barrier building primarily contains non-residential uses that face towards to Western Distributor with some residential uses facing away. The barrier building acts as an acoustic buffer, shielding the proposed park, adjoining streets and apartments from noise associated with the Western Distributor.

- Two new mixed-use residential towers of 32 and 30 storeys with ground floor business uses. The towers are designed so that living rooms and balconies face away from the Western Distributor, improving access to sunlight and air while reducing exposure to traffic noise and pollution.

- An 1,800sqm publicly accessible park that is universally accessible, activated by surrounding ground floor uses and accommodating significant deep soil planting supporting increased tree canopy and providing visual screening for adjoining properties.

46. The proposed controls are informed by detailed wind tunnel, noise and ventilation testing that was not available to the City during the preparation of the Stage 1 controls. The testing, as outlined in the City's Urban Design Study, demonstrates that whilst the tower elements are significantly different in height to the City's Stage 1 proposal (11 storeys increased to 29 and 33 storeys), the development still meets the City's design considerations, including that:

- The development delivers around 550 new dwellings and a 1,800sqm publicly accessible park and deep soil areas that have excellent solar access and can accommodate 67 new trees.

- The revised envelope continues to minimise overshadowing to surrounding existing neighbouring properties in compliance with the NSW Government's Apartment Design Guide.

- Street level setbacks and tower placement have been carefully planned to allow more sunlight into the streets.

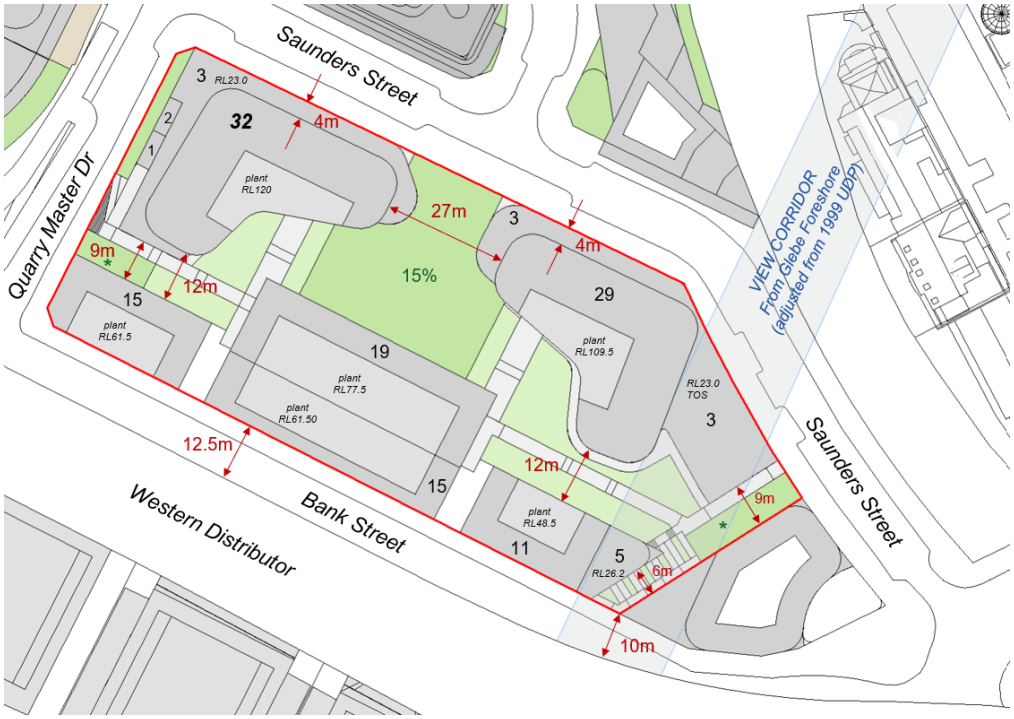


Figure 24: Site plan showing proposed planning controls at 1-33 Saunders Street

56 Harris Street (88 John Street)

47. This site is owned by City West Housing and designed by Turner Associates. The existing development was constructed in 2007 and comprises a mixed-use building of 4 to 7 storeys. It includes 81 affordable rental apartments above ground floor business/retail tenancies fronting Haris Street with minimal deep soil landscaping.



Figure 25: Location map of 56 Harris Street (88 John Street)



Figure 26: Harris Street frontage

48. The City has developed draft planning controls for the site in response to a request from City West Housing. The proposed controls enable a mixed-use development ranging from 4 to 12 storeys. The development is to be restricted to the western half of the site with the building on the eastern half retained. The development would comprise approximately 131 affordable rental apartments above a ground floor retail use fronting Harris Street.

49. The increased building height allows for additional affordable rental housing while minimising overshadowing of surrounding residential properties. Deep soil landscaping is concentrated central to the north of the site, supporting increased tree canopy.



Figure 27: Site plan showing proposed planning controls at 56 Harris Street

120-122 Saunders Street

50. The existing development was constructed in 1992-94 by Meriton following demolition of the Pyrmont Incinerator (operating 1937-71). It comprises a residential flat building containing around 250 apartments with deep soil landscaping at the rear.

51. The site's deep soil landscaping extends to the boundary with Bank Street Reserve, a City-owned area of open space area next to the sandstone cliff face to the north. While the reserve is currently fenced and not publicly accessible, residents of 120-122 Saunders Street currently use part of the land.

52. Due to the site's proximity to the Western Distributor, many apartments experience a reduced environmental amenity, including elevated traffic noise, reduced air quality and a southerly aspect towards the road corridor.

53. The basement vehicle entry is close to the access point for 2-10 Quarry Master Drive, directly opposite Saunders Street. Together with the separated cycleways associated with the Anzac Bridge and Saunders Street, this creates a complex and visually cluttered intersection environment with potential conflicts between people walking, cycling and driving.

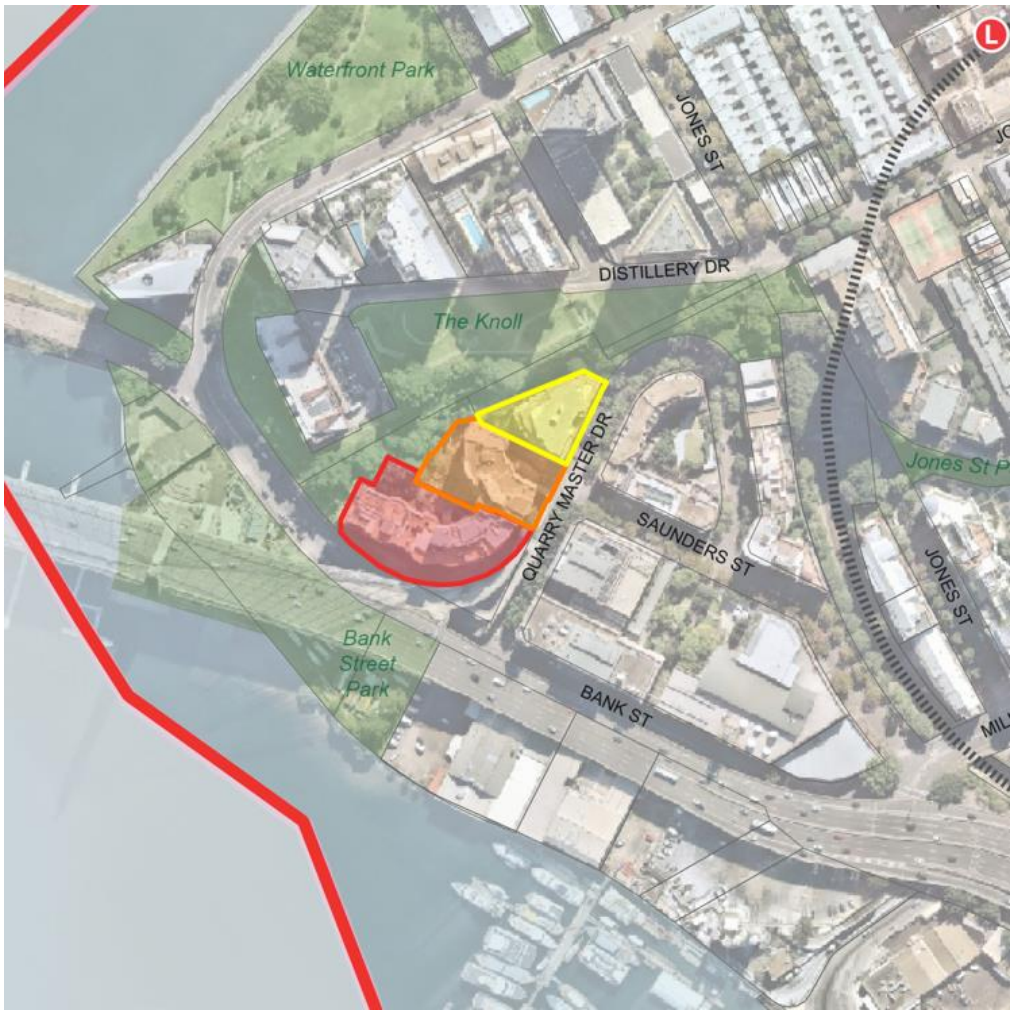


Figure 28: Location map of 120-122 Saunders Street, shown in red and orange



Figure 29: Quarry Master Drive frontage



Figure 30: Fenced Bank Street Reserve

54. The City has developed draft planning controls for the site in response to a request from residents within the building. The proposed controls will facilitate a new mixed-use development comprising an 8 to 14 storey podium and a 37-storey tower. The development would accommodate approximately 371 residential apartments above ground-floor business uses, with active frontages to Bank Street and Quarry Master Drive and a new publicly accessible through-site link connecting Saunders Street to Bank Street Reserve.

55. The proposed controls enable additional housing while minimising overshadowing to neighbours and Bank Street Park. The built form has been shaped and positioned to improve daylight to surrounding streets and public spaces, while maintaining comfortable and safe wind conditions at street level. Deep soil landscaping is provided around the perimeter and within the centre of the site supporting significant tree canopy growth, an extension to Bank Street Reserve and a new through-site link.

56. The arrangement and orientation of the built form significantly improves environmental amenity. The podium and tower are an acoustic buffer to the Western Distributor, reducing traffic noise impacts on future residents and the surrounding neighbourhood. Apartments are oriented primarily towards the east, allowing living areas and balconies to receive improved sunlight, outlook and ventilation while reducing exposure to traffic noise and vehicle emissions.

57. The proposal also improves access to and activation of Bank Street Reserve. The new publicly accessible through-site link will provide a safer, more direct and legible pedestrian connection to the reserve, increasing its visibility and accessibility and supporting its future role as part of the broader open space and pedestrian network within the Blackwattle Bay sub-precinct.

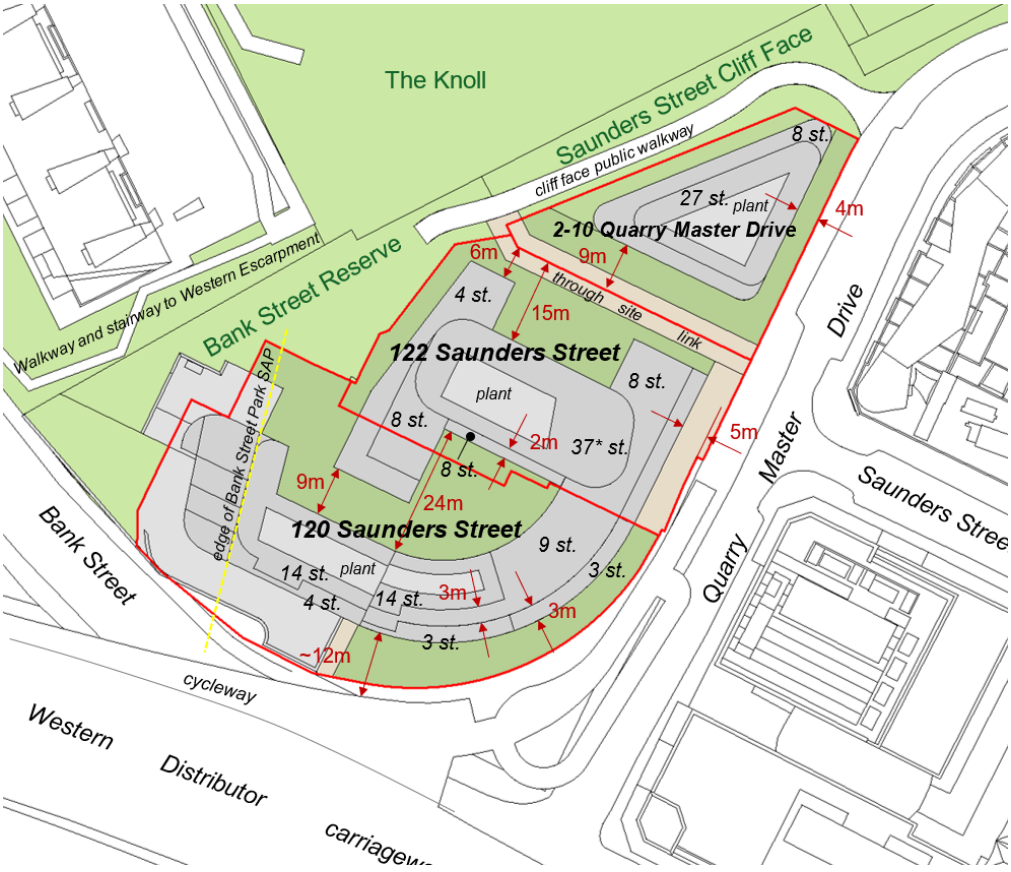


Figure 31: Site plan showing proposed planning controls at 120-122 Saunders Street

2-10 Quarry Master Drive (Tara)

58. Tara Apartments is a 10-storey residential flat building constructed in 1998 containing 66 apartments with deep soil landscaping at the rear adjacent to Bank Street Reserve.

59. The site at 2-10 Quarry Master Drive adjoins 120-122 Saunders Street to the south.



Figure 32: Location map of 2-10 Quarry Master Drive, shown in yellow



Figure 33: Quarry Master Drive frontage

60. The City has developed draft planning controls for the site in response to a request from residents within the building. The proposed controls facilitate a residential flat building comprising an 8-storey podium and a 27-storey tower with approximately 132 apartments and a new publicly accessible through-site link connecting Saunders Street to Bank Street Reserve.

61. The proposed controls enable additional housing while minimising overshadowing to neighbours and Bank Street Park. The built form has been shaped and positioned to improve daylight to surrounding streets and public spaces, while maintaining comfortable and safe wind conditions at street level. Deep soil landscaping is provided around the perimeter and within the centre of the site, supporting significant tree canopy growth, an extension to Bank Street Reserve and a new through-site link.

62. The proposal improves access to and activation of Bank Street Reserve. The new publicly accessible through-site link will provide a safer, more direct and legible pedestrian connection to the reserve, increasing its visibility and accessibility and supporting its future role as part of the broader open space and pedestrian network within the Blackwattle Bay sub-precinct.

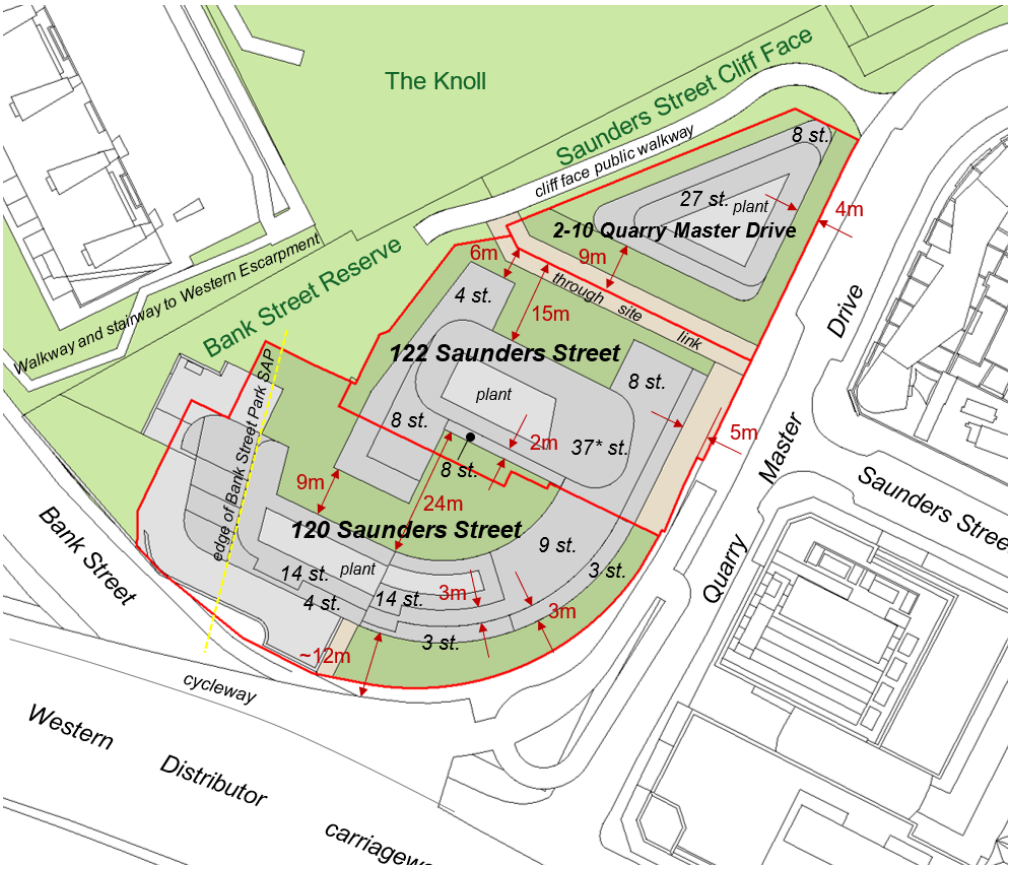


Figure 34: site plan showing proposed planning controls at 2-10 Quarry Master Drive

The proposal will deliver housing that contributes to housing targets

63. The planning proposal is intended to facilitate additional housing and contribute to the City's and the NSW Government's housing targets under the National Housing Accord. However, current housing targets do not count co-living and student accommodation. These forms of housing can achieve substantially higher dwelling yields than conventional residential development and are already incentivised with 10% additional floor space under the NSW Government's planning rules. If co-living housing is developed on sites identified for additional housing capacity, it could significantly reduce the number of countable dwellings delivered by the proposal.

64. To ensure the additional development capacity provided through this planning proposal contributes to the delivery of private dwellings that count towards the City's housing targets, it is proposed to explore the introduction of an LEP provision that prohibits co-living and student accommodation on identified sites proposed for increased residential capacity.

65. This approach does not diminish the important role of co-living and student accommodation in meeting broader housing needs. Rather, it ensures that the residential capacity specifically identified through this planning proposal delivers the housing outcomes on which the proposal and its contribution to housing targets are based.

Protecting sunlight to public parks and open spaces

66. The NSW Government's Pyrmont Peninsula Place Strategy supports growth and change without compromising the amenity, functionality and environmental quality of the area's public parks, open spaces and publicly accessible places. As the area accommodates additional homes, jobs and taller buildings, access to sunlight for parks becomes increasingly important to maintaining their usability and enjoyment and support healthy tree canopy and grass growth.

67. The Place Strategy balances increased building heights and density with the protection of sunlight access, public amenity, local character and heritage values. It enables sun access and no additional overshadowing controls to guide the location and scale of future development so that significant public parks, open spaces and civic places continue to receive appropriate sunlight.

68. The planning proposal seeks to amend the LEP to introduce the sun access planes and no additional overshadowing controls identified in the Place Strategy, to protect sunlight to key public parks, open spaces and civic places across Ultimo and Pyrmont.

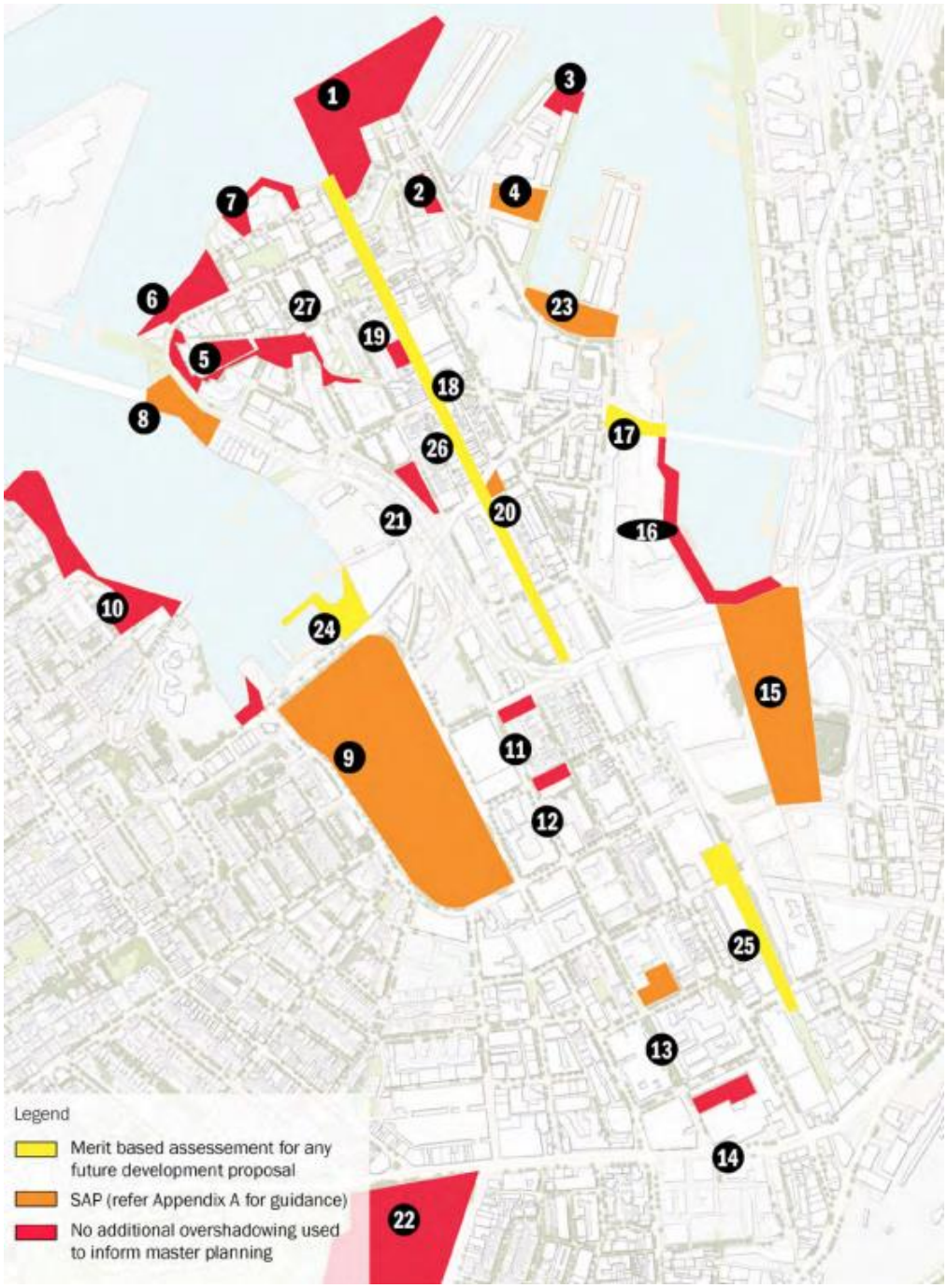


Figure 35: Proposed parks and spaces for sunlight protection, Pyrmont Peninsula Place Strategy (limited to land within Sydney LEP 2012)

69. The proposed LEP controls will protect sunlight access to Pirrama Park and Giba Park, James Watkinson Reserve, Ballaarat Park, Metcalfe Park, Distillery Drive Park/The Knoll, Waterfront Park, Cadi Park, Bank Street Park, Wentworth Park, Fig Lane Park, Quarry Green, Mary Ann Street Park, Alumni Green, Union Square, Maybanke Park, Elizabeth Healey Reserve, Paradise Reserve, Pyrmont Bay Park, Carmichael Park and Sydney Fish Market Square.

70. These controls are complemented by proposed DCP provisions, including building envelopes, setbacks and built form controls, which have been informed by detailed solar access testing undertaken through the Urban Design Study. The proposed sun access controls do not reduce the proposed development potential of sites.

Affordable housing

71. Sites identified for additional residential development are proposed to be included in Schedule 6C of the Sydney LEP 2012. This will require 9% of the additional residential floor space enabled by the planning proposal to be provided as affordable rental housing. This is estimated to deliver around 100 affordable rental dwellings.

72. This requirement is in addition to the existing affordable housing contribution requirements that apply generally in Ultimo and Pyrmont. These currently require a contribution equivalent to 1% of total floor area for non-residential development and 3% of total floor area for residential development. The existing requirements are estimated to deliver around 50 affordable rental dwellings from development facilitated by the planning proposal.

73. In addition, the Jones Street and Henry Avenue street block, 26–52 Mount Street and 56 Harris Street are intended to be secured for 100% social and affordable housing. These sites are estimated to deliver around 150 additional social and affordable housing dwellings.

74. In total, the planning proposal is estimated to facilitate around 300 social and affordable housing dwellings, comprising approximately 150 dwellings through affordable housing contribution requirements and a further 150 dwellings on sites intended to be secured for 100% social and affordable housing.

Key Implications

Harris Street south of Allen Street presents a future housing opportunity

75. Feedback on the City's Housing for All Discussion Paper identified the western side of Harris Street, south of Allen Street, as suitable for additional housing as it is close to jobs, transport, parks and services. The renewal of underutilised sites could accommodate additional homes while improving the streetscape and local environment.

76. The City shares this view and has previously identified Harris Street as having capacity for additional housing. However, the extent of future housing growth is closely linked to the future function and design of Harris Street. The Place Strategy envisages Harris Street as a pedestrian-focused high street with reduced traffic impacts, wider footpaths, improved crossings and enhanced public domain outcomes. The City considers these improvements essential to supporting additional housing and creating a high-quality living environment.

77. Proposals associated with the Western Distributor Road Network Improvements project will increase the movement of traffic through Allen Street and Harris Street, reducing opportunities to reallocate road space to pedestrians, cyclists and public transport. The City has consistently raised concerns that increasing vehicle capacity along this corridor would undermine the objectives of the Place Strategy and reduce the ability to accommodate additional housing along Harris Street. While aspects of the Western Distributor project have since been scaled back, proposed changes around the Allen Street and Harris Street intersection continue to raise concerns about the future role of the corridor.

78. To inform future planning, the Department commissioned the Pyrmont-Ultimo Precinct Transport Study. The study found that substantial areas of Harris Street south of Allen Street are dominated by road space, provide poor pedestrian amenity and do not perform as a high-quality main street. The study recommends measures including wider footpaths, lower vehicle speeds, improved pedestrian crossings, reduced waiting times at signals, increased tree canopy and new cycling infrastructure to support a more people-focused street environment and future housing growth.

79. The City has continued to advocate for these outcomes through its submissions on the Greater Sydney Urban Development Program and associated infrastructure planning. The City has specifically requested NSW Government investment in place improvements along Harris Street and Pyrmont Bridge Road, including footpath widening, cycling infrastructure and the reallocation of road space to support walking, cycling and public transport. The City considers these investments to be critical enabling infrastructure for future housing delivery in Ultimo and Pyrmont.

80. Should the NSW Government commit to delivering these place improvements, the City could undertake a future Stage 3 planning review for Ultimo/Pyrmont. Preliminary investigations indicate that improvements to Harris Street along could support at least 200 additional dwellings while also delivering a safer, greener and more attractive high street that aligns with the vision of the Place Strategy and broader housing objectives.

The proposal gives effect to the State and City strategic planning framework

Sustainable Sydney 2030–2050 Continuing the Vision

81. The planning proposal supports the City's long-term vision by facilitating additional housing and employment opportunities in a highly accessible inner-city location while promoting design excellence, sustainability, liveability and a high-quality public domain. The proposed planning controls support a more sustainable and resilient city by directing growth to locations with strong public transport access and existing infrastructure capacity.

City Plan 2036 (Local Strategic Planning Statement)

82. The proposal implements the City's Local Strategic Planning Statement by supporting the continued evolution of Pyrmont/Ultimo as a globally competitive innovation, employment and mixed-use precinct. The proposed controls support the delivery of housing, jobs, sustainability outcomes, heritage conservation, design excellence and public domain improvements, while responding to local character and environmental constraints. The proposal gives effect to the LSPS priorities relating to a productive global city, housing supply and diversity, sustainable growth, a connected city and great places.

Sydney Plan and State Land Use Plan

83. The proposal is consistent with the Sydney Plan and State Land Use Plan by delivering additional housing capacity and employment growth within an established strategic centre identified for urban renewal and intensification.

84. The Sydney Plans Housing and Employment Guidance specifically identifies Ultimo/Pyrmont as a priority area for housing growth, noting that, supported by the return of open space at Wentworth Park, Ultimo/Pyrmont has further major housing opportunities that should be rezoned for greater uplift in the short term.

85. The proposal supports the objectives of locating growth close to jobs, services and public transport, increasing housing choice and affordability, improving productivity, supporting the innovation and knowledge economy, and making better use of existing infrastructure. Through the implementation of the Pyrmont Peninsula Place Strategy, the proposal contributes to the broader State objective of delivering well-designed, sustainable and connected communities within Sydney's existing urban footprint.

Risks

86. City staff have undertaken a thorough assessment of the proposed planning controls and found that they demonstrate strategic and site-specific merit in accordance with NSW Government guidelines. The proposal is consistent with City policies and strategies including City Plan 2036 and Sustainable Sydney 2030-2050 Continuing the Vision. Progressing the proposal is within the City's risk tolerance and appetite.

87. The 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.

88. Should Council and the Central Sydney Planning Committee endorse the proposal for public exhibition, it will be forwarded to the Department of Planning, Housing and Infrastructure in accordance with section 3.34 of the Act for Gateway Determination.

Relevant Legislation

89. Environmental Planning and Assessment Act 1979.

Critical Dates / Time Frames

90. Should Council and the Central Sydney Planning Committee endorse the attached proposal for public exhibition, it will be forwarded to the Department of Planning, Housing and Infrastructure in accordance with section 3.34 of the Act for Gateway Determination.

91. The Gateway Determination will provide the required date for the completion of the Local Environmental Plan amendment.

92. Following public exhibition, the outcomes will be reported back to Council and the Central Sydney Planning Committee.

Public Consultation

93. Significant engagement was undertaken during the preparation of the Stage 1 planning proposal. This Stage 2 planning proposal is in direct response to feedback from the Stage 1 engagement.

94. In response to an October 2025 resolution of Council, the City wrote to tenants of social and affordable housing buildings under review as part of the Stage 2 proposal. The letter:

- explained that the review of planning controls is Council-led and part of long-term planning for the area to identify growth opportunities - they do not require or force any building to be demolished or renewed
- reassured tenants of both City West and Homes NSW sites that there was no immediate plans to redevelop their building and there are no changes to their tenancy arrangements
- outlined the planning process and expected timelines, including how and when stakeholders will be able to provide formal feedback during the public exhibition stage
- provided a contact from Homes NSW or City West should they have questions about their tenancy and a contact from City of Sydney should they have questions about the planning proposal.

95. The City was not contacted by tenants in response to the letters.

96. The public exhibition process for this proposal will be determined by the Department of Planning, Housing and Infrastructure. It is proposed that the public exhibition of the planning proposal and draft DCP will run concurrently. The consultation will be in accordance with the requirements of the:

(a) Gateway Determination issued by the Department of Planning, Housing and Infrastructure under section 3.34 of the Act

(b) Environmental Planning and Assessment Regulation 2021

(c) City of Sydney's Community Engagement Strategy and Participation Plan.

97. It is likely that the public exhibition period for the planning proposal would be a minimum of 20 working days.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

Tim Wise, Manager Planning Policy

Attachment A

Planning proposal – Ultimo Pyrmont
Stage 2

CITY OF SYDNEY

Planning Proposal
Ultimo Pyrmont Stage 2



The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Contents

1. Background 5
2. Planning controls 12
3. Objectives 14
4. Explanation of provisions 15
5. Justification 18
6. Mapping 37
7. Community consultation 38
8. Project timeline 39
9. Appendices 40

Table of figures

Figure 1. Specific sites affected by this planning proposal 9
Figure 2. Property zoning **Error! Bookmark not defined.**
Figure 3. Height and FSR **Error! Bookmark not defined.**
Figure 4. Proposed heights and FSRs 19
Figure 5. Ministerial Directions 25
Figure 6. Consistency with State Environmental Planning Policies 31

Executive summary

In October 2025, Council approved a new planning framework for Ultimo Pyrmont which included:

- new planning controls for between 1,262 and 1,524 homes in residential flats, mixed-use developments and small-lot housing, designed to ensure good access to sunlight and natural ventilation
- new planning controls with the capacity to accommodate between 3,603 and 6,970 jobs in a range of building typologies in highly accessible locations and align with the types of commercial buildings industry have told us are in high demand
- new planning controls that facilitate opportunities to increase publicly accessible open space, widen footpaths, accommodate over 250 new trees, 2,000sqm of new green roofs, and minimise overshadowing to existing residents and important public parks and places, and
- a new local infrastructure contributions plan for Ultimo/Pyrmont that will align growth with the delivery of new and improved local infrastructure.

Together with existing development approvals and State Significant sites, the approved planning framework exceeds the NSW Government's Pyrmont Peninsula Place Strategy (the Place Strategy) targets for the area, contributing between 4,555 and 4,817 homes and 23,637 and 27,004 jobs. The new planning framework commenced with the NSW Government's approval of the planning controls and local infrastructure contributions plan.

In October 2025, Council also endorsed a Stage 2 review of sites which were not in Stage 1 because they were:

- not identified for new controls in the Place Strategy,
- constrained by an existing strata scheme,
- social or affordable housing sites where the owner had originally not requested new controls, or
- or landowners requested controls different from what was exhibited in Stage 1.

Based on the Stage 2 review, this planning proposal seeks change the planning controls for the following 11 sites:

- Tivoli Gardens, 344 Bulwara Road, Ultimo
- 463-467 Harris Street, Ultimo
- 336-374 Jones Street (1-7 Henry Avene) and 370-374 Jones Street, Ultimo (amalgamated)
- Darling Harbour Apartments, 313-369 Harris Street, Pyrmont
- Headingley, 1-19 Allen Street, Pyrmont
- 100 Harris Street, Pyrmont
- 26-52 Mount Street, Pyrmont
- 1-33 Saunders Street, Pyrmont
- 2-10 Quarry Master Drive, Pyrmont
- 120 and 122 Saunders Street Pyrmont (amalgamated)
- 56 Harris Street, Pyrmont

These changes will facilitate:

- 1,240 additional homes, including 150 new social and affordable homes;
- space for 411 additional new jobs, primarily within new retail frontages; and

- opportunities for more publicly accessible open space, wider footpaths, 270 additional trees and 450sqm of additional green roofs.

This planning proposal also adds new sunlight protection controls for key public parks, open spaces and civic places across Ultimo and Pyrmont, consistent with the NSW Government's Pyrmont Peninsula Place Strategy. The proposed controls accommodate increased height and density while protecting the amenity, usability and attractiveness of public spaces, including:

- Pirrama Park
- Union Square and
- Mary Ann Street Park.

This planning proposal is supported by an Urban Design Study (Attachment C) as well as a Flood Study (Attachment D) and a Precinct Transport Study (Attachment E) undertaken in collaboration with the NSW Department of Planning, Housing and Infrastructure.

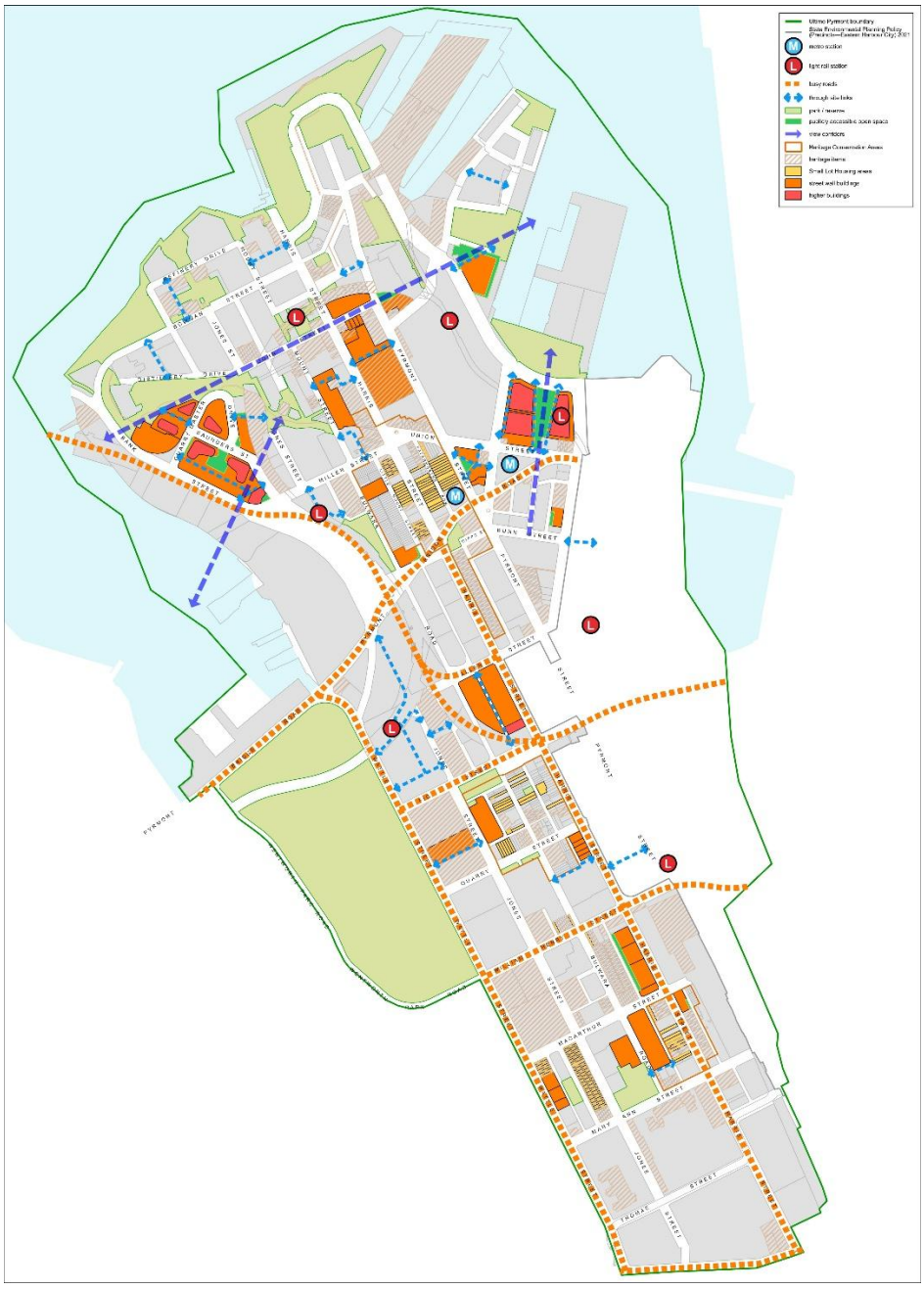
1. Background

1.1. Ultimo/Pyrmont Stage 2

1.1.1. Site identification

This planning proposal relates to various sites in Ultimo and Pyrmont. It complements the City's Ultimo/Pyrmont Stage 1 Planning Proposal, which will soon come into effect.

Figure 1. Ultimo/Pyrmont Stage 1 and Stage 2 sites (shown in orange)



1.1.2. Location and context

The initial study area, “the Pyrmont Peninsula”, was identified by the Department of Planning, Housing and Infrastructure (the Department) in their Pyrmont Peninsula Place Strategy (the Place Strategy).

The area is within the City of Sydney local government area about 1 kilometre west of Town Hall in Sydney’s CBD. The northern extent of the study area is Pirrama Park and Johnstons Bay. The eastern extent is Darling Harbour. The southern extent is George Street/Broadway. The western extent is Wentworth Park.

Pyrmont Metro is scheduled to open in the early 2030s directly connecting Ultimo and Pyrmont to Sydney CBD, Bays West and centres along the Metro West alignment including Sydney Olympic Park, Parramatta and Westmead. The NSW Treasury Economic Development Strategy and Demographic Profile developed in support of the NSW Government’s Place Strategy outline that with the opening of Metro in Pyrmont in the early 2030s, there will be significant additional demand for people to live, work, visit and move their businesses to Ultimo and Pyrmont.

1.1.3. Transport and access

The planned construction of the Metro West station within Pyrmont will significantly improve the public transport in the area. The Place Strategy identified more demand for business and homes in the area as a result of the Metro, which supports the higher commercial and residential densities proposed in this planning proposal. The City's proposal reinforces its Stage 1 land use approach that seeks to:

- incentivise a critical mass of business floor space close to future Pyrmont Metro Station to promote public transport use by workers and customers, support a self-sustaining workplace precinct in a diversity of building typologies while also continuing to support the growth and clustering of creative media businesses;
- plan for a middle ring of mixed-use developments with strong public transport accessibility to provide homes for people and good access to local shops and services for existing and future residents; and
- provide an outer ring of residential development, comprised of housing options ranging from higher density to small lot dwellings, located slightly further from public transport but still within walking distance of light rail, bus routes or the Pyrmont Metro station.

1.1.7 Public domain

The public domain of Ultimo Pyrmont is quite disparate. There are areas of very high quality public domain with attractive open space, streetscapes and shared zones. There are also areas bisected by flyovers for arterial roads, large concrete walls and low pedestrian safety and amenity. Several major transport routes pass through the area, including Harris Street, which is a major connector between the western distributor and the eastern and southern suburbs of the City.

The current streetscapes are also varied. There are pockets of single and two storey terrace houses, modern residential flat buildings and mixed-use developments, modern commercial buildings, adaptive reuse of heritage items and vernacular warehouse and commercial facilities. This diverse streetscape is reflected on how this area relates to public spaces. A number of areas, such as along Pyrmont Bridge Road, suffer from poor pedestrian amenity, narrow footpaths and uneven footpaths. Other areas, such as Murray Street and parts of Bulwara Road, provide a high quality pedestrian environment.

There are several public parks and publicly accessible spaces. As with the public domain, these are of varying quality. Areas such as Carmichael Park and Quarry Park provide high-quality public space to the community. Conversely, some publicly accessible spaces are of a lesser quality, and are a less desirable space for community use.

Controls focussed on improving the amenity of public spaces has been a guiding theme in the preparation of site controls, including consideration of overshadowing, streetscape and interaction with heritage items and heritage conservation areas.

1.2. Strategic context

1.2.1. Pyrmont Peninsula Place Strategy

The Place Strategy is a NSW Government prepared strategy that outlines their vision for how Ultimo and Pyrmont should grow in the future. The Place Strategy is supported by a range of documents, including an Economic Development Strategy prepared by NSW Treasury, Heritage Studies, Urban Design Frameworks, and a Place Based Transport Strategy. The Place Strategy is underpinned by the NSW Government's Local Environmental Plan Making Guideline which requires the plan-making authority to consider whether a planning proposal has strategic merit, including whether it gives effect to relevant regional plans and any strategy or place strategy endorsed by the Planning Secretary.

Ultimo/Pyrmont Planning Proposal Stage 1

In October 2025, Council approved a new planning framework for Ultimo/Pyrmont which included:

- new planning controls for between 1,262 and 1,524 homes in residential flats, mixed-use developments and small-lot housing, designed to ensure good access to sunlight and natural ventilation
- new planning controls with the capacity to accommodate between 3,603 and 6,970 jobs in a range of building typologies in highly accessible locations and align with the types of commercial buildings industry have told us are in high demand
- new planning controls that facilitate opportunities to increase publicly accessible open space, widen footpaths, accommodate over 250 new trees, 2,000sqm of new green roofs, and minimise overshadowing to existing residents and important public parks and places, and
- a new local infrastructure contributions plan for Ultimo/Pyrmont that will align growth with the delivery of new and improved local infrastructure.

Together with existing development approvals and State Significant sites, the approved planning framework exceeds the Place Strategy targets for the area, contributing between 4,555 and 4,817 homes and 23,637 and 27,004 jobs.

The new planning framework will soon come into effect, with the NSW Government finalising the planning controls and approving the new local infrastructure contributions plan. Early results indicate a strong market response, with development applications at either the pre-application or lodgement stage for 3 sites, delivering a potential 366 new dwellings and capacity for 24 new jobs.

A full background of the City's Stage 1 proposal, Place Strategy history, our community engagement, design considerations and approach can be viewed:

- for the December 2023 Stage 1 pre-exhibition report to the Transport, Heritage, Environment and Planning Committee at https://meetings.cityofsydney.nsw.gov.au/ieListDocuments.aspx?CId=137&MId=4185&%20Ver=4 (see Item 5), and
- for the October 2025 Stage 1 post-exhibition report to the Transport, Heritage, Environment and Planning Committee at https://meetings.cityofsydney.nsw.gov.au/ieListDocuments.aspx?CId=137&MId=4641&Ver=4 (see Item 4).

When approved, Council also endorsed a Stage 2 review of sites. These sites were not included in the City's Stage 1 proposal because they were either:

- not identified for new controls in the Place Strategy,
- constrained by an existing strata scheme,
- social or affordable housing sites where the owner had originally not requested new controls, or
- landowner requests for new controls were different from what was exhibited under Stage 1.

This planning proposal outlines the outcomes of the City's Stage 2 review and proposes changes be made to the Ultimo Pyrmont planning framework.

1.3. Strategic review process

1.3.1. The City's strategic review

As detailed in Ultimo/Pyrmont Planning Proposal Stage 1, the City's strategic review identified sites in the area that could accommodate an uplift in height and density, and how that uplift could be accommodated whilst considering the following design considerations:

1. more deep soil for more trees and cool green spaces
2. more public space for more people – streets and open spaces
3. minimise overshadowing of existing residential properties
4. reinforce 'street wall' form of most buildings
5. conserve heritage values
6. good design for wind and noise
7. match land use to place
8. consider public views to and from public places
9. maximise development within constraints

1.3.2. Stage 2 review

Our work with the community and landowners on Ultimo/Pyrmont Planning Proposal Stage 1 revealed more opportunities for more and better homes in the area, including social and affordable housing. Council resolved to investigate these sites in October 2025 as part of a Stage 2 review.

This planning proposal outlines the outcomes of the City's Stage 2 review and proposes changes be made to the Ultimo/Pyrmont planning framework. The proposed changes follow the same design considerations as adopted under Stage 1, with this analysis and outcomes detailed in our Urban Design Study at Attachment C.

Specific sites affected by this planning proposal are shown in Figure 2 and 3 below.

Figure 2. Specific sites affected by this planning proposal

Map reference	Address	Lot/DP/SP
9	344 Bulwara Road, Ultimo	Lot 101, DP 736100, SP31316
8	463-467 Harris Street, Ultimo	Lot 1, DP 80155
7	336-368 Jones Street, Ultimo (1-7 Henry Avenue, Ultimo)	Lot 1, DP 829164
7	370-374 Jones Street, Ultimo	Lot 2, DP 829164
6	313-369 Harris Street, Pyrmont	Lot 100, DP 613788, SP18021
6	1-19 Allen Street, Pyrmont	Lot 100, DP 711434, SP30156
4	100 Harris Street, Pyrmont	Lot 100, DP1219280
5	26-52 Mount Street, Pyrmont	Lot 1, DP 633390
1	1-33 Saunders Street, Pyrmont	Lot 80, DP 1293466 and Lot 81, DP 1293466
2	2-10 Quarry Master Drive, Pyrmont	Lot 30, DP 859243, SP 61091
2	122 Saunders Street, Pyrmont	Lot 1, DP 839057, SP 47754
2	120 Saunders Street, Pyrmont	Lot 2, DP 839057, SP 46801
3	56 Harris Street, Pyrmont	Lot 22, DP 878273

Figure 3. Specific sites affected by this planning proposal



1.3.3. Engagement

Significant engagement was undertaken during the preparation of the Stage 1 planning proposal. This Stage 2 planning proposal is in direct response to feedback heard as part of the Stage 1 engagement.

In response to an October 2025 resolution of Council, the City wrote to tenants of social and affordable housing buildings under review as part of the Stage 2 proposal. The letter:

- explained that the review of planning controls is Council-led and part of long-term planning for the area
- reassured tenants of both City West and Homes NSW sites that there was no immediate plans to redevelop their building and there are no changes to their tenancy arrangements
- outlined the planning process and expected timelines, including how and when stakeholders will be able to provide formal feedback during the public exhibition stage, and
- provided a contact from Homes NSW or City West should they have questions about their tenancy and a contact from City of Sydney should they have questions about the planning proposal.

The City was not contacted by tenants in response to the letters.

The public exhibition process for this proposal will be determined by the Department of Planning, Housing and Infrastructure. It is proposed that the public exhibition of the Stage 2 planning proposal and draft DCP will run concurrently. The consultation will be in accordance with the requirements of the:

- Gateway Determination issued by the Department of Planning, Housing and Infrastructure under section 3.34 of the Act;
- Environmental Planning and Assessment Regulation 2021; and
- City of Sydney's Community Engagement Strategy and Participation Plan.

1.3.4. Yields

This Stage 2 planning proposal provides capacity for 1,240 new dwellings and up to 411 new jobs.

Together with the Stage 1 planning proposal, existing development approvals and State Significant sites, the existing and proposed planning framework exceeds the NSW Government's the Place Strategy targets for the area, contributing over 5,500 homes and 27,000 jobs.

2. Planning controls

2.1. Zoning

Sydney LEP 2012 contains the zoning controls for Ultimo and Pyrmont.

The existing zoning of the lots affected by this planning proposal are shown in Figure 3.

2.2. Building height and floor space ratio

Sydney LEP 2012 contains the maximum building height and floor space ratio controls for Ultimo and Pyrmont.

The existing maximum building heights and floor space ratio controls for the identified sites are shown in the Figure 4 below.

Figure 4. Existing planning controls

Address	Lot/DP	Zone	Existing Height (m)	Existing FSR
344 Bulwara Road, Ultimo	Lot 101, DP 736100, SP31316	R1 General Residential	15	2
463-467 Harris Street, Ultimo	Lot 1, DP 80155	MU1 Mixed Use	12	2.5
336-368 Jones Street, Ultimo (1-7 Henry Avenue, Ultimo)	Lot 1, DP 829164	R1 General Residential	12	1.5
370-374 Jones Street, Ultimo	Lot 2, DP 829164	RE1 Public Recreation	None	None
313-369 Harris Street, Pyrmont	Lot 100, DP 613788, SP18021	R1 General Residential	18	2
1-19 Allen Street, Pyrmont	Lot 100, DP 711434, SP30156	R1 General Residential	15	2
100 Harris Street, Pyrmont	Lot 100, DP1219280	E2 Commercial Centre	38	3.5
26-52 Mount Street, Pyrmont	Lot 1, DP 633390	R1 General Residential	12	1
1-33 Saunders Street, Pyrmont	Lot 80, DP 1293466 and Lot 81, DP 1293466	MU1 Mixed Use	55	4.22

Address	Lot/DP	Zone	Existing Height (m)	Existing FSR
2-10 Quarry Master Drive, Pyrmont	Lot 30, DP 859243, SP 61091	R1 General Residential	30	4
122 Saunders Street, Pyrmont	Lot 1, DP 839057, SP 47754	R1 General Residential	45	4
120 Saunders Street, Pyrmont	Lot 2, DP 839057, SP 46801	R1 General Residential	45	4
56 Harris Street, Pyrmont	Lot 22, DP 878273	MU1 Mixed Use	24	4

2.3. Heritage

2.3.1. Local heritage listings

The following sites subject to this planning proposal are, in or adjacent to heritage conservation areas, or are heritage listed lots or adjacent to heritage lots.

- 344 Bulwara Road, Ultimo
- 463-467 Harris Street, Ultimo
- 336-368 Jones Street and 1-7 Henry Avenue, Ultimo
- 100 Harris Street, Pyrmont
- 2652 Mount Street, Pyrmont
- 56 Harris Street, Pyrmont

The controls for these sites have been developed to minimise impacts on both heritage items and heritage conservation areas. This approach is discussed for each of the sites in the Urban Design Study at Attachment C and has been overseen and reviewed by the City's Senior Heritage Specialist.

2.3.2. State heritage listings

No changes to controls for State heritage items are proposed. No State heritage items are impacted by this proposal.

2.4. Sydney DCP 2012 controls

The study area is currently under the Sydney DCP 2012. A new section of Sydney DCP 2012 was drafted as part of Stage 1. This section will be amended for sites identified within this planning proposal. The existing DCP will continue to apply to those sites not covered by this planning proposal. The draft DCP is to be exhibited alongside this planning proposal. This allows for a clear understanding of the proposed built form and controls proposed for the sites within the study area.

3. Objectives

This planning proposal will continue to facilitate the renewal of Ultimo and Pyrmont consistent with the Place Strategy, the Economic Development Strategy. The objectives of the planning proposal are to:

- provide additional floor space for employment and a hotel use close to the Pyrmont Metro Station at 100 Harris Street, Pyrmont
- provide additional residential floor space to contribute to housing targets
- ensure appropriate levels of sun access to Ultimo and Pyrmont's important parks and places
- allow retail and business premises as an additional permitted use for certain sites in the general residential zone to support activity and provision of local services
- ensure delivery of affordable and social housing on sites owned by social and community housing providers
- deliver additional affordable housing by identifying sites with an uplift in residential yield in Schedule 6C of the LEP, requiring an additional contribution for affordable housing on the increased FSR

4. Explanation of provisions

4.1. Proposed amendment to Sydney LEP 2012

The following amendments are proposed to the Sydney Local Environmental Plan 2012:

4.1.1. Mapping amendments

- Amend the Locality and Site Identification map sheets 7 and 8 to identify the relevant sites as 'Ultimo/Pyrmont Opportunity Land'
- Amend the Floor Space Ratio map sheets 7 and 8 as shown at Appendix 2 of this planning proposal to introduce new floor space ratio controls for identified sites.
- Amend the Height of Buildings map sheets 7 and 8 as shown at Appendix 2 of this planning proposal to introduce new height controls for identified sites.
- Amend the Land Use map sheet 8 as shown at Appendix 2 of this planning proposal to facilitate the re-location of RE1 zoned open space
- Amend the Sun Access Protection Map Sheets 7 and 8 as shown at Appendix 2 of this planning proposal to protect sun access to:
    - Pirrama Park and Giba Park
    - James Watkinson Reserve
    - Ballaarat Park
    - Metcalfe Park
    - Distillery Drive Park/The Knoll,
    - Waterfront Park
    - Cadi Park
    - Bank Street Park
    - Wentworth Park
    - Fig Lane Park
    - Quarry Green
    - Mary Ann Street Park
    - Alumni Green
    - Union Square
    - Maybanke Park
    - Elizabeth Healey Reserve
    - Paradise Reserve
    - Pyrmont Bay Park
    - Carmichael Park, and

    - Sydney Fish Market Square.

- Amend the Active Street Frontages Map Sheets 7 and 8 as shown at Appendix 2 of this planning proposal to apply active street frontage controls to the identified frontages.
- Introduce new Affordable Housing Map Sheets 7 and 8 to show sites to which an additional Affordable Housing Contribution will apply to the residential uplift, as shown at Appendix 2 of this planning proposal.

4.1.2. Ultimo/Pyrmont Opportunity Land

- Amend Part 9 Ultimo/Pyrmont Opportunity Land objectives to include:
    - to provide for social and affordable housing
    - to improve access to local shops and services
- Amend Part 9 provisions for 1-19 Allen Street and 313-369 Harris Street to:
    - require business premises and retail premises at street level, and
    - allow for additional business premises and retail premises floor space at basement level that is excluded from their maximum FSR
- Amend Part 9 provisions to ensure that for development on Ultimo/Pyrmont Precinct Opportunity Land, the consent authority is satisfied that:
    - 100% social and affordable housing is provided at 336-368 Jones Street, Ultimo (1-7 Henry Avenue, Ultimo), 370-374 Jones Street, Ultimo, 26-52 Mount Street, Pyrmont
    - 100% affordable housing is provided at 56 Harris Street, Pyrmont
    - as part of the redevelopment of Quarry Lane Streetscape (370-374 Jones Street, Ultimo), an equal or larger area of RE1 open space is re-provided to the north of the site (336-368 Jones Street / 1-7 Henry Avenue, Ultimo)

4.1.3. Sun access planes

- Amend Clause 6.17(4), 6.18 and schedule 6A to protect sun access to Pirrama Park and Giba Park, James Watkinson Reserve, Ballaarat Park, Metcalfe Park, Distillery Drive Park/The Knoll, Waterfront Park, Cadi Park, Bank Street Park, Wentworth Park, Fig Lane Park, Quarry Green, Mary Ann Street Park, Alumni Green, Union Square, Maybanke Park, Elizabeth Healey Reserve, Paradise Reserve, Pyrmont Bay Park, Carmichael Park and Sydney Fish Market Square by applying a sun access controls, as outlined in Appendix 1.

4.1.4. Affordable housing

- Identify land with a residential uplift in Schedule 6C to ensure affordable housing contributions, currently of 9% of the additional residential floor space, are imposed as shown in the table at Appendix 1 and mapped at Appendix 2.

4.1.5. Additional permitted uses

Make retail and business premises additional permitted uses on the following sites:

- 1-19 Allen Street, Pyrmont
- 313-369 Harris Street, Pyrmont
- 344 Bulwara Road, Ultimo
- 122 Saunders Street, Pyrmont
- 120 Saunders Street, Pyrmont

4.1.6. Residential accommodation on certain land

Ensure residential accommodation on the following sites does not include co-living housing:

- 344 Bulwara Road, Ultimo
- 463-467 Harris Street, Ultimo

- 336-368 Jones Street, Ultimo
- 370-374 Jones Street, Ultimo
- 313-369 Harris Street, Pyrmont
- 1-19 Allen Street, Pyrmont
- 26-52 Mount Street, Pyrmont
- 1-33 Saunders Street, Pyrmont
- 2-10 Quarry Master Drive, Pyrmont
- 122 Saunders Street, Pyrmont
- 120 Saunders Street, Pyrmont
- 56 Harris Street, Pyrmont

4.2. Site-specific DCP

Amendments to Sydney DCP 2012 have been prepared and will be exhibited concurrently with this Planning Proposal. This DCP proposes specific controls for the sites included within this Planning Proposal and provides site-by-site envelopes and controls. This is to ensure that impacts on adjoining properties and public space are minimised. The draft DCP will include overall heights, building envelopes, setbacks, deep soil zones, building typology and pedestrian amenity.

5. Justification

5.1. Strategic merit

The planning proposal represents a further stage in the implementation of the broader precinct planning framework for Ultimo and Pyrmont undertaken by the Department of Planning, Housing and Infrastructure and the City of Sydney. This Stage 2 planning proposal builds on the strategic work that informed the initial Ultimo and Pyrmont planning proposal and applies the established planning approach to an additional group of sites identified as having the potential to contribute to the renewal of the precinct.

Extensive strategic planning, stakeholder engagement and community consultation have informed the vision, objectives and planning principles for Ultimo and Pyrmont. Ongoing consultation and discussion have been held with the community and key stakeholders to keep them informed of the process and how their comments have been reflected in the concepts prepared by the City.

The review of the planning controls for Ultimo and Pyrmont has been as a direct result of the strategic work undertaken by the NSW Government in association with the construction of the Metro West Line and construction of the Pyrmont Metro Station. As such, it is considered that the strategic merit of the planning proposal has already been established by the NSW Government.

Consistent with the Stage 1 planning proposal, community feedback and strategic planning work have informed the key design considerations guiding this planning proposal. These considerations are:

1. more deep soil for more trees and cool green spaces
2. more public space for more people – streets and open spaces
3. minimise overshadowing of existing residential properties
4. reinforce ‘street wall’ form of most buildings
5. conserve heritage values
6. good design for wind and noise
7. match land use to place
8. consider public views to and from public places
9. maximise development within constraints

5.2. Development outcome

This section provides a description of development outcomes facilitated by this planning proposal and the draft DCP. It also provides the justification for the proposed amendments to the Sydney LEP 2012.

The planning proposal seeks to increase both residential and employment capacity in appropriate locations through a diverse range of building forms. The City's approach is to:

a. incentivise a critical mass of employment floor space close to Pyrmont Metro Station
b. plan for a middle ring of mixed-use developments with strong public transport accessibility to provide homes for people and good access to local shops and services for existing and future residents, and

c. provide an outer ring of residential development located slightly further from public transport but still within walking distance of light rail, bus routes or the Pyrmont metro station.

5.2.1. Site specific provisions

It is proposed to apply Part 9 Ultimo/Pyrmont Opportunity Land to the identified sites.

Three sites owned by social and community housing providers have site specific provisions to secure the delivery of social and/or affordable housing.

Development on Ultimo/Pyrmont Opportunity Land is supported by a draft DCP containing detailed built form controls. As such, development on Ultimo/Pyrmont Opportunity Land will not require preparation of a site-specific development control plan.

5.2.2. Changes to height and FSR

The planning proposal allows additional height and/or floor space to support growth and development in appropriate locations and forms across Ultimo and Pyrmont. The proposed height and floor space controls have been developed through detailed urban design studies taking into consideration site-specific constraints. The proposed height and floor space controls are supported by detailed built form controls in the draft DCP.

The proposed height and FSR controls outlined in Figure 5 below are shown on the Height of Building and Floor Space Ratio Maps at Appendix 2.

Figure 5. Proposed heights and FSRs

Address	Lot/DP	Existing height(m)	Proposed height (m)	Existing FSR	Proposed FSR
344 Bulwara Road, Ultimo	SP31316	15	45	2	3.12
463-467 Harris Street, Ultimo	Lot 1, DP80155	12	27	2.5	3
336-368 Jones Street, Ultimo (1-7 Henry Avenue, Ultimo)*	Lot 1, DP829164	12	20	1.5	1.6
370-374 Jones Street, Ultimo*	Lot 2, DP829164	none		none	
313-369 Harris Street, Pyrmont	SP18021	18	65	2	4
1-19 Allen Street, Pyrmont	SP30156	15	45	2	4.22
100 Harris Street, Pyrmont	Lot 100, DP1219280	38	40	3.5	4.16
26-52 Mount Street, Pyrmont	Lot 1, DP633390	12	27	1	1.75
1-33 Saunders Street, Pyrmont	Lot 80, DP 1293466 Lot 81, 1293466	55	RL120	4.22	7.25

Address	Lot/DP	Existing height(m)	Proposed height (m)	Existing FSR	Proposed FSR
2-10 Quarry Master Drive, Pyrmont	Lot 30, DP 859243, SP 61091	30	95	4	6.5
122 Saunders Street, Pyrmont*	Lot 1, DP 839057, SP 47754	45	RL144	4	4.74
120 Saunders Street, Pyrmont*	Lot 2, DP 839057, SP 46801	45	60	4	
56 Harris Street, Pyrmont	Lot 22, DP878273	24	45	4	4

*Amalgamated sites

5.2.3. Sun access protection

The NSW Government's Pyrmont Peninsula Place Strategy supports growth and change without compromising the amenity, functionality and environmental quality of the area's public parks, open spaces and publicly accessible places. As the area accommodates additional homes, jobs and taller buildings, access to sunlight for parks becomes increasingly important to maintaining their usability and enjoyment and support healthy tree canopy and grass growth.

The Place Strategy balances increased building heights and density with the protection of sunlight access, public amenity, local character and heritage values. It enables sun access and no additional overshadowing controls to guide the location and scale of future development so that significant public parks, open spaces and civic places continue to receive appropriate sunlight.

The planning proposal seeks to amend the LEP to introduce the sun access planes and no additional overshadowing controls identified in the Place Strategy, to protect sunlight to key public parks, open spaces and civic places across Ultimo and Pyrmont.

The proposed LEP controls will protect sunlight access to Pirrama Park and Giba Park, James Watkinson Reserve, Ballaarat Park, Metcalfe Park, Distillery Drive Park/The Knoll, Waterfront Park, Cadi Park, Bank Street Park, Wentworth Park, Fig Lane Park, Quarry Green, Mary Ann Street Park, Alumni Green, Union Square, Maybanke Park, Elizabeth Healey Reserve, Paradise Reserve, Pyrmont Bay Park, Carmichael Park and Sydney Fish Market Square.

The proposed DCP provisions have been informed by detailed solar access testing undertaken through the Urban Design Study. The proposed sun access controls do not reduce the proposed development potential of sites.

Amendments to sun access controls to Wentworth Park, Sydney Fish Market Square and Bank Street Park are administrative amendments in line with those made as part of the City's LEP Housekeeping Planning Proposal. These amendments do not reduce the available solar access to these spaces and do not reduce the proposed development potential of sites. The proposed DCP provisions have been informed by detailed solar access testing undertaken through the Urban Design Study.

Proposed amendments to Sydney LEP 2012 are outlined at Appendix 1 and associated amendments to the Sun Access Protection Map are shown at Appendix 2.

It is noted that the SAP coordinates at Appendix 1 are presented in MGA94 format for consistency with the Pyrmont Peninsula Place Strategy. These coordinates will be updated to MGA2020 format following public exhibition and prior to the making of the LEP.

5.2.4. Changes to zoning

Some minor changes are being made to land use. The planning proposal seeks to rationalise the location of an existing City-owned RE1 Public Recreation parcel situated at the southern end of 336-368 Jones Street.

The relocation of this open space to the north-western part of the site will:

- facilitate a more efficient site layout, enabling additional social and affordable housing while maintaining an equivalent quantum of publicly accessible open space, and
- improve solar access to the open space, enhance its usability and amenity, and allow it to function as an extension of Fig Lane Park, contributing to a more cohesive open space network.

To facilitate this outcome, the proposal includes the rezoning of 370–374 Jones Street (Quarry Lane Streetscape) from RE1 Public Recreation to R1 General Residential, together with the rezoning of an equivalent area at the north-western corner of 336-368 Jones Street from R1 General Residential to RE1 Public Recreation.

The planning proposal does not seek to reclassify the existing Quarry Lane Streetscape from community land to operational land. Any future reclassification required to facilitate the relocation of the park would be considered through a separate process at a later stage, once redevelopment of the sites is sufficiently progressed and the delivery of the replacement public open space is certain.

5.2.5. Additional permitted uses

To support neighbourhood activity and the provision of services that meet the day-to-day needs of residents, the planning proposal seeks to permit retail and business premises as an additional permitted use on the following sites zoned R1 General Residential:

– 1-19 Allen Street, Pyrmont
– 313-369 Harris Street, Pyrmont
– 344 Bulwara Road, Ultimo
– 122 Saunders Street, Pyrmont
– 120 Saunders Street, Pyrmont

The Precinct Transport Study (Attachment E) identified a gap in access to supermarket facilities within the central area of the peninsula. The planning proposal therefore enables the delivery of a supermarket as part of development on 1–19 Allen Street. This improves access to essential goods and services, supports a walkable neighbourhood and reduces the need for vehicle trips.

5.2.6. Ensuring delivery of housing that contributes to housing targets

The planning proposal is intended to facilitate significant additional housing capacity in Ultimo and Pyrmont and contribute to meeting the City's and the NSW Government's housing targets under the National Housing Accord. It is therefore important that the additional residential capacity created through the proposal results in the delivery of dwellings that contribute to those targets.

Current housing targets do not count non-private dwellings, including co-living housing. This is a particular consideration in the City of Sydney, where demand for co-living housing, including student accommodation, is comparatively high due to the concentration of universities and other educational institutions. Co-living housing can achieve substantially higher dwelling yields than conventional residential development due to smaller private spaces and shared facilities and is already incentivised with additional floor space permitted under the NSW State Environmental Planning Policy (Housing) 2021.

There is therefore a risk that sites provided with additional residential development capacity through the planning proposal could instead be developed for co-living housing. This would reduce the number of countable private dwellings delivered and undermine the contribution the proposal is intended to make towards meeting the City's and the NSW Government's housing targets.

The Planning Proposal therefore seeks to ensure that residential accommodation, other than co-living housing, is developed on identified sites receiving additional residential development capacity. The proposed restriction is limited to co-living housing and does not apply to other forms of non-private accommodation.

Co-living housing is important in meeting the housing needs of students and other residents and already has advantages under the planning system including floor space incentives and different requirements for residential amenity. Therefore, on the identified sites, the proposed residential capacity is specifically intended to facilitate the delivery of private dwellings that contribute to the City's and the NSW Government's housing targets.

5.2.7. Design excellence bonuses

The planning proposal includes a requirement that development on Ultimo/Pyrmont Opportunity Land not be eligible for additional height under Clause 6.21D(3)(a) of the Sydney LEP 2012.

The site-specific controls for on Ultimo/Pyrmont Opportunity Land have been developed through detailed urban design testing to maximise development capacity while minimising overshadowing of existing residential properties and public spaces. Therefore, as additional height has already been maximised, Clause 6.21D(3)(a) of the Sydney LEP 2012 should not apply.

Development on Ultimo/Pyrmont Opportunity Land will still be eligible for additional floor space under Clause 6.21D(3)(b) of the Sydney LEP 2012. The potential for additional design excellence floor space was tested during the preparation of this planning proposal to ensure it can be accommodated.

5.2.8. Active frontages

Some frontages are proposed to be added to the Sydney LEP Active Frontage Map to encourage uses that activate the street, such as retail and business uses. The proposed active frontages are identified on the Active Frontages Map at Appendix 2.

5.2.9. Affordable housing contributions

Sites which have been identified for residential uplift are proposed to be included in Schedule 6C of the Sydney LEP 2012 to capture 9 per cent of the residential uplift floor space as affordable rental housing. This approach is consistent with the existing City of Sydney Affordable Housing Program.

This contribution is in addition to the standard requirement under cl. 7.13 for 1 per cent of the total floor area of non-residential uses and 3 per cent of the total floor area of residential uses.

The sites proposed to be included in Schedule 6C of the Sydney LEP 2012 are listed at Appendix 1 and mapped at Appendix 2.

5.3. Need for the planning proposal

Is the planning proposal a result of an endorsed LSPS, strategic study or report?

The planning proposal is the result of the NSW Government's Pyrmont Peninsula Place Strategy and Economic Development Strategy, which establish the long-term vision for Ultimo and Pyrmont and identify the area as capable of accommodating significant housing and employment growth. The Place Strategy seeks to deliver additional homes and jobs while improving public spaces, connectivity, sustainability, heritage outcomes and neighbourhood amenity.

The planning proposal also supports the Sydney Plan, which identifies the need to accommodate additional housing and employment growth in locations with strong access to public transport, infrastructure, services and jobs. The Sydney Plan specifically identifies Ultimo/Pyrmont as an area with further major housing opportunities that should be rezoned for additional uplift in the short term. The proposal responds directly to this strategic direction by facilitating additional housing and

employment capacity in an established inner-city precinct served by existing and planned transport infrastructure, open space and employment centres.

The Stage 2 planning proposal builds on the City's earlier Stage 1 work and focuses on sites requiring further investigation, including strata-titled sites, social and affordable housing sites and sites subject to landowner requests for review. The proposed controls deliver additional housing and jobs alongside new publicly accessible open space, improved pedestrian connectivity, increased tree canopy and broader neighbourhood improvements.

5.4. Relationship to the strategic planning framework

Will the planning proposal give effect to the state land use plan and relevant region plan (including any exhibited draft plans or strategies)?

State Land Use Plan

The proposal gives effect to the NSW State Land Use Plan by supporting the priorities of Housed, Prosperous, Connected, Resilient, Liveable and Coordinated. The proposal facilitates additional housing supply, including social and affordable housing, in an established inner-city location with access to jobs, public transport and services. It also provides capacity for additional employment, supports investment in public infrastructure and public transport, facilitates publicly accessible open space and urban greening, and aligns housing and employment growth with infrastructure delivery. Through these measures, the proposal contributes to a more sustainable, connected and liveable community while supporting the coordinated delivery of growth.

Sydney Plan

The proposal gives effect to the Sydney Plan by delivering additional housing and employment capacity in a highly accessible strategic location. The Sydney Plan identifies the need to accommodate housing and jobs growth in locations with access to public transport, infrastructure, services and employment opportunities and specifically identifies Pyrmont-Ultimo as an area with further major housing opportunities that should be rezoned for additional uplift in the short term. The proposal responds directly to this strategic direction through the delivery of additional homes, jobs and affordable housing in close proximity to the future Pyrmont Metro station and existing public transport services.

The proposal is also consistent with the following priority responses of the Sydney Plan:

- **Increase housing diversity and choice** through a range of housing typologies and tenures, including residential flat buildings, mixed-use development, social housing and affordable rental housing.
- **Secure the supply of affordable housing** through additional affordable housing contribution requirements applying to residential uplift.
- **Grow well-located jobs** by providing additional employment capacity close to existing and planned public transport infrastructure.
- **Align infrastructure with planned growth** through the delivery of local infrastructure funded by the Ultimo/Pyrmont Local Infrastructure Contributions Plan and coordination with major transport investments, including the Pyrmont Metro.
- **Grow and connect public open space** through new publicly accessible open spaces, improved pedestrian links, wider footpaths, increased tree canopy and enhanced connections between neighbourhoods, centres and public transport.

Together, these outcomes support the Sydney Plan's objective of coordinating housing, jobs, infrastructure, transport, sustainability and liveability outcomes in locations capable of accommodating growth.

Is the planning proposal consistent with any other applicable State and regional studies, plans, or strategies?

Yes. This planning proposal is consistent with relevant local strategies and plans as summarised below.

Pyrmont Peninsula Place Strategy, Pyrmont Peninsula Economic Development Strategy and Pyrmont Peninsula Place Strategy - Urban Design Report (Vol. 3 Sub-precinct Master Planning)

The Place Strategy and Pyrmont Peninsula Economic Development Strategy still have statutory weight and are mandatory matters that must be addressed when determining the strategic merit of the application as per the NSW Government's Local Environmental Plan Making Guideline, July 2026. The Guidelines require the plan making authority determine whether a proposal has strategic merit by assessing whether it gives effect to the state land use plan and relevant region plan, including "any place strategy for a strategic precinct".

The NSW Department of Planning, Housing and Infrastructure confirmed, in writing to the City on 23 July 2026 and 30 July 2026, that the Place Strategy and Economic Development Strategy remain in force for the purposes of assessing and determining strategic merit.

As detailed in Appendix 3, the proposal is consistent with and gives effect to the Place Strategy and Economic Development Strategy.

Is the planning proposal consistent with a council LSPS or local strategy or strategic plan?

Sustainable Sydney 2030-2050

The planning proposal supports following Sustainable Sydney strategic directions:

Direction 5 – A city for walking, cycling and public transport - The proposal is well located and walkable neighbourhood. It is also within close proximity to light rail and the future Pyrmont Metro station which supports the continued optimal use of existing and planned transport infrastructure.

Direction 6 – An equitable and inclusive city - The proposal will support diversity in the housing market through the provision of social, affordable rental and market housing.

City Plan 2036 (LSPS)

This planning proposal gives effect to the following priorities of City Plan 2036:

Housing

- H1: Housing for all – The proposal facilitates additional housing supply in a highly accessible location. It will increase housing capacity, support housing diversity and contribute to affordable housing outcomes in proximity to jobs, services, public transport and open space.

Infrastructure

- I1: Movement for walkable neighbourhoods and a connected city – The sites are located within easy access of public transport, walking and cycling connections. The proposal directs additional housing growth to a location where residents can access employment, education, services and recreation without reliance on private vehicles.
- I2: Align development and growth with supporting infrastructure – The proposal locates additional housing in an established urban area with access to existing transport, utility, open space, health and community infrastructure. The proposal also supports the efficient use of existing infrastructure and services.

Liveability

- L3: New homes for a diverse community – The proposal facilitates a range of housing outcomes, including affordable housing and social housing, helping to meet the needs of a growing and changing population.

Productivity

- P1: Growing a stronger, more competitive economy – The proposal facilitates a mixed-use precinct in proximity to major employment, education and health institutions and retains employment-generating floor space within the site.

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 region plan. This planning proposal aligns with the following priorities of the strategy:

- Priority H1 – Facilitating more homes in the right locations – This proposal would deliver additional dwellings in a well-established area that is close to public transport, social infrastructure and public facilities.
- Priority H2: Coordinating housing growth with the delivery of infrastructure – The proposal is responding to the proposed Metro West line and associated station in Pyrmont
- Priority H3 – Increasing diversity and choice in housing – This proposal would contribute to increased housing diversity and affordability with the provision of social, affordable rental and market housing.
- Priority H4: Increase the diversity and number of homes available for lower-income households – The proposal will facilitate additional opportunities for housing diversity, including social and affordable rental housing. The planning proposal also includes those properties that achieve a yield uplift in Schedule 6C of the LEP which ensures additional contributions for affordable housing on the percentage of increased yield.

Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Ministerial Direction - Local Plan Making priorities) or key government priority?

This proposal is consistent with all applicable Ministerial Directions issued under section 9.1 of the Environmental Planning and Assessment Act 1979, as summarised in Figure 6.

Figure 6. Ministerial Directions

Ministerial Direction	Comment
Priority 1: Aboriginal Outcomes	
P1.1 – Aboriginal Land Planning	Not applicable. This planning proposal does not affect land owned or managed by an Aboriginal Land Council (ALC). Accordingly, Direction P1.1 – Aboriginal Land Planning does not apply to this proposal.
P1.2 – Cultural Guidance	The planning proposal has had regard to Aboriginal cultural values and the broader cultural context of Pyrmont Peninsula. The proposal implements the strategic planning framework established through the Pyrmont Peninsula Place Strategy, which was informed by Aboriginal cultural heritage investigations and Designing with Country work, including the Pyrmont Peninsula Indigenous Cultural Heritage Report and Reading Country Recommendations prepared by Djinjama. These studies identified the continuing cultural significance of Pyrmont Peninsula to Aboriginal people and recommended improved interpretation, recognition of Country, access to open space, connection to water, urban greening and opportunities for cultural expression within the public domain.

	The planning proposal does not directly affect any identified Aboriginal heritage sites, Aboriginal Places or known Aboriginal objects. The majority of sites subject to the proposal are highly urbanised and previously developed land. However, the proposal has been informed by the broader Aboriginal cultural landscape identified through the Pyrmont Peninsula Place Strategy and seeks to support improved public access, connectivity, urban greening and opportunities for interpretation of Aboriginal history and culture. The proposal may indirectly contribute to several Aboriginal cultural outcomes identified through the Place Strategy. This includes improving access to and awareness of nearby Aboriginal heritage features and interpretation opportunities, including the new Yananurala harbour walk. The proposal's new pedestrian connections, publicly accessible open spaces and foreshore-linked movement network will assist in strengthening public access to places where Aboriginal stories, histories and connections to Country are interpreted and shared. The Djinjama Reading Country Recommendations emphasise Country-centred design, cultural safety, ongoing engagement with Aboriginal communities, recognition of Indigenous Cultural and Intellectual Property and opportunities for Aboriginal cultural expression in public spaces. The planning proposal supports these principles through provisions that increase tree canopy, deep soil planting, publicly accessible open space, permeability and opportunities for future place-based interpretation and public domain improvements at the development application and public domain design stages. As the proposal primarily amends strategic planning controls and does not directly impact identified Aboriginal heritage sites, no project-specific Aboriginal cultural assessment has been undertaken. Future development applications will be required to undertake any Aboriginal cultural heritage assessment, consultation and approvals required under the relevant legislation where site-specific investigations identify archaeological sensitivity or potential impacts on Aboriginal heritage values.
Priority 2: Housed	
P2.1 – Housing	Consistent. The proposal seeks to increase the density of residential accommodation on appropriately located sites within the area. This will create additional housing diversity in the area, responds to the provision of the Metro transportation links and will set out requirements for appropriate design and sustainability outcomes.
Priority 3: Prosperous	
P3.1 – Employment	Consistent. The proposal does not remove employment capacity from the site. Rather, it facilitates a mixed-use outcome that integrates employment and residential uses in a highly accessible location close to major employment, education and health precincts. The proposal will support ongoing job creation while contributing to broader housing objectives.

P3.2 Rural	Not applicable. This direction does not apply as the site does not contain or affect rural or conservation zoned land.
P3.3 – Airport Safeguarding	Consistent. The proposal does not penetrate the applicable PANS-OPS surface. Detailed aviation assessment and consultation with relevant aviation authorities will be undertaken as part of future development applications to demonstrate that any proposed development can be accommodated within the applicable airport safeguarding framework and to obtain any required approvals.
P3.4 – Mining and Petroleum Production	Not applicable. The site does not contain or affect land associated with mining or petroleum production activities or identified mineral or petroleum resources.
P3.5 – Oyster Aquaculture	Not applicable. The site does not contain or affect a Priority Oyster Aquaculture Area or oyster aquaculture lease.
P3.6 – Mine Subsidence and Unstable Land	Not applicable. The site is not located within a declared mine subsidence district and has not been identified as unstable land.
Priority 4: Connected	
P4.1 – Integrating Land Use and Infrastructure	Consistent. The provisions in these planning amendments will result in intensification of land uses in Ultimo and Pyrmont, however this intensification of land uses is consistent with that envisaged by the NSW Government's Place Strategy and will not adversely affect the traffic conditions in Ultimo and Pyrmont as confirmed by a number of NSW Government transport strategies and assessments including the December 2020 VIAE Consulting Pyrmont Transport Plan and the 2023 Transport for NSW Pyrmont Ultimo Transport Plan. In addition, the proposed amendments are consistent with this Direction and would be likely to improve access to housing, jobs and services, have the potential to reduce travel demand and support the efficient and viable operation of public transport services by introducing intensified land uses close to proposed public transport upgrades (Pyrmont metro station). The City's planning controls already include maximum car parking rates which promote public transport use. The City's Ultimo/Pyrmont Local Infrastructure Contributions Plan includes a number of projects focused on promoting walking and cycling as a mode of transport with footpath widening and cycleway works proposed.
Priority 5: Resilient	
P5.1 – Strategic Conservation Planning	Not applicable. The site is not identified as avoided land, a strategic conservation area or certified urban capable land.
P5.2 – Conservation	Not applicable. The site does not contain environmentally sensitive land and is not located within an existing or proposed conservation zone.
P5.3 – Foreshores and Water Catchment Areas	Consistent. The area is partially mapped as being a Foreshore and Waterways as defined in State Environmental Planning Policy

	(Biodiversity and Conservation) 2021. As such, consideration must be given to this direction. The proposal is consistent with the principles contained within this direction. The building envelopes and controls proposed for the specific sites ensure that public views and access to the harbour are maintained or enhanced, access to foreshore areas is not altered, and the historical significance of the harbour for both Aboriginal communities and the role it played within European occupation are acknowledged.
P5.4 – Contaminated Lands	Consistent. The site is located within the Pyrmont Peninsula, an area with a long history of industrial, maritime, transport and utility-related land uses. Historical activities across Pyrmont and Ultimo have included port and shipping operations, rail infrastructure, heavy industry, fuel storage, power generation, waste management and land reclamation activities, all of which have the potential to have impacted soil and groundwater quality. The Department commissioned the Pyrmont Peninsula Place Strategy Contamination and Acid Sulfate Soils Study (GHD, 2021) to inform implementation of the Pyrmont Peninsula Place Strategy. The study constitutes a preliminary contamination assessment of the peninsula and was prepared in accordance with the contaminated land planning framework. The study reviewed publicly available information, including historical land uses, EPA contaminated land records, licensed activities, geological and hydrogeological information, and publicly available contamination investigations. The study identifies the Saunders Street and Quarry Master Drive precinct as having a high likelihood of contamination issues, primarily due to its proximity to the former tank farm, Pyrmont Incinerator and other historical industrial land uses. The study also notes that there is generally potential for contamination to occur across the Pyrmont Peninsula as a consequence of its historical industrial development. Notwithstanding this potential constraint, the Contamination Study demonstrates that contamination has been considered at the planning proposal stage, consistent with the requirements of Ministerial Direction P5.4. The proposal does not rely on the immediate suitability of the land for any future sensitive use. Any future development application will be required to address contamination in accordance with the Environmental Planning and Assessment Act 1979, relevant EPA guidelines and applicable planning controls, including the preparation of site-specific contamination investigations where required. Should future investigations identify contamination requiring remediation, remediation works will be undertaken prior to the commencement of any use for which the land would otherwise be unsuitable.
P5.5 – Acid Sulfate Soils	Consistent. The Pyrmont Peninsula Place Strategy Contamination and Acid Sulfate Soils Study (GHD, 2021) identifies that land within the Pyrmont Peninsula is affected by a range of Acid Sulfate Soil (ASS) classes, reflecting the peninsula's historic foreshore

	environment, reclaimed land and proximity to Sydney Harbour. The study notes that ASS Classes 1, 2, 3 and 5 are present across parts of the peninsula, with Class 1 land generally occurring along sections of the foreshore, Class 2 land associated with reclaimed low-lying areas, and Class 5 land extending across much of the peninsula. The study was prepared specifically to inform implementation of the Pyrmont Peninsula Place Strategy and includes a preliminary assessment of ASS constraints across the peninsula. It concludes that, where ASS are present or likely to be present, further investigation and management may be required as part of future redevelopment to ensure environmental impacts are appropriately managed. The planning proposal does not amend or remove the existing statutory framework that applies to ASS under the Sydney Local Environmental Plan 2012. The proposal does not contain provisions that would contradict or hinder the application of ASS controls, nor does it permit development without the necessary consideration of ASS impacts through subsequent assessment processes. The objective of Ministerial Direction P5.5 is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils. Consistent with this objective, any future development application involving excavation, dewatering, or other works with the potential to disturb ASS will be required to address ASS risks in accordance with the Sydney LEP 2012, the Acid Sulfate Soils Manual and relevant planning controls. Site-specific investigations, management plans and mitigation measures can be prepared where required to demonstrate that potential impacts can be appropriately managed.
P5.6 – Threatened species, threatened ecological communities and their habitat	Not applicable. The site is located within a highly urbanised inner-city environment that has been extensively developed and modified over a long period. The land is characterised by residential, commercial, mixed-use, transport and other urban development and does not contain any identified threatened species, threatened ecological communities or associated habitat. The planning proposal does not affect any known threatened species, threatened ecological communities or their habitat, nor does it facilitate development that would be inconsistent with the conservation of biodiversity values.
P5.7 – Flooding	Consistent. A Flood Impact and Risk Assessment (FIRA) has been prepared to support the planning proposal. The assessment was undertaken in accordance with the NSW Flood Risk Management Manual (2023) and relevant flood planning guidance and considered adopted flood studies, floodplain risk management plans and the City of Sydney's flood-related planning framework. The FIRA confirms that parts of the planning proposal area are affected by flooding associated with overland flow and local drainage systems. The assessment undertook a detailed review of sites within the proposal area, including flood behaviour, hazard, flood planning levels, access and evacuation considerations, flood function and climate change impacts.

	Where flood constraints exist, the City of Sydney's flood-related controls, including the Sydney Interim Floodplain Management Policy, ensure that future development is compatible with the flood risk affecting the site. The FIRA notes that future development applications for flood-affected land will be required to demonstrate compliance with the relevant flood planning controls through site-specific flood impact and risk assessments. The FIRA concludes that flood constraints do not preclude redevelopment of any of the identified sites. While some sites are affected by flooding, the most significant constraints relate to the achievement of flood planning levels and access and evacuation requirements. The assessment finds that these matters can be appropriately addressed through detailed design at the development application stage. In many cases, redevelopment will facilitate improvements in flood resilience through compliance with contemporary flood planning requirements, the provision of flood-compatible building design, increased opportunities for flood refuge and the incorporation of deep soil areas that may improve local infiltration and reduce runoff. Where sites are affected by flooding, the proposed planning controls have been informed by the findings of the FIRA. Additional floor space will typically be accommodated above flood-affected levels, while mixed-use zoning enables less sensitive land uses to be located on lower floors where appropriate. The assessment also concludes that access to and from sites can generally be maintained during flood events through appropriate building design and that redevelopment is likely to result in outcomes that are more compatible with the existing flood risk than current development. The FIRA specifically assessed the proposal against Ministerial Direction P5.7 – Flooding and concluded that, while the proposal facilitates an increase in development and dwelling density on some flood-affected land, it remains consistent with the objectives of the Direction. The assessment demonstrates that future development can appropriately manage flood risk through the application of existing flood-related controls and site-specific assessment at the development application stage.
P5.8 – Coastal Management	Parts of the study area are mapped as being both in the Coastal Environment Area and the Coastal Use Area under State Environmental Planning Policy (Resilience and Hazards) 2021. No area subject to a proposed rezoning has been identified as a coastal vulnerability area or have been identified as land affected by a current or future coastal hazard. The proposal is consistent with the Ministerial Direction. The proposal is consistent with the objectives of the Coastal Management Act 2016 and the NSW Coastal Design Guidelines 2023. This proposal protects and enhances coastal environmental values, ensures the built environment is appropriate for the coast and local context and protects and enhances the social and cultural values of the coastal zone. Nothing in the proposal requires the preparation of a coastal management program.

P5.9 – Planning for Bush Fire Protection	Not applicable. The site is not bush fire prone land and the proposal does not affect land identified as bush fire prone. Accordingly, this direction does not apply to the planning proposal.
Priority 6: Liveable	Not applicable
Priority 7: Coordinated	Not applicable

Is the planning proposal consistent with applicable SEPPs?

This proposal is consistent with all applicable State Environmental Planning Policies (SEPPs), as summarised in Figure 7.

Figure 7. Consistency with State Environmental Planning Policies

State Environmental Planning Policy	Comment
SEPP (Biodiversity and Conservation) 2021	Consistent – This proposal will not contradict or hinder application of this SEPP. Parts of Ultimo and Pyrmont are mapped as being subject to the foreshores and waterways area boundary. No changes are proposed in these locations. The planning proposal is consistent with the objectives of the section of the SEPP.
SEPP (Exempt and Complying Development Codes) 2008	Consistent – This proposal will not contradict or hinder application of this SEPP.
SEPP (Housing) 2021	Consistent – This proposal increases capacity for residential development across Ultimo and Pyrmont. The City's built form modelling has tested the controls contained in this proposal to confirm that every site zoned for housing can accommodate housing developments which achieve the amenity requirements in Chapter 4 of this SEPP. In addition, the SEPP will continue to apply to development within the Precinct that develops for relevant housing.
SEPP (Industry and Employment) 2021	Consistent
SEPP (Planning Systems) 2021	Consistent. The planning proposal has been prepared having regard to the provisions of the State Environmental Planning Policy (Planning Systems) 2021. The Planning Systems SEPP contains provisions relating to State and regional development, Aboriginal land planning processes and concurrence and consent arrangements for certain development. The proposal does not affect land or development to which the relevant provisions of the Planning Systems SEPP apply, including

State Environmental Planning Policy	Comment
	provisions relating to State significant development, State significant infrastructure or Aboriginal land planning processes. The proposal does not seek to vary or conflict with any provision of the Planning Systems SEPP. Accordingly, the planning proposal is consistent with the State Environmental Planning Policy (Planning Systems) 2021.
SEPP (Precincts – Eastern Harbour City) 2021	4.1 of the SEPP precludes the SEPP from operating on land to which the Sydney Local Environmental Plan 2012 applies. Therefore, the SEPP is not applicable to this planning proposal.
SEPP (Resilience and Hazards) 2021	Consistent – the proposal includes land that is mapped as both Coastal Environment Area and Coastal Use Area under the SEPP. With reference to Chapter 4 Remediation of Land, no change in permissible land uses is facilitated by this planning proposal which introduces sensitive uses. Further investigation regarding potential contamination will be undertaken as part of any future development application process. The proposed uses are consistent with the objectives of the SEPP.
SEPP (Resources and Energy) 2021	Consistent
SEPP (Sustainable Buildings) 2022	Consistent – the proposal seeks to achieve positive outcomes by ensuring that new development will exceed the latest requirements and will implement other policy work from the City.
SEPP (Transport and Infrastructure) 2021	Consistent. The planning proposal has been prepared having regard to the provisions of the State Environmental Planning Policy (Transport and Infrastructure) 2021. In particular, consideration has been given to Clause 2.120 – Impact of road noise or vibration on non-road development. A number of sites within the planning proposal area are located adjacent to major transport corridors, including the Western Distributor, Anzac Bridge approaches and other classified roads. The proposal may facilitate additional residential and mixed-use development on some of these sites, where road traffic noise and vibration are potential considerations.

State Environmental Planning Policy	Comment
	The planning proposal does not alter the operation of Clause 2.120, which requires road traffic noise and vibration impacts to be considered at the development application stage. Detailed assessment of these matters is more appropriately undertaken once the design, layout, orientation and built form of a development are known. Notwithstanding, the proposed planning and urban design framework has been informed by the presence of major transport corridors. The proposed building envelopes and associated DCP controls seek to minimise potential impacts on future occupants by encouraging building designs that locate sensitive residential uses away from major roads where practicable, utilise less sensitive uses as acoustic buffers, and create opportunities for quieter internal and communal spaces. The controls also support building orientation, setbacks, podium configurations and façade treatments that assist in reducing exposure to traffic noise and vibration. Future development applications will be required to demonstrate compliance with the Transport and Infrastructure SEPP 2021 and any applicable road traffic noise and vibration guidelines, including the incorporation of appropriate acoustic attenuation and mitigation measures where required.

The following SEPPs are not applicable to this proposal:

SEPP (Precincts – Central River City) 2021, SEPP (Precincts – Regional) 2021, SEPP (Precincts – Western Parkland City) 2021, SEPP (Primary Production) 2021

5.5. 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?

The planning proposal is unlikely to adversely affect any critical habitat, threatened species, populations, ecological communities or their habitats.

The proposal applies predominantly to already developed urban land characterised by residential, commercial and mixed-use buildings, parking areas and other urban development. The sites identified for change are highly urbanised and do not contain bushland, remnant native vegetation or areas known to support significant biodiversity values. While the proposal includes the relocation of an existing pocket park within the Jones Street and Henry Avenue site, this does not involve the loss of bushland, remnant native vegetation or identified biodiversity values. The relocated park will remain publicly accessible and provides opportunities for improved solar access, landscaping and tree canopy outcomes.

The Pyrmont Peninsula Place Strategy Biodiversity Study found that Pyrmont has undergone extensive urban development and retains very little, if any, remnant native habitat. The study recognised that future development has the potential to generate biodiversity impacts but concluded that these impacts can be appropriately managed through landscape design, development controls and construction management measures. The study also identified urban landscaping, parks and private open spaces as the primary opportunities for biodiversity enhancement within the peninsula.

The planning proposal and supporting technical investigations do not identify any critical habitat, threatened species, threatened ecological communities or significant biodiversity values on the subject sites. Accordingly, it is highly unlikely that the proposal will result in significant adverse impacts on threatened biodiversity values.

The proposal facilitates substantial increases in deep soil planting, tree canopy and green infrastructure across Ultimo and Pyrmont. Most sites identified for change provide significant areas of deep soil suitable for canopy tree planting and biodiversity-supporting landscaping. Where deep soil opportunities are constrained, alternative greening measures, including green roofs, are proposed. These measures are expected to contribute positively to urban greening, habitat opportunities and ecological resilience over time.

Future development arising from the proposal will be subject to detailed assessment at the development application stage, including consideration of the Biodiversity Conservation Act 2016, Sydney DCP 2012 and any other relevant biodiversity assessment requirements. Should biodiversity values be identified through future site investigations, any necessary biodiversity assessment and management measures will be undertaken as part of the development assessment process.

Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

The planning proposal has been informed by detailed urban design, heritage, solar access, view, wind, noise and environmental analysis. These investigations demonstrate that the proposed planning controls can accommodate additional housing and employment growth while avoiding unacceptable impacts on adjoining properties, public open spaces, heritage items and the broader public domain. The findings of these investigations are documented in the accompanying Urban Design Study and supporting technical reports.

The proposal includes a range of measures to manage potential environmental effects. These include site-specific height and floor space controls, building setbacks, height transitions, sun access planes, deep soil planting requirements, publicly accessible open spaces, green roofs and provisions to improve pedestrian amenity. Together, these measures help manage impacts relating to overshadowing, urban heat, visual amenity, wind, noise and the environmental performance of future development.

The proposal has also been developed with regard to heritage conservation. Several sites are located within heritage conservation areas. The proposed planning controls have been informed by heritage analysis and seek to retain and enhance significant heritage buildings, maintain important streetscape character and protect key views and visual relationships that contribute to the significance of Ultimo and Pyrmont.

The proposal is not expected to have adverse impacts on Aboriginal objects, Aboriginal places or areas of Aboriginal heritage significance. The sites are predominantly developed urban land and no Aboriginal heritage constraints have been identified through the strategic planning process. Any future development applications will be required to comply with the relevant requirements of the National Parks and Wildlife Act 1974 and any applicable Aboriginal cultural heritage assessment requirements.

Future development facilitated by the proposal will remain subject to detailed assessment at the development application stage. This will include consideration of site-specific environmental matters, including flooding, contamination, geotechnical conditions, noise, wind, heritage,

biodiversity and urban design, to ensure that any environmental impacts are appropriately identified and managed prior to development occurring.

Has the planning proposal adequately addressed any social and economic effects?

The planning proposal is expected to have significant positive social and economic benefits. It facilitates additional housing supply in a highly accessible inner-city location and contributes to the delivery of market, affordable rental and social housing. The proposal will increase housing choice through a range of dwelling types and tenures, supporting a more diverse community and improving access to housing for a broad range of households. It also supports the renewal of ageing residential building stock, providing opportunities for better quality, more sustainable and accessible housing that responds to contemporary living standards.

The proposal will provide capacity for additional employment through new mixed-use development and shop-top housing. Increased residential and worker populations will support local businesses, retail activity and services, contributing to the economic vitality of Ultimo and Pyrmont. The proposal is located within an established employment precinct with excellent access to existing and planned public transport infrastructure, including the future Pyrmont Metro station, supporting broader strategic objectives for jobs growth in well-connected locations.

The proposal also delivers a range of public benefits. These include opportunities for additional publicly accessible open space, improved pedestrian and cycling connections, widened footpaths, increased tree canopy, deep soil planting and new green infrastructure. The proposal introduces planning controls that protect solar access to key parks and public spaces and is supported by the Ultimo/Pyrmont Local Infrastructure Contributions Plan, which will assist in funding upgrades to parks, streets, public domain improvements and active transport infrastructure.

The proposal is not expected to result in adverse impacts on retail centres, freight logistics networks, schools, hospitals or strategically important employment land. Growth facilitated by the proposal is concentrated in locations identified through the Pyrmont Peninsula Place Strategy and supported by existing and planned infrastructure. Future demand generated by additional residents and workers will be addressed through ongoing infrastructure planning, development contributions and the provision of additional community, open space and public domain improvements.

The proposal has been informed by detailed urban design, heritage, environmental and infrastructure investigations. These studies demonstrate that potential social and economic impacts can be appropriately managed through the proposed planning controls and future development assessment processes. Overall, the proposal delivers a net positive social and economic outcome through the provision of additional housing, jobs, affordable housing, social housing, public open space and public domain improvements.

5.6. Infrastructure (Local, State and Commonwealth interests

Is there adequate infrastructure (physical and social) for the planning proposal?

The planning proposal is supported by existing and planned physical and social infrastructure and is capable of being serviced over time. Ultimo and Pyrmont are established inner-city neighbourhoods with access to a significant range of infrastructure, including public transport, open space, community facilities, education facilities, utilities, health services and active transport connections. The proposal directs growth to locations that are already well served by infrastructure and services, consistent with the strategic planning framework for the precinct.

The proposal is supported by substantial transport investment, including the future Pyrmont Metro station, existing light rail services, bus services and planned transport improvements identified in the Pyrmont-Ultimo Transport Plan. The proposal also facilitates wider footpaths, new through-site links, publicly accessible open spaces and improved walking and cycling connections that will support a transit-oriented pattern of growth.

Infrastructure needs arising from future growth have been considered through the preparation of the Ultimo/Pyrmont Local Infrastructure Contributions Plan, which came into force July 2026. The contributions plan is expected to generate approximately $148 million in infrastructure funding and includes works to:

- improve the capacity of Wentworth Park
- upgrade community facilities
- deliver public domain improvements and tree planting
- provide dedicated cycling infrastructure
- undertake drainage and stormwater improvement works.

In July 2026, the NSW Government also committed to the return of Wentworth Park as public open space when the Greyhound Breeders, Owners and Trainers Association vacate the site at the end of 2026.

The proposal is also supported by existing utility infrastructure. Sydney Water has advised that water and wastewater servicing is expected to be available to support future development, although local upgrades may be required as individual redevelopment projects proceed. The NSW Government's Utilities Infrastructure Assessment, prepared to support the Pyrmont Peninsula Place Strategy, also considered the infrastructure upgrades required to service anticipated growth over the life of the strategy.

Relevant government agencies have been consulted on infrastructure requirements. NSW Education advised that projected demand for primary school places can generally be accommodated by existing assets, although future upgrades to secondary school infrastructure may be required. Sydney Water, Sydney Metro, Transport for NSW and other infrastructure providers did not raise any strategic servicing constraints that would prevent the proposal proceeding.

Accordingly, adequate infrastructure exists, or is planned, to support the growth facilitated by the proposal. Any additional infrastructure requirements will be addressed through the local infrastructure contributions framework, ongoing public infrastructure investment and site-specific assessment at the development application stage.

6. Mapping

The planning proposal seeks to amend the following maps contained in Sydney LEP 2012:

- Tile 007
  - Sheet CL1_007
  - Sheet FSR_007
  - Sheet HOB_007
  - Sheet AFH_007
  - Sheet ASF_007
  - Sheet SAP_007
- Tile 008
  - Sheet CL1_008
  - Sheet FSR_008
  - Sheet HOB_008
  - Sheet AFH_008
  - Sheet ASF_008
  - Sheet SAP_008
  - Sheet LZN_008

The above maps are included at Appendix 2.

7. Community consultation

Significant engagement was undertaken during the preparation of the Stage 1 planning proposal. This Stage 2 planning proposal is in direct response to feedback heard as part of the Stage 1 engagement.

In response to an October 2025 resolution of Council, the City wrote to tenants of social and affordable housing buildings under review as part of the Stage 2 proposal. The letter:

- explained that the review of planning controls is Council-led and part of long-term planning for the area
- reassured tenants of both City West and Homes NSW sites that there was no immediate plans to redevelop their building and there are no changes to their tenancy arrangements
- outlined the planning process and expected timelines, including how and when stakeholders will be able to provide formal feedback during the public exhibition stage, and
- provided a contact from Homes NSW or City West should they have questions about their tenancy and a contact from City of Sydney should they have questions about the planning proposal.

The City was not contacted by tenants in response to the letters.

The public exhibition process for this proposal will be determined by the Department of Planning, Housing and Infrastructure. It is proposed that the public exhibition of the Stage 2 planning proposal and draft DCP will run concurrently. The consultation will be in accordance with the requirements of:

- the Gateway Determination issued by the Department of Planning, Housing and Infrastructure under section 3.34 of the Act;
- the Environmental Planning and Assessment Regulation 2021; and
- the City of Sydney's Community Engagement Strategy and Participation Plan.

8. Project timeline

The anticipated timeline for completion of this planning proposal as follows:

Stage	Timeframe
Commencement / gateway determination	October – December 2026
Government agency consultation	December – February 2026-27
Public exhibition	December – February 2026-27
Review of issues raised in submissions	February – March 2027
Post-exhibition reporting	April – May 2027
LEP drafting	June – July 2027
LEP notification	August 2027

9. Appendices

Appendix 1 – Example drafting

The following drafting is provided as indicative wording only, noting that it is supplementary to the Ultimo/Pyrmont Planning Proposal Stage 1 drafting, which had not been finalised when this planning proposal was prepared.

Part 9 Ultimo/Pyrmont Opportunity Land

Amend section 9.1 Objectives and application of the part by adding the following:

(h) to facilitate the provision of social and affordable housing.

(i) to improve access to local shops and services.

Amend section 9.2 Development on Ultimo/Pyrmont Opportunity Land by adding the following:

(4)(a) Development consent must not be granted to development on land at 1–19 Allen Street and 313-369 Harris Street, Pyrmont unless the consent authority is satisfied that the development will result in business premises or retail premises at street level.

(4(b) A building on land at 1–19 Allen Street and 313-369 Harris Street, Pyrmont is eligible for an amount of additional floor space (business or retail floor space) equal to the floor space of any parts of the basement of the building used for the purposes of business premises or retail premises.

(5) Development consent must not be granted to development on 26-52 Mount Street, Pyrmont or on 56 Harris Street, Pyrmont unless the consent authority is satisfied that:

(a) the development is only for the purposes of affordable housing

(b) the affordable housing will be owned and managed by a public authority or a register community housing provider.

(6) Development consent must not be granted to development on 336-368 Jones Street, 1-7 Henry Avenue and 370-374 Jones Street, Ultimo unless the consent authority is satisfied that:

(a) development relates to the whole of the block

(b) the development includes public recreation land located at the north-western corner of the site with an area equal to or greater than the existing public recreation land at 370-374 Jones Street, Ultimo

(c) the development is only for the purposes of affordable housing

(d) the affordable housing will be owned and managed by a public authority or a register community housing provider.

Sun access planes

Amend the table is 6.17(4) and Schedule 6A by adding the following:

Place	Period of protection	Times of protection
Mary Anne Street Park	All year	10am – 2pm
Elizabeth Healey Reserve	All year	10am – 2pm

Union Square	All year	10am – 2pm
Pyrmont Bay Park	All year	10am – 2pm
Metcalfe Park	All year	10am – 2pm
Bank Street Park	All year	11am – 2pm

Mary Anne Street Park 14A sun access plane
(1) X is a point at 333478.7N, 6249570.9E, RL22.5.
(2) B1 is 74.55 degrees.
(3) V1 is 63.21 degrees.
(4) B2 is 46.6 degrees.
(5) V2 is 45.48 degrees.

Mary Anne Street Park 14B sun access plane
(1) X is a point at 333478.7N, 6249570.9E, RL22.5.
(2) B1 is 46.6 degrees.
(3) V1 is 45.48 degrees.
(4) B2 is 29.98 degrees.
(5) V2 is 26.34 degrees.

Mary Anne Street Park 14C sun access plane
(1) X is a point at 333478.7N, 6249570.9E, RL22.5.
(2) Y is a point at 333469.7N, 6249588.9E, RL23.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Mary Anne Street Park 14D sun access plane
(1) X is a point at 333469.7N, 6249588.9E, RL20.0.
(2) Y is a point at 333462.4N, 6249603.4E, RL20.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Mary Anne Street Park 14E sun access plane
(1) X is a point at 333462.4N, 6249603.4E, RL29.5.
(2) Y is a point at 333448.9N, 6249630.4E, RL30.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Mary Anne Street Park 14F sun access plane
(1) X is a point at 333448.9N, 6249630.4E, RL30.0.
(2) B1 is 29.98 degrees.
(3) V1 is 26.34 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Mary Anne Street Park 14G sun access plane
(1) X is a point at 333448.9N, 6249630.4E, RL30.0.
(2) Y is a point at 333434.6N, 6249623.7E, RL30.0.
(3) B is 359.16 degrees.
(4) V is 32.72 degrees.

Mary Anne Street Park 14H sun access plane
(1) X is a point at 333434.6N, 6249623.7E, RL30.0.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Mary Anne Street Park 14I sun access plane
(1) X is a point at 333434.6N, 6249623.7E, RL33.0.
(2) Y is a point at 333416.6N, 6249614.6E, RL33.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14J sun access plane
(1) X is a point at 333412.6N, 6249621.8E, RL33.0.
(2) Y is a point at 333398.7N, 6249614.9E, RL33.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14K sun access plane
(1) X is a point at 333398.7N, 6249614.9E, RL33.0.
(2) Y is a point at 333390.7N, 6249610.8E, RL32.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14L sun access plane
(1) X is a point at 333390.7N, 6249610.8E, RL32.5.
(2) Y is a point at 333407.1N, 6249578.7E, RL32.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14M sun access plane
(1) X is a point at 333407.1N, 6249578.7E, RL32.0.
(2) Y is a point at 333379.8N, 6249565.3E, RL30.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14N sun access plane
(1) X is a point at 333379.8N, 6249565.3E, RL21.5.
(2) Y is a point at 333362.1N, 6249556.6E, RL20.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14O sun access plane
(1) X is a point at 333362.1N, 6249556.6E, RL20.5.
(2) Y is a point at 333380.0N, 6249520.7E, RL20.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Mary Anne Street Park 14P sun access plane
(1) X is a point at 333380.0N, 6249520.7E, RL20.0.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Mary Anne Street Park 14Q sun access plane
(1) X is a point at 333380.0N, 6249520.7E, RL20.0.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

Elizabeth Healey Reserve 15A sun access plane
(1) X is a point at 333103.3N, 6250655.6E, RL39.5.
(2) B1 is 74.55 degrees.
(3) V1 is 63.21 degrees.
(4) B2 is 46.6 degrees.
(5) V2 is 45.48 degrees.

Elizabeth Healey Reserve 15B sun access plane
(1) X is a point at 333103.3N, 6250655.6E, RL39.5.
(2) B1 is 46.6 degrees.
(3) V1 is 45.48 degrees.
(4) B2 is 29.98 degrees.
(5) V2 is 26.34 degrees.

Elizabeth Healey Reserve 15C sun access plane
(1) X is a point at 333103.3N, 6250655.6E, RL39.5.
(2) Y is a point at 333092.1N, 6250650.1E, RL38.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Elizabeth Healey Reserve 15D sun access plane
(1) X is a point at 333092.1N, 6250650.1E, RL38.0.
(2) Y is a point at 333078.4N, 6250676.9E, RL36.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Elizabeth Healey Reserve 15E sun access plane
(1) X is a point at 333078.4N, 6250676.9E, RL29.5.
(2) Y is a point at 333072.1N, 6250697.8E, RL29.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Elizabeth Healey Reserve 15F sun access plane
(1) X is a point at 333072.1N, 6250697.8E, RL29.5.
(2) B1 is 29.98 degrees.
(3) V1 is 26.34 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Elizabeth Healey Reserve 15G sun access plane
(1) X is a point at 333072.1N, 6250697.8E, RL29.5.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Elizabeth Healey Reserve 15H sun access plane
(1) X is a point at 333072.1N, 6250697.8E, RL29.5.
(2) Y is a point at 333063.2N, 6250689.6E, RL29.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Elizabeth Healey Reserve 15I sun access plane
(1) X is a point at 333063.2N, 6250689.6E, RL26.0.
(2) Y is a point at 333045.2N, 6250662.0E, RL25.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Elizabeth Healey Reserve 15J sun access plane
(1) X is a point at 333045.2N, 6250662.0E, RL25.0.
(2) Y is a point at 333030.0N, 6250640.6E, RL24.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Elizabeth Healey Reserve 15K sun access plane
(1) X is a point at 333030.0N, 6250640.6E, RL24.5.
(2) Y is a point at 333046.1N, 6250605.0E, RL25.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Elizabeth Healey Reserve 15L sun access plane
(1) X is a point at 333046.1N, 6250605.0E, RL25.5.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Elizabeth Healey Reserve 15M sun access plane
(1) X is a point at 333046.1N, 6250605.0E, RL25.5.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

Union Square 16A sun access plane
(1) X is a point at 333071.8N, 6250820.6E, RL39.0.
(2) B1 is 74.55 degrees.
(3) V1 is 63.21 degrees.
(4) B2 is 46.6 degrees.
(5) V2 is 45.48 degrees.

Union Square 16B sun access plane
(1) X is a point at 333071.8N, 6250820.6E, RL39.0.
(2) B1 is 46.6 degrees.
(3) V1 is 45.48 degrees.
(4) B2 is 29.98 degrees.
(5) V2 is 26.34 degrees.

Union Square 16C sun access plane
(1) X is a point at 333071.8N, 6250820.6E, RL39.0.
(2) Y is a point at 333056.9N, 6250848.6E, RL38.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Union Square 16D sun access plane
(1) X is a point at 333056.9N, 6250848.6E, RL38.5.
(2) Y is a point at 333033.8N, 6250849.6E, RL39.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Union Square 16E sun access plane
(1) X is a point at 333033.8N, 6250849.6E, RL20.5.
(2) Y is a point at 332940.9N, 6250863.0E, RL26.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Union Square 16F sun access plane
(1) X is a point at 332940.9N, 6250863.0E, RL26.0.
(2) B1 is 29.98 degrees.
(3) V1 is 26.34 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Union Square 16G sun access plane
(1) X is a point at 332940.9N, 6250863.0E, RL26.0.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Union Square 16H sun access plane
(1) X is a point at 332940.9N, 6250863.0E, RL26.0.

(2) Y is a point at 332923.3N, 6250852.5E, RL26.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Union Square 16I sun access plane
(1) X is a point at 332923.3N, 6250852.5E, RL29.0.
(2) Y is a point at 332934.3N, 6250830.1E, RL29.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Union Square 16J sun access plane
(1) X is a point at 332934.3N, 6250830.1E, RL29.0.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Union Square 16K sun access plane
(1) X is a point at 332934.3N, 6250830.1E, RL29.0.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

Pyrmont Bay Park 17A sun access plane
(1) X is a point at 333316.0N, 6250964.5E, RL23.5.
(2) B1 is 74.55 degrees.
(3) V1 is 63.21 degrees.
(4) B2 is 46.6 degrees.
(5) V2 is 45.48 degrees.

Pyrmont Bay Park 17B sun access plane
(1) X is a point at 333316.0N, 6250964.5E, RL23.5.
(2) B1 is 46.6 degrees.
(3) V1 is 45.48 degrees.
(4) B2 is 29.98 degrees.
(5) V2 is 26.34 degrees.

Pyrmont Bay Park 17C sun access plane
(1) X is a point at 333316.0N, 6250964.5E, RL23.5.
(2) Y is a point at 333314.6N, 6250983.7E, RL23.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Pyrmont Bay Park 17D sun access plane
(1) X is a point at 333314.6N, 6250983.7E, RL23.0.
(2) Y is a point at 333323.1N, 6251017.1E, RL23.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Pyrmont Bay Park 17E sun access plane
(1) X is a point at 333323.1N, 6251017.1E, RL23.0.
(2) Y is a point at 333298.3N, 6251025.0E, RL23.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Pyrmont Bay Park 17F sun access plane
(1) X is a point at 333298.3N, 6251025.0E, RL13.0.
(2) Y is a point at 333244.9N, 6251042.7E, RL13.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Pyrmont Bay Park 17G sun access plane
(1) X is a point at 333244.9N, 6251042.7E, RL25.0.
(2) Y is a point at 333138.4N, 6251075.8E, RL25.0.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Pyrmont Bay Park 17H sun access plane
(1) X is a point at 333138.4N, 6251075.8E, RL25.0.
(2) B1 is 29.98 degrees.
(3) V1 is 26.34 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Pyrmont Bay Park 17I sun access plane
(1) X is a point at 333138.4N, 6251075.8E, RL25.0.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Pyrmont Bay Park 17J sun access plane
(1) X is a point at 333138.4N, 6251075.8E, RL25.0.
(2) Y is a point at 333122.9N, 6251038.5E, RL25.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Pyrmont Bay Park 17K sun access plane
(1) X is a point at 333122.9N, 6251038.5E, RL25.5.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Pyrmont Bay Park 17L sun access plane
(1) X is a point at 333122.9N, 6251038.5E, RL25.5.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

Metcalfe Park 18A sun access plane
(1) X is a point at 333194.3N, 6251281.5E, RL24.5.
(2) B1 is 74.55 degrees.
(3) V1 is 63.21 degrees.
(4) B2 is 46.6 degrees.
(5) V2 is 45.48 degrees.

Metcalfe Park 18B sun access plane
(1) X is a point at 333194.3N, 6251281.5E, RL24.5.
(2) B1 is 46.6 degrees.
(3) V1 is 45.48 degrees.
(4) B2 is 29.98 degrees.
(5) V2 is 26.34 degrees.

Metcalfe Park 18C sun access plane
(1) X is a point at 333194.3N, 6251281.5E, RL24.5.
(2) Y is a point at 333176.2N, 6251287.3E, RL24.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Metcalfe Park 18D sun access plane
(1) X is a point at 333176.2N, 6251287.3E, RL26.5.

(2) Y is a point at 333160.1N, 6251291.5E, RL26.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Metcalfe Park 18E sun access plane
(1) X is a point at 333160.1N, 6251291.5E, RL26.5.
(2) Y is a point at 333077.2N, 6251303.5E, RL26.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Metcalfe Park 18F sun access plane
(1) X is a point at 333077.2N, 6251303.5E, RL27.5.
(2) Y is a point at 333060.1N, 6251305.0E, RL27.5.
(3) B is 29.98 degrees.
(4) V is 26.34 degrees.

Metcalfe Park 18G sun access plane
(1) X is a point at 333060.1N, 6251305.0E, RL27.5.
(2) B1 is 29.98 degrees.
(3) V1 is 26.34 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Metcalfe Park 18H sun access plane
(1) X is a point at 333060.1N, 6251305.0E, RL27.5.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Metcalfe Park 18I sun access plane
(1) X is a point at 333060.1N, 6251305.0E, RL27.5.
(2) Y is a point at 333057.8N, 6251299.9E, RL27.5.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Metcalfe Park 18J sun access plane
(1) X is a point at 333057.8N, 6251299.9E, RL27.5.
(2) Y is a point at 333049.0N, 6251238.6E, RL27.0.
(3) B is 328.63 degrees.
(4) V is 25.69 degrees.

Metcalfe Park 18K sun access plane
(1) X is a point at 333049.0N, 6251238.6E, RL27.0.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Metcalfe Park 18L sun access plane
(1) X is a point at 333049.0N, 6251238.6E, RL27.0.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

Bank Street 19A sun access plane
(1) X is a point at 332452.2N, 6250802.1E, RL4.3.
(2) Y is a point at 332437.8N, 6250813.3E, RL4.2.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19B sun access plane
(1) X is a point at 332437.8N, 6250813.3E, RL4.2.
(2) Y is a point at 332424.1N, 6250826.3E, RL4.2.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19C sun access plane
(1) X is a point at 332424.1N, 6250826.3E, RL4.2.
(2) Y is a point at 332408.6N, 6250844.6E, RL4.2.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19D sun access plane
(1) X is a point at 332408.6N, 6250844.6E, RL4.2.
(2) Y is a point at 332403.9N, 6250850.9E, RL4.5.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19E sun access plane
(1) X is a point at 332403.9N, 6250850.9E, RL4.5.
(2) Y is a point at 332382.9N, 6250879.9E, RL4.5.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19F sun access plane
(1) X is a point at 332382.9N, 6250879.9E, RL4.5.
(2) Y is a point at 332376.1N, 6250888.6E, RL4.2.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19G sun access plane
(1) X is a point at 332376.1N, 6250888.6E, RL4.2.
(2) Y is a point at 332370.7N, 6250893.7E, RL4.2.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19H sun access plane
(1) X is a point at 332370.7N, 6250893.7E, RL4.2.
(2) Y is a point at 332362.1N, 6250900.2E, RL4.7.
(3) B is 15.27 degrees.
(4) V is 31.11 degrees.

Bank Street 19I sun access plane
(1) X is a point at 332362.1N, 6250900.2E, RL15.6.
(2) B1 is 15.27 degrees.
(3) V1 is 31.11 degrees.
(4) B2 is 359.16 degrees.
(5) V2 is 32.72 degrees.

Bank Street 19J sun access plane
(1) X is a point at 332362.1N, 6250900.2E, RL15.6.
(2) Y is a point at 332354.3N, 6250906.1E, RL20.1.
(3) B is 359.16 degrees.
(4) V is 32.72 degrees.

Bank Street 19K sun access plane
(1) X is a point at 332354.3N, 6250906.1E, RL20.1.
(2) Y is a point at 332346.1N, 6250903.2E, RL19.8.
(3) B is 359.16 degrees.
(4) V is 32.72 degrees.

Bank Street 19L sun access plane
(1) X is a point at 332346.1N, 6250903.2E, RL19.8.
(2) Y is a point at 332336.0N, 6250898.4E, RL18.5.
(3) B is 359.16 degrees.
(4) V is 32.72 degrees.

Bank Street 19M sun access plane
(1) X is a point at 332336.0N, 6250898.4E, RL18.5.
(2) B1 is 359.16 degrees.
(3) V1 is 32.72 degrees.
(4) B2 is 328.63 degrees.
(5) V2 is 25.69 degrees.

Bank Street 19N sun access plane
(1) X is a point at 332336.0N, 6250898.4E, RL18.5.
(2) B1 is 328.63 degrees.
(3) V1 is 25.69 degrees.
(4) B2 is 310.49 degrees.
(5) V2 is 44.16 degrees.

Bank Street 19O sun access plane
(1) X is a point at 332336.0N, 6250898.4E, RL18.5.
(2) B1 is 310.49 degrees.
(3) V1 is 44.16 degrees.
(4) B2 is 282.25 degrees.
(5) V2 is 60.44 degrees.

and associated diagrams.

Overshadowing of certain public places

Amend the table is 6.18(2) by adding the following:

Place	Period of protection	Times of protection
Pirrama Park and Giba Park	All year	10am-2pm
James Watkinson Reserve	All year	10am-2pm
Ballaarat Park	All year	10am-2pm
Distillery Drive Park/The Knoll	All year	10am-2pm
Waterfront Park	All year	10am-2pm
Cadi Park	All year	10am-2pm
Fig Lane Park	All year	10am-2pm
Quarry Green	All year	10am-2pm
Alumni Green	All year	10am-2pm
Maybanke Park	All year	10am-2pm
Paradise Reserve	All year	10am-2pm
Carmichael Park	All year	10am-2pm

Sydney Fish Market Square	All year	10am-2pm

Schedule 1 - Additional Permitted Use

(1) This clause applies to the following land at 1-19 Allen Street, Pyrmont, 313-369 Harris Street, Pyrmont, 344 Bulwara Road, Ultimo, 122 Saunders Street, Pyrmont and 120 Saunders Street, Pyrmont —

a) Lot 100, DP 711434, SP30156
b) Lot 100, DP 613788, SP18021
c) Lot 101, DP 736100, SP31316
d) Lot 1, DP 839057, SP 47754
e) Lot 2, DP 839057, SP 46801

(2) Development for the purposes of Retail Premises and Business Premises is permitted with development consent.

Schedule 6C Contribution requirement for certain development on Planning Proposal Land

Apply an affordable housing contribution of 9% to any residential floor space that exceeds the maximum floor space ratio that applied prior to the publication of the LEP that implements this planning proposal.

The suggested approach to amending Schedule 6C of the Sydney LEP is to:

- map sites according to their current FSR, for example, sites with a 2:1 FSR that will be mapped “Area 2” on the Affordable Housing Map, sites with a 2.5:1 FSR that will be mapped “Area 3” on the Affordable Housing Map, and so on as shown in the table below;
- identify each area in “Planning Proposal Land” (column 1) of Schedule 6C;
- In each row, require in “Contribution Requirement” (column 2) that the contribution requirement be calculated by “the total amount of (a) the contribution applying to the development under clause 7.13, and (b) if the part of a building intended to be used for a purpose other than residential accommodation has a floor space ratio of less than XX:1— 9% of the gross floor area equivalent to the amount by which the floor space ratio of the building exceeds XX:1”, with XX being the current FSR of the sites (before this planning proposal increases development capacity) as shown in the table below.

Address	Lot/DP	FSR above which a 9% affordable housing contribution is imposed on residential floor space	Affordable housing map area	Proposed FSR (excl Design Excellence)
344 Bulwara Road, Ultimo	SP31316	2	5	3.12
463-467 Harris Street, Ultimo	Lot 1, DP80155	2.5	6	3

Address	Lot/DP	FSR above which a 9% affordable housing contribution is imposed on residential floor space	Affordable housing map area	Proposed FSR (excl Design Excellence)
336-368 Jones Street, Ultimo (1-7 Henry Avenue, Ultimo) and 370-374 Jones Street, Ultimo	Lot 1, DP829164 Lot 2, DP829164	1.5	4	1.6
1-33 Saunders Street	Lot 80, DP 1293466 and Lot 81, DP 1293466	0	9	7.25
313-369 Harris Street, Pyrmont	SP18021	2	5	4
1-19 Allen Street, Pyrmont	SP30156	2	5	4.22
26-52 Mount Street, Pyrmont	Lot 1, DP633390	1	2	1.75
56 Harris Street, Pyrmont	Lot 22, DP878273	4	9	4
2-10 Quarry Master Drive, Pyrmont	Lot 30, DP 859243, SP 61091	4	9	6.5
122 Saunders Street, Pyrmont	Lot 1, DP 839057, SP 47754	4	9	4.2
120 Saunders Street, Pyrmont	Lot 2, DP 839057, SP 46801	4	9	4.2

Note: 1-33 Saunders Street was mapped as Affordable Housing map area 9 as part of the previous Ultimo/Pyrmont planning proposal.

Insert a new Schedule 7

(1) This clause applies to the following land:

(a) Lot 101, DP 736100, SP31316, 344 Bulwara Road, Ultimo

(b) Lot 1, DP 80155, 463-467 Harris Street, Ultimo

(c) Lot 1, DP 829164, 336-368 Jones Street, Ultimo

(d) Lot 2, DP 829164, 370-374 Jones Street, Ultimo

(e) Lot 100, DP 613788, SP18021, 313-369 Harris Street, Pyrmont

(f) Lot 100, DP 711434, SP30156, 1-19 Allen Street, Pyrmont

(g) Lot 1, DP 633390, 26-52 Mount Street, Pyrmont

(h) Lot 80, DP 1293466 and Lot 81, DP 1293466, 1-33 Saunders Street, Pyrmont

(i) Lot 30, DP 859243, SP 61091, 2-10 Quarry Master Drive, Pyrmont

(j) Lot 1, DP 839057, SP 47754, 122 Saunders Street, Pyrmont

(k) Lot 2, DP 839057, SP 46801, 120 Saunders Street, Pyrmont

(l) Lot 22, DP 878273, 56 Harris Street, Pyrmont

(2) Despite any other provision of this Plan, a building erected on land to which this clause applies must not be used for the purpose of co-living housing.

Appendix 2 – Maps

See Attachment A1

Appendix 3 – Consistency with the Pyrmont Peninsula Place Strategy, Pyrmont Peninsula Economic Development Strategy and Pyrmont Peninsula Place Strategy - Urban Design Report (Vol. 3 Sub-precinct Master Planning)

The NSW Government's Local Environmental Plan Making Guideline requires a planning proposal for land subject to the Place Strategy to be consistent with the Place Strategy, the Economic Development Strategy and the Place Strategy – Urban Design Report (Vol. 3 Sub-precinct Master Planning).

1.1 The Planning Proposal gives effect to the Vision (Part 5) of the Place Strategy

As outlined in Figure 1 below, this proposal guides growth and change balanced with character, heritage, access to sunlight and public space, views, trees and infrastructure considerations across the Peninsula.

Figure 1. Alignment of the planning proposal with the Vision of the Place Strategy

Vision	Comment
A renowned and treasured cultural and entertainment precinct	**Consistent** The proposal supports the vision of Ultimo/Pyrmont as a renowned and treasured cultural and entertainment precinct by enabling additional homes and jobs that will strengthen the area's vitality, support local businesses, and increase activity throughout the day and evening. The proposal does not change planning controls for the NSW Government's identified cultural and entertainment key sites.
Pyrmont will be at the forefront of	**Consistent** The proposal supports Pyrmont's role in the future of work by providing capacity for additional jobs through new business, retail and commercial spaces in retail frontages and mixed-use developments. It also provides capacity for additional

Vision	Comment
the future of work.	homes in close proximity to employment, services and public transport, reinforcing Ultimo/Pyrmont's tradition as a place where people can live close to where they work.
Green and connected	**Consistent** The proposal supports a greener and more connected Ultimo/Pyrmont by facilitating new publicly accessible open spaces, wider footpaths, more than 270 new trees and 400 square metres of green roofs. The proposed planning controls have also been designed to protect solar access to key public open spaces, while maintaining and enhancing important public views and connections between Ultimo, Pyrmont and the waterfront.
Embracing a sensible approach to growth	**Consistent** The proposal supports a sensible approach to growth by directing additional housing and employment capacity to sites that can accommodate change while delivering improvements to the public domain, open space, tree canopy and pedestrian environment. The proposed controls are tailored to the specific constraints and opportunities of each site, balancing growth with the protection of heritage, local character, residential amenity and key public spaces.
A variety of building typologies	**Consistent** The proposal supports a variety of building typologies by facilitating approximately 1,240 new dwellings across a mix of residential flat buildings, shop-top housing, mixed-use developments, affordable rental housing and social housing. The site-specific controls enable a diverse range of building forms and housing opportunities while ensuring new development achieves high standards of amenity, including access to sunlight, natural ventilation and landscaped open space.
People will use public transport, walk or cycle to get to and from the Peninsula.	**Consistent** The proposal supports the Place Strategy vision for a precinct where people walk, cycle and use public transport by locating additional housing and employment growth within walking distance of the future Pyrmont Metro station, light rail services and existing bus networks. The proposal also facilitates wider footpaths, new publicly accessible open spaces, improved pedestrian connections, active street frontages and increased tree canopy, making it easier and more attractive for people to move around Ultimo and Pyrmont without relying on private vehicles. These outcomes will be supported by future infrastructure upgrades, including improvements to walking and cycling connections.
A diversity of housing, including new affordable and social housing.	**Consistent** The proposal supports housing diversity by facilitating approximately 1,240 new dwellings across a range of housing types, including mixed-use development, residential flat buildings, affordable rental housing and social housing. The proposal also expands affordable housing supply through additional affordable housing contribution requirements and directly facilitates approximately 150 new social and affordable housing dwellings on land owned by Homes NSW and City West Housing. Together, these measures will increase housing choice and improve access to housing for a diverse range of households.

Vision	Comment
A tapestry of publicly accessible open spaces	**Consistent** The proposal supports a tapestry of publicly accessible open spaces by protecting solar access to key existing parks and creating opportunities for new publicly accessible open space throughout Ultimo and Pyrmont. New planning controls are complemented by draft DCP provisions that facilitate publicly accessible landscaped areas, deep soil planting, new through-site links and improved pedestrian connections. Together, these measures will expand opportunities for recreation, walking and informal gathering while strengthening connections between neighbourhoods, public transport and key destinations

1.2 The Planning Proposal is consistent with the 10 directions (Part 6) and Structure Plan (Part 8) in the Pyrmont Peninsula Place Strategy

This planning proposal is consistent with the 10 directions, as outlined in the table below.

Figure 2. Alignment of the planning proposal with the 10 directions of the Place Strategy

10 Directions	Comment
1. Jobs and industries of the future	**Consistent** The proposal supports jobs and industries of the future by providing capacity for approximately 400 additional jobs through new mixed-use developments, business premises and retail uses. Increased employment opportunities are complemented by new publicly accessible open spaces, active street frontages, improved pedestrian connections and local services, enhancing the attractiveness of Ultimo/Pyrmont as a place to work, invest and do business.
2. Development that complements or enhances the area	**Consistent** The proposal supports development that complements and enhances the area through a place-led and people-focused approach to planning and design. The proposed controls have been informed by detailed urban design analysis and site-specific investigations that seek to: • provide more deep soil, tree canopy and green spaces; • create more public space and improve the quality of streets and open spaces; • minimise impacts on existing residential amenity, including overshadowing; • reinforce the established street wall character of the area; • conserve heritage significance and local character;

10 Directions	Comment
	• achieve good outcomes for wind, noise and environmental amenity; • match land uses to their location and context; • protect important public views and vistas; and • maximise development potential within site constraints. Together, these principles ensure that future development responds to the unique characteristics of each site while enhancing the character, liveability and environmental quality of Ultimo and Pyrmont.
3. Centres for residents, workers and visitors	**Consistent** The proposal supports centres for residents, workers and visitors by providing capacity for additional employment and new mixed-use development, including retail premises and business uses. New publicly accessible open spaces, active street frontages, wider footpaths and improved pedestrian connections will enhance the attractiveness and functionality of local centres, supporting increased activity throughout the day and evening.
4. A unified planning framework	**Consistent** The proposal supports a unified planning framework by implementing the directions of the Pyrmont Peninsula Place Strategy through amendments to the Sydney LEP 2012 and Sydney DCP 2012. The proposal provides a consistent planning approach across Ultimo and Pyrmont while responding to the specific opportunities and constraints of individual sites. The proposal does not alter the planning pathway or planning controls for NSW Government-identified key sites.
5. A tapestry of greener public spaces and experiences	**Consistent** The proposal supports a tapestry of greener public spaces and experiences by protecting solar access to key parks and public spaces, including Wentworth Park, Mary Ann Street Park, Elizabeth Healy Reserve, Union Square, Pyrmont Bay Park, Metcalfe Park and Bank Street Park. New planning controls and draft DCP provisions also facilitate publicly accessible open spaces, deep soil planting and increased tree canopy throughout Ultimo and Pyrmont. Together, these measures will expand opportunities for recreation, relaxation and walking, while maintaining and enhancing important view corridors and connections to the harbour and surrounding public spaces.
6. Creativity, culture and heritage	**Consistent**

10 Directions	Comment
	The proposal supports creativity, culture and heritage by conserving heritage items and heritage conservation areas, maintaining important public views and protecting the amenity of key public spaces, including the Sydney Harbour foreshore and local parks. The proposal does not alter planning controls for NSW Government-identified cultural and entertainment key sites and will support their ongoing success by providing additional housing, jobs and improvements to the surrounding public domain.
7. Making it easier to move around	**Consistent** The proposal supports easier movement around the peninsula by facilitating new and upgraded pedestrian connections, widened footpaths and publicly accessible open spaces that improve permeability and walkability. New through-site links and open spaces will strengthen east-west connections and reinforce key "ridge to harbour" routes, while also improving access to the future Pyrmont Metro station and other public transport services. Together, these improvements will create a more connected, legible and comfortable environment for walking and cycling.
8. Building now for a sustainable future	**Consistent** The proposal supports a sustainable future by facilitating increased deep soil planting, tree canopy and green roofs across Ultimo and Pyrmont, contributing to urban cooling, biodiversity and climate resilience. The proposed controls encourage the renewal of ageing building stock with modern, more sustainable development and work alongside existing City and State sustainability policies, including net zero emissions initiatives. The proposal is further supported by infrastructure planning that will help fund public domain improvements, tree planting and enhanced walking and cycling connections, ensuring growth is accompanied by long-term environmental and community benefits.
9. Great homes that can suit the needs of more people	**Consistent** The proposal supports the delivery of great homes that can suit the needs of more people by facilitating a diverse range of housing types, including residential flat buildings, mixed-use developments, affordable rental housing and social housing. The proposal will increase housing choice across Ultimo and Pyrmont while supporting the renewal of ageing residential buildings with new homes designed to contemporary standards of amenity, sustainability and accessibility. In addition, sites receiving residential uplift will be required to contribute 9 per cent of residential uplift

10 Directions	Comment
	floor space as affordable rental housing, alongside existing affordable housing contribution requirements. The proposal also directly facilitates approximately 150 social and affordable housing dwellings on land owned by HomesNSW and City West Housing.
10. A collaborative voice	**Consistent** The proposal supports a collaborative voice by building on the extensive engagement undertaken during the preparation of the Stage 1 Ultimo/Pyrmont Planning Proposal and continuing consultation with key stakeholders throughout the Stage 2 review process. The City has engaged directly with affected landowners and housing providers and has proactively communicated with tenants of social and affordable housing sites identified for review. The proposal will be publicly exhibited in accordance with legislative requirements and the City's Community Engagement Strategy and Participation Plan, ensuring residents, businesses, landowners and government agencies have the opportunity to provide feedback and help inform final planning controls.

This planning proposal is consistent with the Structure Plan of the Place Strategy, as outlined in the table below.

Figure 3. Alignment of the planning proposal with the Structure Plan of the Place Strategy

Structure Plan	Comment
Regional Harbour Parkland	**Consistent** The proposal supports the Regional Harbour Parkland by protecting the amenity of the harbour foreshore and adjacent public open spaces, including through measures that maintain solar access to foreshore parks. The proposal also improves pedestrian connectivity through new and enhanced through-site links, widened footpaths and publicly accessible open spaces, strengthening connections between neighbourhoods and the harbour foreshore. Together, these measures will improve public access to, and enjoyment of, Sydney Harbour and its surrounding open space network.
World class harbour foreshore walk	**Consistent** The proposal is consistent with the World Class Harbour Foreshore Walk by protecting the amenity of foreshore parks and maintaining planning controls that support the continued delivery of the harbour foreshore network. While the proposal does not include sites identified for the delivery of the foreshore walk, it improves pedestrian connectivity to the

Structure Plan	Comment
	waterfront through new and enhanced through-site links, publicly accessible open spaces and wider footpaths.
High street/intermediate transport corridor	**Consistent** The proposal supports the High Street and Intermediate Transport Corridor by concentrating new mixed-use development, employment opportunities and active ground-floor uses along Harris Street and other key streets. The proposed controls facilitate new retail frontages, wider footpaths, improved pedestrian connections and increased tree canopy, contributing to a more attractive and walkable street environment. The proposal also complements the transport and public domain improvements identified in the Pyrmont-Ultimo Precinct Transport Study, which seeks to strengthen Harris Street's role as a people-focused main street and public transport corridor.
Strategic active transport route and green walkable streets	**Consistent** The proposal supports strategic active transport routes and green walkable streets by facilitating wider footpaths, new pedestrian connections, publicly accessible open spaces and increased tree canopy throughout Ultimo and Pyrmont. Draft DCP provisions require deep soil planting and landscaped open spaces as part of future development, creating greener streets and more attractive walking environments. These outcomes will be complemented by infrastructure contributions that support public domain improvements, tree planting and enhanced cycling connections.
Local open spaces	**Consistent** The proposal supports Local Open Spaces by protecting solar access to key parks and public spaces, including Wentworth Park, Mary Ann Street Park, Elizabeth Healy Reserve, Union Square, Pyrmont Bay Park, Metcalfe Park and Bank Street Park. New sun access planes will help ensure these spaces continue to receive sunlight during their primary hours of use. The proposal is also supported by infrastructure planning that will fund improvements to local open spaces, including capacity upgrades to Wentworth Park. In addition, site-specific planning controls and draft DCP provisions facilitate new publicly accessible open spaces, deep soil landscaping and tree planting, expanding opportunities for recreation, relaxation and passive enjoyment throughout Ultimo and Pyrmont.
Areas capable of change	**Consistent** The proposal supports the Structure Plan's identification of Areas Capable of Change by introducing site-specific planning controls that facilitate approximately 1,240 additional dwellings and 400 jobs across Ultimo and Pyrmont. The proposal focuses growth on sites with the greatest capacity to accommodate change while delivering public benefits,

Structure Plan	Comment
	including new open space, improved pedestrian connections, increased tree canopy and active street frontages. Site selection and proposed planning controls have been informed by Stage 1 community feedback, detailed urban design analysis and testing to ensure development responds appropriately to local context, heritage, public spaces, amenity and infrastructure capacity.

1.3 The Planning Proposal delivers on envisaged future character for sub-precincts (Part 9), including relevant place priorities in the Pyrmont Peninsula Place Strategy

This planning proposal delivers on envisaged future character for sub-precincts, as outlined in Table 4 below.

Figure 4. Alignment of the Planning Proposal with the envisaged future character for sub-precincts of the Place Strategy

Sub-precincts	Comment
Darling Island	**Not applicable** This planning proposal does not apply to any sites within the Darling Island sub-precinct.
Tumbalong Park	**Not applicable** This planning proposal does not apply to any sites within the Tumbalong Park sub-precinct.
Ultimo	**Consistent** The proposal contributes to the delivery of the envisaged future character for the Ultimo sub-precinct through the renewal of 344 Bulwara Road (Tivoli Gardens). The proposed controls facilitate a mixed-use development with additional housing, active ground-floor uses, improved landscaping and a new retail frontage to Bulwara Road. A widened footpath, increased tree canopy and enhanced pedestrian amenity will improve the quality of the public domain and support a more vibrant, walkable neighbourhood. The proposal also responds to the ageing condition of the existing building stock while ensuring new development is integrated with the surrounding urban context.
Wentworth Park	**Consistent** The proposal supports the future character of the Wentworth Park sub-precinct by facilitating the renewal of 463-467 Harris Street and the delivery of additional social housing at the Jones Street and Henry Avenue sites. The proposal balances housing growth with heritage conservation, increased deep soil planting, improved pedestrian permeability and enhanced open space outcomes, including a larger and better sunlit pocket park integrated with Fig Lane Park. These

Sub-precincts	Comment
	improvements will support a more liveable, connected and sustainable residential neighbourhood.
Blackwattle Bay	**Consistent** The proposal supports the future character of the Blackwattle Bay sub-precinct by enabling the renewal of ageing residential buildings and delivering substantial housing growth supported by new publicly accessible open space. New barrier buildings and carefully designed tower forms will improve residential amenity by reducing exposure to traffic noise and air pollution, while deep soil planting, tree canopy and active ground-floor uses will create greener and more attractive neighbourhoods. Improved pedestrian connections and access to open space will further strengthen the sub-precinct's role as a highly accessible residential community close to public transport and employment opportunities.
Pirrama	**Consistent** The proposal contributes to the delivery of the envisaged future character for the Pirrama sub-precinct through the redevelopment of 56 Harris Street. The proposed controls facilitate additional affordable rental housing in a highly accessible location while improving environmental outcomes through increased deep soil planting and tree canopy. The proposal balances housing growth with the protection of surrounding residential amenity and supports the continued evolution of Pirrama as a mixed-use waterfront neighbourhood with strong connections to jobs, services, public transport and open space.
Pyrmont Village	**Consistent** The proposal contributes to the delivery of the envisaged future character for the Pyrmont Village sub-precinct through the renewal of sites at 313-369 Harris Street, 1-19 Allen Street, 100 Harris Street and 26-52 Mount Street. The proposed controls facilitate additional housing, employment and local services while improving the quality of the public domain through new publicly accessible open spaces, wider pedestrian connections, active street frontages, increased deep soil planting and enhanced tree canopy. The proposal also supports housing affordability and social housing outcomes, improves environmental amenity through carefully designed built form and landscaping, and reinforces Harris Street's role as a vibrant mixed-use main street. Together, these outcomes support the continued evolution of Pyrmont Village as a walkable, diverse and well-connected neighbourhood with strong access to jobs, services, open space and public transport.

1.4 The Planning Proposal supports the delivery of the Big Moves (Part 7) in the Pyrmont Peninsula Place Strategy

The Planning Proposal supports the delivery of the Big Moves (Part 7) in the Pyrmont Peninsula Place Strategy.

Big Moves	Comment
A world-class harbour foreshore walk	**Consistent** The proposal supports the delivery of the World-class Harbour Foreshore Walk by protecting the amenity of foreshore parks through the maintenance of solar access and by improving pedestrian connectivity throughout Ultimo and Pyrmont. New and enhanced through-site links, wider footpaths, active street frontages and publicly accessible open spaces will strengthen connections between neighbourhoods, local destinations, public transport and the harbour foreshore. While the proposal does not apply to sites identified for the delivery of the foreshore walk itself, it complements the Big Move by improving access to and enjoyment of the wider harbour foreshore network.
A vibrant 24-hour cultural and entertainment destination	**Consistent** The proposal supports the delivery of a vibrant 24-hour cultural and entertainment destination by increasing the number of residents, workers and visitors who will support local businesses, cultural venues, entertainment uses and hospitality offerings across Ultimo and Pyrmont. The proposed controls facilitate active street frontages, new publicly accessible open spaces, improved pedestrian connections, footpath widening and increased tree canopy, creating a more attractive and active public domain throughout the day and evening. The proposal does not alter existing planning controls that support cultural, entertainment and night-time economy uses, including on NSW Government-identified key sites.
Connect to Metro	**Consistent** The proposal supports the delivery of the Connect to Metro Big Move by directing additional housing and employment growth to locations with strong access to the future Pyrmont Metro station, light rail services and existing bus networks. Consistent with the City's land use strategy, the proposal concentrates employment-generating uses and active mixed-use development in areas closest to the metro station, while providing additional housing opportunities within walking distance of public transport, services and jobs. The proposed controls also facilitate new publicly accessible open spaces, pedestrian through-site links and wider footpaths that strengthen connections to the metro station, improve wayfinding and make walking to and from public transport more convenient and attractive. Together, these outcomes support a more accessible, transit-oriented and connected Ultimo/Pyrmont.

Big Moves	Comment
Low carbon, high performance precinct	**Consistent** The proposal supports the delivery of a low carbon, high performance precinct by facilitating growth in locations with excellent access to the future Pyrmont Metro station, light rail, bus services and active transport networks, reducing reliance on private vehicles. The proposal delivers new publicly accessible open spaces, deep soil planting, increased tree canopy, green roofs, widened footpaths and enhanced pedestrian connections, contributing to urban cooling, climate resilience and improved walkability. The proposal operates alongside the City's broader sustainability framework, including net zero emissions requirements for non-residential development, recycled water network provisions, water-sensitive urban design controls and updated active transport and parking requirements. The proposal is also supported by infrastructure planning that will fund public domain improvements, tree planting and cycling infrastructure, helping to create a more sustainable and environmentally resilient Ultimo/Pyrmont.
More, and better activated public space	**Consistent** The proposal supports the delivery of more, and better activated public space by protecting the amenity of existing parks while creating opportunities for new publicly accessible open spaces throughout Ultimo and Pyrmont. New sun access planes will protect solar access to key public spaces, including Wentworth Park, Mary Ann Street Park, Elizabeth Healy Reserve, Union Square, Pyrmont Bay Park, Metcalfe Park and Bank Street Park, ensuring they continue to receive sunlight during their primary hours of use. The proposed planning controls and draft DCP also facilitate new publicly accessible open spaces, deep soil planting, increased tree canopy and active frontages integrated with future development. New through-site links, widened footpaths and open spaces radiating from the future Pyrmont Metro station will improve accessibility, wayfinding and opportunities for recreation, walking and informal gathering. Important view corridors and visual connections to the waterfront are also protected and enhanced, contributing to a more connected, attractive and activated public domain across the peninsula.

1.5 The Planning Proposal is consistent with Peninsula wide objectives contained in Part 2 of the Urban Design Report

2.1 Country

While the planning proposal does not introduce specific controls relating to Country, it establishes the framework for future development and public domain improvements that can deliver these objectives. Consideration of Country, cultural interpretation, landscape design and connections to place will occur through future development applications and the detailed design of public domain works.

2.2 Movement

The proposal is consistent with the movement objectives of the Urban Design Report by improving walkability, permeability and access to public transport across Ultimo and Pyrmont. While many movement initiatives identified in the Urban Design Report will be delivered by future public domain and transport projects, the proposal supports these outcomes through site-specific controls that facilitate widened footpaths, new and improved through-site links, publicly accessible open spaces and active street frontages.

The proposal delivers a number of locally significant movement improvements, including a widened and more active pedestrian connection through Ada Place supported by setbacks at 313-369 Harris Street and 1-19 Allen Street and improved pedestrian amenity along Bulwara Road through a substantial building setback that enables footpath widening, tree planting and outdoor dining. New publicly accessible open spaces and through-site links at the Saunders Street and Quarry Master Drive sites will also improve permeability and access to surrounding destinations.

The proposal complements broader transport and public domain initiatives identified in the Place Strategy, Urban Design Report and Pyrmont Ultimo Local Infrastructure Contributions Plan, including future investments in walking, cycling and public domain infrastructure that will support the continued growth of Ultimo and Pyrmont as a highly accessible and connected precinct.

Figure 5. Alignment of the planning proposal with the Movement objectives of the Urban Design Report

2.2 Movement objectives	Comment
1. Establish a hierarchy of movement that clarifies the role of key streets and intersections.	**Consistent** The proposal is consistent with this objective by reinforcing the role of key streets, local centres and pedestrian connections within Ultimo and Pyrmont. New mixed-use development and active ground-floor uses are concentrated along Harris Street, Bulwara Road and other identified retail frontages, strengthening their function as important activity corridors. The proposal also facilitates wider footpaths, new through-site links and publicly accessible open spaces that improve connections between local destinations, neighbourhoods and the future Pyrmont Metro station. These measures help create a more legible movement network and support the evolving role of key streets and connections identified in the Urban Design Report.
2. Provide safe, accessible and legible movement between transport modes and destinations within, around and across the Peninsula.	**Consistent** The proposal is consistent with this objective by facilitating new and improved pedestrian connections, through-site links, publicly accessible open spaces and footpath widening opportunities that enhance access between homes, jobs, services and public transport. Key initiatives include the creation of a widened pedestrian link through Ada Place and improved pedestrian amenity along Bulwara Road and new publicly accessible connections associated with redevelopment sites in Pyrmont. Together, these

2.2 Movement objectives	Comment
	measures will improve the safety, accessibility and legibility of movement throughout Ultimo and Pyrmont and strengthen connections to the future Pyrmont Metro station, light rail services and local destinations.
3. Maximise the convenience of walking and cycling to support investment in public transport infrastructure and minimise private vehicle use.	**Consistent** The proposal is consistent with this objective by improving the convenience, comfort and attractiveness of walking and cycling as alternatives to private vehicle travel. The proposed controls facilitate new through-site links, wider footpaths, publicly accessible open spaces and active street frontages that strengthen connections between homes, jobs, public transport and local services. Several of these connections also form part of broader accessible movement networks, improving mobility for people with disability, older people and families with young children. In addition, the proposal supports a transit-oriented pattern of growth within walking distance of the future Pyrmont Metro station, light rail services and bus routes. These outcomes are complemented by the City's broader planning framework, including proposed reductions in maximum parking rates and updated bicycle parking requirements, which encourage greater use of active and public transport.
4. Provide an uninterrupted foreshore walk with a continuous pedestrian and cycling route that also provides clear access to water for recreation and transport.	**Consistent** The proposal is consistent with this objective by improving pedestrian connectivity between neighbourhoods, centres, public transport and the harbour foreshore. While the proposal does not apply to any sites identified for the delivery of the foreshore walk itself, it facilitates new and enhanced through-site links, wider footpaths and publicly accessible open spaces that strengthen access to the foreshore network. These improvements complement the delivery of a continuous waterfront walking and cycling experience by making it easier for residents, workers and visitors to access the harbour and associated recreation and transport opportunities.
5. Provide a continuous Walking and Cycling Loop in the Peninsula that enables convenient links between destinations in the Innovation Corridor, connects to the regional cycling network and integrates with the wider tech central cycling network.	**Consistent** The proposal is consistent with this objective by facilitating new pedestrian links, widened footpaths, publicly accessible open spaces and improved connections between neighbourhoods, local centres and public transport. While the proposal does not directly deliver sections of the Peninsula walking and cycling loop, it improves local permeability and walkability, supporting broader active transport connections across Ultimo and Pyrmont. These improvements complement the wider walking and

2.2 Movement objectives	Comment
	cycling network envisaged by the Urban Design Report and Place Strategy.
6. Calm local streets providing an improvement to street amenity and enabling safer lower speed spaces for community enjoyment.	**Consistent** The proposal is consistent with this objective by supporting improvements to the amenity, safety and landscape quality of local streets. The proposed planning controls facilitate wider footpaths, increased tree canopy, active street frontages and new publicly accessible open spaces that contribute to a more pedestrian-friendly public domain. In addition, the Ultimo/Pyrmont Local Infrastructure Contributions Plan includes funding for local streetscape improvement projects, enabling upgrades that will create calmer, greener and more attractive streets that better support walking, social interaction and neighbourhood amenity.
7. Deliver generous and attractive through site links that increase mid-block permeability, facilitate safe and direct movement.	**Consistent** The proposal is consistent with this objective by facilitating new and enhanced through-site links on larger redevelopment sites, improving permeability and providing more direct connections between homes, jobs, public transport and local destinations. Key examples include the widened and activated Ada Place connection between Harris Street and Allen Street and new pedestrian links associated with major redevelopment sites in Pyrmont. The proposed links are integrated with publicly accessible open spaces and are typically framed by active ground-floor uses, improving passive surveillance, safety and pedestrian amenity. Together, these measures will strengthen east-west connectivity, reduce walking distances and create a more connected and legible movement network across Ultimo and Pyrmont.

2.3 Open space network

The proposal is consistent with the open space network objectives of the Urban Design Report by protecting the amenity of existing public open spaces and facilitating opportunities for new publicly accessible open space throughout Ultimo and Pyrmont. The proposed built form controls, including new sun access planes, ensure that key parks and public spaces continue to receive appropriate levels of sunlight and are not adversely affected by future development. The proposal also facilitates new publicly accessible open spaces, deep soil planting and increased tree canopy, helping to expand the open space network and improve access to green space for existing and future residents.

The location of deep soil areas has been carefully considered to maximise opportunities for tree planting, landscape character and public benefit, particularly along key streets, pedestrian connections and publicly accessible open spaces. The proposal also supports the broader open space network identified in the Place Strategy and Urban Design Report through new pedestrian links, improved connectivity and the protection of important public views and vistas.

Improvements to parks, streets and public spaces will continue to be delivered as development occurs through the City's capital works program and the Ultimo/Pyrmont Local Infrastructure

Contributions Plan, helping to ensure the open space network grows in step with the area's increasing population and workforce.

Figure 6. Alignment of the planning proposal with the Open space network objectives of the Urban Design Report

2.3 Open space network objectives	Comment
1. Ensure public open space is designed and delivered in accordance with Connection with Country principles.	**Consistent** The proposal is consistent with this objective by identifying opportunities for new publicly accessible open spaces and deep soil landscaped areas that can support the future application of Connecting with Country principles. While the detailed design of public open spaces will occur through future development applications and public domain projects, the proposed planning controls establish a framework that enables these spaces to incorporate cultural, landscape and ecological outcomes that respond to Country and local context.
2. Protect, conserve, restore and enhance biodiversity and connected urban ecologies to increase greening of the urban environments and connect people to nature.	**Consistent** The proposal is consistent with this objective by facilitating a significant increase in deep soil planting, tree canopy and green infrastructure across Ultimo and Pyrmont. The proposed planning controls prioritise the provision of deep soil areas capable of supporting large canopy trees and diverse landscaping, helping to enhance biodiversity, improve urban ecology and strengthen connections between people and nature. On most sites, substantial deep soil areas are provided to support long-term landscape outcomes, while sites with greater physical constraints incorporate green roofs and other greening measures to increase vegetation cover and environmental performance. The proposal also complements the City's broader urban ecology initiatives, including measures to support habitat creation, biodiversity and sustainable building design.
3. Recognise streets as open spaces with places for respite and play which will be enhanced with increased planting and reduction of on-street parking over time as public transport improves.	**Consistent** The proposal is consistent with this objective by facilitating a greener and more pedestrian-friendly public domain. The proposed planning controls require increased deep soil planting, tree canopy and publicly accessible open spaces that contribute to more attractive and comfortable streets and places for respite. Building setbacks along key streets, including Bulwara Road and Ada Place, create opportunities for wider footpaths, landscaping and outdoor activity, reinforcing the role of streets as important public spaces. The proposal is also supported by the

2.3 Open space network objectives	Comment
	Ultimo/Pyrmont Local Infrastructure Contributions Plan, which includes funding for street tree planting and public domain improvements. Over time, these initiatives, together with improved public transport accessibility associated with the Pyrmont Metro, will support the continued evolution of streets as greener and more people-focused places.
4. Facilitate the return of Wentworth Park to community as public open space.	**Consistent** The proposal is consistent with this objective by protecting the amenity and ongoing function of Wentworth Park as a major public open space. The proposed built form controls do not constrain or prejudice future opportunities to expand public open space within Wentworth Park and include measures to protect solar access to the park. The proposal is also supported by the Ultimo/Pyrmont Local Infrastructure Contributions Plan, which identifies funding for capacity improvements to Wentworth Park to help accommodate the recreational needs of a growing population. Together, these measures support the long-term enhancement of Wentworth Park as an important community open space.
5. Provide new and upgraded open spaces under and along the Western Distributor corridor.	**Consistent** The proposal is consistent with this objective by supporting future open space opportunities along the Western Distributor corridor. While the proposal does not apply to land beneath the Western Distributor, the proposed built form controls do not constrain or prejudice the delivery of new or upgraded open spaces in this location. The proposal complements this objective through the delivery of new publicly accessible open spaces, deep soil planting and improved pedestrian connections on adjoining sites, particularly within the Blackwattle Bay sub-precinct, helping to strengthen the broader open space network identified in the Urban Design Report.
6. Upgrade and expand existing open spaces through strategic closure of streets not required for maintaining site access or servicing and to meet universal design standards.	**Consistent** The proposal is consistent with this objective by supporting the expansion and enhancement of the open space network where opportunities arise through redevelopment and public domain improvements. While the proposal does not involve the closure of public streets, it facilitates new publicly accessible open spaces, through-site links and pedestrian connections that improve access to open space and support universal accessibility. The proposal does not constrain the future implementation of street closures

2.3 Open space network objectives	Comment
	or reallocation of road space identified through subsequent planning, transport or public domain projects and is compatible with the long-term open space outcomes envisaged by the Urban Design Report.
7. Provide for new public, publicly accessible open space and through site links on key sites and larger renewals where significant change is projected.	**Consistent** The proposal is consistent with this objective by facilitating new publicly accessible open spaces and pedestrian through-site links on larger redevelopment sites across Ultimo and Pyrmont. The proposed planning controls and draft DCP have been designed to locate deep soil landscaping in highly visible and accessible locations, including along public streets, park edges and key pedestrian routes, maximising opportunities for tree planting, passive recreation and public enjoyment. Through-site links are provided where they improve permeability, reduce walking distances and strengthen connections between neighbourhoods, public transport, local centres and open spaces. Together, these measures expand the publicly accessible open space network and improve pedestrian connectivity in areas identified for significant renewal and growth.
8. Ensure new open space is located and designed to universal design standards, maximise solar access, amenity, safety and use throughout the day and night.	**Consistent** The proposal is consistent with this objective by ensuring that new publicly accessible open spaces and pedestrian connections are located to maximise accessibility, amenity and usability. The proposed planning controls have been informed by detailed urban design analysis and testing to protect solar access to key parks and public spaces, maintain important public views and create attractive and well-connected public environments. New publicly accessible open spaces are generally co-located with active street frontages, pedestrian links and areas of deep soil planting, supporting safety, passive surveillance and activity throughout the day. The proposal is complemented by the City's broader planning framework, including updated public domain and open space design requirements that will guide the detailed design of future open spaces and ensure they achieve high standards of accessibility, amenity and environmental performance. The existing and proposed DCP requirements ensure public open space delivered as part of development prioritises universal design, solar access and amenity.
9. Co-locate open space with community facilities where possible to support community events and activation.	**Consistent** The proposal is consistent with this objective by facilitating new publicly accessible open spaces that

2.3 Open space network objectives	Comment
	are integrated with mixed-use development, active ground-floor uses and pedestrian connections. The proposed open spaces are generally located adjacent to streets, through-site links and areas of activity, helping to support informal recreation, social interaction and community use. While the proposal does not directly deliver new community facilities, it does not preclude their future co-location with open space and creates a framework for new public spaces that can support community activation and events as redevelopment occurs.
10. Increase urban tree canopy and greening to meet a 40% target between public and private lands, including provision for deep soil as per City of Sydney's guidelines, incorporating green roofs, façades and walls, appropriate material selection and the integration of Water Sensitive Urban Design (WSUD) requirements.	**Consistent** The proposal is consistent with this objective by facilitating a substantial increase in urban greening across Ultimo and Pyrmont through new deep soil planting, increased tree canopy and green roof outcomes. The proposed planning controls have been informed by the City's urban design investigations, which prioritise the provision of deep soil areas capable of supporting large canopy trees and long-term landscape growth. Where deep soil opportunities are constrained, alternative greening measures such as green roofs contribute to biodiversity, urban cooling and improved environmental performance. The proposal is also supported by the City's broader planning framework, including updated deep soil, tree planting and water-sensitive urban design requirements, helping to increase canopy cover and enhance the environmental resilience of both public and private land.
11. Support Resilient Sydney Strategy 2018 and Decentralised Water Master Plan through the design and implementation of storm water management, rainwater management and Water Sensitive Urban Design (WSUD) within the public and private realm.	**Consistent** The proposal is consistent with this objective by facilitating development that incorporates contemporary stormwater and water management outcomes through increased deep soil planting, landscaped areas and green infrastructure. While the planning proposal does not introduce specific stormwater or water efficiency controls, it operates alongside the City's broader planning framework, including updated requirements for water efficiency, rainwater harvesting, stormwater management and Water Sensitive Urban Design (WSUD). These measures will guide future development and help improve water quality, reduce potable water demand and increase the resilience of Ultimo and Pyrmont to climate change and extreme weather events. The City's existing planning controls require new development to connect to any existing recycled water network.

2.3 Open space network objectives	Comment
12. Include provision for digital infrastructure to support knowledge-based and tech industry start-ups / businesses and educational facilities within the public domain, including publicly accessible private land, ensuring that all service infrastructure is concealed.	**Consistent** The proposal is consistent with this objective by facilitating additional employment, commercial and mixed-use development that will support the growth of knowledge-based industries, innovative businesses and educational institutions within Ultimo and Pyrmont. While the planning proposal does not introduce specific controls relating to digital infrastructure, it does not constrain the delivery of telecommunications and digital services required to support future residents, workers and businesses. The detailed design and provision of communications infrastructure will be considered through future development and infrastructure delivery processes, consistent with the broader objectives of the Urban Design Report.

2.4 Views

The proposal has been developed in accordance with the views objectives of the Pyrmont Peninsula Place Strategy and Urban Design Report. The proposed planning controls have been informed by detailed urban design analysis that considered the protection of important public views, visual connections and the broader townscape character of Ultimo and Pyrmont. The controls use a combination of site-specific height limits, building setbacks, tower separation and street wall requirements to ensure new development integrates with its surroundings and maintains the visual qualities that contribute to the identity of the peninsula.

Across the Stage 2 sites, development envelopes have been designed to maintain and enhance key visual connections between neighbourhoods, parks, streets, public spaces and the waterfront. New publicly accessible open spaces, deep soil landscaped areas and pedestrian connections are generally located to reinforce these visual links and improve the experience of moving through the peninsula. Taller building elements are carefully positioned to minimise visual impacts on surrounding residential areas and public spaces while accommodating growth in locations capable of change.

The proposal also supports the broader objective of strengthening connections between Ultimo, Pyrmont and Sydney Harbour through the protection of view corridors identified in the Urban Design Study and the maintenance of visual links to important landmarks, public open spaces and waterfront destinations. Together, these measures ensure that future growth contributes positively to the character, legibility and sense of place of Ultimo and Pyrmont.

Figure 7. Alignment of the planning proposal with the Views objectives of the Urban Design Report

2.2 Views objectives	Comment
1. Views are to be maintained and created along streets to reinforce connections to waterfront and regional open spaces at the Peninsula edges from the ridge along Harris Street.	**Consistent** The proposal is consistent with this objective by maintaining and enhancing important visual connections between the Harris Street ridge, local streets, public spaces and the waterfront. The proposed planning controls have been informed by

2.2 Views objectives	Comment
	detailed urban design analysis to ensure that new development responds to identified view corridors and reinforces visual links to Sydney Harbour, foreshore open spaces and other key landmarks. Building envelopes, setbacks and the location of publicly accessible open spaces have been designed to protect the legibility of these views while accommodating additional housing and employment growth.
2. Views from key intersections are to support wayfinding within and across the Peninsula.	**Consistent** The proposal is consistent with this objective by ensuring that key views from streets and intersections continue to assist with orientation and wayfinding throughout Ultimo and Pyrmont. The proposed planning controls have been informed by detailed urban design testing that considers the relationship between built form, streets and public spaces, with established street wall heights generally maintained and additional building height set back from the street frontage. This approach helps retain visual connections to important destinations, landmarks, open spaces and the waterfront, supporting the legibility of the public domain and reinforcing wayfinding across the peninsula.
3. Views to landmarks and major public facilities are to be protected including the Anzac Bridge Pylons and suspension wires, ICC and Sydney Fish Markets.	**Consistent** The proposal is consistent with this objective by ensuring that new development responds to important public views to landmarks, major public facilities and waterfront destinations. The proposed planning controls have been informed by detailed urban design analysis and testing, including consideration of building heights, setbacks and massing to minimise impacts on significant views from streets, parks and other public places. The controls seek to maintain the legibility of key landmarks and public destinations while accommodating growth in locations identified as capable of change, ensuring that important visual reference points continue to contribute to the character and wayfinding of Ultimo and Pyrmont.
4. Built form to protect and enhance the existing view corridor from Martin Place as defined within the Central Sydney Planning Framework.	**Consistent** The proposal is consistent with this objective as it does not facilitate development that would adversely affect the Martin Place view corridor protected under the Central Sydney Planning Framework. The proposed planning controls have been informed by detailed urban design analysis, including consideration of strategic views and visual impacts. Building heights and envelopes on the Stage 2 sites have been established to accommodate growth while ensuring

2.2 Views objectives	Comment
	important metropolitan views and view-sharing objectives continue to be respected.
5. Create new and maintain existing views along streets and between buildings to water, open space and landmarks to support legibility and wayfinding, enhance existing character and visually connect people to the natural setting of the Peninsula.	**Consistent** The proposal is consistent with this objective by ensuring that views to the waterfront, public open spaces and important landmarks are considered in the design of future built form and public domain outcomes. The proposed planning controls have been informed by detailed urban design analysis that considers visual connections within and beyond the peninsula, including views along streets, through publicly accessible open spaces and along pedestrian connections. Building heights, setbacks and massing have been designed to maintain and enhance the legibility of Ultimo and Pyrmont, while new through-site links, widened footpaths, landscaped open spaces and deep soil areas reinforce visual connections to surrounding parks, streets and the harbour. Together, these measures help maintain the distinctive character of the peninsula and strengthen people's connection to its natural and urban setting.
6. Create new and maintain existing views to the sky from public open space, key streets and between new developments to protect amenity and ensure a diversity in scale and character in built form.	**Consistent** The proposal is consistent with this objective by maintaining and enhancing sky views from public open spaces, streets and pedestrian environments through carefully designed building envelopes, setbacks and height transitions. The proposed planning controls have been informed by detailed urban design testing, including view and solar access analysis, to ensure that new development protects the amenity of key parks, publicly accessible open spaces and streets. Established street wall heights are generally retained, with additional building height recessed from the street frontage to maintain a comfortable human scale, preserve sky views and reinforce the character of the public domain. The incorporation of widened footpaths, through-site links, deep soil landscaped areas and new publicly accessible open spaces further contributes to an open and attractive urban environment that balances growth with amenity.
7. Protect the unique waterfront character of the Peninsula by ensuring new buildings and landscape reveal its topography and escarpments, heritage buildings and spaces, and the transition of buildings from north to south.	**Consistent** The proposal is consistent with this objective by ensuring that new development responds to the distinctive topography, heritage character and waterfront setting of Ultimo and Pyrmont. The proposed planning controls have been informed by detailed urban design analysis that considers key public views, height transitions, street wall presentation and the relationship between built form and the

2.2 Views objectives	Comment
	surrounding landscape. Building envelopes are designed to provide an appropriate transition in scale, protect important visual connections and maintain the prominence of heritage items and heritage conservation areas. New publicly accessible open spaces, deep soil landscaped areas and pedestrian connections further reinforce the peninsula's unique character by enhancing views to open space, revealing the area's physical setting and strengthening connections between neighbourhoods, heritage landmarks and the waterfront.

1.6 The Planning Proposal is consistent with the Peninsula height strategy contained in Part 3 of the Urban Design Report

The proposal is consistent with the Peninsula Height Strategy contained in Part 3 of the Urban Design Report. Sites identified for additional height and floor space have been selected through a detailed assessment of their capacity to accommodate change and contribute to the objectives of the Pyrmont Peninsula Place Strategy. The proposed heights and built form outcomes have been informed by extensive urban design testing and are tailored to the specific opportunities and constraints of each site.

The proposed controls seek to balance growth with the protection of public amenity by minimising overshadowing of existing dwellings and public open spaces, providing appropriate height transitions, reinforcing established street wall character, protecting important views and vistas, and responding to local heritage, wind, noise and environmental conditions. In locations affected by major infrastructure, including the Western Distributor, building heights and forms have also been designed to improve residential amenity and environmental performance.

Together, these measures ensure that additional housing and employment growth is accommodated in a manner that is consistent with the Peninsula Height Strategy and supports the long-term character, liveability and sustainability of Ultimo and Pyrmont.

Figure 8. Alignment of the planning proposal with the Height strategy in the Urban Design Report

3.1 Height strategy	Comment
General provisions	
1. New development should complement and enhance the existing character of escarpments, street scale and heritage fabric.	**Consistent** The proposal is consistent with this provision by ensuring that new development responds to the established character, heritage significance and urban form of Ultimo and Pyrmont. A key urban design principle underpinning the proposed controls is the reinforcement of existing street wall character, with additional building height generally accommodated above recessed upper levels to maintain the scale and enclosure of streets. The proposed built form also responds to local heritage items, heritage conservation areas, important corner sites and the topography of the

3.1 Height strategy	Comment
	peninsula, ensuring that growth complements and enhances the existing character of the area while accommodating additional housing and employment opportunities.
2. Building heights should be varied across the Peninsula in accordance with the zones indicated in Figure 3.1.1.	**Consistent** The proposal is consistent with this provision by applying a range of building heights across Ultimo and Pyrmont that reflect the Peninsula Height Strategy and the differing roles, constraints and opportunities of individual sites. The proposed controls provide for a varied urban form, with building heights responding to proximity to public transport, centres, open spaces, heritage character and surrounding development. Height outcomes have been informed by detailed urban design testing and are tailored to each site's context, ensuring that growth is accommodated in a manner that reinforces the intended hierarchy of built form across the peninsula.
3. Parameters for Key Sites are outlined under Chapter 10 'Framework for Key Sites' of the Pyrmont Peninsula Place Strategy (DPE 2020).	**Consistent** The proposal is consistent with this provision. It does not apply to any land identified as a Key Site under the Pyrmont Peninsula Place Strategy and does not alter the planning controls or planning pathways established for those sites. Where relevant, approved or proposed built form outcomes for nearby Key Sites have been considered as part of the City's urban design analysis to ensure appropriate interfaces and outcomes across the peninsula.
4. Ensure that increases to existing building heights do not compromise the amenity of public open spaces identified as areas to be protected from additional overshadowing in the Peninsula.	**Consistent** The proposal is consistent with this provision by ensuring that additional building height does not compromise the amenity of important public open spaces. The proposed built form controls have been informed by detailed urban design, solar access and overshadowing analysis to minimise impacts on existing parks and publicly accessible open spaces. The proposal introduces new sun access planes to protect solar access to Wentworth Park, Mary Ann Street Park, Elizabeth Healy Reserve, Union Square, Pyrmont Bay Park, Metcalfe Park and Bank Street Park, ensuring these spaces continue to receive sunlight during their primary hours of use. Building heights, setbacks and massing have been carefully designed to minimise overshadowing impacts on public open spaces, including through height transitions, upper-level setbacks and the strategic location of taller building elements.

3.1 Height strategy	Comment
	The proposal also facilitates new publicly accessible open spaces that have been positioned and designed to achieve high levels of solar access and amenity, ensuring that growth contributes positively to the open space network while protecting the usability and enjoyment of existing parks and public spaces.
5. New development should respect and respond to the lower building height along Harris Street and stepping down to the 'valley' of Darling Harbour and Blackwattle Bay.	**Consistent** The proposal is consistent with this provision by ensuring that development along Harris Street responds to its role as the peninsula's principal ridge street and established mixed-use main street. The proposed controls generally maintain the prevailing street wall scale and character of Harris Street, with additional building height accommodated through upper-level setbacks and carefully designed height transitions. Taller built form is generally concentrated on sites where it can be accommodated without adverse impacts on the public domain, heritage character or important public views, including locations closer to the lower-lying areas of Darling Harbour and Blackwattle Bay. This approach maintains the prominence of the Harris Street ridgeline while reinforcing the broader height hierarchy and topography of the peninsula.
6. Street wall heights should reflect existing low scale context and maximise sunlight and daylight to streets, to encourage a cohesive street experience, support plant growth and support ground level activity within the footpath area.	**Consistent** The proposal is consistent with this provision by reinforcing established street wall heights and responding to the prevailing character of individual streets and neighbourhoods. The proposed built form controls have been informed by detailed urban design testing to ensure that street wall heights remain compatible with the surrounding context, while additional building height is generally recessed through upper-level setbacks. This approach helps maintain access to sunlight and daylight at street level, supports opportunities for tree planting and landscaping, and contributes to an attractive, human-scaled public domain. By preserving a consistent street edge and promoting active frontages, the proposal also supports pedestrian activity and the ongoing vitality of streets and local centres.
7. Building setbacks above the street wall are to mitigate wind impacts as per the City of Sydney's guidelines to ensure an appropriate and comfortable street environment for activity and pedestrian movement.	**Consistent** The proposal is consistent with this provision by incorporating upper-level setbacks and built form controls that respond to the local wind environment and support a comfortable pedestrian experience. The proposed height and massing of buildings have been informed by detailed urban design investigations, including wind assessment where appropriate, to

3.1 Height strategy	Comment
	ensure additional building height does not adversely affect ground-level amenity. Upper-level setbacks help reduce the potential for downdrafts and maintain a human-scaled streetscape, while the design and placement of taller building elements seek to protect the comfort of streets, open spaces and pedestrian connections. Together, these measures support attractive, safe and functional public spaces that encourage walking, outdoor activity and active street life.
8. That the impact of any increase to building heights will be supported by wind modelling to demonstrate a comfortable street environment for street activity and pedestrian movement at ground.	**Consistent** The proposal is consistent with the intent of this provision. The proposed building heights and envelopes have been informed by site-specific urban design analysis, including consideration of local wind conditions and opportunities to improve pedestrian amenity. Building setbacks, height transitions and the location of taller building elements have been designed to minimise potential wind impacts and support comfortable streets, open spaces and pedestrian connections. Detailed quantitative wind modelling is more appropriately undertaken at the development application stage, when individual building designs, architectural treatments and mitigation measures are known. The proposal is supported by the City's broader planning framework, which requires wind impact assessment for taller developments and ensures that future development demonstrates compliance with the City's wind safety and comfort standards. Accordingly, the proposed controls establish a framework that enables future development to achieve comfortable and safe ground-level environments for pedestrians and outdoor activity.
Within the Harbour Interface Zone	
9. New development should complement the existing heights, heritage buildings and topography.	**Consistent** The proposal is consistent with this provision by ensuring that development within and adjoining the Harbour Interface Zone responds to the established character, heritage significance and topography of the peninsula. The proposed planning controls have been informed by detailed urban design analysis and apply a site-specific approach to height, scale and built form, ensuring new development complements its surrounding context. Building envelopes incorporate appropriate street wall heights, upper-level setbacks and height transitions that respond to the grain and character of surrounding development and maintain

3.1 Height strategy	Comment
	the visual prominence of heritage items and heritage conservation areas. The proposal also protects important public views, strengthens visual connections to the waterfront and facilitates new publicly accessible open spaces and landscaped areas that reinforce the harbour setting of Ultimo and Pyrmont. Together, these measures ensure that growth can be accommodated while retaining the distinctive character and amenity of the harbour interface.
10. Street walls in proximity to the sandstone escarpment or visible against sandstone escarpments are to establish a strong relationship and alignment to the scale of the escarpment.	**Consistent** The proposal is consistent with this provision. The sites subject to the proposal are not located in areas where development forms a prominent backdrop to the peninsula's sandstone escarpments. Nevertheless, the proposed built form controls have been informed by the topography of Ultimo and Pyrmont and incorporate site-specific height transitions, setbacks and massing that respond to landform and surrounding context. This approach ensures that new development respects the physical character of the peninsula and maintains the visual relationship between built form, streets, open spaces and the broader landscape setting.
Within the Transition Zone	
11. Building heights that progressively transition the scale from an existing maximum height of RL90 at Distillery Hill up to heights limited by SAPs to support growth of the existing employment clusters and enable greater diversity in employment zones.	**Consistent** The proposal is consistent with this provision by providing building heights that respond to the Peninsula Height Strategy and the intended transition in built form across Ultimo and Pyrmont. The proposed controls introduce additional height with building envelopes tailored to their specific context, constraints and opportunities. Height transitions, upper-level setbacks and site-specific massing controls have been informed by detailed urban design testing to ensure appropriate relationships with surrounding development, heritage items, public spaces and the topography of the peninsula. On sites in proximity to major transport infrastructure and areas identified for renewal, additional height supports housing and employment growth while responding to factors such as solar access, views, wind, noise and the public domain. Together, the proposed controls contribute to a varied and legible skyline that is consistent with the broader height hierarchy envisaged by the Urban Design Report and Place Strategy.
Within the Bay Interface Zone	

3.1 Height strategy	Comment
12. New buildings will provide an appropriate response to the character of Pyrmont's foreshore in a reinterpretation of the working harbour with a low scale podium reflective of historic maritime structures and warehouses.	**Consistent** The proposal is consistent with this provision. The planning proposal does not apply to land within the Bay Interface Zone and does not alter the planning framework or built form character envisaged for Pyrmont's foreshore. The proposal therefore does not affect the intended outcome of development responding to the working harbour character through low-scale podiums and warehouse-inspired built form.
13. New buildings and changes to existing buildings should ensure good solar access to the waterfront.	**Consistent** The proposal is consistent with this provision. While the planning proposal does not apply to sites within the Bay Interface Zone, it includes provisions that protect solar access to key waterfront parks and public spaces, including Pyrmont Bay Park. The proposed building envelopes, height controls and sun access planes have been informed by detailed solar access analysis to minimise overshadowing impacts on the public domain and maintain the amenity of waterfront open spaces. Accordingly, the proposal does not prejudice the objective of ensuring good solar access to the waterfront and supports the broader Place Strategy objective of protecting the quality and usability of foreshore public spaces.
14. Taller buildings above podiums will provide adequate tower separation and building setbacks to ensure wind conditions at ground level support the future event, leisure and recreation uses.	**Not applicable** The proposal is consistent with the intent of this provision. While the planning proposal does not apply to sites within the Bay Interface Zone, the proposed controls require appropriate building setbacks, height transitions and separation distances that support good environmental performance and pedestrian amenity. For sites containing taller built form, development envelopes have been informed by detailed urban design analysis, including consideration of wind impacts, solar access, public domain amenity and the relationship between buildings and surrounding public spaces. Future development applications will be required to demonstrate that wind conditions within streets, publicly accessible open spaces and pedestrian links achieve appropriate comfort and safety standards, ensuring that growth does not adversely affect the use and enjoyment of the public domain.
Within the Open Space Sun Access Control Zone	
15. Ensure that any increase to building heights do not decrease the amenity of	**Consistent** The proposal is consistent with this provision by ensuring that additional building height does not

3.1 Height strategy	Comment
existing and planned open spaces within and around the Peninsula.	diminish the amenity of existing or planned public open spaces. The proposed built form controls have been informed by detailed urban design, solar access and overshadowing analysis, as documented in the Ultimo/Pyrmont Urban Design Study. Building heights, setbacks, massing and height transitions have been carefully designed to minimise overshadowing impacts on parks, publicly accessible open spaces and other important public places. The proposal also introduces new sun access planes to protect solar access to key parks and public spaces across Ultimo and Pyrmont, ensuring that future growth is accommodated while maintaining the usability, comfort and amenity of the peninsula's open space network.
16. New developments consider sunlight to public and open spaces in accordance with the requirements of Figure 3.2.1. New building heights demonstrate appropriate responses to the identified areas and levels of protection required such as no additional overshadowing, not protruding through the sun-access planes and/or merit based impact where noted.	**Consistent** The proposal is consistent with this provision by ensuring that the proposed building heights and envelopes respond appropriately to the solar access requirements identified in the Urban Design Report. The proposed built form controls have been informed by detailed solar access and overshadowing analysis undertaken as part of the Ultimo/Pyrmont Urban Design Study. This analysis demonstrates that development sites have been designed to protect the amenity of existing and planned public open spaces through a combination of height limits, setbacks, height transitions and building massing controls. The proposal also introduces new sun access planes applying to Wentworth Park, Mary Ann Street Park, Elizabeth Healy Reserve, Union Square, Pyrmont Bay Park, Metcalfe Park and Bank Street Park to ensure these spaces continue to receive appropriate levels of sunlight during their primary periods of use. Where relevant, building envelopes have been refined to avoid unacceptable overshadowing impacts and to maintain consistency with the levels of solar access protection identified in the Urban Design Report. Together, these measures ensure that future growth is accommodated without compromising the amenity, usability and enjoyment of the peninsula's open space network.

1.7 The Planning Proposal is consistent with the sub-precinct master plans contained in Part 4 of the Urban Design Report.

The proposal is consistent with the sub-precinct master plans contained in Part 4 of the Urban Design Report. The proposed planning controls have been informed by the future character, structure plan elements and place priorities identified for the relevant sub-precincts and support the delivery of additional housing, employment, public domain and open space outcomes in locations identified as capable of accommodating change.

The proposal facilitates renewal that is responsive to the unique opportunities and constraints of each sub-precinct, including the protection of heritage character, enhancement of pedestrian connectivity, delivery of publicly accessible open space, increased tree canopy and improvements to the quality of the public domain. New through-site links, active street frontages, wider footpaths and landscaped areas support the movement, open space and place-making objectives identified in the master plans.

The proposal does not alter the planning framework for NSW Government key sites and does not prejudice the delivery of projects identified in the Urban Design Report. Where relevant, proposed built form controls have been designed to protect important views, maintain solar access to public open spaces and support planned pedestrian and public domain improvements identified in the sub-precinct master plans. The proposal is also supported by the Ultimo/Pyrmont Local Infrastructure Contributions Plan, which will assist in delivering streetscape, open space and active transport improvements as redevelopment occurs.

Figure 9. Alignment of the planning proposal with the Sub-precinct master plan objectives in the Urban Design Report

Sub-precinct master plan objectives	Comment
Pirrama sub-precinct The proposal is consistent with the Pirrama sub-precinct master plan through the redevelopment of 56 Harris Street. The proposed controls facilitate additional affordable rental housing in a location with strong access to jobs, services, public transport and open space, while retaining and responding to the established character of the surrounding area. The proposal incorporates increased deep soil planting and tree canopy and has been designed to minimise impacts on surrounding residential amenity through appropriate height transitions and building setbacks. Together, these outcomes support the continued evolution of Pirrama as a liveable, mixed-use neighbourhood with strong connections to the waterfront, local centres and the broader peninsula.	
Enhance the local movement network	**Consistent** The proposed controls facilitate increased setbacks, deep soil landscaping and active ground-floor uses that contribute to a more attractive and walkable public domain. The site's location on Harris Street supports convenient access to public transport, local services and surrounding destinations, while the additional resident population will help activate walking routes within the Pirrama sub-precinct. The proposal also complements broader pedestrian, cycling and public domain improvements identified in the Place Strategy and Urban Design Report, supporting a more connected and accessible neighbourhood.
Enhance the harbour interface experience	**Consistent** The proposed controls facilitate additional deep soil planting and increased tree canopy, contributing to a greener and more attractive streetscape within walking distance of the harbour foreshore. The proposal does not adversely affect public access to the waterfront, key view corridors or the amenity of foreshore open

Sub-precinct master plan objectives	Comment
	spaces and complements the broader network of pedestrian connections and public spaces identified in the Pirrama sub-precinct master plan. Together, these outcomes support the continued enjoyment of the harbour setting and reinforce the character of Pirrama as a waterfront neighbourhood.
Enhance and protect heritage and views	**Consistent** The proposed built form controls for 56 Harris Street have been designed to preserve and enhance the John Street view corridor, maintaining important visual connections through the precinct. The controls also respect the established scale and street wall character of John Street through appropriate setbacks and building articulation, while increased landscaping and tree planting contribute to the quality of the public domain.
Character area: John Street Square	**Not applicable**
Character area: Bowman Street	**Not applicable**
Darling Island sub-precinct	**Not applicable**
Pyrmont Village sub-precinct This planning proposal has identified some sites capable of change in the Pyrmont Village sub-precinct.	
Intensified public space at intersections of key routes	**Consistent** The proposal is consistent with this objective by enhancing the quality and activation of public spaces at key intersections within the Pyrmont Village sub-precinct. The proposed controls facilitate active ground-floor uses, wider pedestrian connections, increased tree canopy and new publicly accessible open spaces that strengthen the role of key streets and intersections as places for gathering, movement and local activity. In particular, improvements associated with the Harris Street corridor and the widened Ada Place connection will create more attractive and activated public spaces, supporting pedestrian activity and reinforcing Pyrmont Village as a vibrant mixed-use neighbourhood centre.
Unlock a community infrastructure spine	**Consistent** The proposal is consistent with this objective by strengthening the network of streets, publicly accessible open spaces and pedestrian connections that support access to community infrastructure throughout Pyrmont Village. New publicly accessible open spaces, the widened Ada Place connection, active ground-floor uses and improvements to the

Sub-precinct master plan objectives	Comment
	Harris Street corridor will enhance connectivity between homes, jobs, services, open spaces and existing community facilities. While the proposal does not directly deliver new community infrastructure, it supports the accessibility, activation and integration of the broader community infrastructure network identified in the master plan.
Revitalise High Street	**Consistent** The proposal is consistent with this objective by reinforcing Harris Street's role as the principal high street within Pyrmont Village. The proposed controls facilitate the renewal of underutilised sites with additional housing, employment-generating uses, local retail and active ground-floor frontages that will increase activity and support local businesses. Public domain improvements, including wider pedestrian connections, increased tree canopy, publicly accessible open spaces and enhanced links through Ada Place, will further strengthen the vibrancy and attractiveness of the retail environment. The proposed built form also respects the established character of Harris Street by maintaining appropriate street wall heights and incorporating upper-level setbacks that respond to the existing heritage and streetscape context.
Character area: Maybanke 2. Provide public through site links connecting Mount Street, Haris Street and Pyrmont Street that link to wider routes across the Peninsula 4. Improve access and permeability from Harris Street 5. Improve the setting and address of the heritage listed former CSR Manager's house, enhancing visibility of the heritage building from Harris Street and through site links.	**Consistent** The proposal is consistent with these objectives through the redevelopment of 26-52 Mount Street. The proposed controls improve permeability within the block by creating opportunities for new pedestrian connections between Mount Street, Harris Street and surrounding destinations, strengthening links to the wider movement network across the peninsula. The proposal also improves the relationship between the site and Harris Street through a more active and legible built form arrangement. Importantly, the heritage-listed former CSR Manager's House at 85 Harris Street is retained, with new development designed to improve its setting, prominence and visibility through increased setbacks, landscaping and the organisation of built form around the heritage item. Together, these measures enhance access, permeability and heritage outcomes within the Maybanke character area while accommodating additional social housing.
Character area: Elizabeth Healey Reserve	**Not applicable**
Tumbalong Park sub-precinct	**Not applicable**

Sub-precinct master plan objectives	Comment
Ultimo sub-precinct	
Expanded campus commons	**Consistent** The proposal is consistent with this objective by supporting a more active and connected Ultimo neighbourhood through the renewal of 344 Bulwara Road. The proposed controls facilitate additional housing, active ground-floor uses, improved pedestrian amenity and new publicly accessible spaces that strengthen connections between residents, local services and surrounding institutions. While the proposal does not directly deliver or expand educational campus facilities, it increases the resident population and improves the public domain in a manner that complements the broader campus commons network envisaged in the Ultimo sub-precinct master plan.
Enhanced creative clusters	**Consistent** The renewal of 344 Bulwara Road will increase the resident population that supports local businesses, venues and services, while new active ground-floor uses and an improved public domain will contribute to a more vibrant and connected urban environment. While the proposal does not directly deliver creative industry floor space, it reinforces the broader conditions that support the ongoing success of Ultimo's creative clusters.
A regionally connected transport network	**Consistent** The proposed controls facilitate new pedestrian connections, wider footpaths, publicly accessible open spaces and active street frontages that improve access to public transport and strengthen links between Ultimo, surrounding employment centres and regional destinations. The renewal of 344 Bulwara Road also contributes to a more walkable and transit-oriented neighbourhood, consistent with the transport outcomes envisaged in the Ultimo sub-precinct master plan.
Character Area: Goods Line South	**Not applicable**
Character Area: Goods Line North	**Not applicable**
Character Area: TAFE	**Not applicable**
Character Area: Powerhouse	**Not applicable**
Wentworth Park sub-precinct	

Sub-precinct master plan objectives	Comment
This planning proposal has identified some sites capable of change in the Wentworth Park sub-precinct.	
Green links connecting the high street to park	**Consistent** The proposed controls for the Jones Street and Henry Avenue sites include the relocation and expansion of publicly accessible open space adjacent to Fig Lane Park, while new pedestrian connections improve access through the block. At 463-467 Harris Street, new landscaping and deep soil planting contribute to a greener streetscape environment. Together, these measures enhance the network of green links connecting the Harris Street high street to Wentworth Park and surrounding open spaces.
Walking and cycling at the heart	**Consistent** The proposal is consistent with this objective by placing walking and cycling at the heart of future growth through the delivery of new pedestrian connections, publicly accessible open spaces and improved permeability across the Wentworth Park sub-precinct. The proposed controls for the Jones Street and Henry Avenue sites introduce a new central pedestrian spine linking the two developments and improving access through the block, while the relocation of the pocket park adjacent to Fig Lane Park strengthens the local walking network. At 463-467 Harris Street, increased landscaping and active frontages contribute to a more attractive pedestrian environment. Together, these measures improve connections between homes, open spaces, local services, public transport and the broader active transport network.
Enhance mixed use character	**Consistent** The proposal is consistent with this objective by reinforcing the mixed-use character of the Wentworth Park sub-precinct through the renewal of 463-467 Harris Street and the Jones Street/Henry Avenue sites. At 463-467 Harris Street, the proposed controls facilitate a mixed-use development with active ground-floor business uses fronting Harris Street and additional housing above, contributing to the vitality of the local centre. The proposal also increases residential density in close proximity to shops, services, public transport and employment opportunities, supporting the continued evolution of the sub-precinct as a diverse and vibrant mixed-use neighbourhood. Together with improvements to pedestrian connections, landscaping and publicly accessible open space, the proposal strengthens the

Sub-precinct master plan objectives	Comment
	relationship between housing, local businesses and community activity.
Character Area: Western Distributor	**Consistent** The proposal is consistent with this objective by supporting future open space and connectivity opportunities associated with the Western Distributor corridor. While the proposal does not apply to land beneath the Western Distributor, the proposed built form controls do not constrain or prejudice the delivery of future public domain, open space or movement improvements in this location. The proposal complements this objective through the delivery of new publicly accessible open spaces, deep soil planting and improved pedestrian connections on nearby sites, including the Harris Street and Ada Place sites. Together, these outcomes contribute to a greener, more connected neighbourhood and support the broader open space and movement network identified in the Urban Design Report.
Character Area: Jones Street 1. Support expansion of employment uses targeting innovation and creative industries, including affordable employment and creative live/work spaces.	**Consistent** The proposal is consistent with this objective by enhancing the residential character and pedestrian amenity of the Jones Street character area while respecting its heritage significance. The proposed controls facilitate the retention and adaptive renewal of the existing Jones Street terraces and Henry Avenue Flats, maintaining the established fine-grain character of the streetscape while delivering additional social housing. New deep soil landscaping, the relocation and expansion of publicly accessible open space adjacent to Fig Lane Park, and the introduction of a central private connection through the block will improve amenity, permeability and access to open space. Together, these measures reinforce the heritage, landscape and neighbourhood qualities that define the Jones Street character area while supporting sensitive growth and renewal.
Blackwattle Bay sub-precinct	
Open space that connects	**Consistent** The proposal is consistent with this objective by facilitating new publicly accessible open spaces, deep soil landscaped areas and pedestrian connections that strengthen links to the broader open space network within the Blackwattle Bay sub-precinct. The proposed controls for 1-33 Saunders Street, 2-10 Quarry Master Drive and 120-122 Saunders Street provide opportunities for new publicly accessible open space integrated with significant deep soil planting and

Sub-precinct master plan objectives	Comment
	increased tree canopy. New through-site links and pedestrian connections improve permeability through large blocks and enhance access to surrounding open spaces, public transport and key destinations. Together, these outcomes contribute to a more connected and accessible open space network that supports the future character and growth of the Blackwattle Bay sub-precinct.
Integrated into broader movement network	**Consistent** The proposed controls facilitate new pedestrian connections, through-site links, publicly accessible open spaces and improved permeability through large redevelopment sites, making it easier to move between homes, public transport, open spaces and surrounding destinations. The proposal also supports a transit-oriented pattern of growth in proximity to light rail services, bus routes and the future Pyrmont Metro station. Together, these measures strengthen connections between Blackwattle Bay, Pyrmont Village, Wentworth Park and the wider peninsula, consistent with the movement objectives of the Urban Design Report.
Activated and connected harbour foreshore walk	**Consistent** While the proposal does not apply to land forming part of the foreshore walk itself, it facilitates new publicly accessible open spaces, active ground-floor uses, wider footpaths and pedestrian connections that strengthen links between surrounding neighbourhoods and the waterfront. Increased housing, employment and local retail activity will also support greater use of the foreshore and surrounding public spaces throughout the day and evening. Together, these outcomes complement the delivery of an activated and connected harbour foreshore walk within the Blackwattle Bay sub-precinct.
Character Area: Pyrmont Bridge Road	**Not applicable**
Character Area: Carmichael Park	**Consistent** The proposed controls facilitate significant new landscaping and tree canopy, while ensuring that new development responds appropriately to surrounding open spaces through careful siting, height transitions and solar access considerations. New pedestrian connections and publicly accessible spaces will strengthen links between the neighbourhood, local parks and the wider open space network, complementing the role of Carmichael Park as an important recreational and landscape feature within the sub-precinct.

Sub-precinct master plan objectives	Comment
Character Area: Bank Street	**Consistent** The proposal is consistent with this objective by supporting the future character of the Bank Street area through the delivery of additional housing, publicly accessible open space, deep soil planting and improved pedestrian connections. The proposed controls for 1-33 Saunders Street, 2-10 Quarry Master Drive and 120-122 Saunders Street facilitate a greener and more connected urban environment, with significant landscaped areas and increased tree canopy contributing to neighbourhood amenity. New through-site links and publicly accessible spaces will improve permeability and strengthen connections between Bank Street, surrounding residential areas, public transport and the wider open space network. Together, these outcomes support the evolution of the Bank Street character area as a liveable, accessible and landscape-rich neighbourhood.

Attachment A1

Planning proposal - Ultimo Pyrmont
Stage 2 - LEP Maps

CITY OF SYDNEY

Sydney Local Environmental Plan 2012

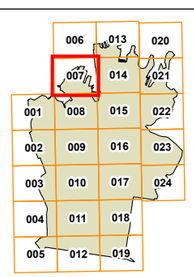
Affordable Housing Map - Sheet AFH_007

Affordable Housing

Refer to clause 7.13B

Cadastre

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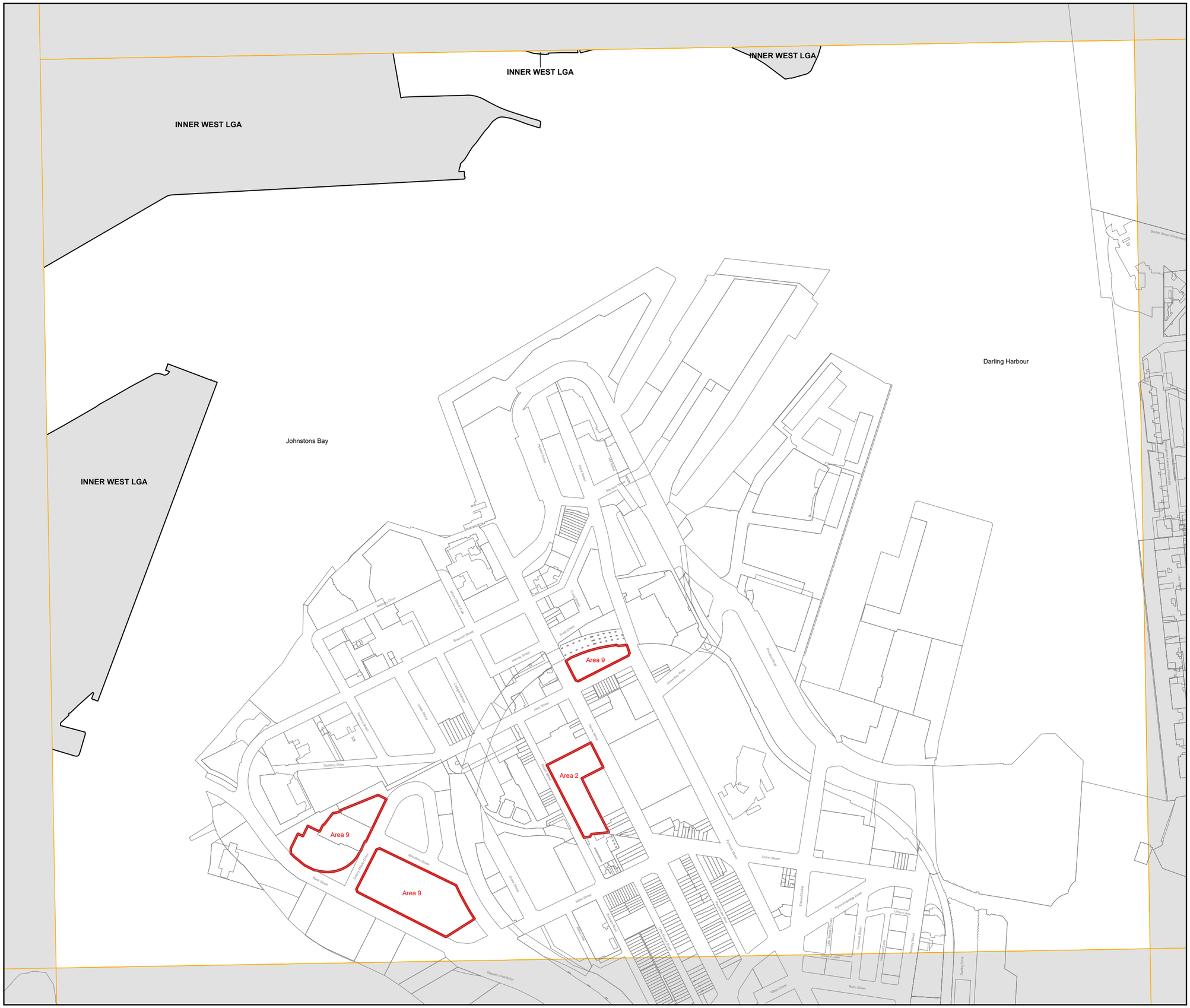
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Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_AFH_007_005_20260813



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Sydney Local Environmental Plan 2012

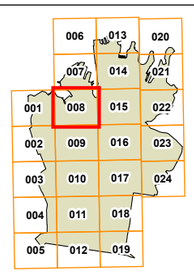
Affordable Housing Map - Sheet AFH_008

Affordable Housing

Refer to clause 7.13B

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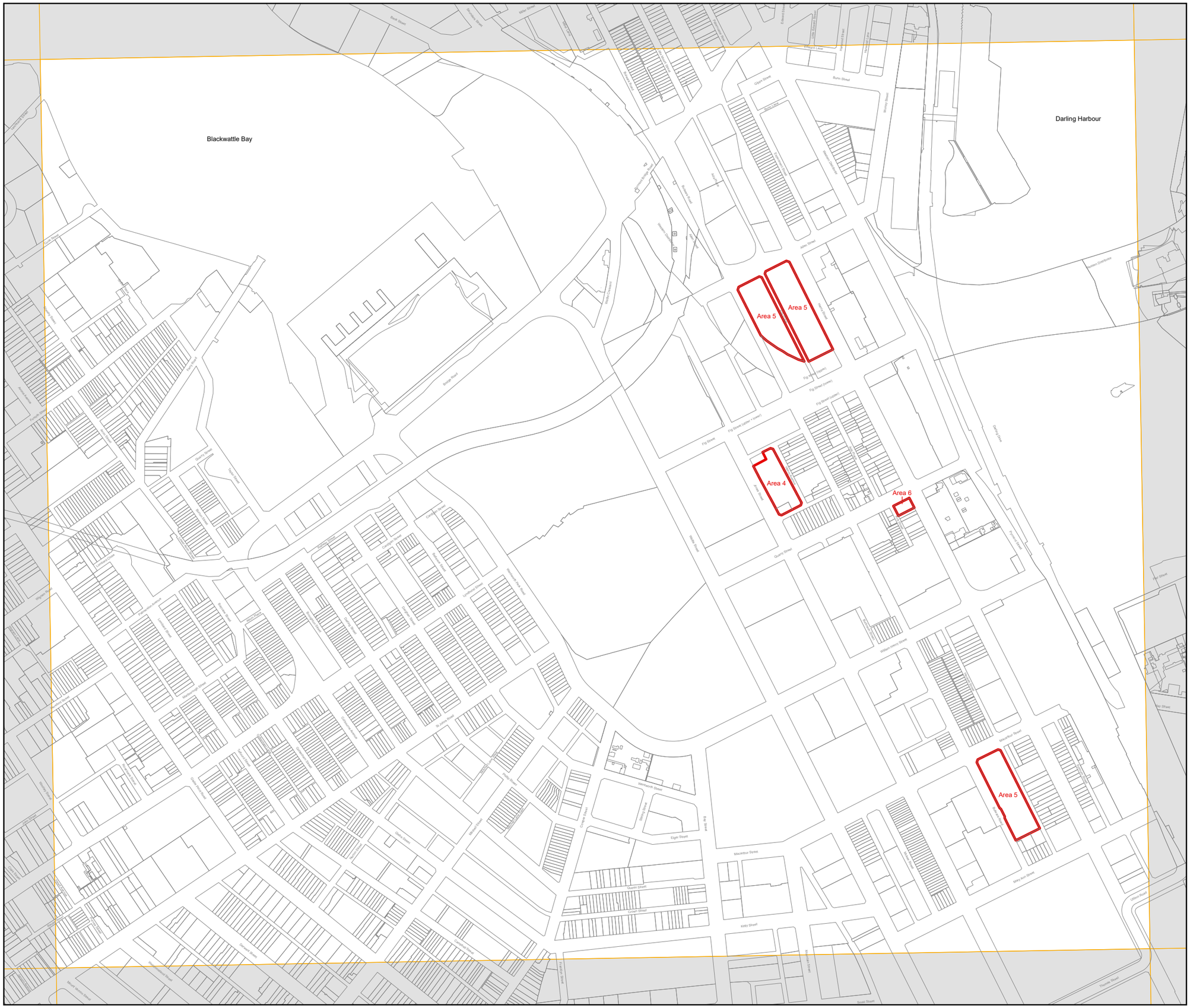
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Projection: GDA 2020
Zone 56

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Sydney Local Environmental Plan 2012

Active Street Frontages Map - Sheet ASF_007

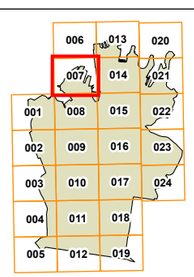
Active Street Frontages

Active Street Frontage

Cadastre

Cadastre 25/08/2026 © City of Sydney

131



N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_ASF_007_005_20260825

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

Johnstons Bay

Darling Harbour

Sydney Local Environmental Plan 2012

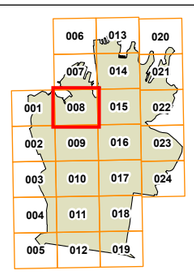
Active Street Frontages Map
- Sheet ASF_008

Active Street Frontages

Active Street Frontage

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Cadastre 26/08/2026 © City of Sydney



N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_ASF_008_005_20260826

CITY OF SYDNEY

Sydney Local Environmental Plan 2012

Locality and Site Identification Map
Key Sites Map
Foreshore Building Line Map
- Sheet CL1_007

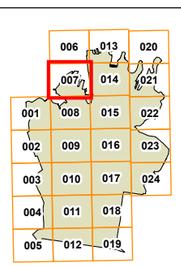
Locality and Site Identification Map

Ultimo Pyrmont Opportunity Land

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133



N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 1994
Zone 56

Map identification number:
7200_COM_CL1_007_005_20260814

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

Johnstons Bay

Darling Harbour

Sydney Local Environmental Plan 2012

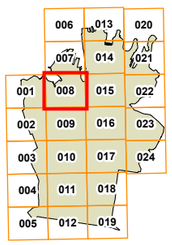
Locality and Site Identification Map
Key Sites Map
Foreshore Building Line Map
- Sheet CL1_008

Locality and Site Identification Map

Ultimo Pyrmont Opportunity Land

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N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 1994
Zone 56

Map identification number:
7200_COM_CL1_008_005_20260814



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Sydney Local Environmental Plan 2012

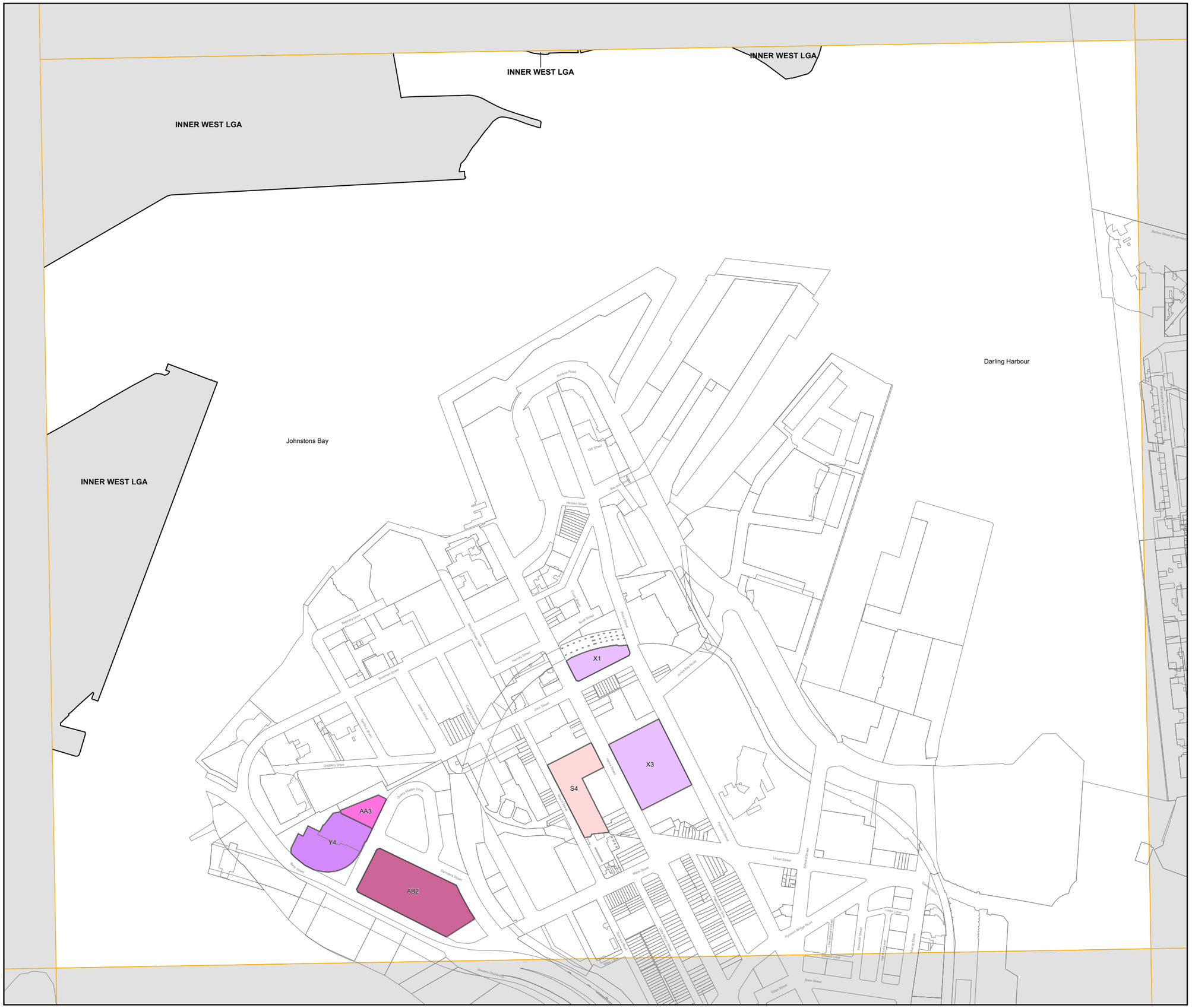
Floor Space Ratio Map - Sheet FSR_007

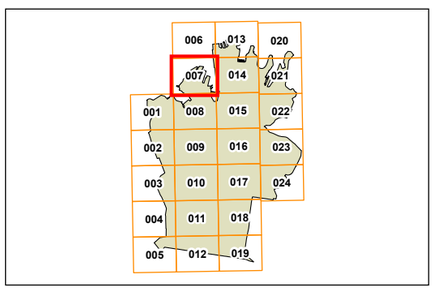
Maximum Floor Space Ratio (n:1)

S 3	1.6
S 4	1.75
V 1	3
V 2	3.12
X 1	4
X 3	4.16
X 4	4.22
Y 4	4.74
A A 3	6.5
A B 2	7.25

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N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_FSR_007_005_20260825

Sydney Local Environmental Plan 2012

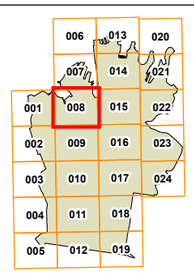
Floor Space Ratio Map - Sheet FSR_008

Maximum Floor Space Ratio (n:1)

S 3	1.6
S 4	1.75
V 1	3
V 2	3.12
X 1	4
X 3	4.16
X 4	4.22
Y 4	4.74
A A 3	6.5
A B 2	7.25

Cadastre

Cadastre 28/08/2026 © City of Sydney



N

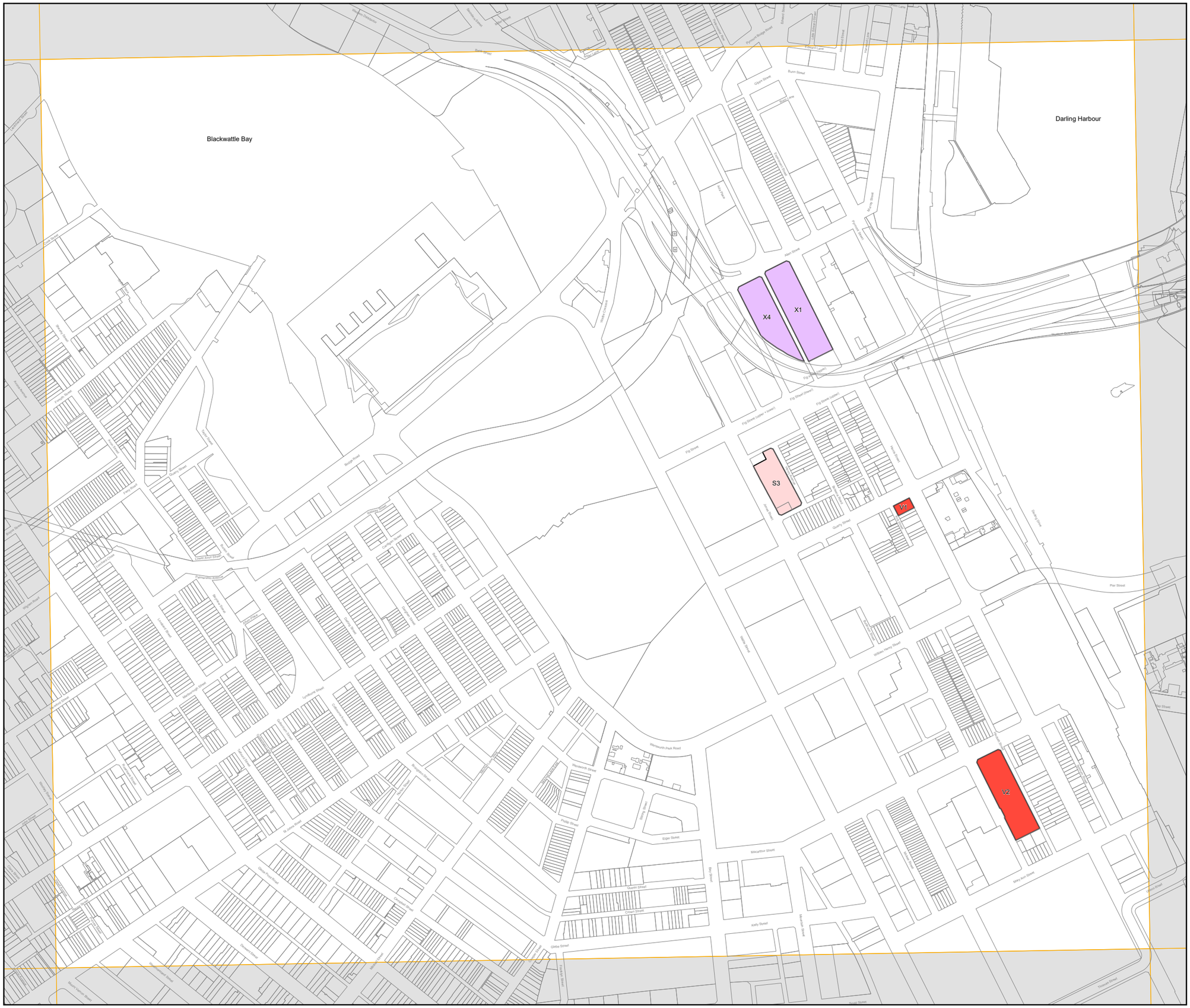
0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_FSR_008_005_20260828

136



CITY OF SYDNEY

Sydney Local Environmental Plan 2012

Height of Buildings Map - Sheet HOB_007

Maximum Building Height (m)

Q2	20
T2	27
W1	40
X	45
AA1	60
AA2	65
AB3	95

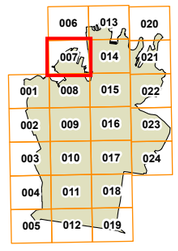
Maximum Building Height (m)
Heights shown on map in RL (m)

	110 - 120
	140 - 150

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137



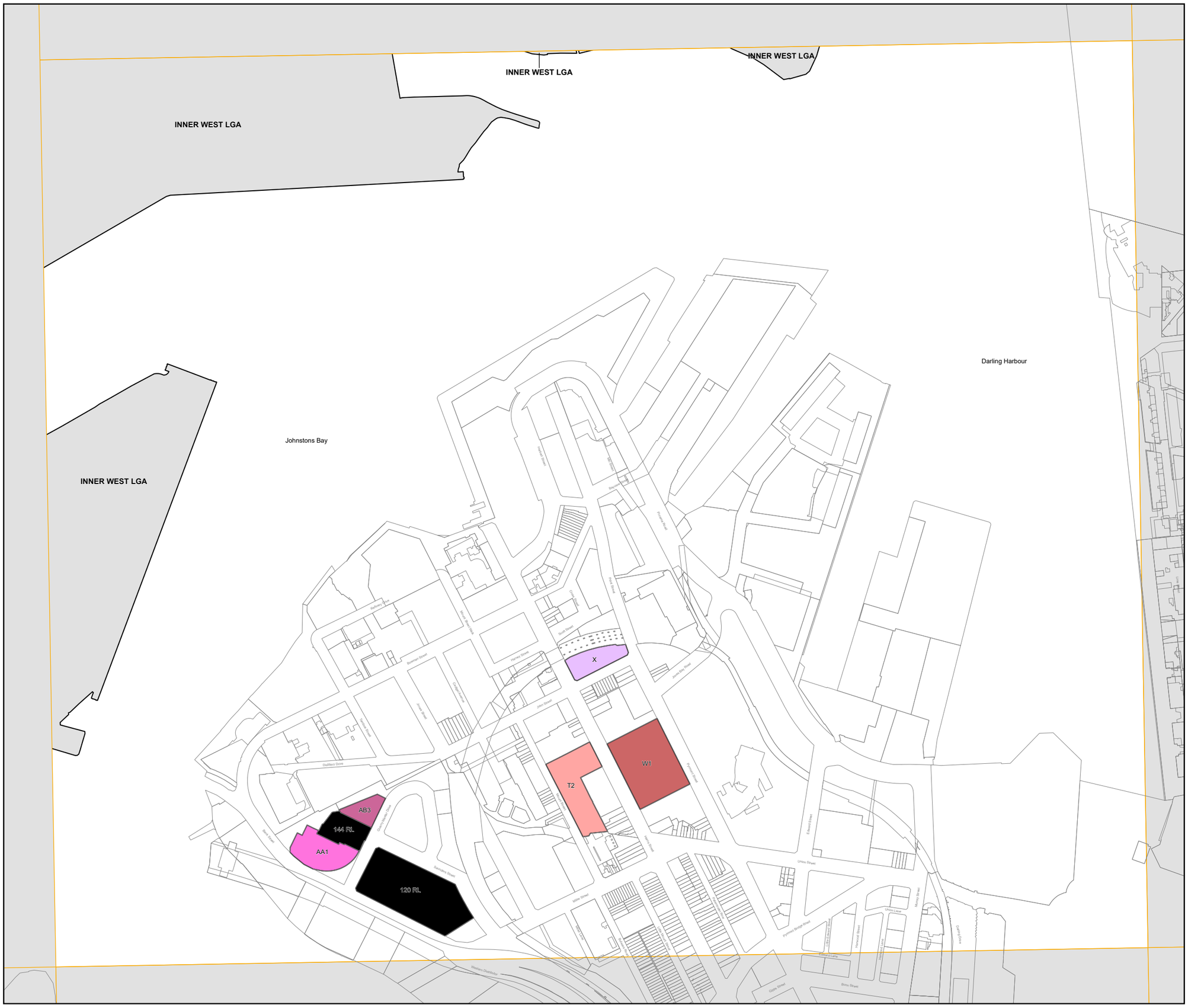
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0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_HOB_007_005_20260825



Sydney Local Environmental Plan 2012

Height of Buildings Map - Sheet HOB_008

Maximum Building Height (m)

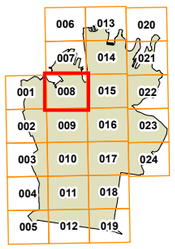
Q2	20
T2	27
W1	40
X	45
AA1	60
AA2	65
AB3	95

Maximum Building Height (m)
Heights shown on map in RL (m)

	110 - 120
	140 - 150

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N

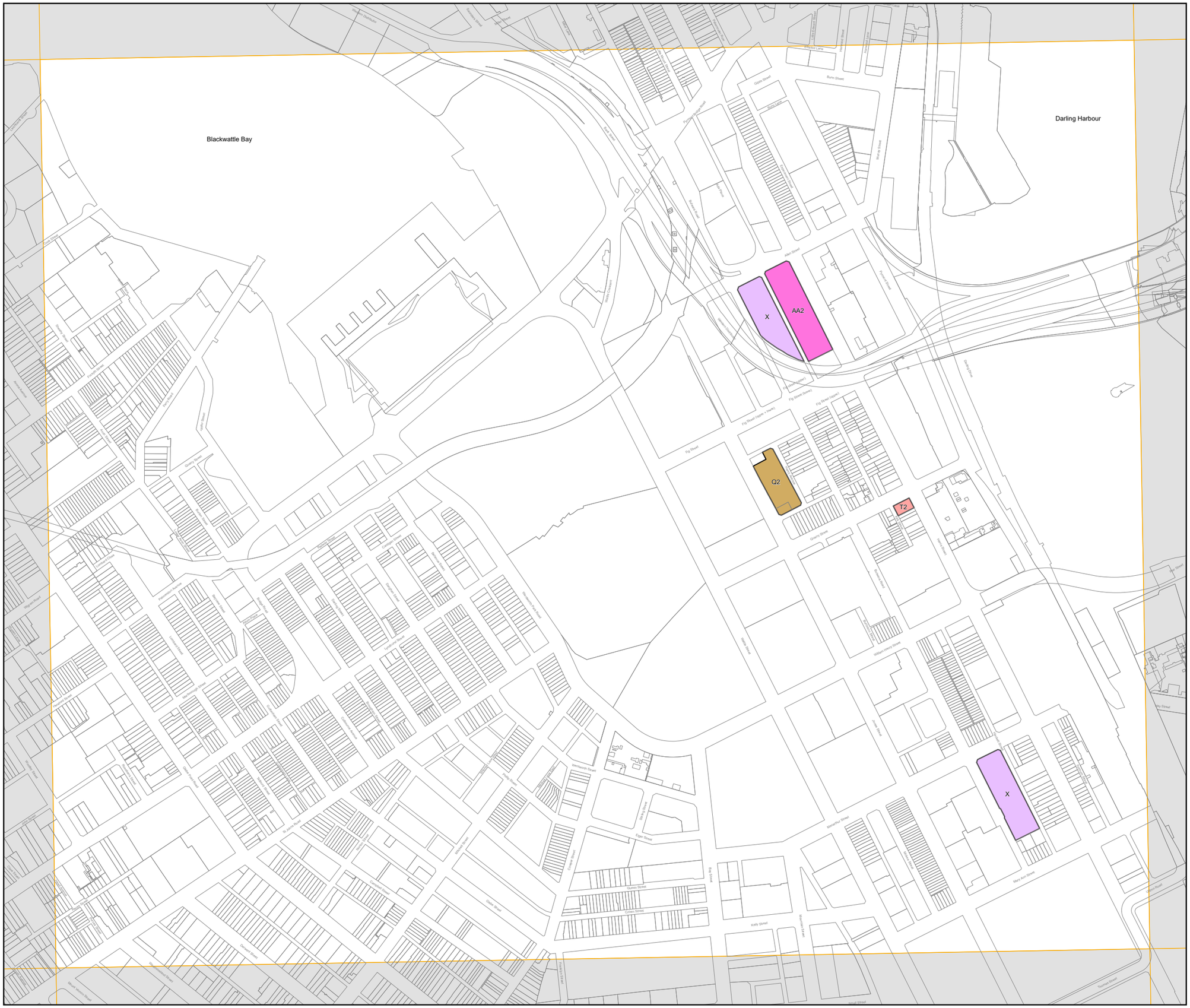
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Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_HOB_008_005_20260825

138



Sydney Local Environmental Plan 2012

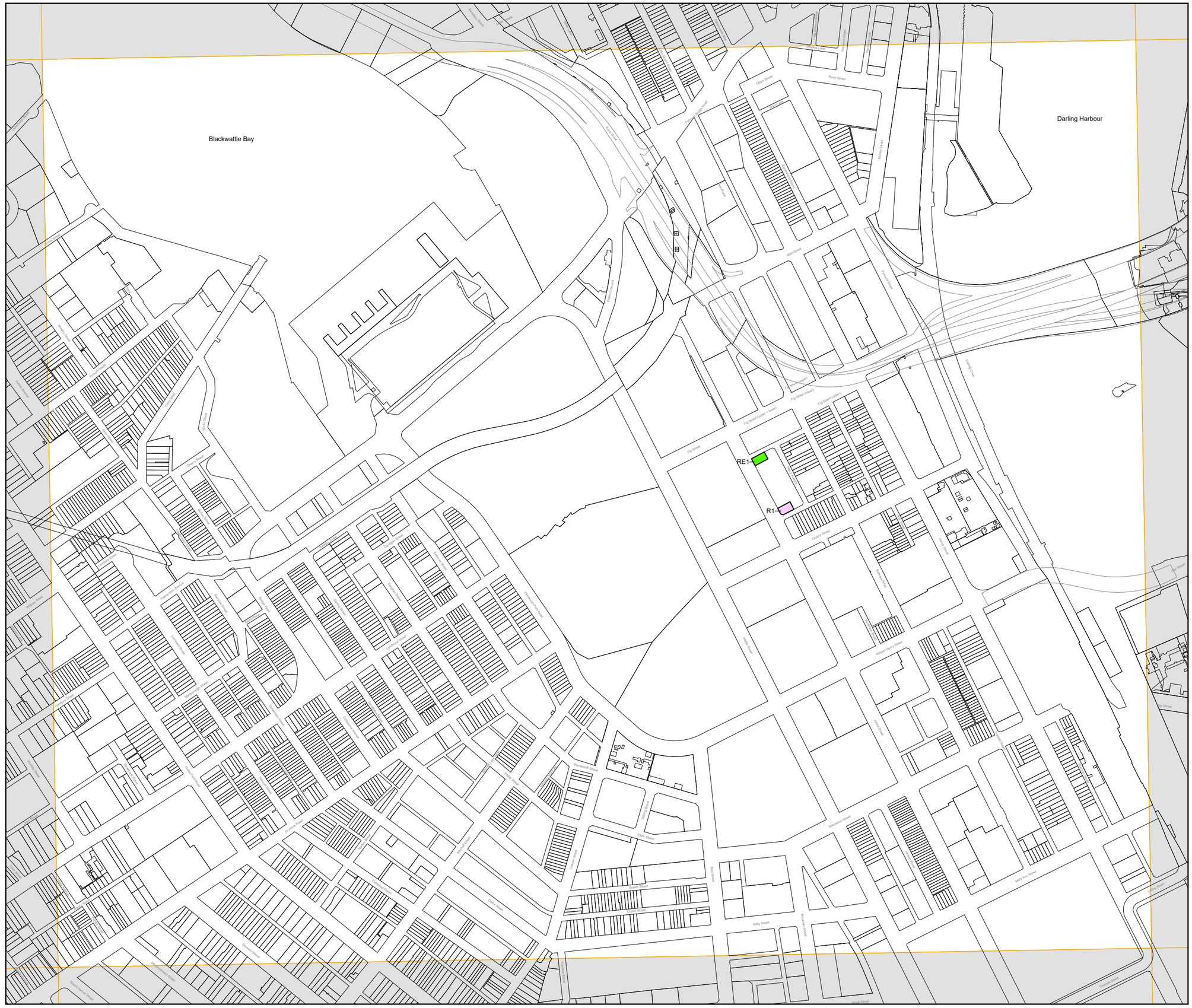
Land Zoning Map - Sheet LZN_008

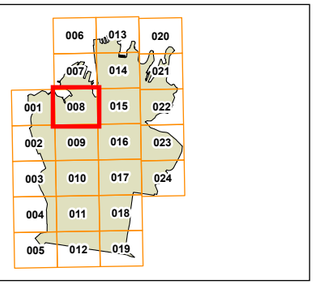
Zone

- R1 General Residential
- RE1 Public Recreation

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- Cadastre 14/08/2026 © City of Sydney





N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_LZN_008_005_20260814

Sydney Local Environmental Plan 2012

Sun Access Protection Map - Sheet SAP_007

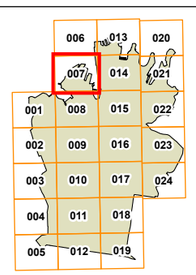
Protected Places

- Land Protected by Sun Access Planes
- Land Protected by Clause 6.18

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- Cadastre 14/08/2026 © City of Sydney

140



N

0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020 Zone 56

Map identification number: 7200_COM_SAP_007_005_20260814

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

INNER WEST LGA

Johnstons Bay

Darling Harbour

Pirrama Park

Gibbs Park

Pirrama Park

Ballaarat Park

James Watkinson Reserve

Metcalfe Park

Cadi Park

Waterfront Park

Pyrmont Bay Park

Distillery Park

Carmichael Park

The Knoll

Maybanke Park

Union Square

Bank Street Park

Paradise Reserve

Sydney Local Environmental Plan 2012

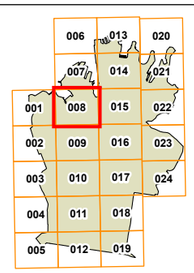
Sun Access Protection Map - Sheet SAP_008

Protected Places

- Land Protected by Sun Access Planes
- Land Protected by Clause 6.18

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- Cadastre 03/09/2026 © City of Sydney



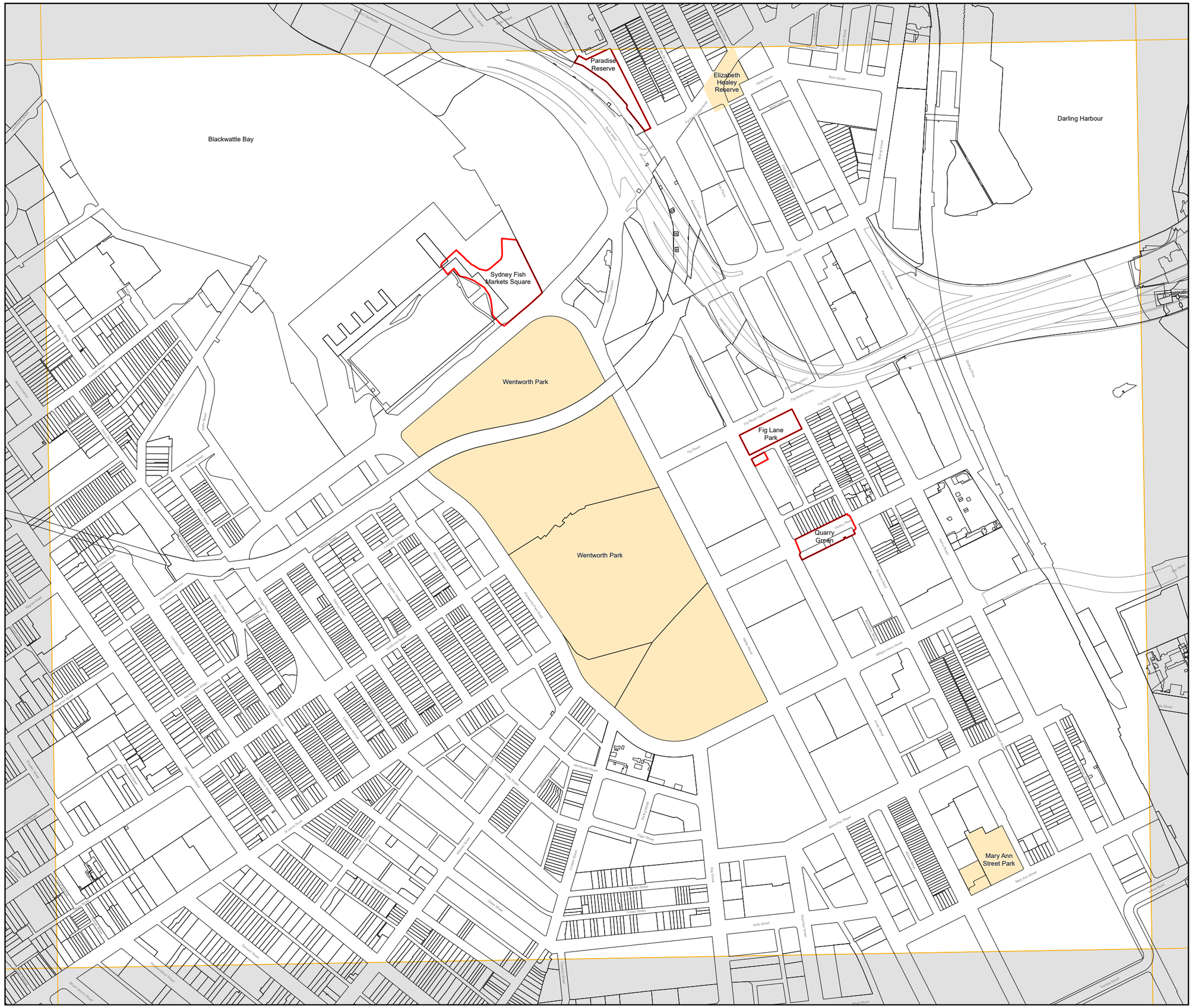
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0 200 m

Scale: 1:5,000 @ A3

Projection: GDA 2020
Zone 56

Map identification number:
7200_COM_SAP_008_005_20260903



CITY OF SYDNEY

Sydney Local Environmental Plan 2012

Sun Access Protection Map - Sheet SAP_009

Protected Places

Land Protected by Sun Access Planes

Land Protected by Clause 6.18

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Alumni Green
Catherine Street
Anzac Bridge
Parramatta Road
Anzac Bridge
Broadway
Kent Street
Sussex Street
Clarence Street
Kelly Street
Goulburn Street
Liverpool Street
Bathurst Street
Elizabeth Street
Castlereagh Street
Pitt Street
George Street
Macquarie Street
Phillip Street
Bridge Street
Loftus Street
Young Street
Grosvenor Street
Essex Street
Harrington Street
Cumberland Street
Gloucester Street
Argyle Street
Cambridge Street
Hickson Road
Cahill Expressway
Lower Fort Street
Upper Fort Street
Cumberland Street
Gloucester Street
Argyle Street
Harrington Street
Phillip Street
Bridge Street
Loftus Street
Young Street
Grosvenor Street
Essex Street
Bligh Street
Pitt Street
George Street
Macquarie Street
Elizabeth Street
Castlereagh Street
Bathurst Street
Liverpool Street
Goulburn Street

Attachment B

Draft Sydney development control plan – Ultimo Pyrmont Stage 2

CITY OF SYDNEY

Draft Sydney Development Control Plan 2012 – Ultimo-Pyrmont Stage 2



The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Draft Sydney Development Control Plan 2012 – Ultimo-Pyrmont Stage 2

The purpose of this draft Development Control Plan

The purpose of this draft 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 provisions guide future development within the area known as the Ultimo-Pyrmont identified within the City of Sydney Local Environmental Plan 2012.

Citation

This amendment may be referred to as Sydney Development Control Plan 2012 – Ultimo-Pyrmont Stage 2.

Land covered by this plan

This plan applies to all land identified in the Ultimo-Pyrmont within the City of Sydney Local Environmental Plan 2012.

Relationship of this plan to Sydney Development Control Plan 2012

This plan amends the Sydney Development Control Plan 2012

Amendment to Sydney Development Control Plan 2012

1. Amend Section 5.X Ultimo Pyrmont in accordance with Appendix 2.

3. Amend DCP map sheets 7 and 8 in accordance with Figures provided in Appendix 2.

Reviewer notes

This DCP identifies proposed amendments to Section 5.13 Ultimo Pyrmont. At the time of writing, Section 5.13 has been approved for making but has not yet been finalised. Accordingly, references, numbering, formatting and document structure may vary from the final published version.

For mapping purposes, the Ultimo Pyrmont Stage 1 DCP groups sites into six geographic groupings (Groups A-E and Miscellaneous). These groupings were established to provide clear and legible mapping. With the inclusion of additional Stage 2 sites, the grouping and presentation of sites on maps may be revised in the final DCP.

Amendments are shown in red and deletions are shown in ~~red strikethrough~~.

Only maps and diagrams that are proposed to be added or amended are included in this document. Where appropriate, the proposed map amendments will be made to the DCP map tiles.

Appendix 2

5.X Ultimo-Pyrmont

This section applies to the land identified as the Ultimo-Pyrmont in Figure X Specific Areas map. It should be read in conjunction with:

- other requirements of this DCP; and
- the locality statement and principles in Section 2.4 Harris Street Village.

Clause XX [new clause] of the Sydney LEP 2012 incentivises development for employment generating uses on sites identified as ~~Area A – Metro Station in Figure 2 Groups of sites included~~. [reference to be inserted in final version]

This section applies to development which utilises the incentive planning controls available under Clause XX of the Sydney LEP 2012. This section does not apply to development on sites identified as ~~Area A – Metro Station~~ [reference to be inserted in final version] which does not utilise incentive planning controls available under Clause XX of the Sydney LEP 2012.

5.X.1 General

Objectives

(a) Protect amenity for current and future residents.

(b) Protect the heritage character of Ultimo Pyrmont.

(c) Provide for deep soil planting provisions for new developments.

(d) Ensure that habitable rooms in existing residential dwellings maintain an appropriate level of sun access.

(e) Ensure that public spaces have an appropriate level of sun access.

(f) Protect and enhance identified public view corridors.

Provisions

(1) Development is to be in accordance with the locality statement at Section 2.4 Harris Street Village and supporting principles for the locality.

Development is to be in accordance with

(2) Figure 1 Ultimo-Pyrmont Urban Strategy Map

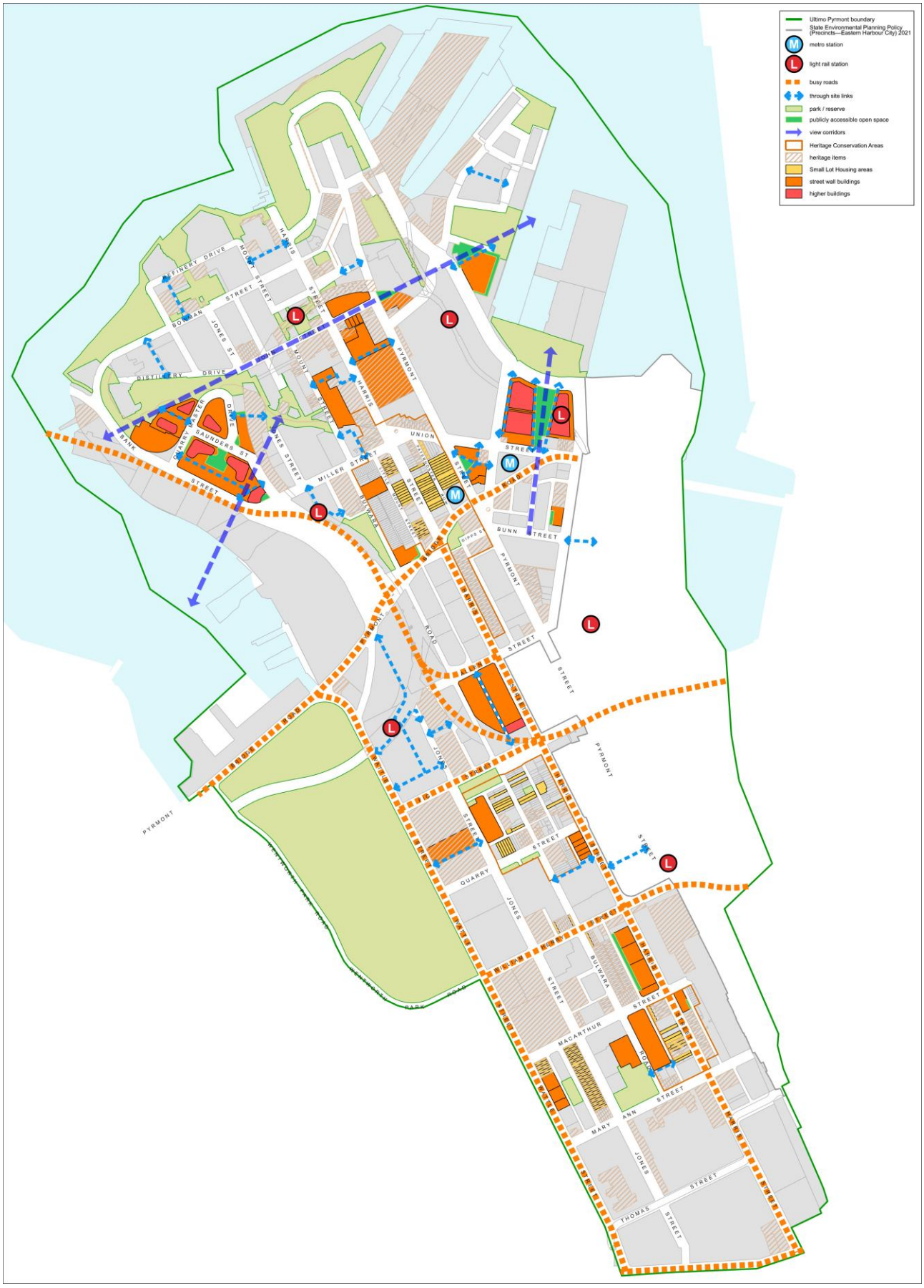


Figure 1 Ultimo-Pyrmont Urban Strategy Map

5.X.2 Movement and accessible open space

Objectives

(a) To ensure that appropriate publicly accessible spaces are provided as part of new developments.

(b) Improve pedestrian safety and amenity through the targeted widening of footpaths and increases in street setbacks on key sites.

(c) Create a walkable and pedestrian friendly network to improve through-site links within Ultimo Pyrmont and surrounds.

(d) Deliver tree canopy cover and greening within road corridors and reservations.

(e) Increase visibility of, and access to, key public transport nodes.

(f) Increase permeability of large street blocks and reduce walking distances to key destinations.

Provisions

(1) Where identified on Figure 2 to Figure 5, buildings are to be set back to increase pedestrian safety and amenity.

(2) Development is to provide publicly accessible open space in accordance with Figure 6 to Figure 9.

(3) Public open space at 336-374 Jones Street Ultimo is to:

a. be of an area no less than the existing public open space which it replaces at 370-374 Jones Street Ultimo

b. have dimensions and proportions that provide an equivalent or improved level of functionality, usability and landscape amenity;

c. be capable of accommodating the recreation, landscaping and public domain functions of the existing public open space; and

d. be fit for purpose, not constrained by contaminated land restrictions, and dedicated to Council.

(4) Where required by Council, public open space and footpaths are to be provided and dedicated to Council.

(5) Despite 5.X.2(2) where 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, development is to provide publicly accessible open space in accordance with Figure X.

(6) Where identified by Figure 6 to Figure 9, accessible through-site links are to be provided to ensure unencumbered public pedestrian accessibility across Ultimo Pyrmont and surrounds.

(7) Despite 5.X.2(4) where 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, development is to provide through-site links are to be provided to ensure unencumbered public pedestrian accessibility in accordance with Figure X.

(8) Where through-site links require a lift, the lift provided is to be exclusively for the through-site link.

(9) The through-site link at 60 Union Street Pyrmont and 2 Edward Street Pyrmont is to be in accordance with the elevations at Figures X and X.

(10) Building arrangement and through-site link at 28-48 Wattle Street Ultimo is to be in accordance with the sections at Figures X and X.

(11) Driveways and vehicle access points are only to be provided where shown on Figures 6 to 10.

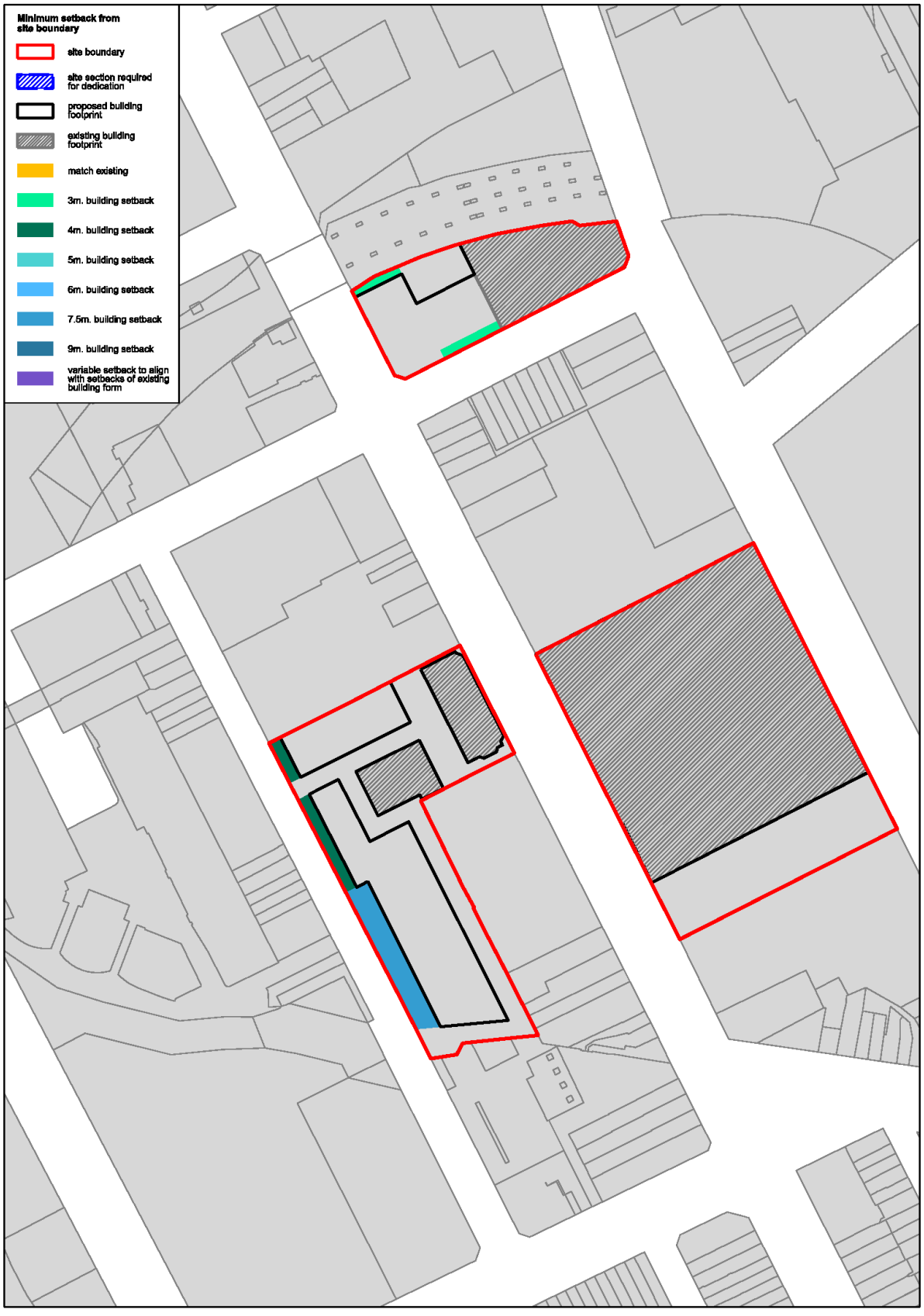


Figure 2 Street Level Setbacks maps 1/4

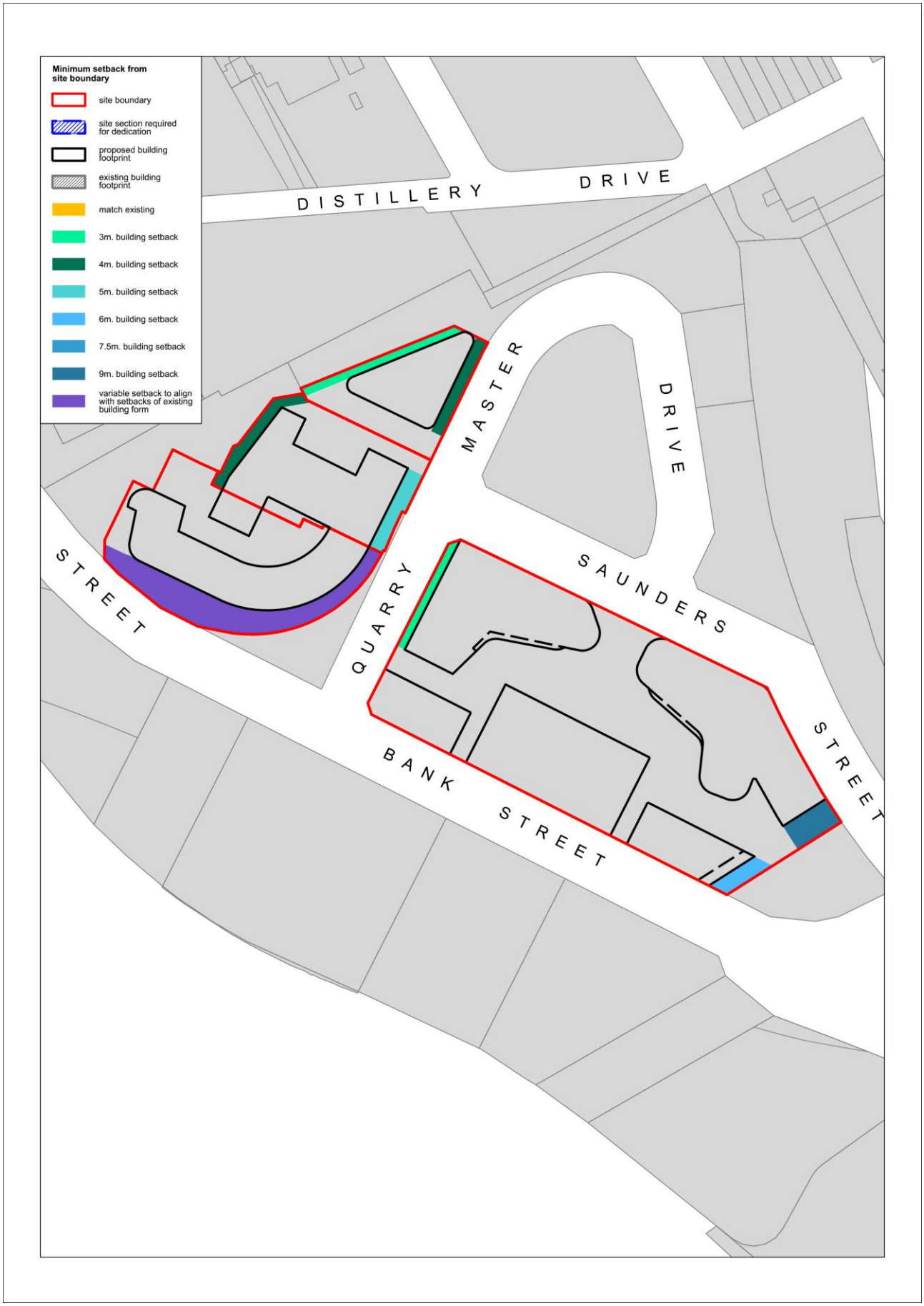


Figure 3 Street Level Setbacks maps 2/4



Figure 4 Street Level Setbacks maps 3/4

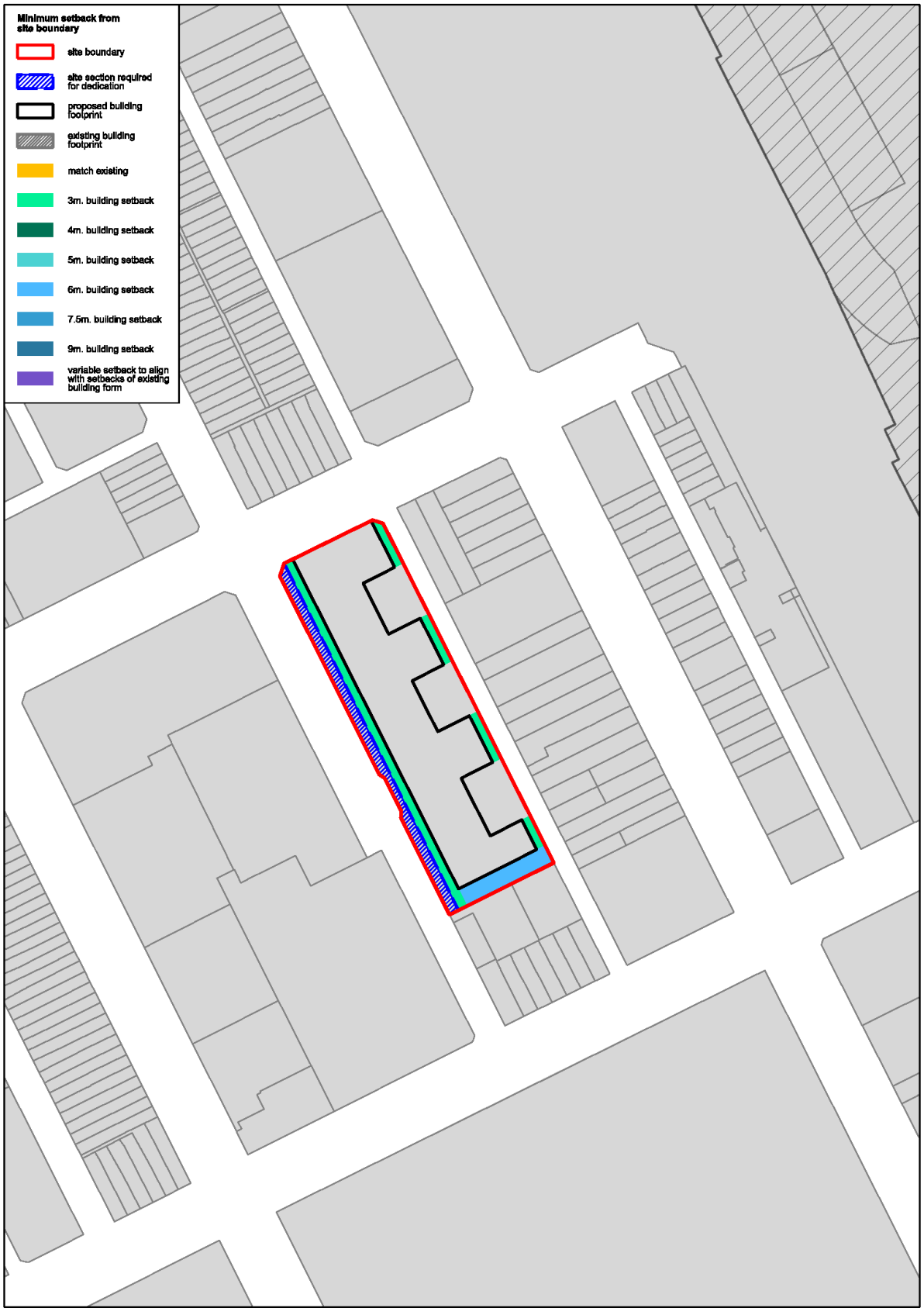


Figure 5 Street Level Setbacks maps 4/4

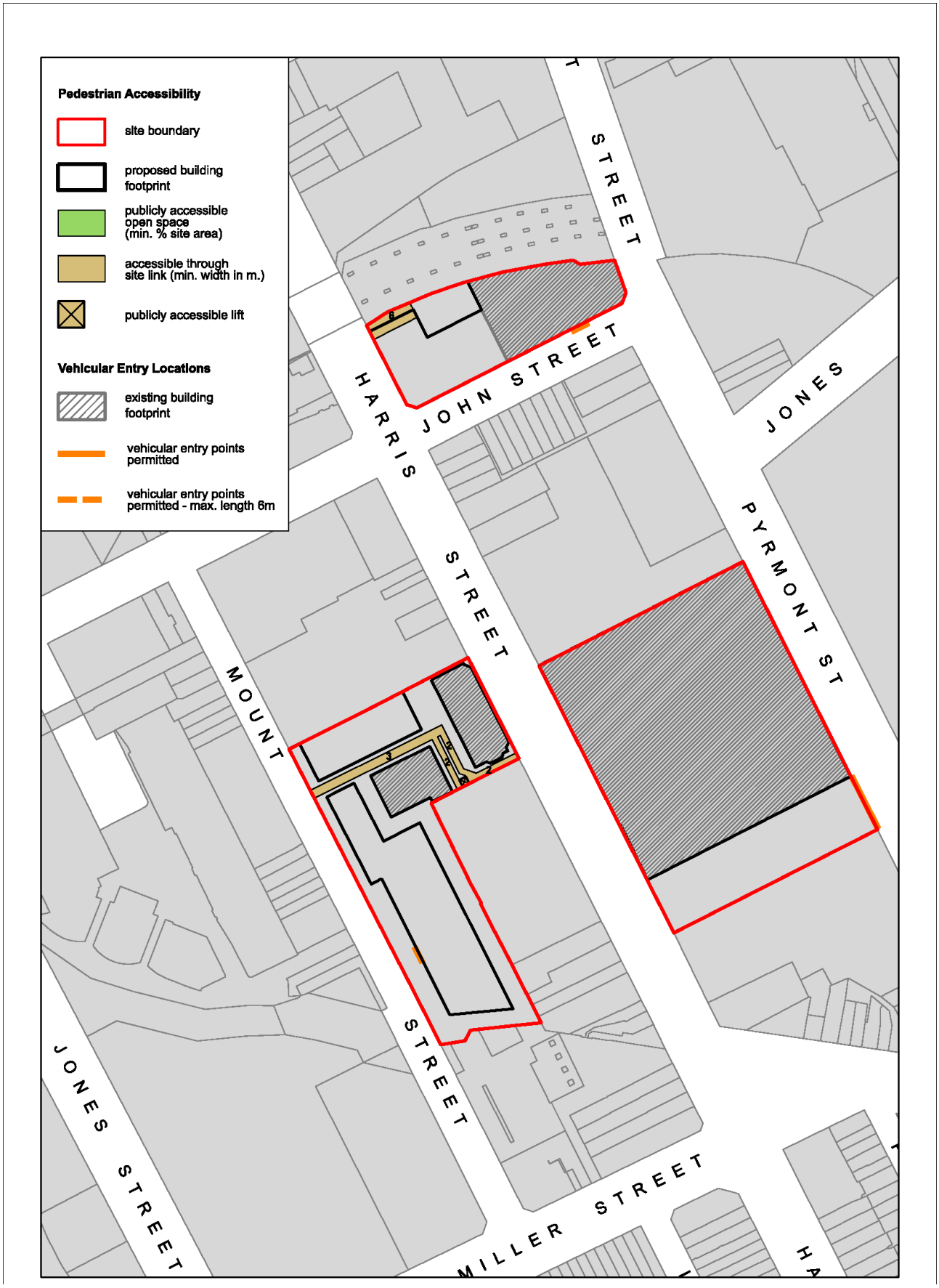


Figure 6 Pedestrian Accessibility and Vehicular Entry Locations maps 1/4



Figure 7 Pedestrian Accessibility and Vehicular Entry Locations maps 2/4



Figure 8 Pedestrian Accessibility and Vehicular Entry Locations maps 3/4

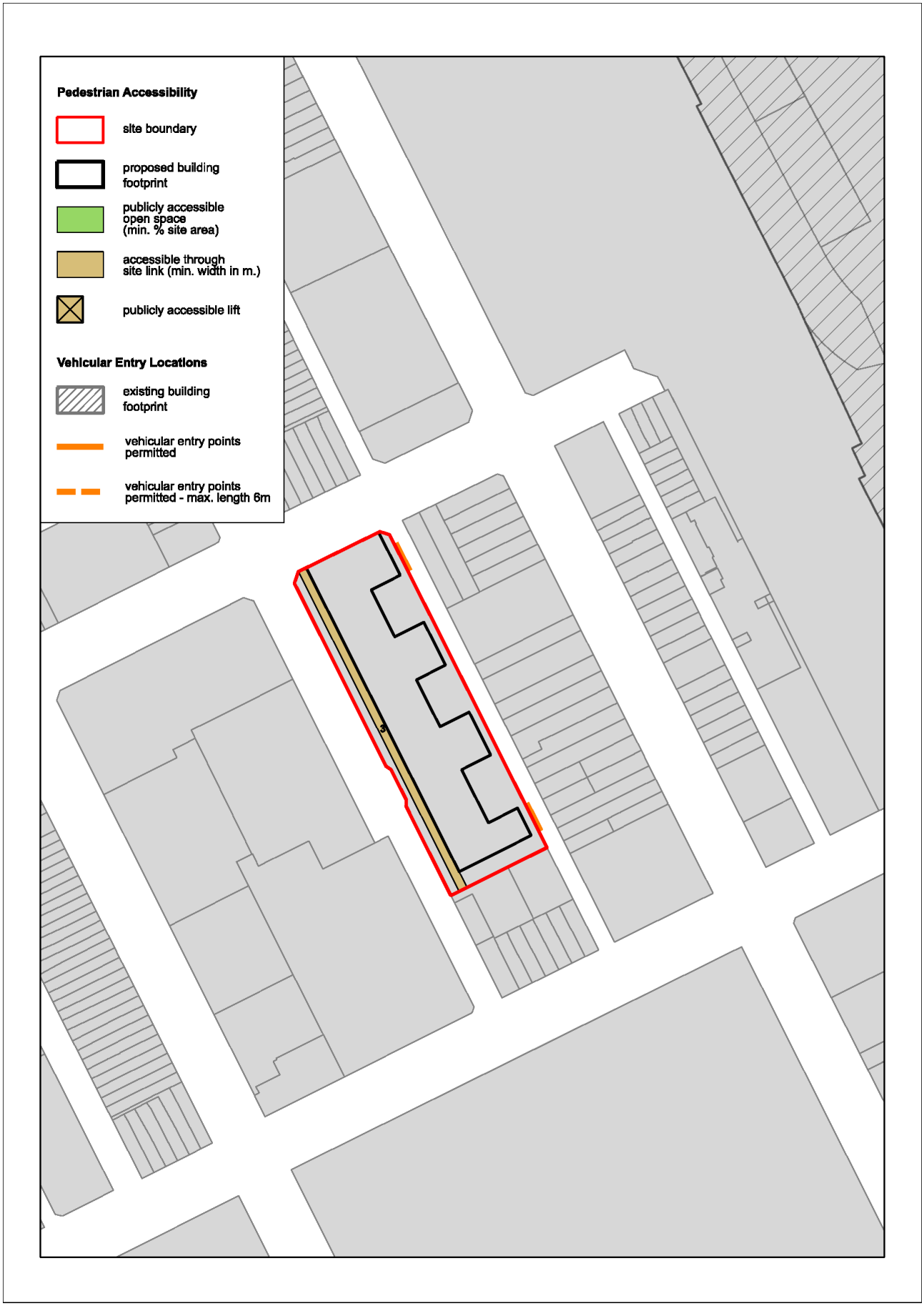


Figure 9 Pedestrian Accessibility and Vehicular Entry Locations maps 4/4

5.X.3 Deep soil and landscaping

Objectives

(a) Ensure appropriate deep soil areas are provided for in new developments.

(b) Increase tree canopy to limit the impacts of heat and increase amenity and wellbeing.

Provisions

(1) Unless otherwise identified, new developments are to provide for a minimum 15% Deep Soil zone.

(2) Development is to provide areas of deep soil in accordance with Figure 10 to Figure 13.

(3) Despite 5.X.3(2) where 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, development is to areas of deep soil in accordance with Figure X.

(4) Street tree plantings to be provided in accordance with the City of Sydney Street Tree Planting Masterplan.

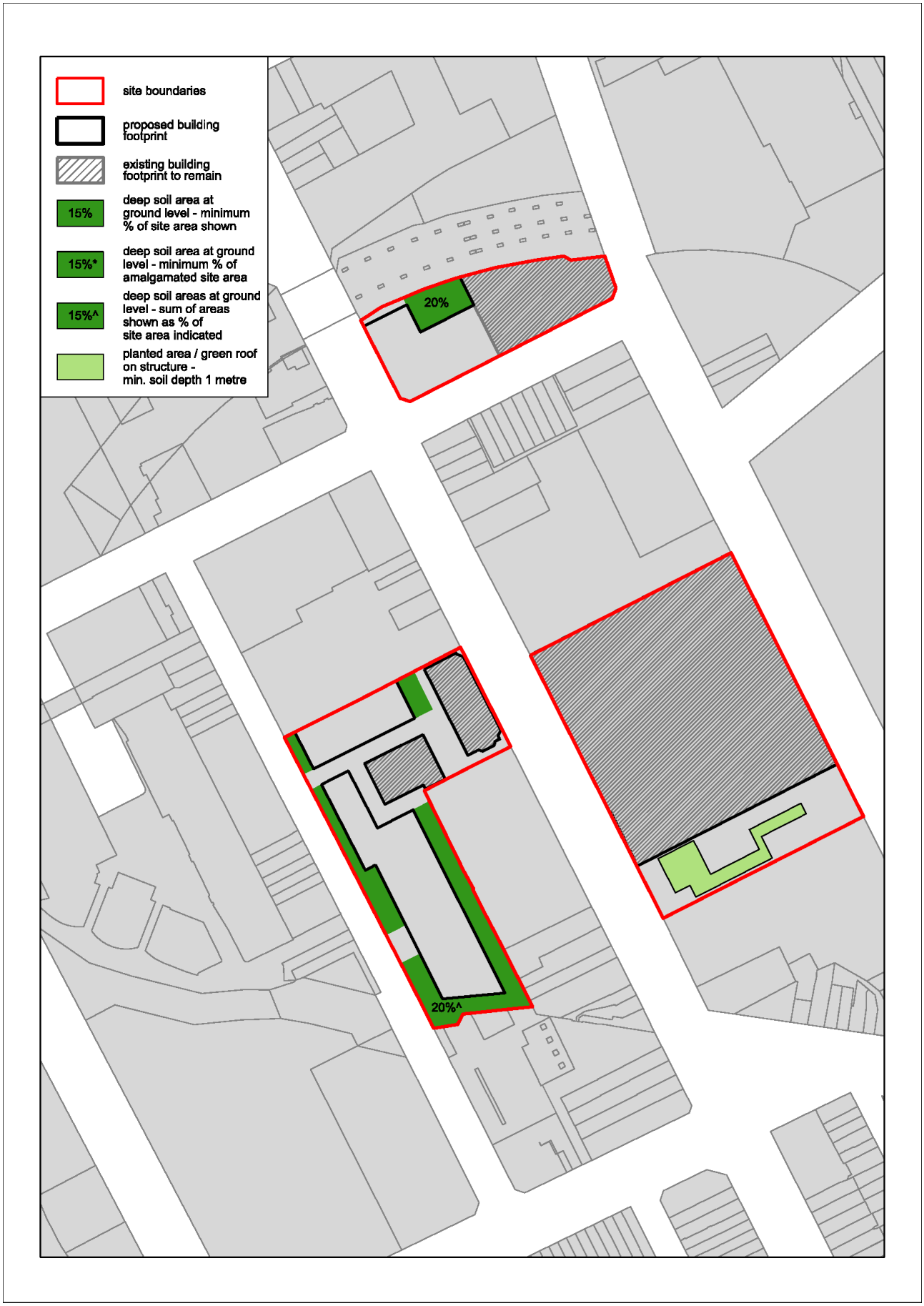


Figure 10 Deep Soil Areas maps 1/4

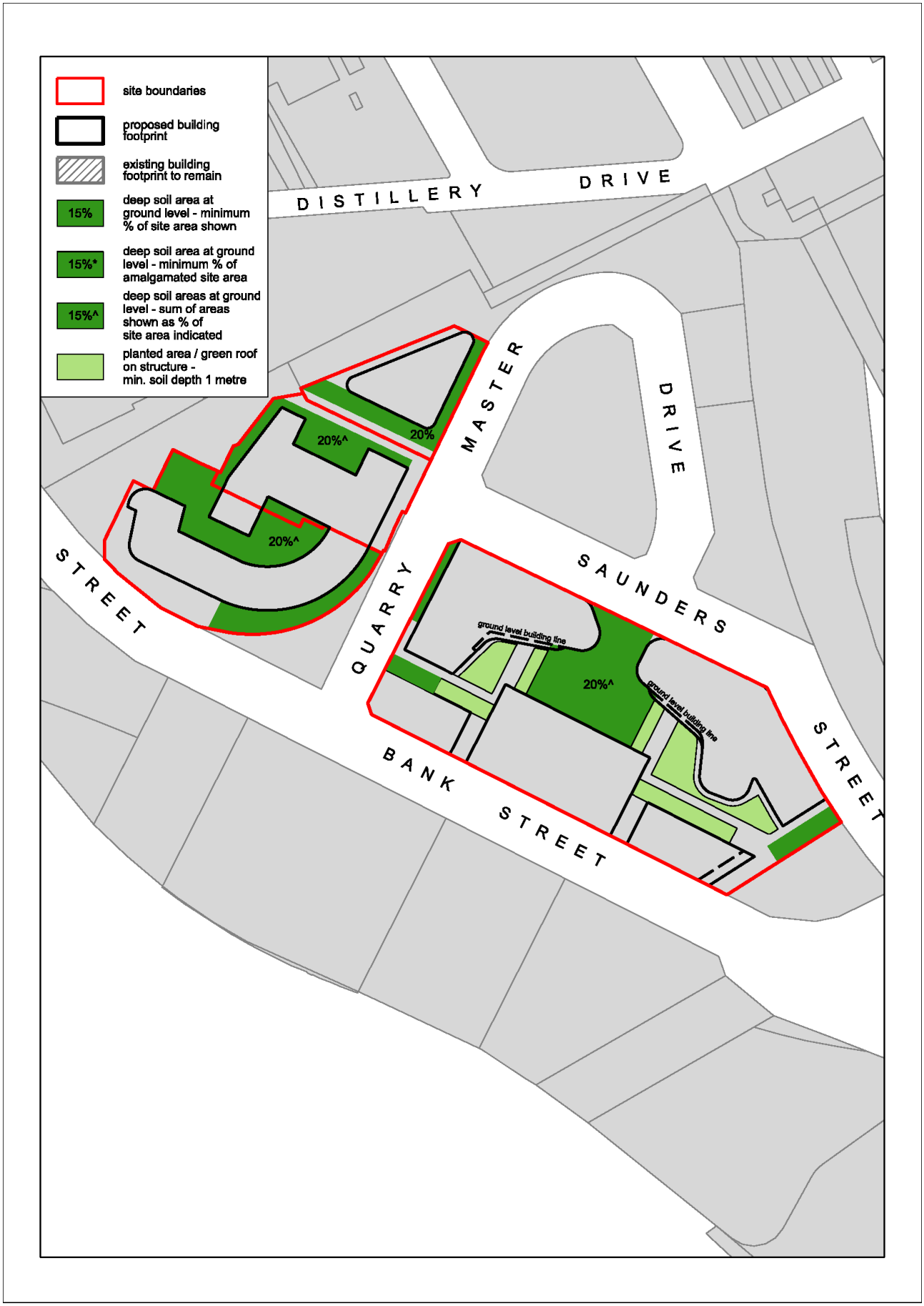


Figure 11 Deep Soil Areas maps 2/4

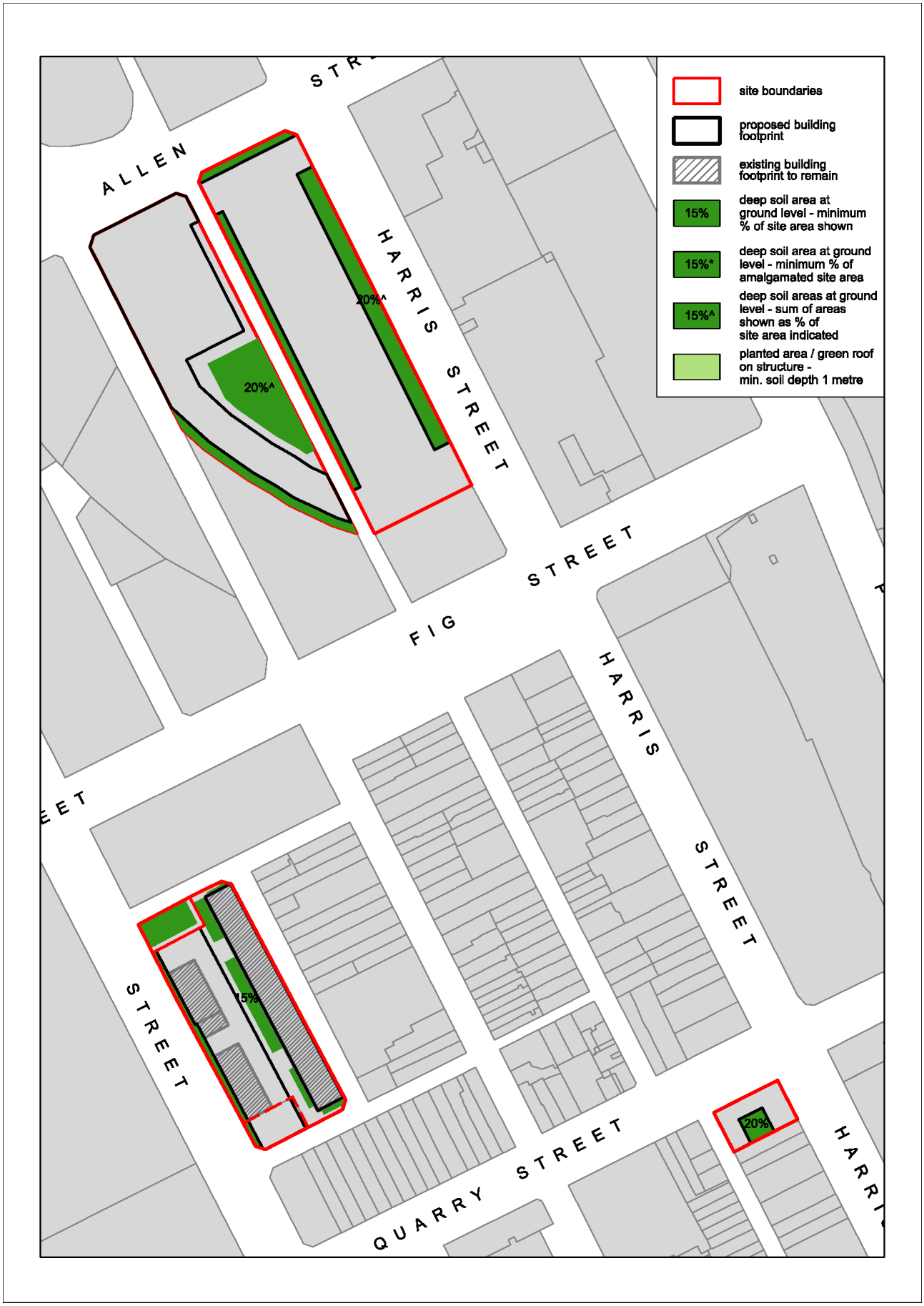


Figure 12 Deep Soil Areas maps 3/4

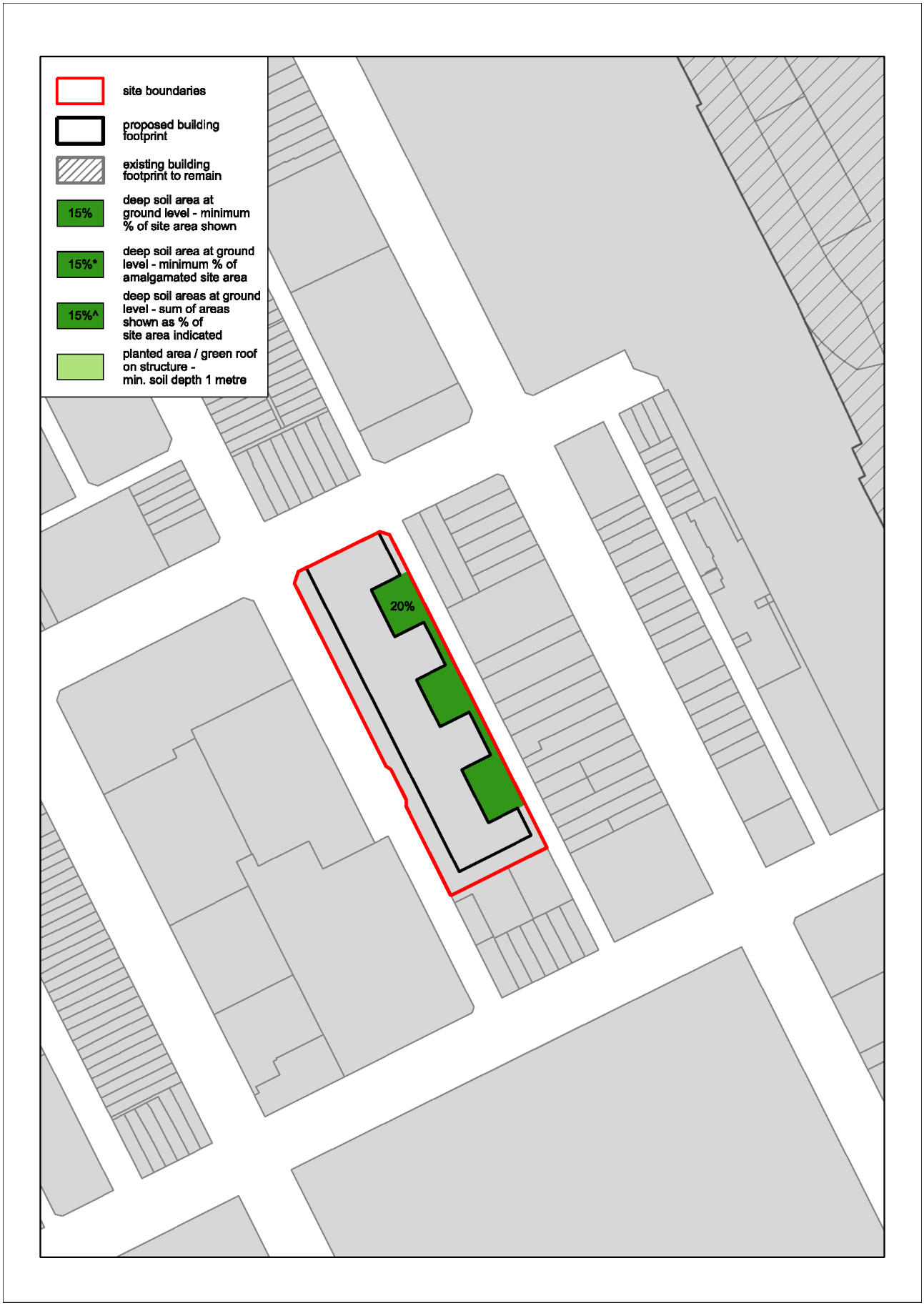


Figure 13 Deep Soil Areas maps 4/4

5.X.4 Building form, setbacks, layout and design

Objectives

(a) Incentivise provision of employment floor space in well located areas.

(b) Ensure a high level of amenity to streets, parks and public spaces with sunlight and a comfortable and safe wind environment.

(c) Establish appropriate street wall heights and horizontal articulation.

(d) Ensure setbacks are provided to transition to nearby heritage items and heritage conservation areas.

(e) Provision of flexible and adaptable spaces for diverse businesses and other non-residential activities.

(f) Ensure existing parks and open space are protected from excessive overshadowing from new development.

(g) Ensure the amenity of future residents is protected through appropriate design controls.

(h) Locate uses more capable of absorbing noise closer to noise generating activities.

Provisions

(1) Where development does not utilise incentive building heights available under clause 6X.XX of Sydney LEP 2012 the maximum height in storeys of development is to be in accordance with Figure 14 to Figure 17

(2) Where development does not utilise incentive building heights available under clause 6X.XX of Sydney LEP 2012 upper level setbacks are to be provided in accordance with Figure 18 to Figure 21

(3) Where upper level setbacks are not identified in (2), buildings are to present a consistent street wall, with no upper level setback to the street frontage.

(4) Where development utilises incentive building heights or FSR available under clause 6X.XX of Sydney LEP 2012 maximum height in storeys are to be in accordance with Figure X Alternative Height in Storeys.

(5) Where development utilises incentive building heights or FSR available under clause 6X.XX of Sydney LEP 2012 upper level setback to the street frontage are to be in accordance with Figure X Alternative Upper Level Setbacks.

(6) Buildings are to preserve view corridors in accordance with Figure 22.

(7) Street cross sections, including building depth and arrangement of internal spaces to attenuate noise, are to be generally in accordance with Figure 23

(8) Building elevations are to be generally in accordance with Figure X.

(9) Further to (1), (2) and (7), building layouts may be varied through the competitive design process required for each site provided the building layout demonstrates better amenity for the development, neighbouring developments and the public domain.

(10) Sun shading devices to glazing on walls at the street alignment are permitted to project up to 0.6 metres beyond the building line subject to any required approval under the Roads Act 1997.

(11) Development at 100 Harris Street Pyrmont and 336-368 Jones Street / 1-7 Henry Avenue Ultimo is to retain and adapt the existing building(s) on the site in accordance with Figure 24 to Figure 25 to facilitate the ongoing use of the building while conserving its significant built form, structure and character.

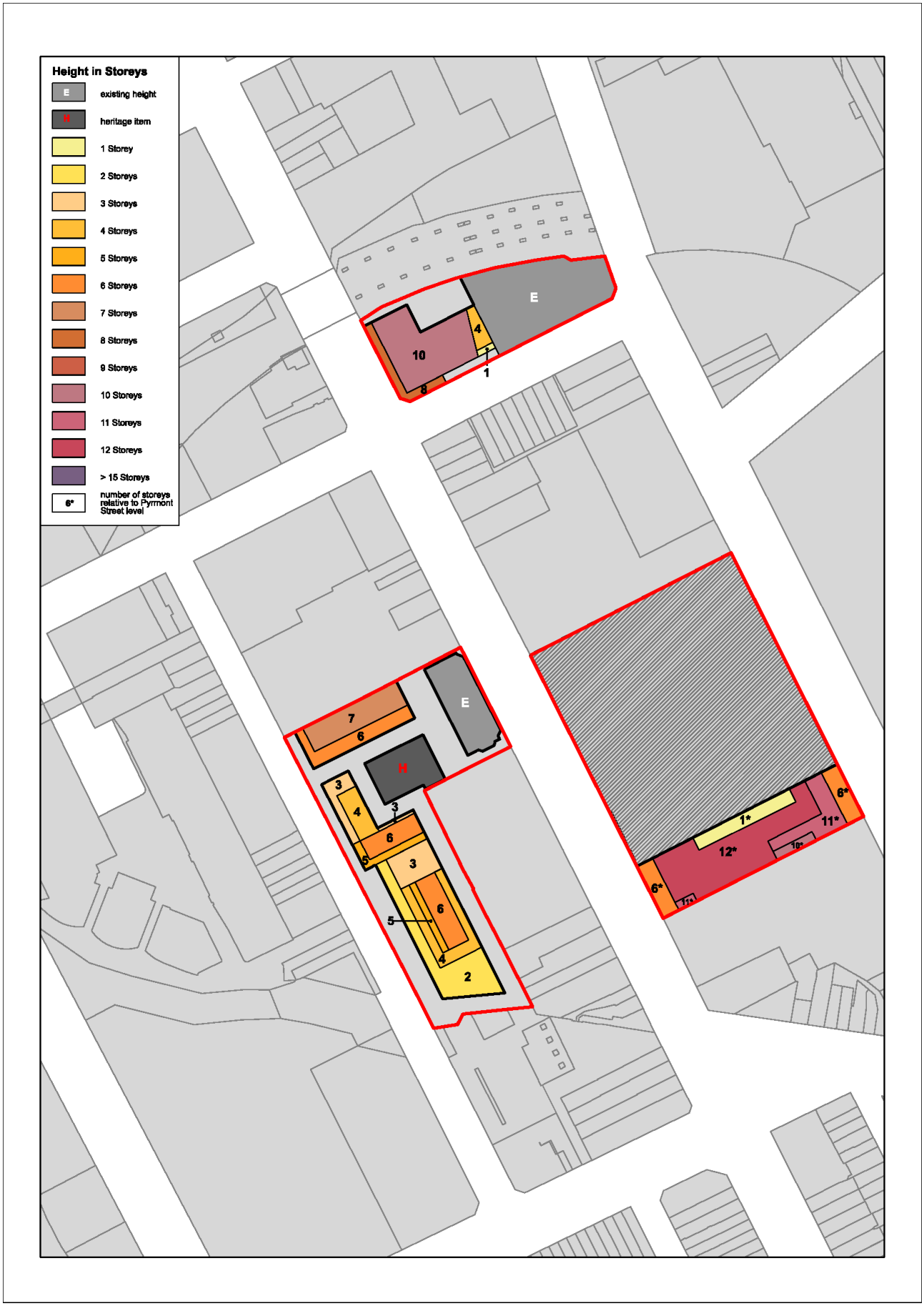


Figure 14 Height in storeys maps 1/4

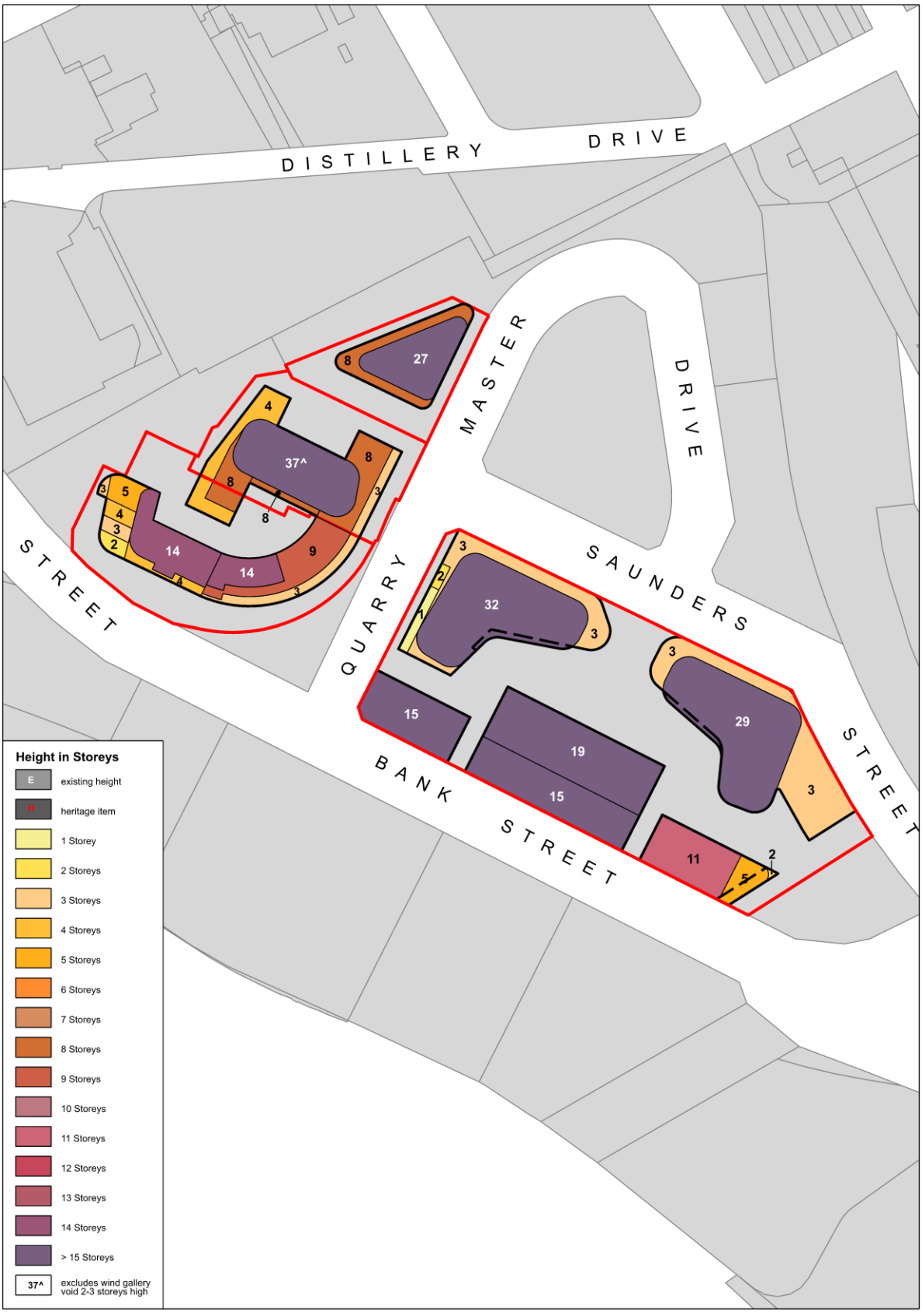


Figure 15 Height in storeys maps 2/4

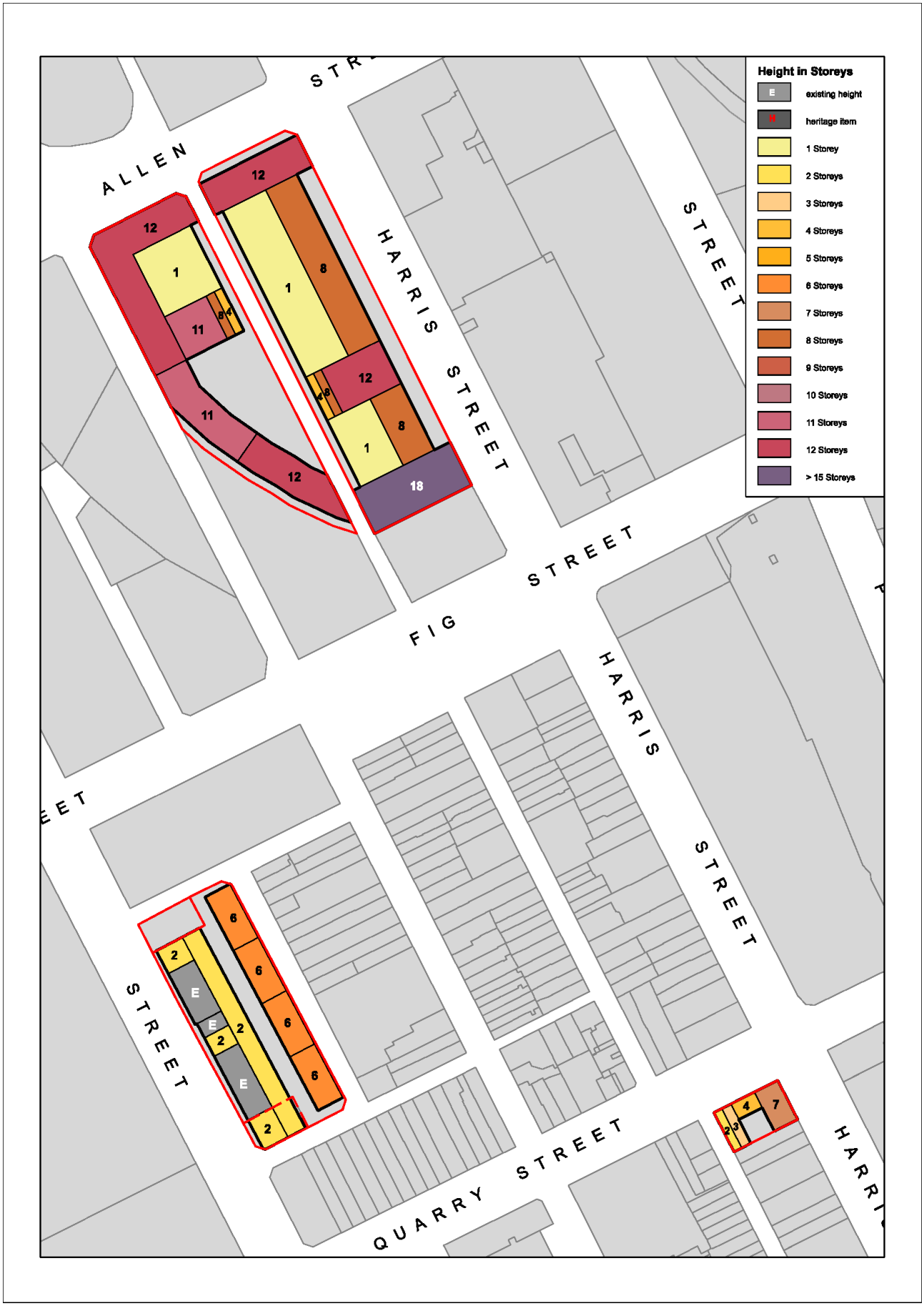


Figure 16 Height in storeys maps 3/4

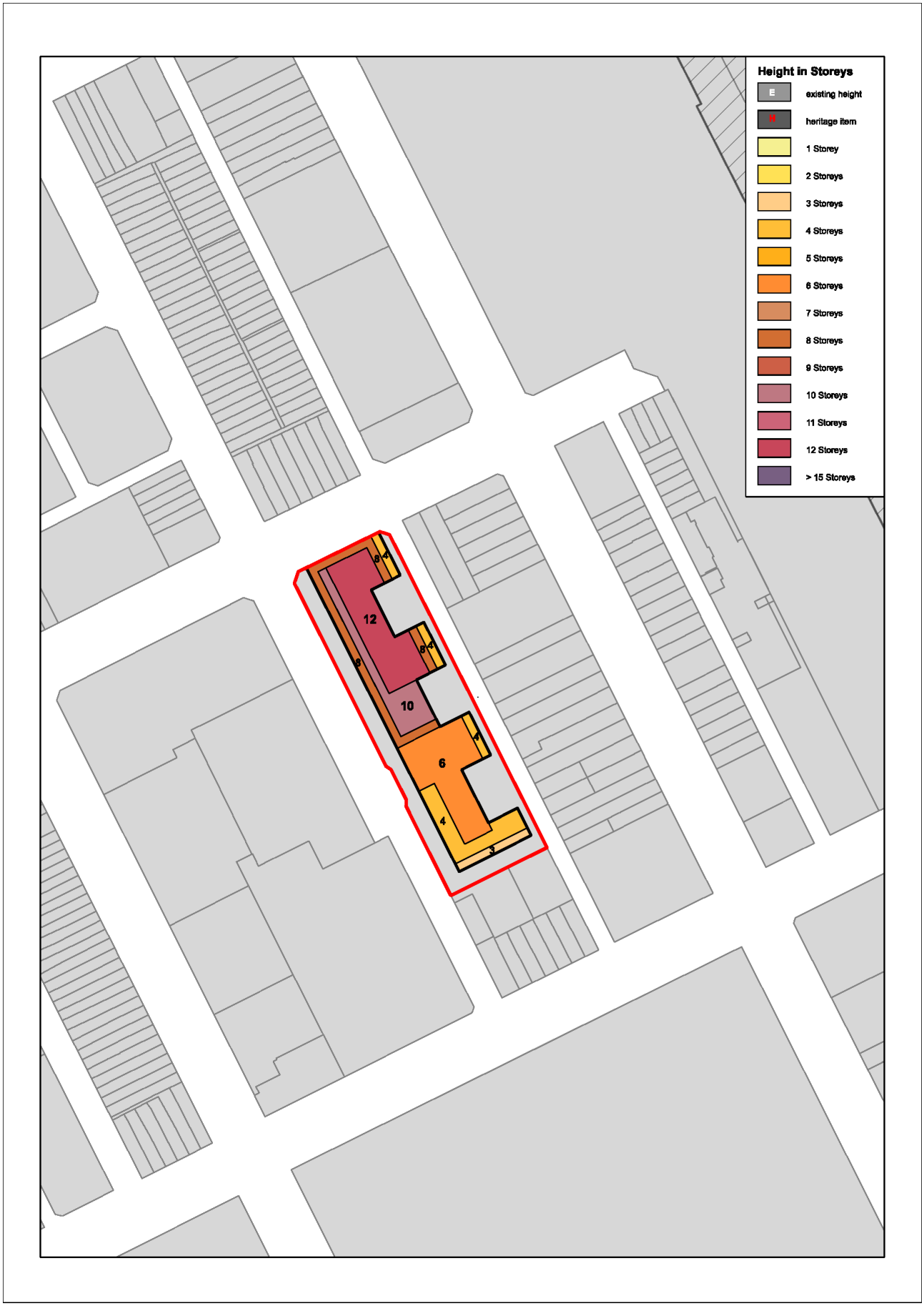


Figure 17 Height in storeys maps 4/4

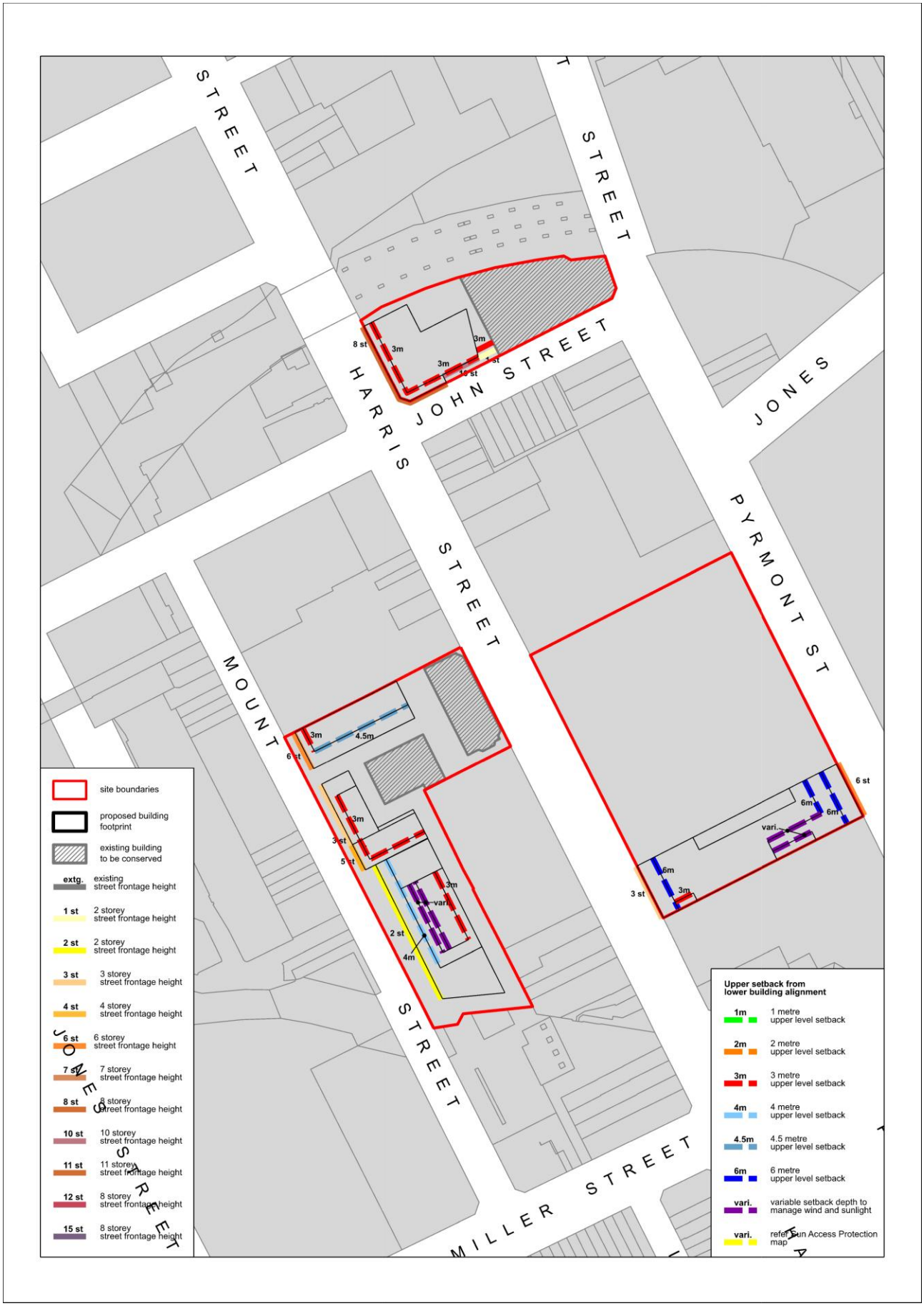


Figure 18 Upper Level Setbacks maps 1/4

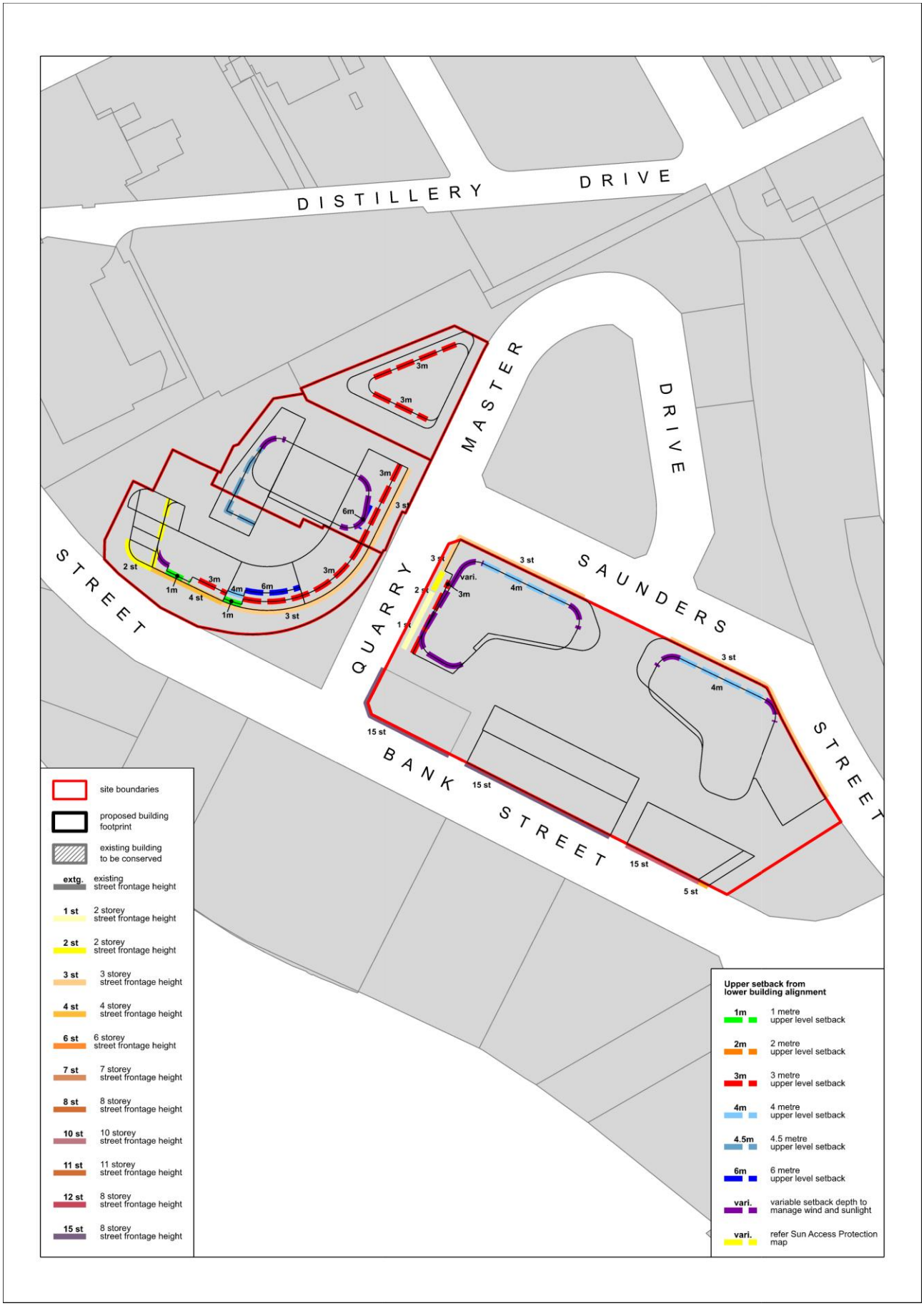


Figure 19 Upper Level Setbacks maps 2/4

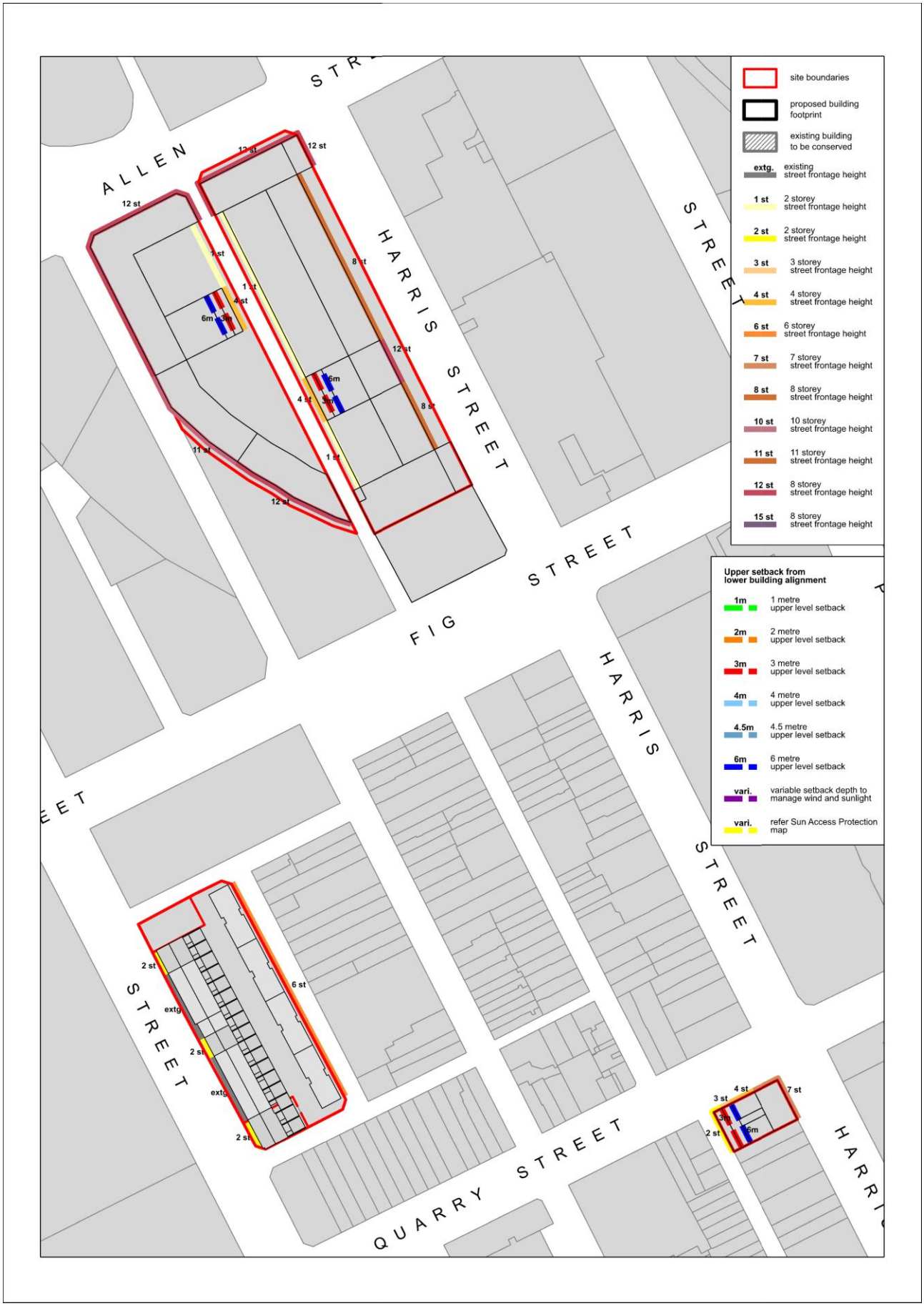


Figure 20 Upper Level Setbacks maps 3/4

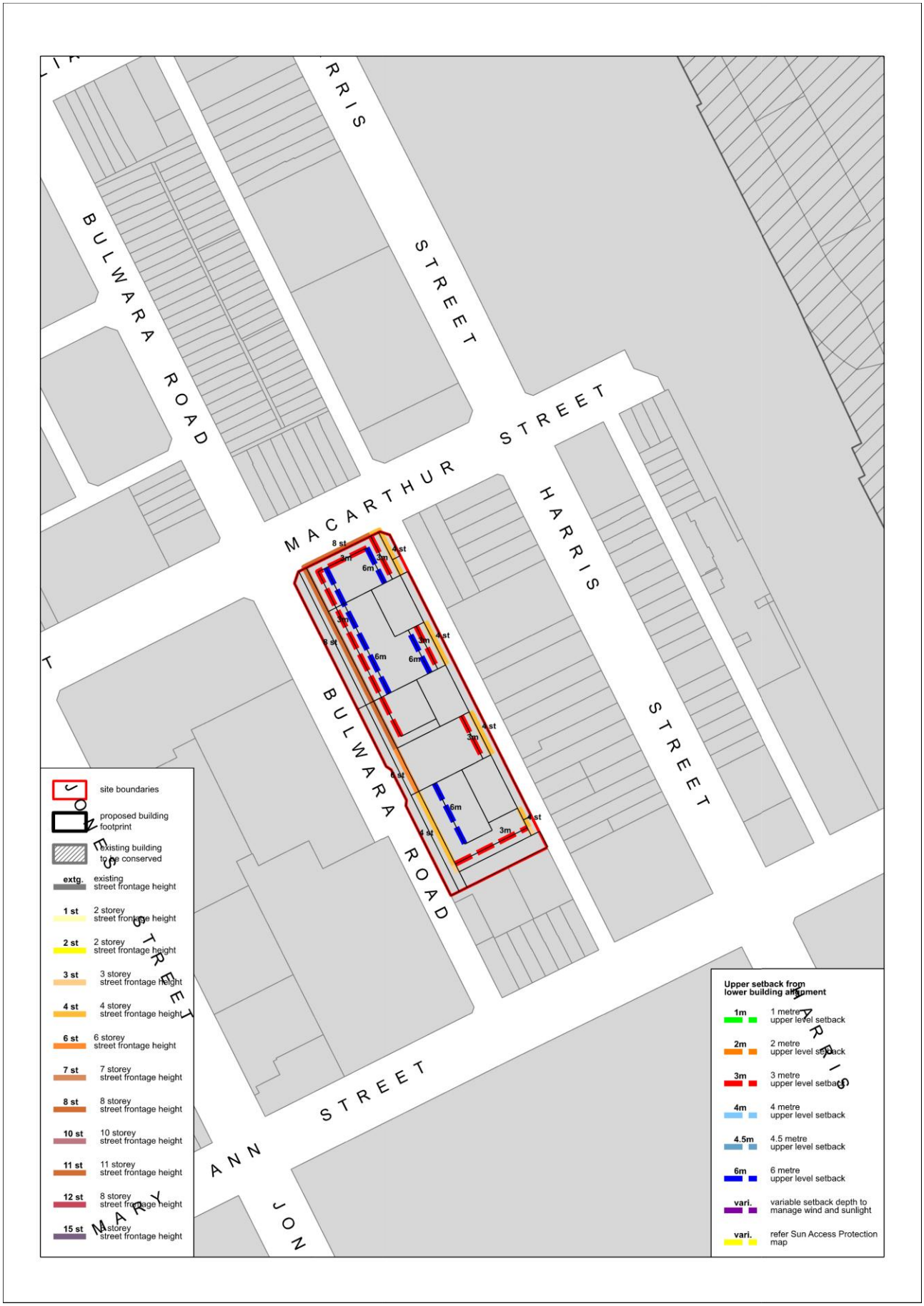


Figure 21 Upper Level Setbacks maps 4/4

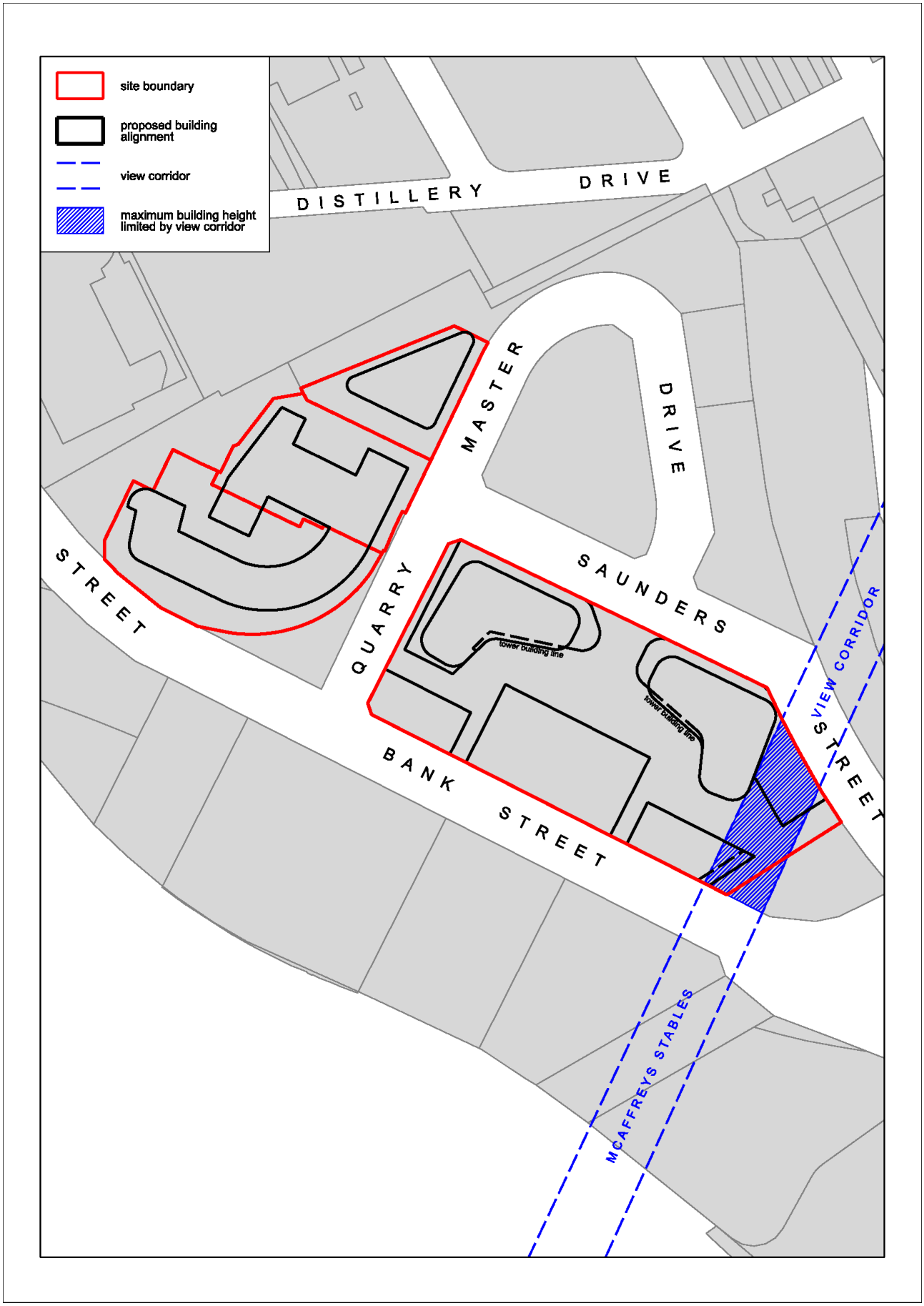


Figure 22 View Corridor map 1/1

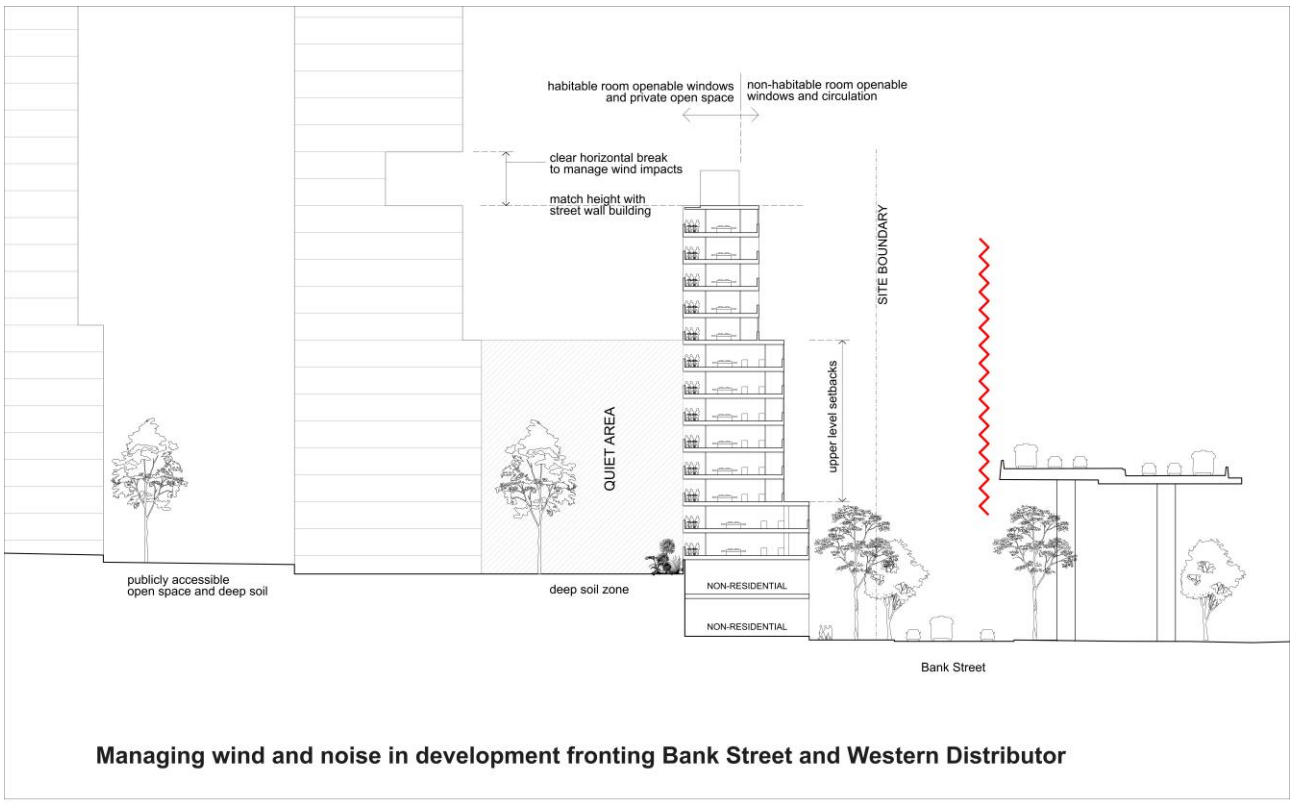


Figure 23 Cross-section – Managing wind and noise in development fronting Bank Street

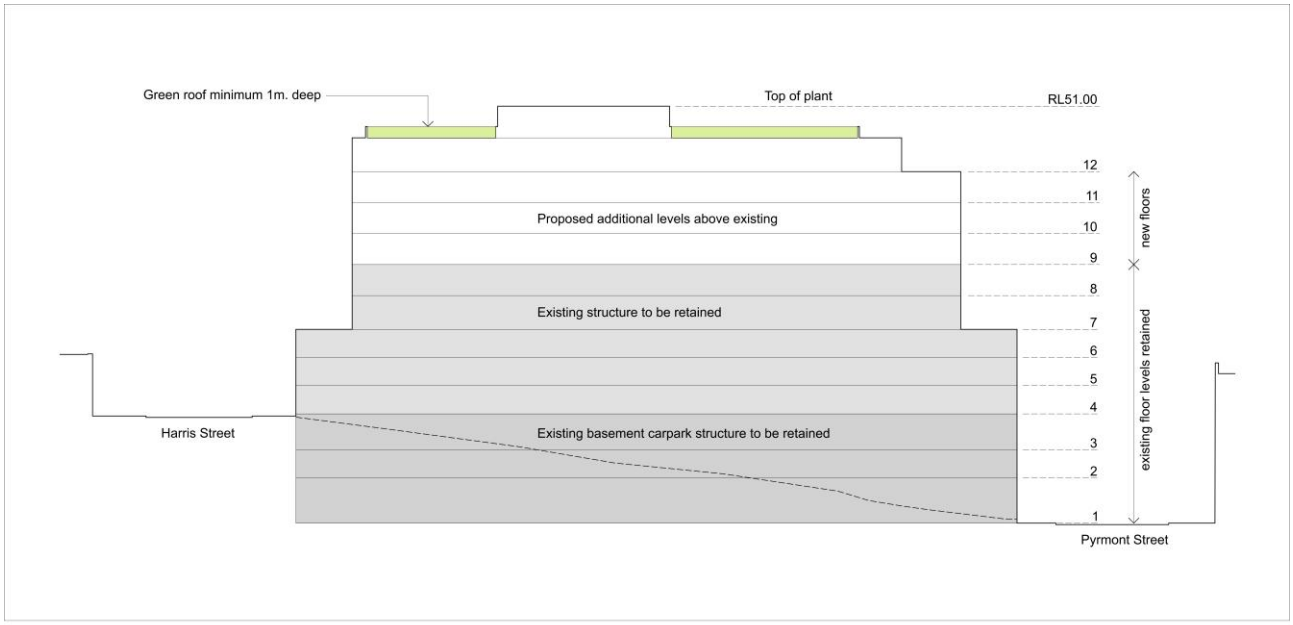


Figure 24 Cross-section – indicative scheme for 100 Harris Street



Figure 25 Indicative plan for 336-368 Jones Street

5.X.4.2 Ground and first floor uses, active frontages and awnings

This section is to be read in conjunction with the provisions in section 3.2.3 Active frontages and section 2.3.4 Awnings of this DCP.

Objectives

(a) Ensure street frontages are active and create interest at the street level.

(b) Ensure the needs of residents and workers are met with supporting retail, services and food and drink premises.

(c) Facilitate safe and comfortable pedestrian environments, including protection from direct sun, rain and wind, and passive surveillance.

Provisions

(1) Ground floor uses are to be in accordance with Figure 26 to Figure 29

(2) Despite 5.X.4.2(1) here 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, ground floor uses are to be in accordance with Figure X

(3) Ground floor uses fronting Harris St and Wattle Street are to provide windows and entrances to provide passive surveillance of the public domain and indirect lighting at night time.

(4) Sites identified in the Active street frontages maps Figure 30 to Figure 33 must give consideration to managing flooding and stormwater impacts while maintaining an active frontage with minimal setbacks and direct street access.

(5) Despite 5.X.4.2(4) where 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, development is to maintain an active frontage with minimal setbacks and direct street access, while giving consideration to managing flooding and stormwater impacts in accordance with Figure X

(6) Provide continuous awnings and colonnades in accordance with Figure 30 to Figure 33

(7) Despite 5.X.4.2(6) where 13A-29 Union Street Pyrmont utilises incentive building heights or floor space ratios available under clause 6.60B of Sydney LEP 2012, development is to provide continuous awnings and colonnades in accordance with Figure X.

(8) A supermarket is the preferred outcome for the ground floor commercial premises at 1-19 Allen Street and 313-369 Harris Street, Pyrmont.

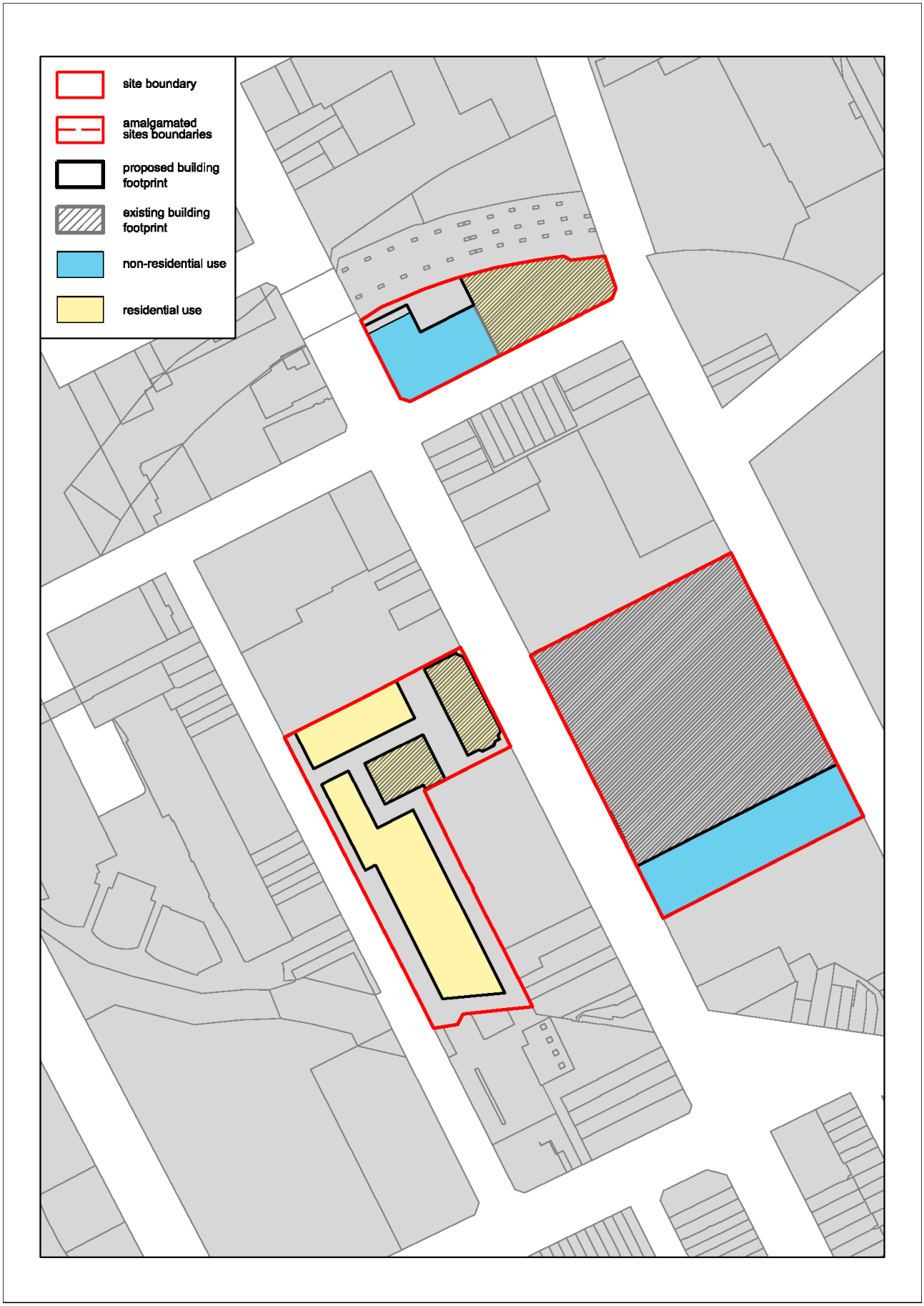


Figure 26 Street Level Land Use maps 1/4

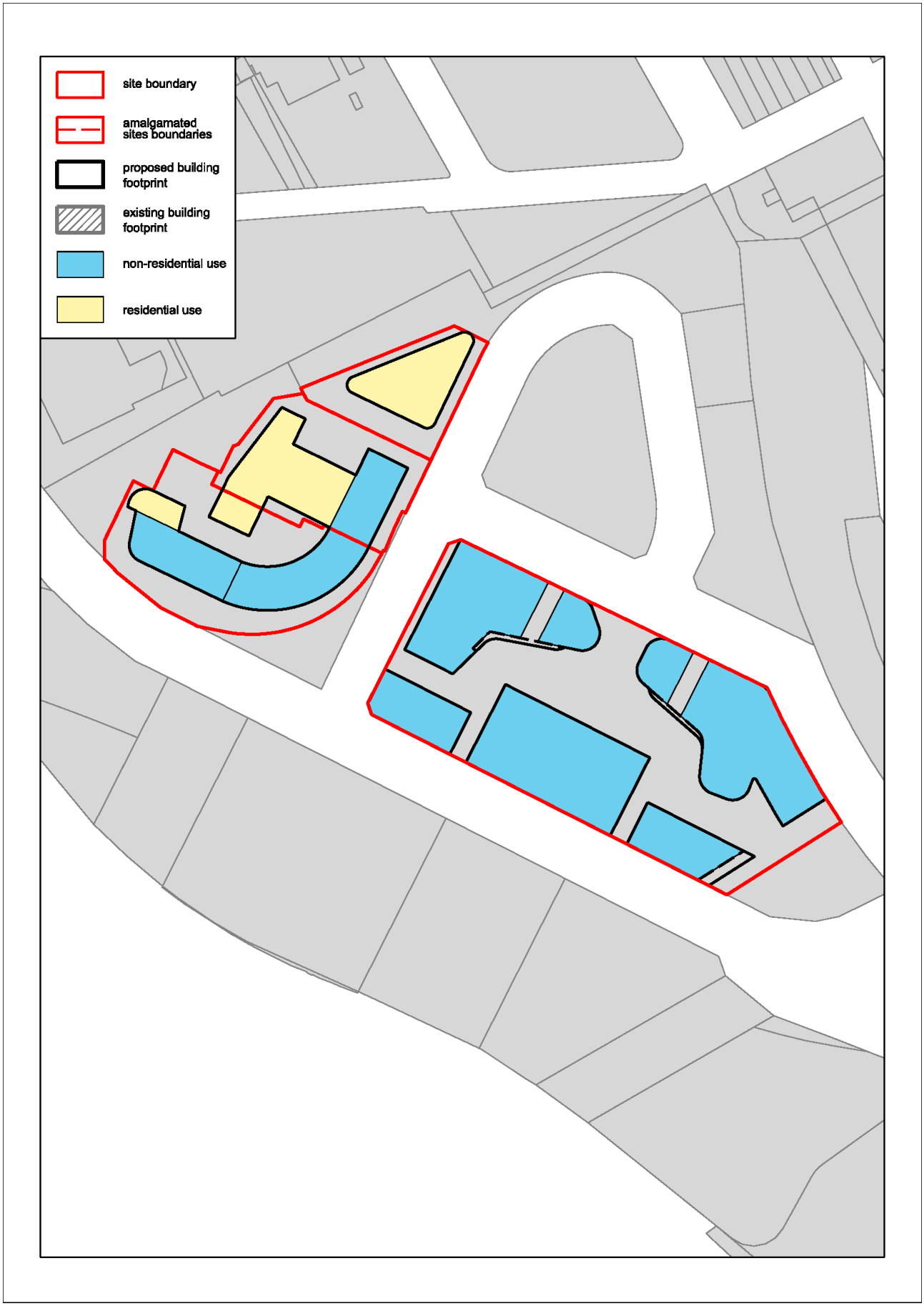


Figure 27 Street Level Land Use maps 2/4

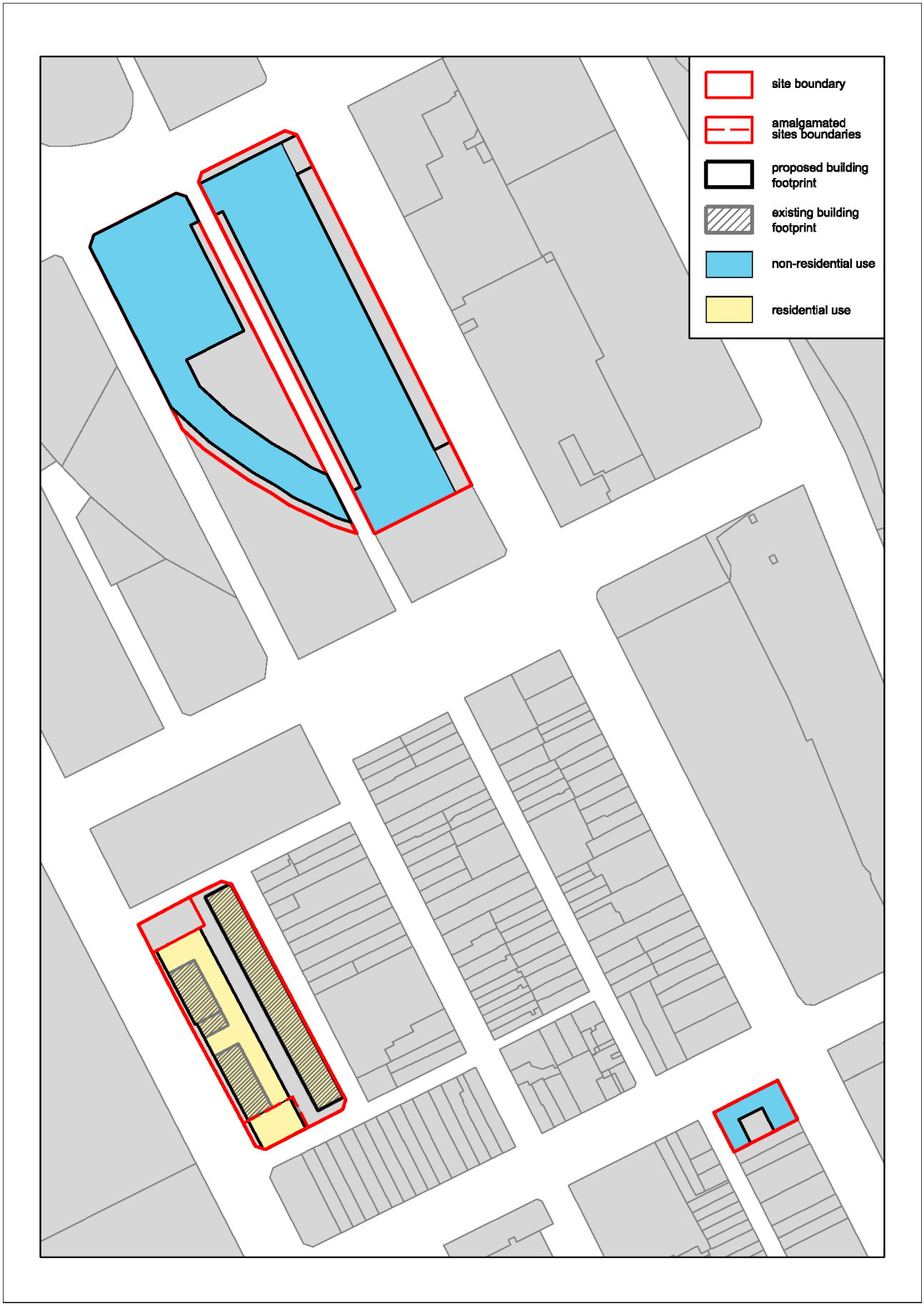


Figure 28 Street Level Land Use maps 3/4

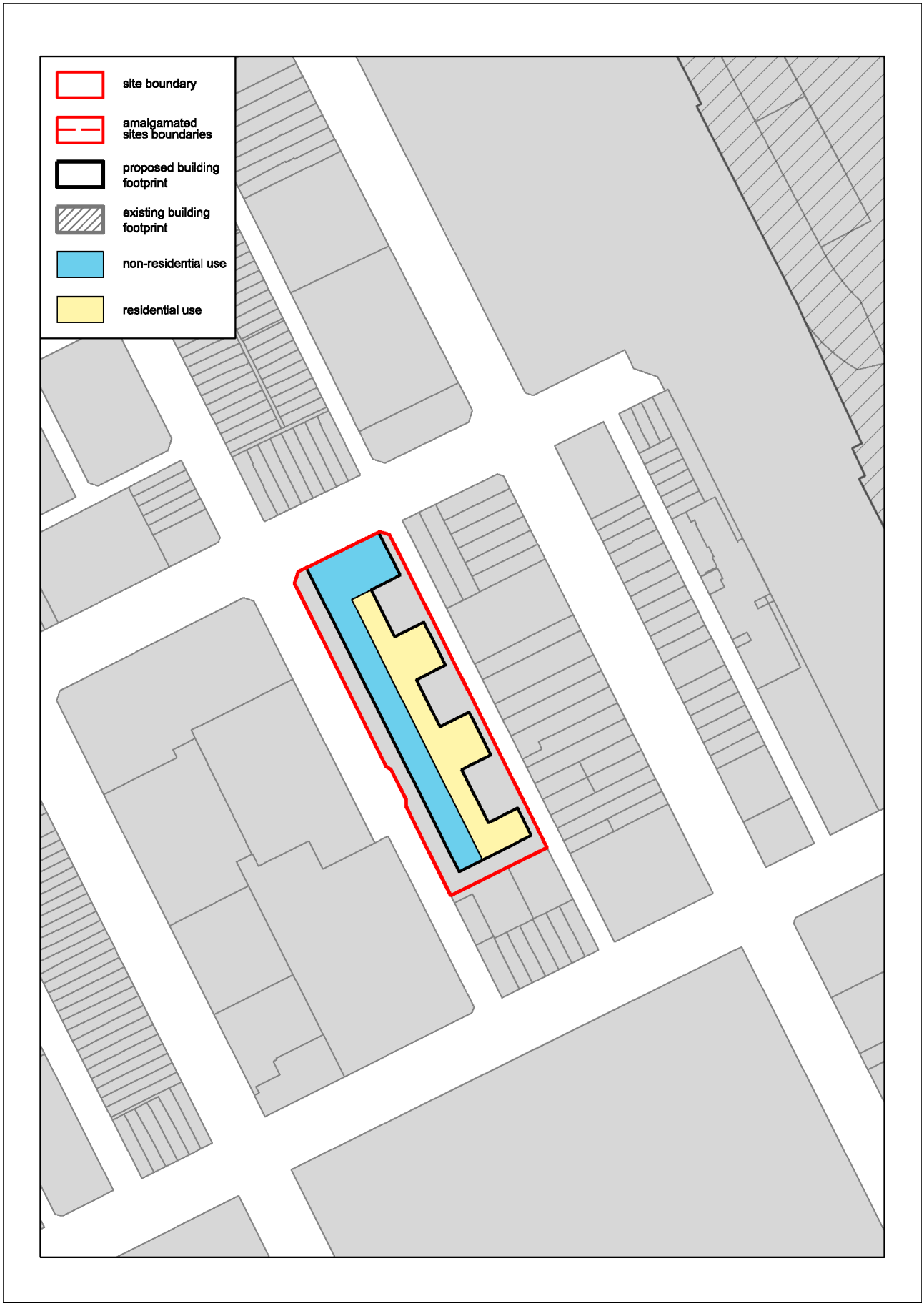


Figure 29 Street Level Land Use maps 4/4

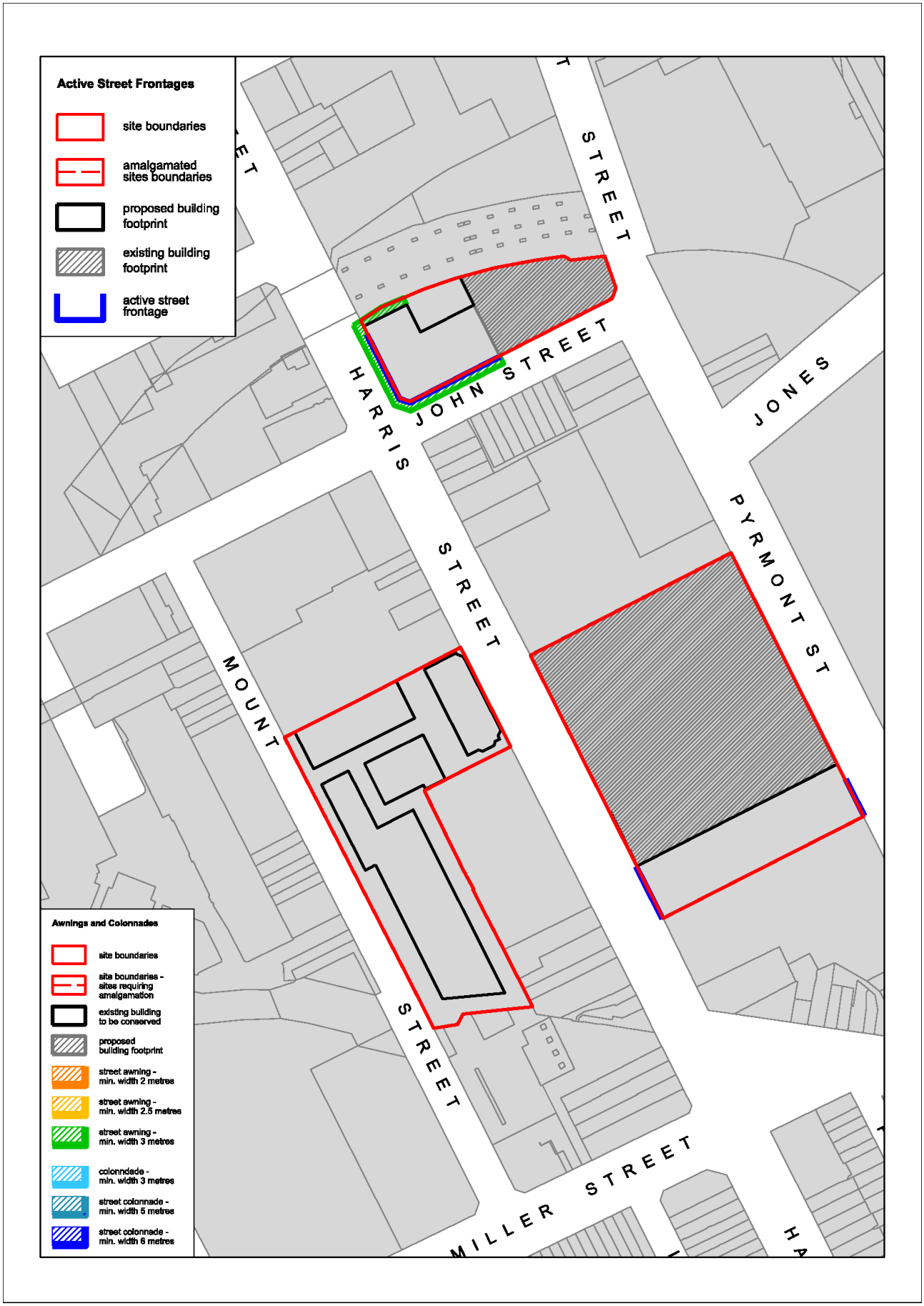


Figure 30 Active Street Frontage and Awnings and Colonnades maps 1/4

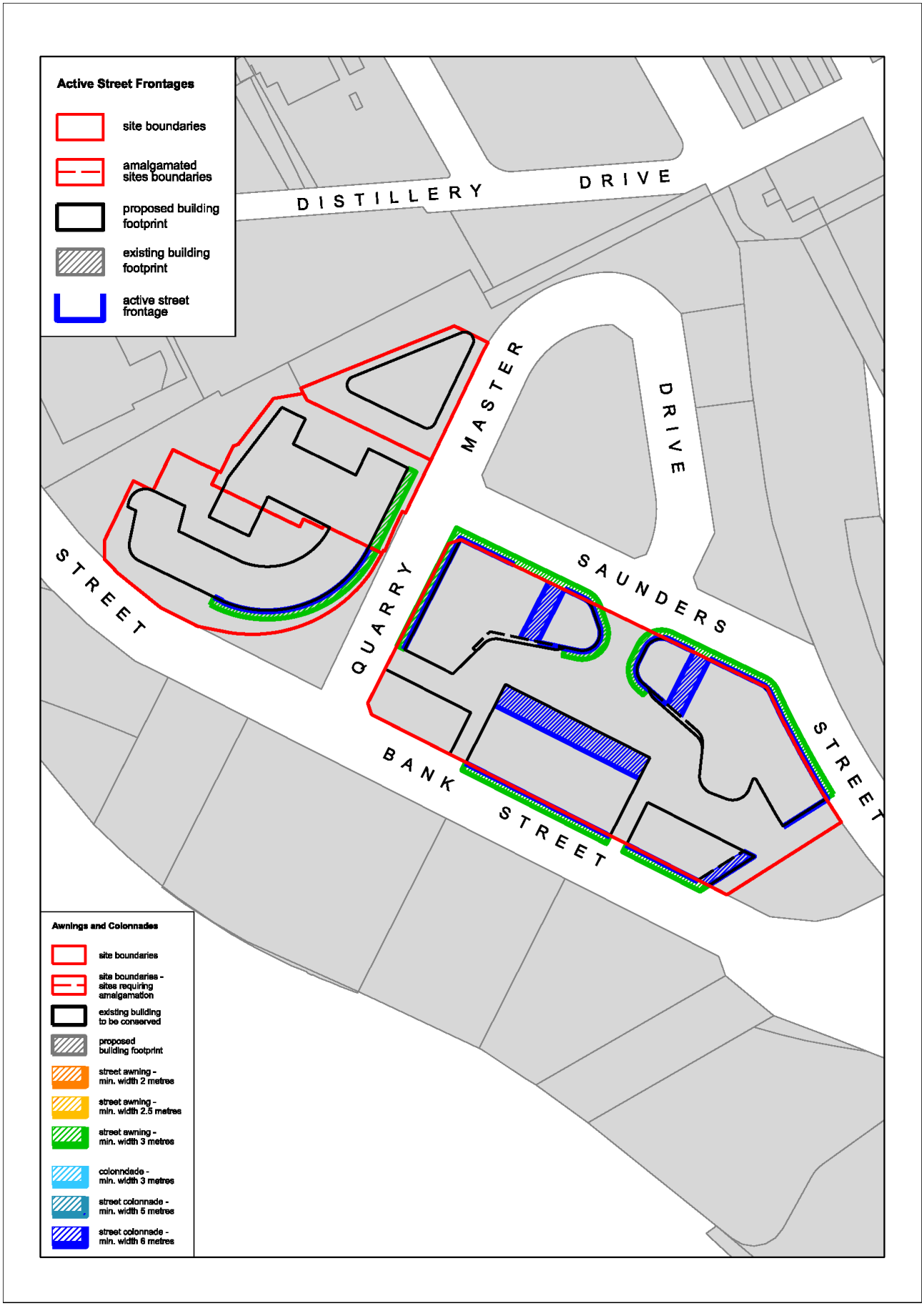


Figure 31 Active Street Frontage and Awnings and Colonnades maps 2/4

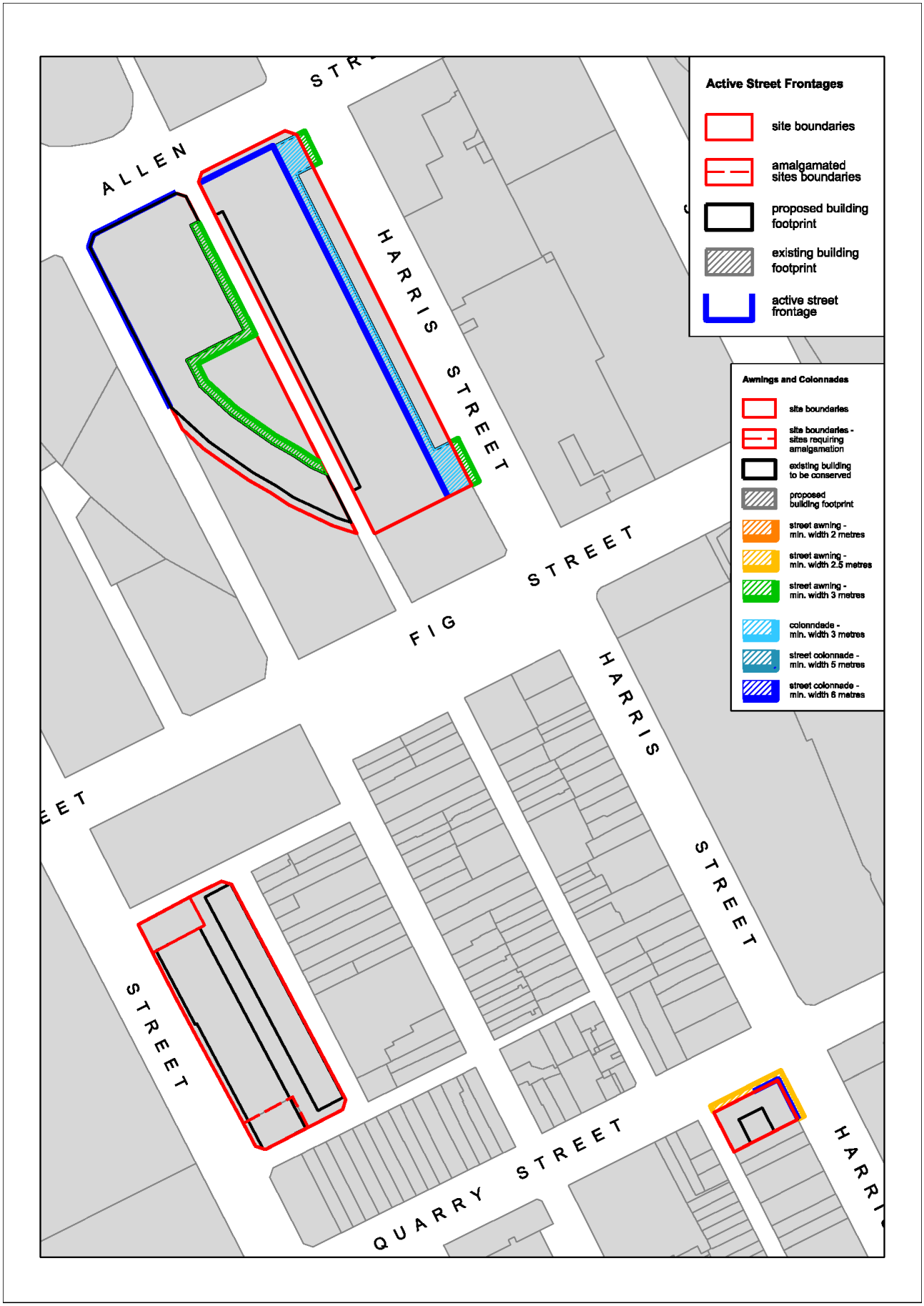


Figure 32 Active Street Frontage and Awnings and Colonnades maps 3/4

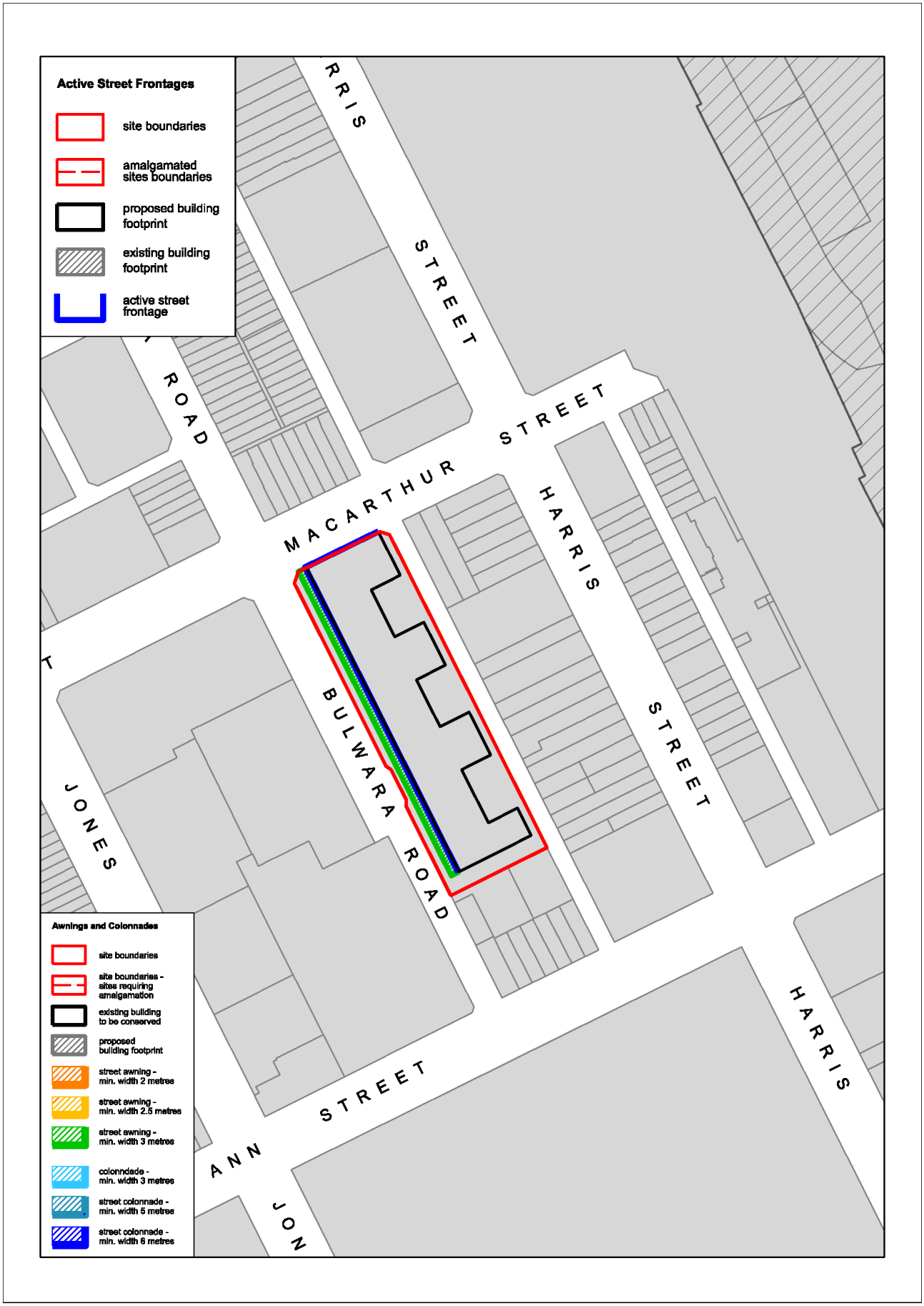


Figure 33 Active Street Frontage and Awnings and Colonnades maps 4/4

5.X.6 Land amalgamation

Objectives

(a) To facilitate the planned built form in efficient buildings and with high amenity.

Provisions

(1) The maximum Floor Space Ratio and Height of Building applicable to sites identified in Figure 14 to Figure 17 may only be achieved when landholdings are amalgamated in accordance with Figure 36 to Figure 36.

(2) Any alternative land amalgamation scheme must be supported by an urban design study and will be assessed on its merits.

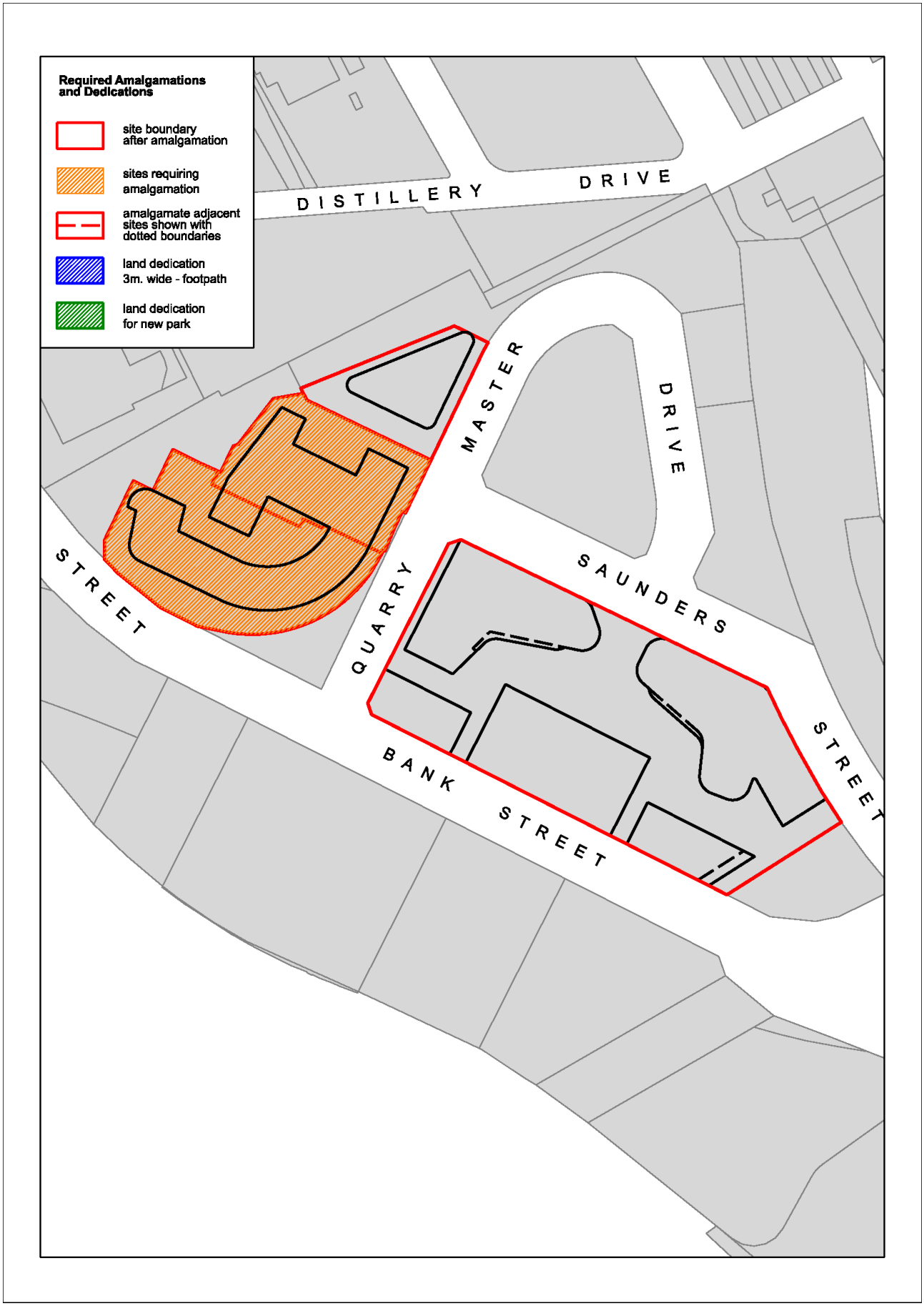


Figure 34 Amalgamations and Dedications maps 1/3

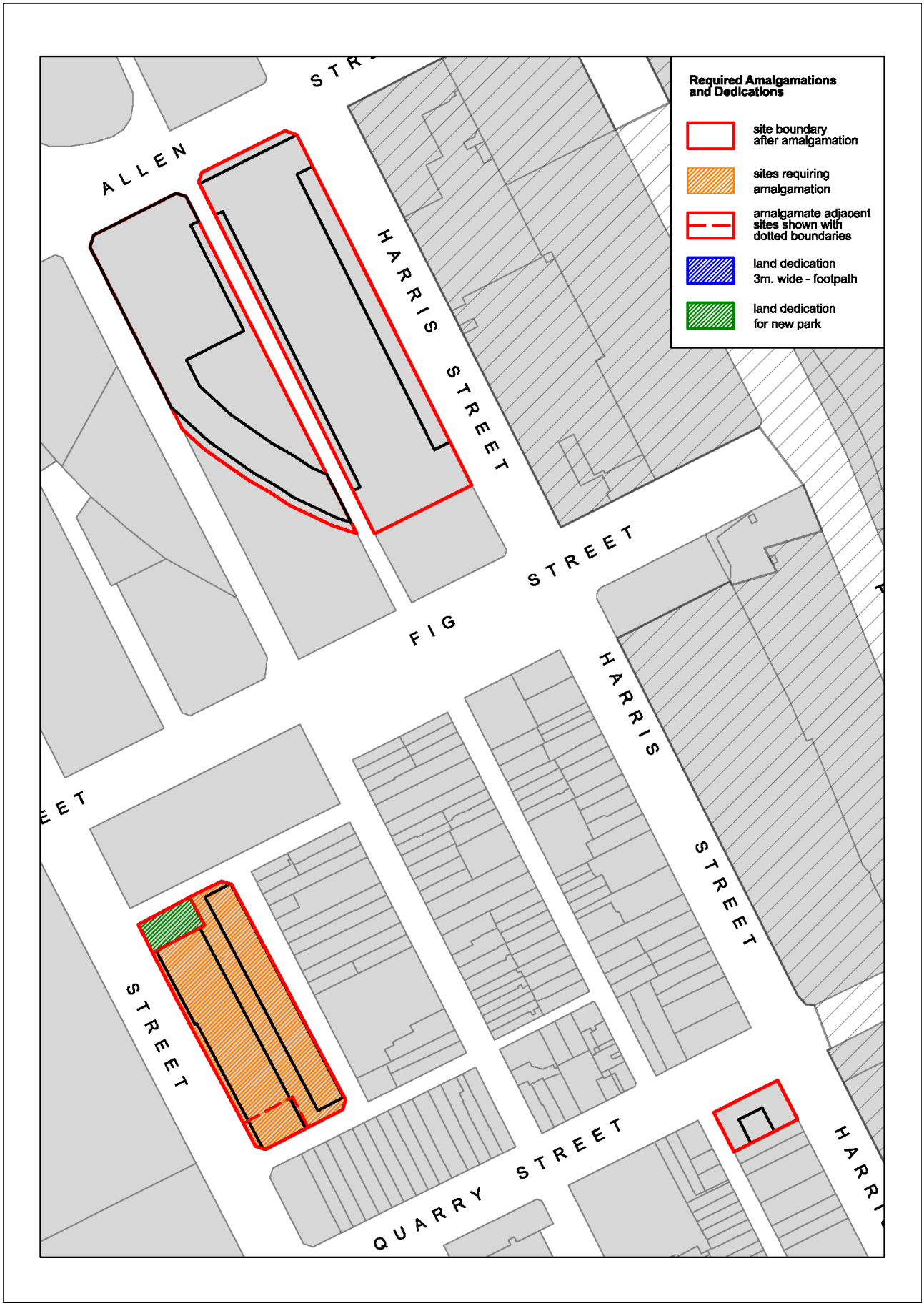


Figure 35 Amalgamations and Dedications maps 1/3

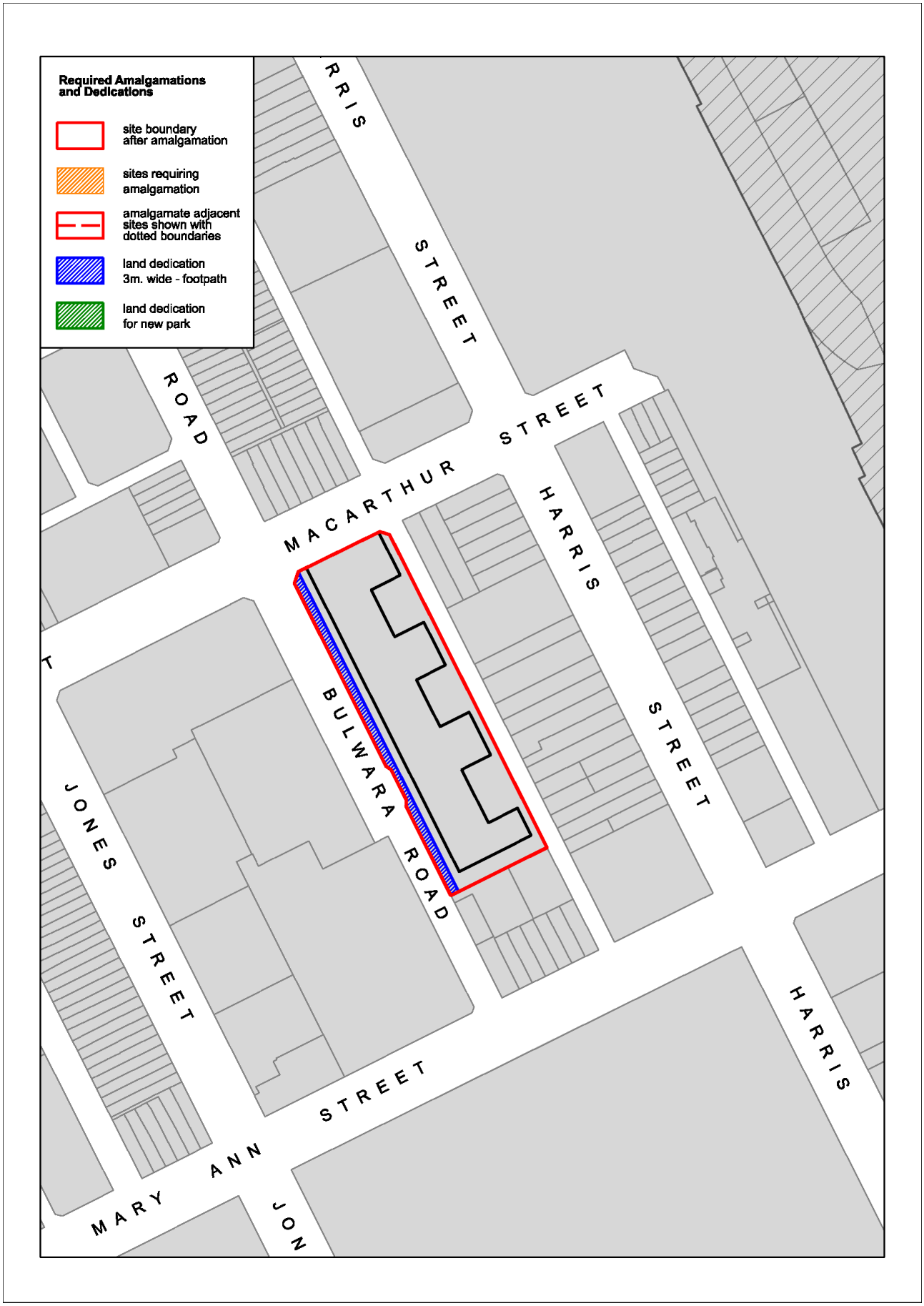


Figure 36 Amalgamations and Dedications maps 1/3

5.X.8. Managing wind impacts

Objectives

(a) To ensure the safety and comfort of people in streets and publicly accessible areas

(b) To minimise the impacts of traffic-related air pollution by allowing air movement and dispersal of pollutants.

Provisions

(1) Provisions relating to wind in Sydney DCP 2012 apply to Ultimo Pyrmont.

(2) Publicly accessible open space is to be considered a public place for the purposes of Table 3.9 Relevant wind safety standards and criteria for adjacent public place uses.

(3) Development is to provide wind tunnel testing that demonstrates that publicly accessible open space complies with the following wind standard:

a) Wind Comfort Standard for Walking for any active use areas; and

b) Wind Comfort Standard for Sitting for all other areas.

(4) At least 50 per cent of a site's publicly accessible open space must be suitable for sitting.

(5) Development is to provide wind tunnel testing that demonstrates that through-site links comply with the Wind Comfort Standard for Walking.

(6) Recommendations from wind experts as a result of the testing required at (2) above are to be implemented to ensure safe and comfortable conditions for walking in all the surrounding public space and publicly accessible open space.

(7) Building corners are to be curved and the profile shaped, including additional setbacks, to minimise wind downdraft as shown in Figure 14 to Figure 17

(8) A ~~minimum 6 metre~~ setback above street wall height is to be provided to arrest wind downdraft as shown in Figure 18 to Figure 21.

(9) Where a taller tower structure is proposed, such as that at 26-38 Saunders Street, provide a clear horizontal break in the building form as illustrated in Figure X, that:

a) is located at least above the level of any upper level setback to the building podium;

b) is a minimum of 9 metres in height to minimise wind downdraft at street level;

c) allows access only for maintenance; and

d) minimises physical elements in the break other than vertical circulation, structural columns, and plant equipment

(10) Where a taller tower structure is proposed, such as that at 120-122 Saunders Street, provide a clear horizontal break in the building form as illustrated in Figure 23, that:

a) is located at least above the level of any of the adjacent street wall building;

b) is a minimum of 2 storeys in height to minimise wind downdraft at street level;

c) allows access only for maintenance; and

d) minimises physical elements in the break other than vertical circulation, structural columns, and plant equipment

(11) In terms of air quality and pollutants, development adjacent to the Western Distributor is to:

a) carefully site and orient buildings, and locate uses within buildings, to provide appropriate separation between the Western Distributor and sensitive land uses;

b) incorporate building forms that support the dispersion of air pollutants and promote favourable airflow patterns, having regard to local microclimatic conditions;

c) avoid built form outcomes that restrict air movement or create street canyon effects; and

d) locate mechanical ventilation air intake points to maximise separation from major roads and other sources of air pollution and minimise the intake of pollutants into buildings.

(12) Development at 1-33 Saunders Street is to provide a generally continuous building frontage to the Western Distributor to act as a noise barrier, as shown in Figure 37. Building separation and breaks should be limited to those necessary to facilitate airflow and the dispersion of air pollutants and are not to exceed 6 metres in width.

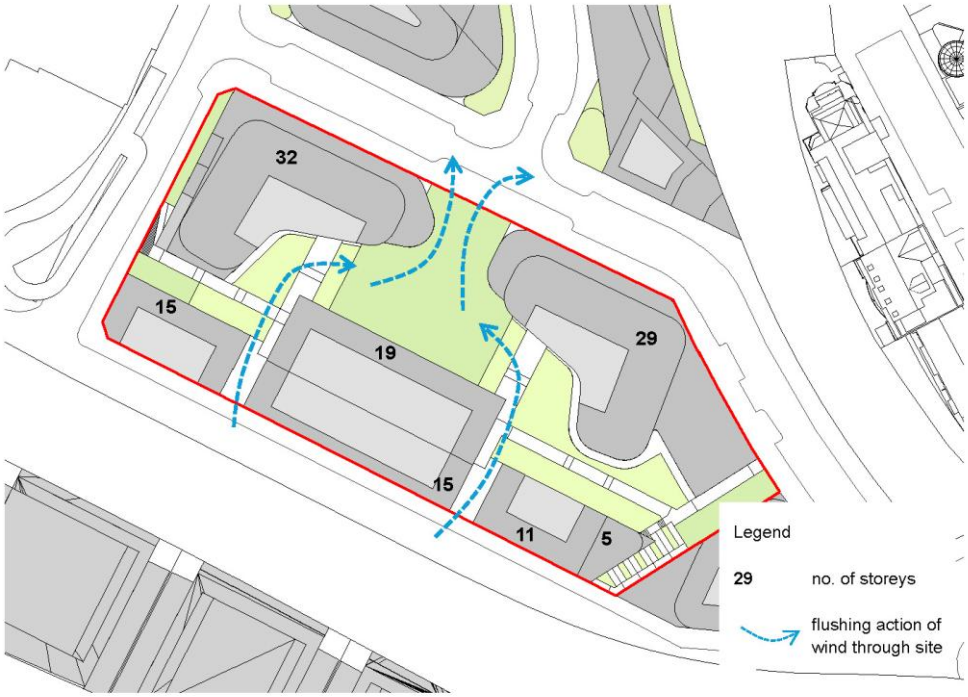


Figure 37 1-33 Saunders Street air flow diagram

5.X.9. Noise and ventilation

This Section must be read in conjunction with the NSW Apartment Design Guide objectives for noise and ventilation.

Objectives

(a) To ensure appropriate natural ventilation and comfort for people living in apartments.

(b) Ensure appropriate facade design to maximise internal amenity in apartments.

Provisions

(1) Provisions relating to environmental noise in Sydney DCP 2012 apply to Ultimo Pyrmont.

(2) Street cross sections, including residential building depth and arrangement of internal spaces to attenuate noise, are to be generally in accordance with section 5.X.4, including the provision of continuous, unbroken buildings along busy roads to act as noise barriers.

(3) Residentail buildings fronting busy roads are to be no more than 9 metres deep inclusive of all built elements.

(4) Habitable rooms are to be located so that windows required for ventilation face away from busy roads.

(5) Non-habitable rooms, vertical circulation and common access corridors may be located on the busy road side of the building. Habitable rooms are only permitted to have a frontage to busy roads where they also have a frontage to which they can be naturally ventilated.

(6) Any windows facing busy roads are to provide appropriate noise protection and are not to be used for ventilating habitable rooms.

(7) Windows to habitable rooms on the ends of buildings perpendicular to busy roads are to be minimised.

(8) Windows to habitable rooms in these locations are to have external projecting noise shields with a projection of 0.6-1m that may extend into the primary ground level setback, publicly accessible open space and the street reservation.

Note: In Ultimo Pyrmont, busy roads include Wattle Street, the Western Distributor, Harris Street (south of Pyrmont Bridge Road), Pyrmont Bridge Road and William Henry Street as shown in Figure X.

(9) Buildings with ground floor non-residential premises are to provide for appropriate exhaust ventilation to accommodate food and beverage services that avoid noise and air quality impacts to residential premises.

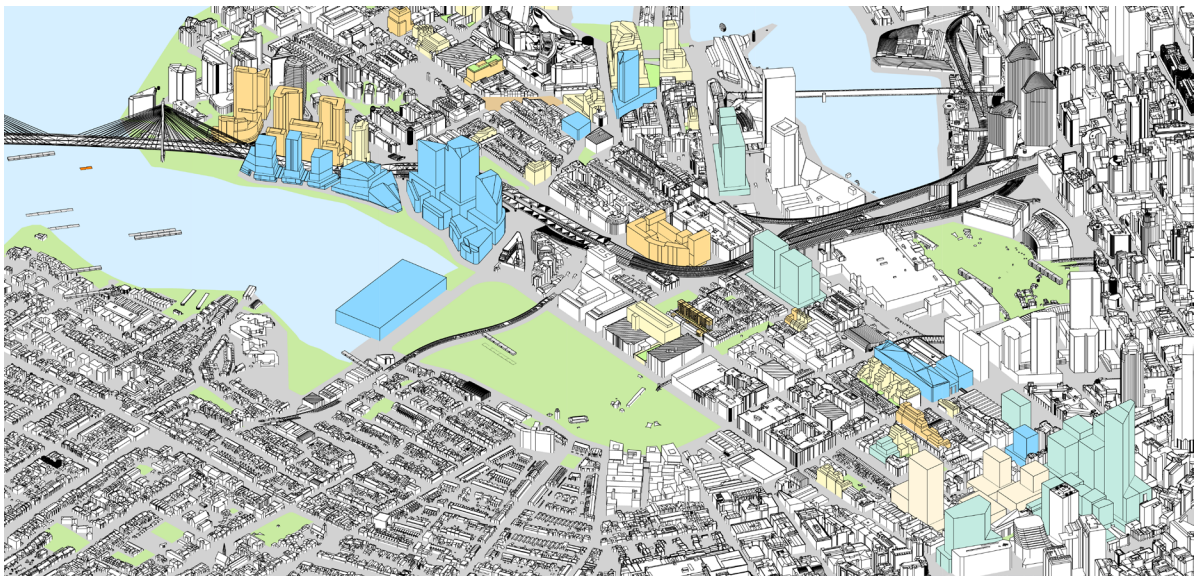


Attachment C

Urban design study - Ultimo
Pyrmont Stage 2

CITY OF SYDNEY

Ultimo Pyrmont Urban Design Study – Stage 2



September 2026

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Table of Contents

Responding to the Place Strategy 8
Urban Design Principles 8
Additional sites identified for study 10
Urban design studies to support proposed changes in planning controls 10
1-33 Saunders Street Pyrmont 12
120-122 Saunders Street and 2-10 Quarry Master Drive 27
56 Harris Street Pyrmont 45
100 Harris Street 63
1-19 Allen Street and 313-319 Harris Street Pyrmont 72
1-7 Henry Avenue and 336-368 Jones Street & 370-374 Jones Street 84
463 – 467 Harris Street Ultimo 98
344 Bulwara Road Ultimo 107

Table of figures

Figure 1. Aerial map showing additional sites selected for study in Stage 2. 11
Figure 2. Aerial map showing site at 1-33 Saunders Street shaded in red 12
Figure 3. Aerial view showing site at 1-33 Saunders Street outlined in red 12
Figure 4. Studies for 1-33 Saunders Street, Stage 1 (left) and Stage 2 (right) of the planning proposal 13
Table 1. Planning provisions for 1-33 Saunders Street proposed in Stage 1 and 2 of the planning proposal 13
Figure 5. Site plan showing existing building at 1-33 Saunders Street 14
Figure 5. Site plan showing existing building at 1-33 Saunders Street 15
Table 2 Existing site characteristics and planning controls for 1-33 Saunders Street 15
Figure 6. Excerpt from the Ultimo-Pyrmont Urban Development Plan (1999), showing the view corridor to the 'Former CSR McCaffrey's Building' 17

Figure 7. View comparisons looking towards Blackwattle Bay from the Glebe Foreshore Walk 18

Figure 8. Plan diagrams showing sunlight access to publicly accessible open space of site, in accordane with the NSW Apartment Design Guide. 19

Figure 9. Aerial view showing sunlight access to adjacent future development at Blackwattle Bay. 19

Figure 10. Plan diagrams showing no change to sunlight access to the Blackwattle Bay northern foreshore promenade resulting from approved and proposed controls at 1-33 Saunders Street. 20

Table 3. Planning provisions for 1-33 Saunders Street - existing and proposed controls 21

Figure 11. Site plan of proposed scheme at 1-33 Saunders Street. 22

Figure 12. Viewpoint locations for following view studies. 23

Figure 13. Aerial map showing site at 1-33 Saunders Street shaded in red 27

Figure 14. Aerial view showing site at 1-33 Saunders Street outlined in red 27

Figure 15. Approved built form controls from Ultimo Pyrmont – Stage 1 (shown at left), and proposed controls for Stage 2 (at right); subject site shown in orange, with DA for 26-38 Saunders Street shown in grey 28

Table 4. Existing development and planning controls at 120-122 Saunders Street and 2-10 Quarry Master Drive 28

Figure 16. The existing development at 120-122 Saunders Street and 2-10 Quarry Master Drive 29

Table 5. Proposed planning provisions for 120-122 Saunders Street and 2-10 Quarry Master Drive 32

Figure 17. The proposed development at 120-122 Saunders Street and 2-10 Quarry Master Drive 33

Figure 18. View study – comparison of existing and proposed controls viewed from Glebe Foreshore Walk 33

Figure 19. Plan diagrams comparing sunlight access to publicly accessible open spaces around the sites. 35

Figure 20. Aerial views comparing sunlight access to Blackwattle Bay LEP planning envelopes. 36

Figure 21. Plan diagrams showing no change to sunlight access to the Blackwattle Bay northern foreshore promenade resulting from approved and proposed controls at 1-33 Saunders Street. 37

Figure 22. Section drawing showing design responses to the conditions of wind, noise and air quality associated with the elevated roadway and Blackwattle Bay. 38

Figure 23. Plan and detail views of design iterations using desktop CFD wind testing – (A) and (B) 39

Figure 24. Plan and detail views of design iterations using desktop CFD wind testing (C) and final design 40

Figure 25. Viewpoint locations for following view studies. 41

Figure 26. Location plan showing 56 Harris Street highlighted in red 45

Figure 27. aerial view of 56 Harris Street 45

Figure 28. Aerial view of model showing the existing building at 56 Harris Street (at left, shown in grey), and the proposed scheme considered by the City of Sydney in Stage 2. 46

Table 6. Existing development and planning controls at 56 Harris Street 46

Figure 29. Site plan showing the existing development at 56 Harris Street 47

Figure 30. Aerial view of 56 Harris Street showing sunlight protection controls to John Street terraces opposite 48

Table 7. Planning provisions for 56 Harris Street – existing and proposed controls. 49

Figure 31. Plan view of proposed changes to planning controls for 56 Harris Street. 49

Figure 32. Aerial view showing floor plate arrangement of new addition to 56 Harris Street. 50

Figure 33. Aerial view of 56 Harris Street with view locations indicated by blue arrows. 51

Figure 34 – location plan showing 26-52 Mount Street Pyrmont 54

Figure 35 – aerial view showing 26-52 Mount Street Pyrmont 54

Figure 36 – studies for 26-52 Mount Street, the Department of Planning's initial study (at left), and the scheme proposed in Stage 2 (at right) 55

Table 8 – Comparison of proposed planning controls for 25-52 Mount Street – Dept. of Planning initial study and controls proposed by the City of Sydney. 55

Table 9 – existing development and existing planning controls for 26-25 Mount Street 56

Figure 37 – existing site plan for 26-25 Mount Street 56

Table 10 – proposed planning controls for 26-52 Mount Street 57

Figure 38 – plan showing proposed changes for 26-52 Mount Street 57

Figure 39 – solar access to neighbouring residential properties around 26-52 Mount Street 59

Figure 40 – view locations 60

Figure 41 – location plan of 100 Harris Street 63

Figure 42 – oblique aerial of 100 Harris Street 63

Figure 43 – studies for 100 Harris Street, approved Stage 1 (at left), and proposed Stage 2 (at right) 64

Table 11 – Comparison of planning controls for 100 Harris Street – approved Stage 1, and proposed Stage 2 64

Figure 44 – existing site plan for 100 Harris Street 65

Table 12 – existing building and existing planning controls for 100 Harris Street 65

Figure 45 – solar access to neighbouring residential properties and Union Square 67

Table 13 – proposed planning controls for 100 Harris Street 68

Figure 46 – proposed controls for 100 Harris Street 68

Figure 47 – proposed site plan for 100 Harris Street 69

Figure 48 – location plan 69

Figure 49. Plan view showing 1-19 Allen Street (orange) and 313-319 Harris Street (red) 72

Figure 50. Aerial view of 1-19 Allen Street (orange outline) and 313-319 Harris Street (red outline) 73

Figure 51. Existing development at 1-19 Allen Street and 313-319 Harris Street (shown at left) and proposed planning controls (shown at right). 73

Table 14. Existing development and planning provisions for 1-19 Allen Street and 313-319 Harris Street 74

Figure 52. Site plan showing the existing development at 1-19 Allen Street (site boundary in orange) and 313-319 Harris Street (site boundary in red). 75

Figure 53. Aerial view of 1-19 Allen Street showing sunlight protection controls to existing development at 80-89 Fig Street. 77

Table 15 . Planning provisions for 1-19 Allen Street and 313-319 Harris Street– existing and proposed controls 77

Figure 54. Site plan showing proposed planning controls at 1-19 Allen Street (site boundary in orange) and 313-319 Harris Street (site boundary in red). 78

Figure 55. Aerial view looking from south west: 1-19 Allen Street in the foreground. 79

Figure 56. Aerial view from north east. 313-319 Harris Street in foreground. 79

Figure 57 Plan view showing how the site layout responds to the location of existing tree canopy around the site. 80

Figure 58. Aerial view of 1-19 Allen Street and 313-319 Harris Street with view locations indicated by blue arrows. 81

Figure 59. Location plan showing 1-7 Henry Avenue and 336-368 Jones Street highlighted in red. 84

Figure 60. Aerial view of 1-7 Henry Avenue and 336-368 Jones Street. 84

Figure 61. Existing development at 463-467 Harris Street with planning changes for adjacent sites proposed in Stage 1 (shown at left) and proposed planning controls for 463-467 Harris Street (shown at right). 85

Table 16. Existing development and planning controls at 1-7 Henry Avenue and 336-368 Jones Street 85

Figure 62. Site plan - 1-7 Henry Avenue and 336-368 Jones Street and 370-374 Jones Street. 86

Figure 63. Plan view of 1-7 Henry Avenue and 336-368 Jones Street (red boundary) showing existing development. Quarry Lane streetscape at 370-374 Jones Street shaded in green. 87

Figure 64. Views of 3-storey flat building at 1-7 Henry Avenue: from Fig Lane Park (left), and from Henry Avenue street frontage (right). 88

Figure 65. View of terrace row and reserve at 336-374 Jones Street: viewed from corner of Jones Street and Quarry Lane (left); and detail view of Quarry Lane Streetscape reserve (right). 88

Figure 66. Height control planes required to maintain existing sunlight access to Quarry Lane streetscape. 90

Table 17 . Planning provisions for 463-467 Harris Street– existing and proposed controls 91

Figure 67. Site plan showing proposed planning controls and reconfiguration of site at 336-374 Jones Street and 1-7 Henry Avenue. 91

Figure 68. Diagrammatic aerial view showing proposed planning controls and reconfiguration of site at 336-374 Jones Street and 1-7 Henry Avenue. 92

Figure 69. Indicative floor plans at 336-374 Jones Street and 1-7 Henry Avenue. 93

Figure 70. Floor plans and configuration diagram for new apartments at 1-7 Henry Avenue. 94

Figure 71. Floor plans and configuration diagram for new apartments at 336-374 Jones Street. 95

Figure 72. Location plan showing 463-467 Harris Street highlighted in red. 98

Figure 73. Aerial view from north east showing 463-467 Harris Street outlined in red. 98

Figure 74. Existing development at 463-467 Harris Street with planning changes for adjacent sites proposed in Stage 1 (shown at left) and proposed planning controls for 463-467 Harris Street (shown at right). 99

Table 18. Existing development and planning controls at 463-467 Harris Street 99

Figure 75. Plan view of 463-467 Harris Street site (red boundary) showing existing development. 100

Figure 76. Height control planes to maintain sunlight access to neighbouring residential development. 102

Table 19 . Planning provisions for 463-467 Harris Street– existing and proposed controls 102

Figure 77. Site plan showing proposed planning controls at 463-467 Harris Street 103

Figure 78. Location plan showing 344 Bulwara Road highlighted in red. 107

Figure 79. Aerial view with 344 Bulwara Road outlined in red. 107

Figure 80. Street views showing footpath to Bulwara Road frontage (left) and through site link at southern boundary of site (right). 108

Figure 81. Existing development at 344 Bulwara Road (shown at left) and proposed planning controls (shown at right). 108

Table 20. Existing development and planning controls at 344 Bulwara Road 109

Figure 82. Plan view of 344 Bulwara Road site (red boundary) showing existing development. 109

Figure 83. Height control planes maintain sunlight access to Mary Ann Street Reserve (left – viewed from south west; right – viewed from north east). 110

Table 21 . Planning provisions for 344 Bulwara Road – existing and proposed controls 111

Figure 84. Site plan showing proposed planning controls at 344 Bulwara Road Ultimo. 111

Responding to the Place Strategy

Urban Design Principles

This urban design report outlines the approach taken for each of the sites studied in Stage 2 of the Ultimo Pyrmont Planning Proposal. It recognises that each site has unique characteristics with different opportunities and constraints. Each study is guided by the urban design principles established in Stage 1 of the planning proposal. They are set out below. The variety of outcomes in terms of built form, height and floor space is consistent with the existing variety to be found across the peninsula.

1. More deep soil for **more trees** and cool green spaces

   Each development site will contain designated deep soil areas for tree planting. The size and location of the areas is subject to the sites' size, shape and orientation. Deep soil areas are concentrated in locations that optimise access to winter sunlight to assist tree health and growth. Where practical they are placed adjacent to streets to maximise the extent of tree canopy over streets, contributing to a greener character to the public spaces of Ultimo Pyrmont. In total, space is provided for an additional 270 trees across the peninsula.

2. **More public space** for more people – streets and open spaces

   The co-location of deep soil areas and streets makes it possible for the open spaces on private lots to be accessible to the public, extending areas for passive enjoyment, sitting, and walking, throughout the peninsula. Proposed changes in Stage 2 include the dedication of a strip of land along the street frontage in Bulwara Road for footpath widening; a through site link that connects Saunders Street to the public walkway in Bank Street Reserve at the foot of the cliff face; and moving the location of Quarry Lane Streetscape reserve from the southern end of the street block to the northern end. In other places, arranging open spaces alongside streets increases their apparent width, with increased light and air, and space for trees and greening, such as along Ada Place between Allen Street and Fig Street, new open spaces with sunlight to maintain existing tree canopy; and on Saunders Street a new sunlit square.

3. **Minimise overshadowing** of existing residential properties

   Ultimo Pyrmont are densely occupied by a variety of housing. The amenity of many dwellings is given by their access to sunlight, and new built form can unfairly limit the access to sunlight if not well designed and planned. Minimum criteria are described in the State Government's Apartment Design Guide and the City's Development Control Plan. These criteria give form to new development, ensuring it minimises overshadowing to existing residential properties while enabling increased height and floorspace.

4. Reinforce **'street wall' form** of most buildings

Ultimo Pyrmont are generally characterised by a continuous street wall form of building with zero front and side setbacks. This characteristic is followed for new building forms to maintain and extend the existing character of the area. New building forms have street walls that fit to their local context or establish a new street wall context similar to other parts of the peninsula. In some cases a tower form is more appropriate, particularly I areas where there are surrounded by other towers.

5. Conserve **heritage** values
   There are three Heritage Conservation Areas and numerous heritage items in Ultimo Pyrmont. Where new development is enabled the conservation of the existing significance of the areas and items is the primary consideration.

6. Good **design for wind and noise**
   Generally, the street wall character means that winds that cause poor comfort or compromise safety on surrounding streets and parks are avoided. Where taller buildings are possible upper-level setbacks to arrest downdraft and curved corners to assist continuous wind flow past new buildings are included.
   Many streets in Ultimo Pyrmont are busy and noisy having the potential to expose residents to the poor health effects that can result from long term exposure to noise. Where the potential exists, for example, near the Anzac Bridge approach in Pyrmont, the building form is narrower and continuous so windows to habitable rooms can open for ventilation away from the noise source. In these contexts, the building forms are designed to protect the interior spaces of the site from the noisy surrounds.

7. Match **land use** to place
   The new Metro station will provide employers access to employees across the Sydney metropolitan area accessed by the rail network. This area currently contains predominately employment uses and is at the centre of employment areas to the north and northeast. Continuing this use with additional floor space will consolidate the productivity of employment uses in Pyrmont into the future and contribute to increased patronage on the metro line.
   Residential uses are located further from the Metro station but within walking distance.

8. Consider **views** to and from public places
   Views identified by the PPPS are generally along streets that run from Harris Street on the ridge to the harbour. Two additional view corridors which have been identified in previous urban design and planning studies have been added to those in the PPPS. View corridors are maintained across private land through building height limits and the location of open space.

9. **Maximise** development **within constraints**
   Within the constraints of other principles the development potential of each site is maximised.

Additional sites identified for study

Urban design studies to support proposed changes in planning controls

During the exhibition period for Stage 1 of the Ultimo Pyrmont Planning Proposal, several submissions were received with regard to additional sites that could be the subject of further study. In response to these submissions a second urban design study was undertaken to explore further opportunities. These sites, studied in Stage 2 of the planning proposal, are listed below.

1. 1-33 Saunders Street Pyrmont
2. 120-122 Saunders Street and 2-10 Quarry Master Drive
3. 56 Harris Street Pyrmont
4. 100 Harris Street Pyrmont
5. 26-52 Mount Street Pyrmont
6. 1-19 Allen Street and 313-319 Harris Street Pyrmont
7. 1-7 Henry Avenue Ultimo and 336-368 Jones Street and 370-374 Jones Street Ultimo
8. 463-467 Harris Street Ultimo
9. 344 Bulwara Road Ultimo



Figure 1. Aerial map showing additional sites selected for study in Stage 2.

1-33 Saunders Street Pyrmont

1-33 Saunders Street Pyrmont (Lot 101 DP 853704, Lot 102 DP 853704) is located in a cluster of sites that were considered in Stage 1 of the planning proposal. Is it located adjacent to the Anzac Bridge approach of the Western Distributor, north of the Blackwattle Bay State Significant Precinct. 140-148 Bank Street adjoins it to the east, and the study site at 26-38 Saunders Street is opposite. The site is bound by Bank Street, Quarry Master Drive and Saunders Street. Refer Figure 2 and Figure 3 for detail.



Figure 2. Aerial map showing site at 1-33 Saunders Street shaded in red

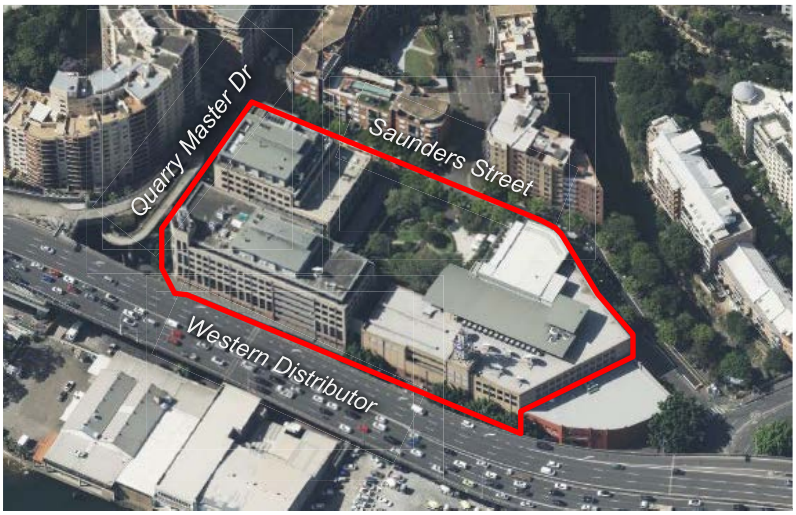


Figure 3. Aerial view showing site at 1-33 Saunders Street outlined in red

Background

In Stage 1 of the planning proposal, the City of Sydney introduced changes to allow for an FSR of 4.22:1 and a height limit of 55 metres. The study considered the impacts of wind and noise on the site, sunlight access to surrounding development, and allowed for accessible links through the site and a publicly accessible open space. The approved Stage 1 building envelope is shown on the left in Figure 4. The building envelope proposed in Stage 2 is shown on the right. Table 1 summarises the controls for each of these schemes.

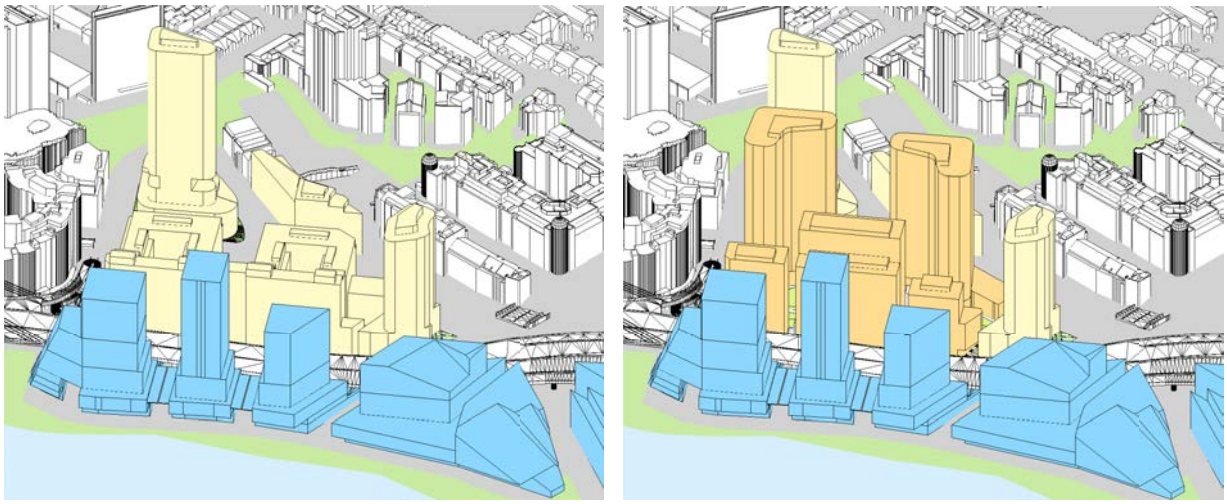


Figure 4. Studies for 1-33 Saunders Street, Stage 1 (left) and Stage 2 (right) of the planning proposal

Table 1. Planning provisions for 1-33 Saunders Street proposed in Stage 1 and 2 of the planning proposal

Pyrmont Ultimo Planning Proposal	Stage 1 (approved)	Stage 2 (proposed)
Gross floor area	46,602 sqm	80,380 sqm
Floor space ratio	4.22 + DesEx	7.27 + DesEx
Height of building	55m	110m (RL 120)
Height in storeys	15	33
Deep soil	15%	15%

Existing site and controls

1-33 Saunders Street currently accommodates commercial uses. It contains the 'City West' office park, a complex of three interconnected buildings up to nine-storeys in height, surrounding a central courtyard, fronting Saunders Street. Beyond the courtyard there are zero setbacks to the remainder of the three street frontages. The existing controls are shown at Table 2 below, and the existing arrangement of the site is shown at Figure 5.

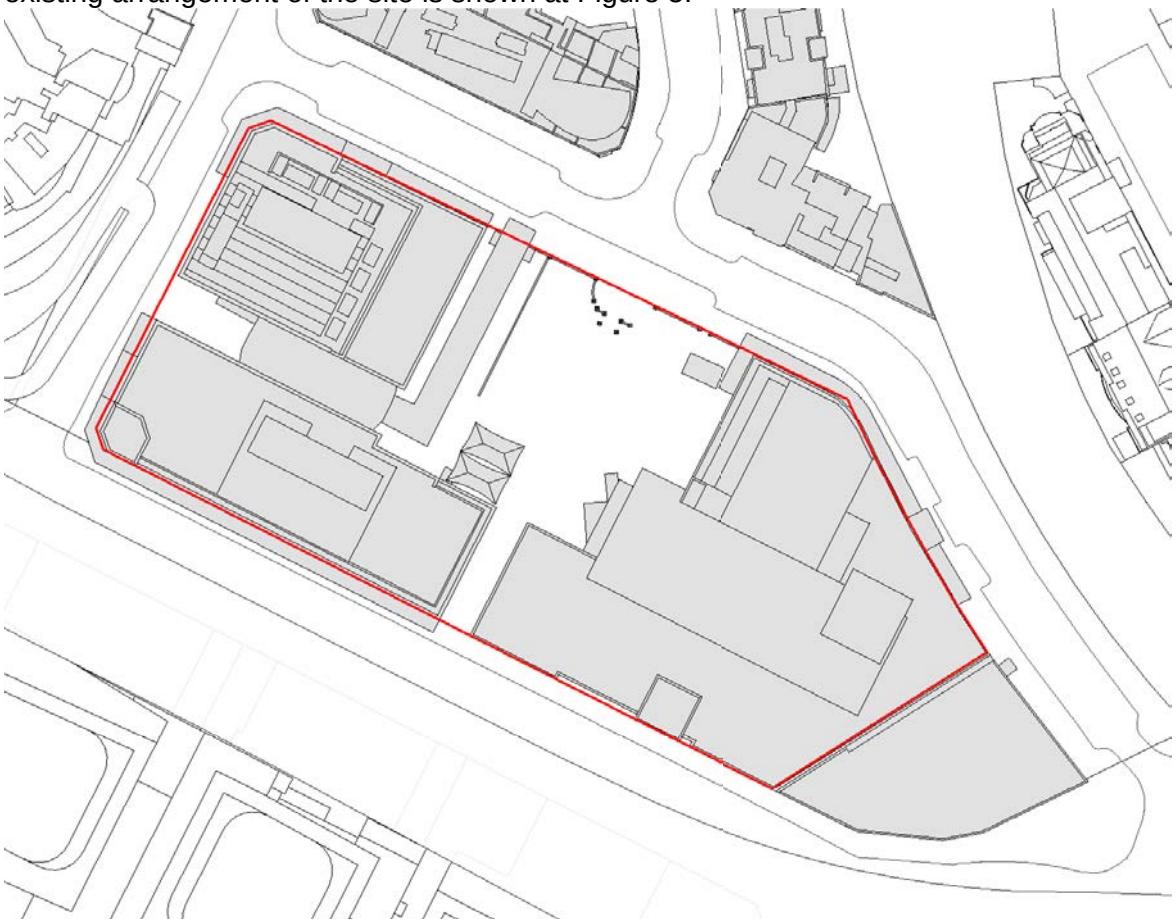


Figure 5. Site plan showing existing building at 1-33 Saunders Street

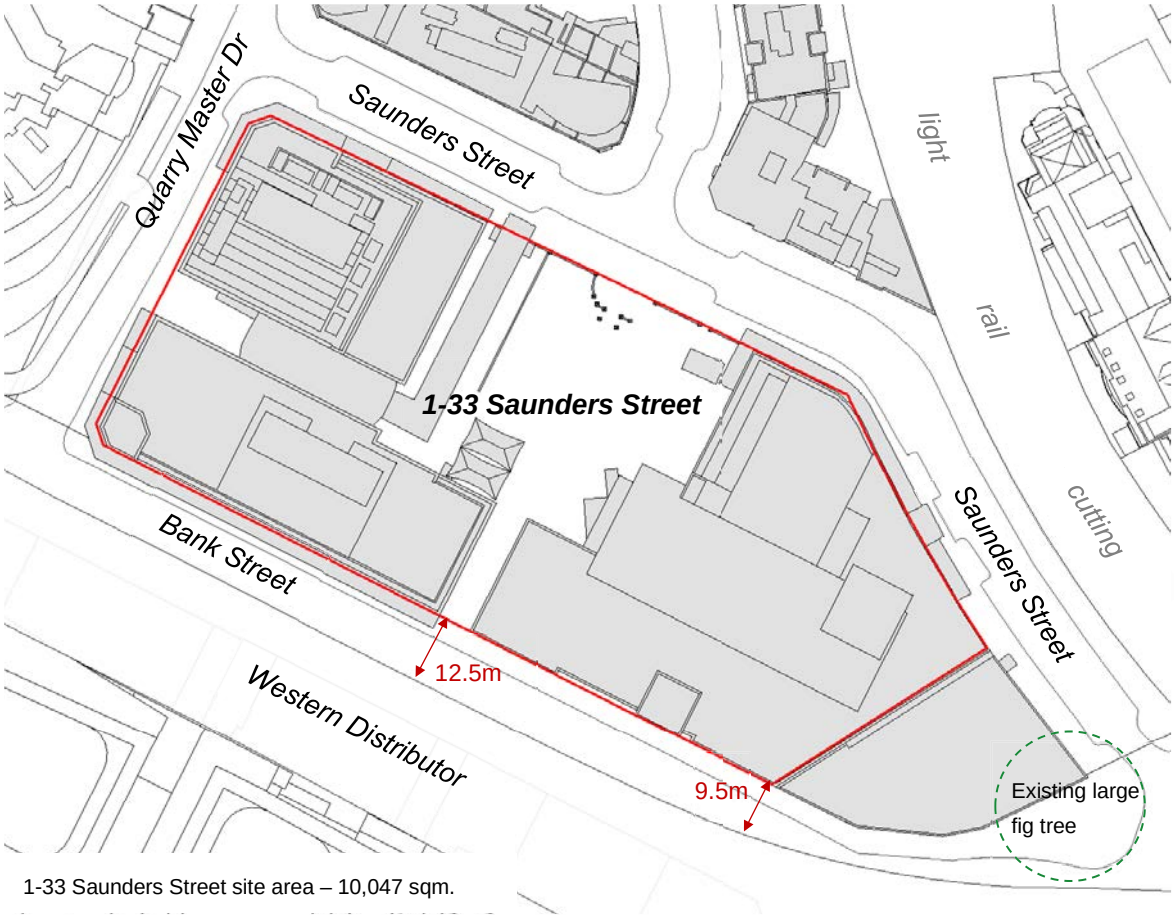


Figure 5. Site plan showing existing building at 1-33 Saunders Street

Table 2 Existing site characteristics and planning controls for 1-33 Saunders Street

	Existing building	Existing controls
Land use and zoning	*Commercial*	E2
Floor space ratio	*2.61 approx.*	4.0
Height of building	*35m*	33m
Height in storeys	*8*	9
Deep soil	-	10%

Urban design principles

In Stage 2 of the planning proposal, the changes proposed to the planning controls on this site were considered in relation to the objectives of the urban design principles outlined below.

More deep soil for **more trees** and cool green spaces –

The initial scheme provided for a publicly accessible open space with an area of deep soil to support new tree canopy in the site. The revised scheme in Stage 2 maintains the total amount of deep soil areas however with changes to their configuration. Building setbacks to the western and eastern boundaries provide for additional tree canopy as well as in the centrally located open space.

More public space for more people – streets and open spaces –

The new scheme maintains a publicly accessible open space in the centre of the site. Year-round access to sunlight is maintained. Adjacent ground floor commercial uses can activate the space and it will be sheltered from the noise of the Western Distributor and winds from the west and south.

Parallel to Bank and Saunders Streets is a six metre wide walkway that runs from Quarry Master Drive to Saunders Street near Miller Street. At the Miller Street end, accessible ramps and a stairway connect Saunders Street to Bank Street. All pathways through the site are designed for accessible gradients.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties, including the approved Blackwattle Bay planning envelopes, have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan.

Reinforce **'street wall' form** of most buildings –

The higher street wall form along Bank Street protects the area from the noise of the Western Distributor. 3- and 4-storey podium buildings to the tower forms maintain a lower scale street wall to Saunders Street. Two towers sit above the street wall on Saunders Street.

Conserve **heritage** values –

There are no heritage items in the vicinity of the site.

Good **design for wind and noise** –

The site is exposed to winds from the west, southwest, and south. The continuous building form along Bank Street accommodates non-residential uses and protects the local area from winds and the noise of the Western Distributor and concrete batching plant. Gaps are placed within the street wall to assist in flushing pollutants and avoiding their concentration due to any canyon effect. Effects of wind downdraft at street level are minimised by the curved corners of the tower forms, the lower scale podia buildings and awnings.

Match **land use** to place –

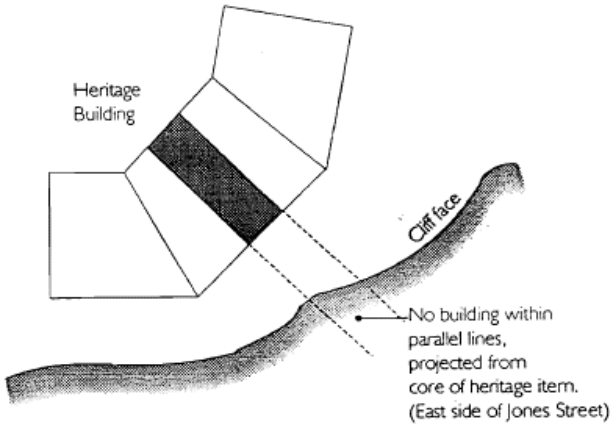
The residential use extends the neighbouring residential area to the north and east.

Consider **views** to and from public places –

The new scheme proposed maintains the view corridor to the former CSR McCaffrey's building identified in Stage 1 of the planning proposal.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.



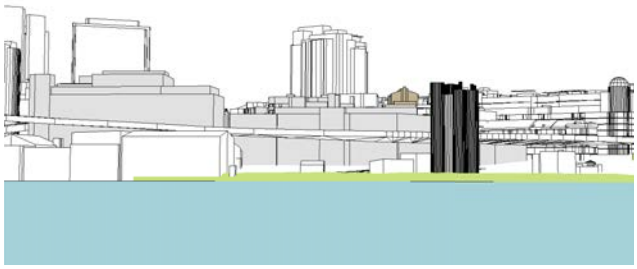
b) Development in respect of Heritage Building

To enable unobstructed views back to the central section of the heritage stables building on the cliff top, no building form (down to ground level on the eastern side of Jones Street) is to encroach into a direct line projected from the building. This view line also applies to the western side of Jones Street but a building form is permissible provided that it demonstrates an ability to maintain distant views from the cliff top walk. See **Figure 9b**.

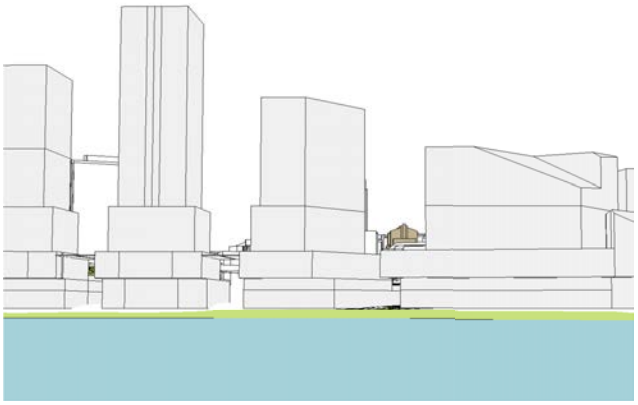
Figure 6. Excerpt from the Ultimo-Pyrmont Urban Development Plan (1999), showing the view corridor to the 'Former CSR McCaffrey's Building'



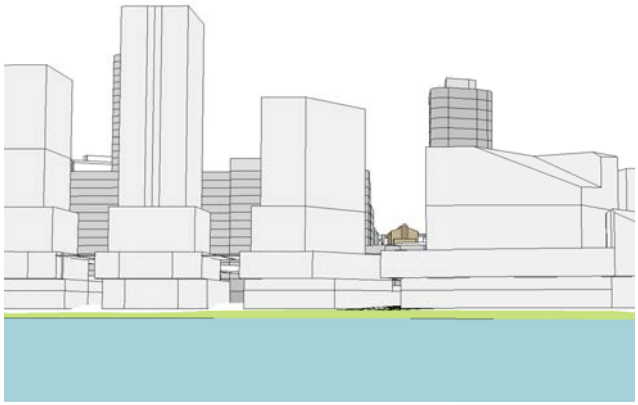
View of Blackwattle Bay looking east from Glebe Foreshore Walk



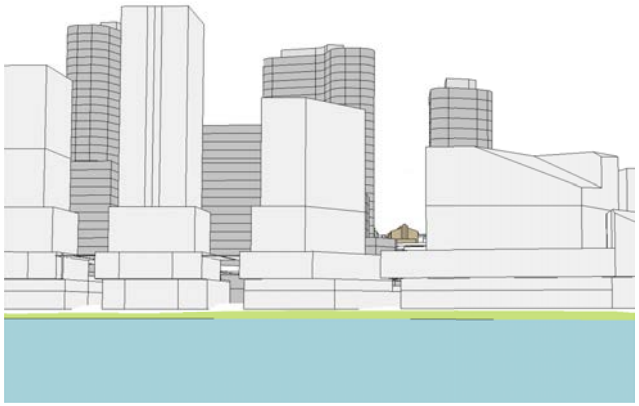
Blackwattle Bay - existing development



Blackwattle Bay – approved SSD built form envelopes



Blackwattle Bay – approved SSD and CoS PPS Stage 1 controls



Blackwattle Bay - approved SSD and proposed CoS PPS Stage 2 controls

Figure 7. View comparisons looking towards Blackwattle Bay from the Glebe Foreshore Walk

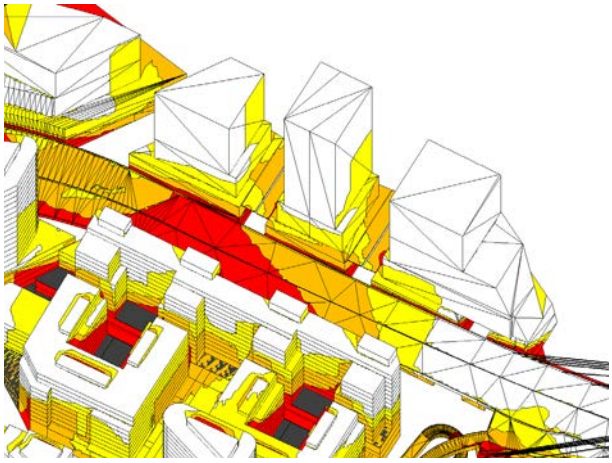


Sunlight access to central deep soil area – 21 June, 9am-3pm

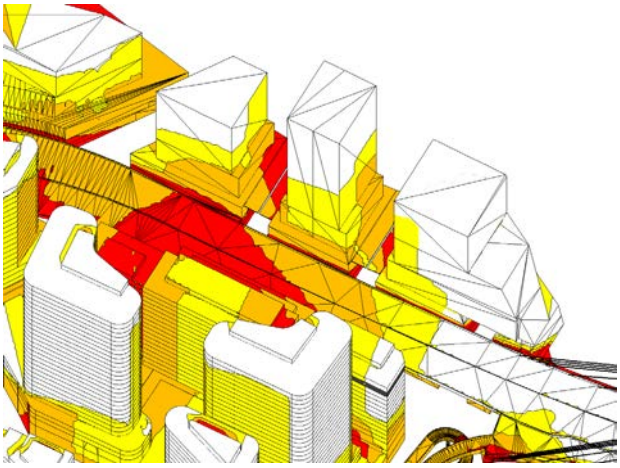


Sunlight access to central deep soil area – 22 Sept., 9am-3pm

Figure 8. Plan diagrams showing sunlight access to publicly accessible open space of site in accordance with the NSW Apartment Design Guide.



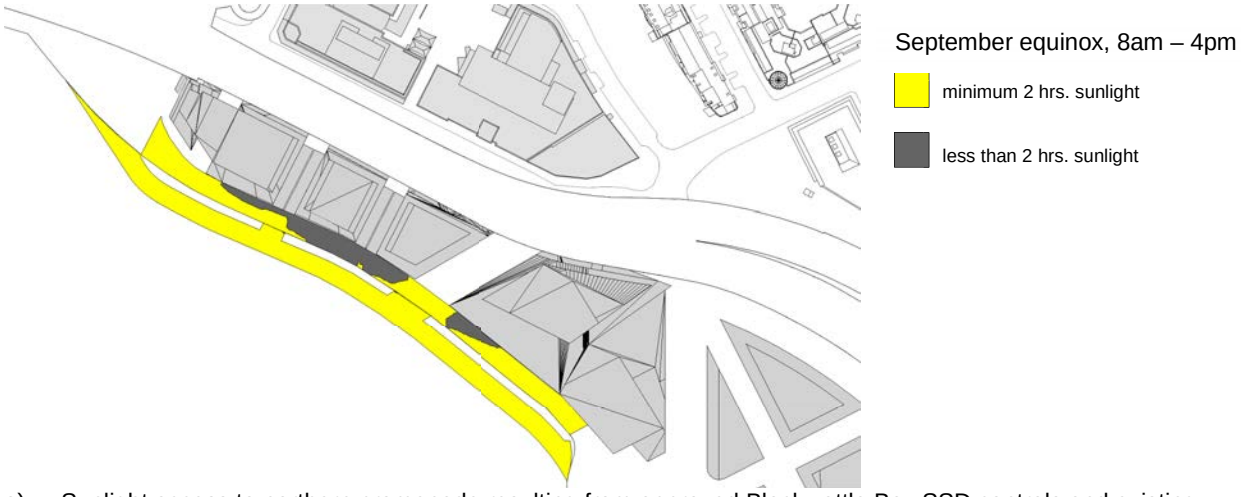
Solar access to BWB LEP envelopes - 21 June, 9am – 3pm
Ultimo-Pyrmont Planning Proposal – Stage 1 approved controls



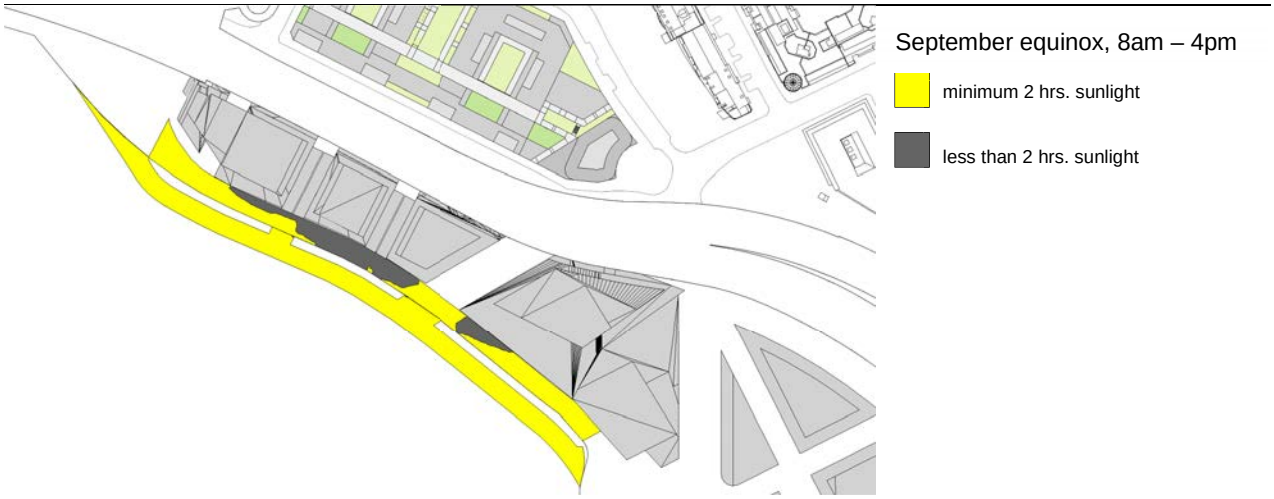
Solar access to BWB LEP envelopes - 21 June, 9am – 3pm
Ultimo-Pyrmont Planning Proposal – Stage 2 proposed controls

Figure 9. Aerial view showing sunlight access to adjacent future development at Blackwattle Bay.

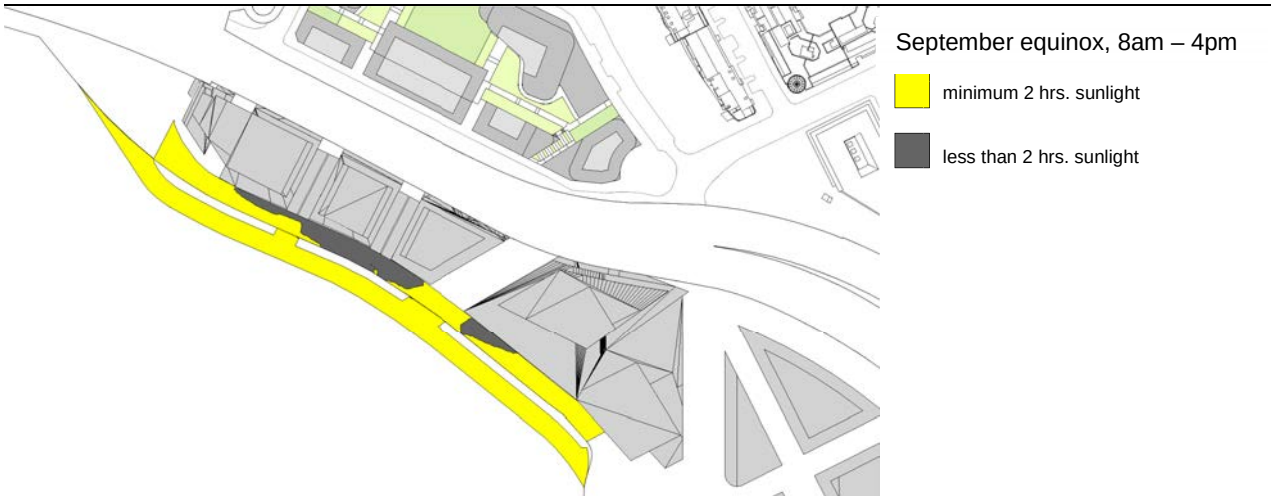
The Blackwattle Bay Design Guidelines specify that a "*minimum of two hours sunlight at equinox is to be provided to **70%** of the northern foreshore promenade between 8am and 4pm…"* (S3.3.3, p.25). The three plan diagrams at Figure 10 below show the proposed scheme for 1-33 Saunders Street will not affect this requirement.



a) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and existing development at 1-33 Saunders Street.



b) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and approved development at 1-33 Saunders Street (Stage 1 planning proposal).



c) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and proposed development at 1-33 Saunders Street (Stage 2 planning proposal).

Figure 10. Plan diagrams showing no change to sunlight access to the Blackwattle Bay northern foreshore promenade resulting from approved and proposed controls at 1-33 Saunders Street.

Proposed controls

The new scheme for 1-33 Saunders Street proposes mixed uses on the site. The street wall building along Bank Street can accommodate commercial, hotel and co-living at different levels. For the building behind facing into the site interior, and the two towers along Saunders Street, residential uses are proposed with commercial/retail uses at street level in the podia.

The proposed FSR is 7.27:1 plus a provision for Design Excellence, a height limit of 110 metres (RL120), 32 storeys; and a deep soil requirement for at least 15% of the site area.

Additional controls such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described in Figure 11. The planning controls are summarised in Table 3 below.

Table 3. Planning provisions for 1-33 Saunders Street - existing and proposed controls

	Existing	Stage 1	Stage 2
Land use and zoning	*Commercial – E2*	MU1	MU1
Gross floor area		46,602 sqm	80,380 sqm
Floor space ratio	*2.61 approx.*	4.21 + DesEx	7.27 + DesEx
Height of building	*35m*	54m	110m (RL 120)
Height in storeys	*8*	15^	33^
Deep soil	-	15%	15%

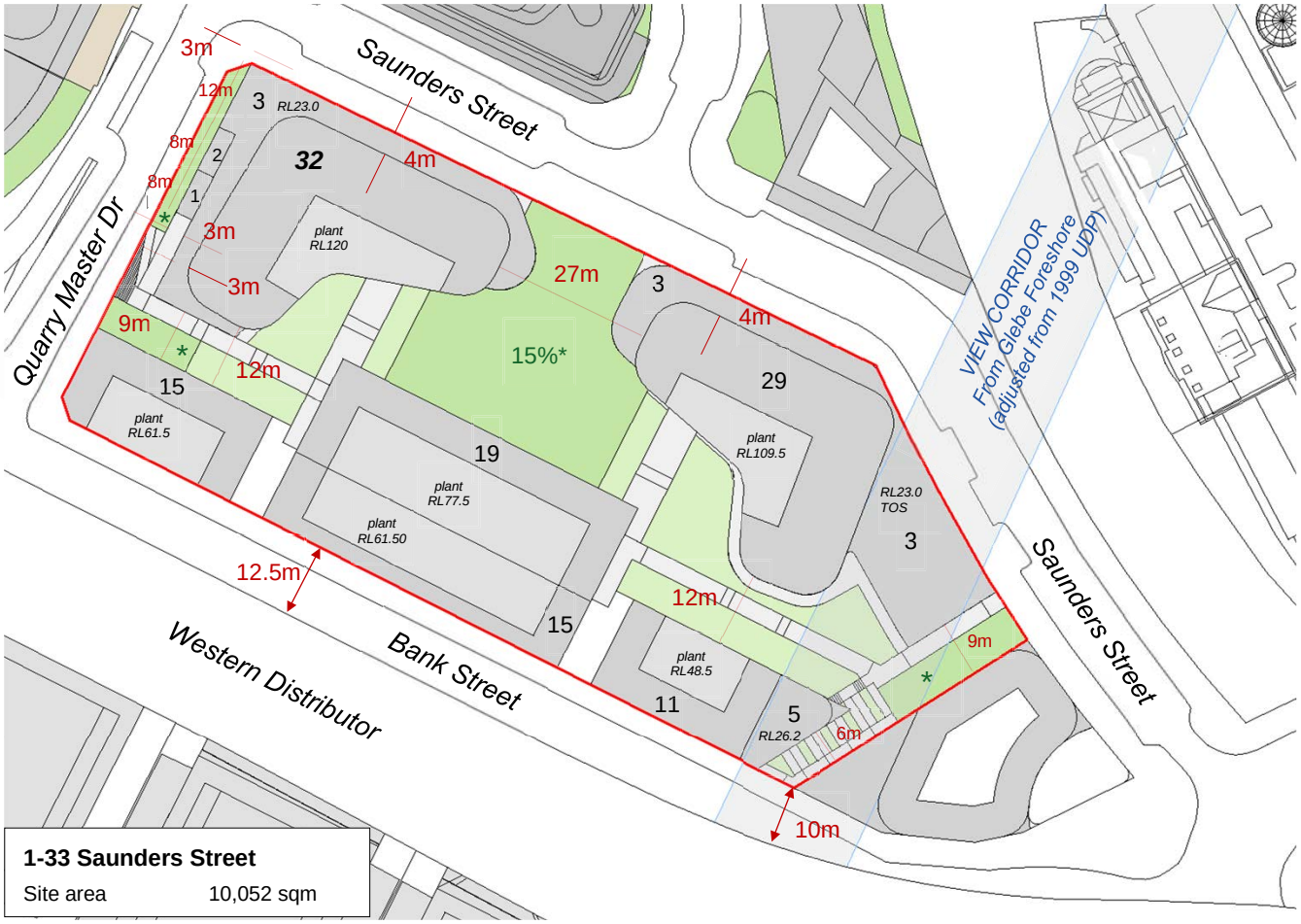


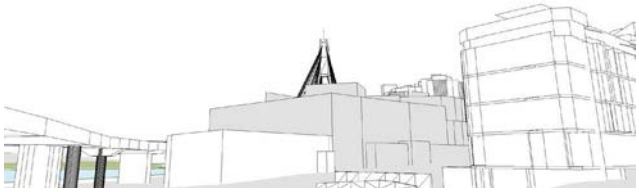
Figure 11. Site plan of proposed scheme at 1-33 Saunders Street.

Visualisation

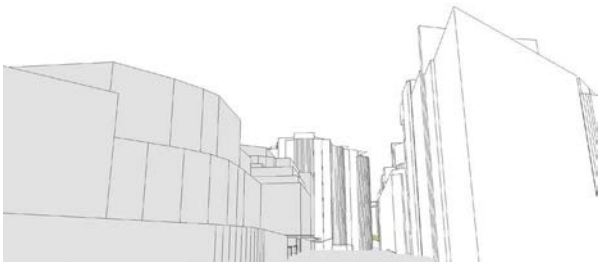


Figure 12. Viewpoint locations for following view studies.

Existing (35mm lens)



View west from Miller Street Civic Space



View west along Saunders Street



View south along Quarry Master Drive

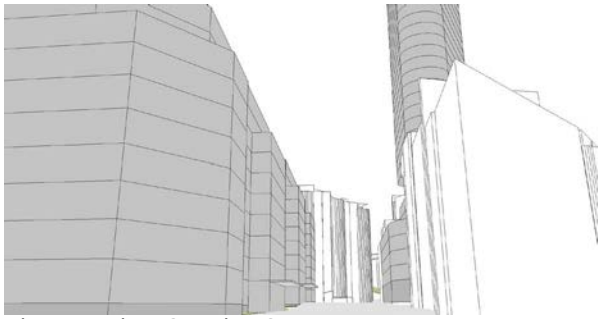


View south from Carmichael Park

Existing and approved controls (35mm lens)



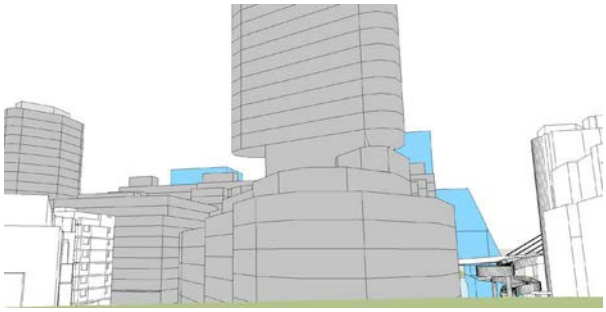
View west from Miller Street Civic Space



View west along Saunders Street



View south along Quarry Master Drive

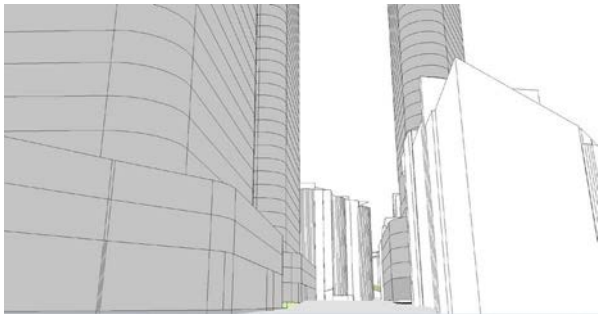


View south from Carmichael Park

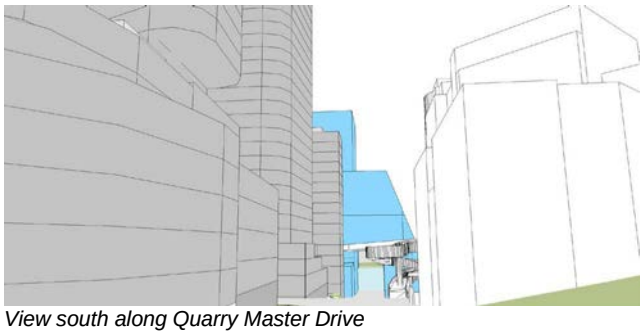
Proposed controls (35mm lens)



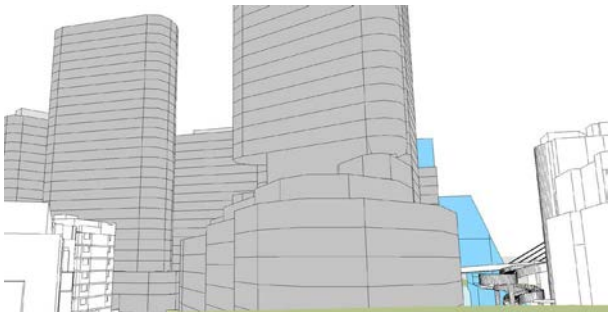
View west from Miller Street Civic Space



View west along Saunders Street

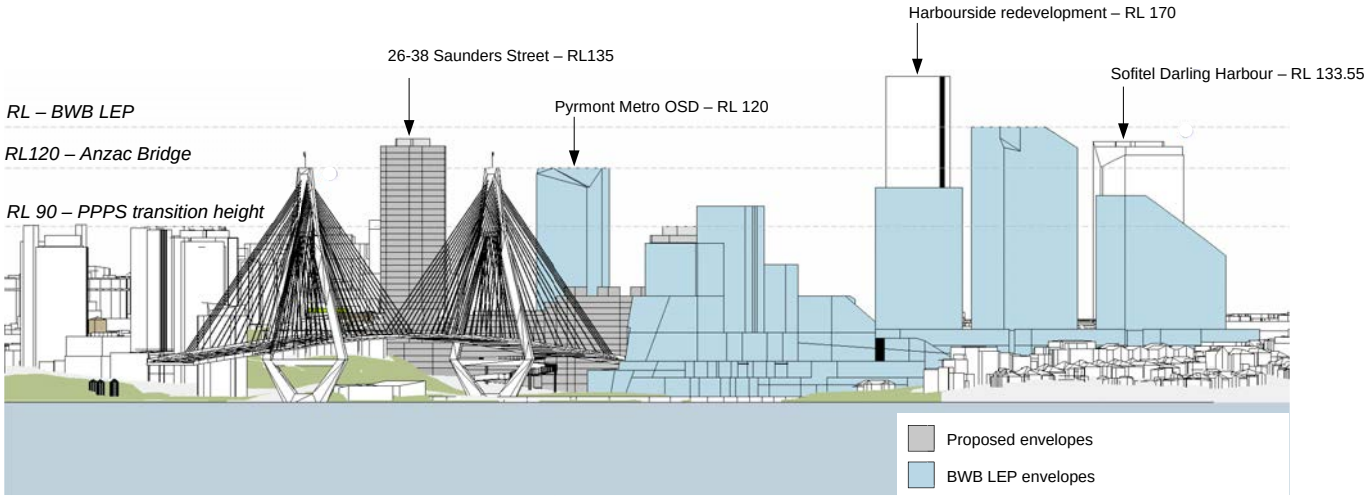


View south along Quarry Master Drive

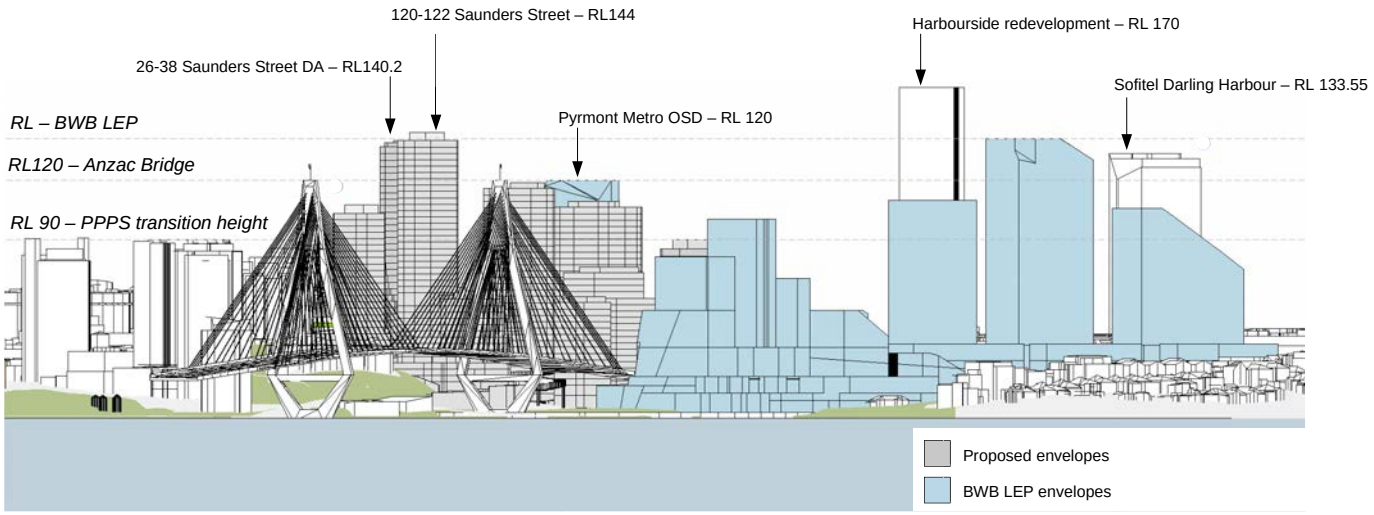


View south from Carmichael Park

View comparison looking east from Blackwattle Bay



View looking east showing approved planning controls for Blackwattle Bay LEP and Ultimo Pyrmont Stage 1 planning proposal



View looking east showing approved planning controls for Blackwattle Bay LEP and proposed planning controls for Ultimo Pyrmont Stage 2.

120-122 Saunders Street and 2-10 Quarry Master Drive

120 Saunders Street (Lot 2 DP 839057, Lots 1-163 SP 46801), 122 Saunders Street (Lot 1 DP 839057, Lots 1-111 SP 47754), and 2-10 Quarry Master Drive (Lot 30 DP 859243, Lots 1-66 SP 61091) are sites near a cluster that was considered in Stage 1 of the planning proposal. They are adjacent to the Anzac Bridge approach, north of Bank Street Park, and below the escarpment that runs along the southern edge of The Knoll. 120 Saunders Street is bound by Saunders Street and Bank Street and the other two sites are on Quarry Master Drive. Refer to Figure 13 and Figure 14 for detail.

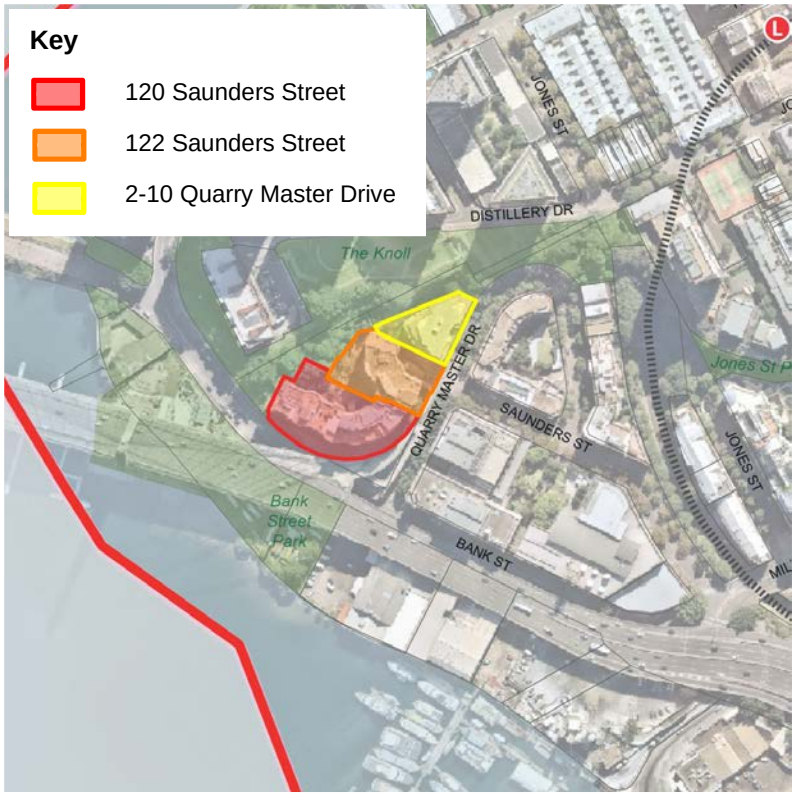


Figure 13. Aerial map showing site at 1-33 Saunders Street shaded in red



Figure 14. Aerial view showing site at 1-33 Saunders Street outlined in red

Background

These three sites were not identified for investigation by the Department of Planning and were not considered by the City of Sydney in Stage 1. Subsequent to the Stage 1 exhibition period the City has considered possible changes to this site in response to submissions. The proposed changes respond to a range of significant constraints on the site due to its location. These include noise impacts from the motorway, wind, and optimising sunlight to Bank Street Park and neighbouring development. Aerial views of the site showing the existing development and proposed changes appear in Figure 15 below. Table 4. Existing development and planning controls at 120-122 Saunders Street and 2-10 Quarry Master Drive.

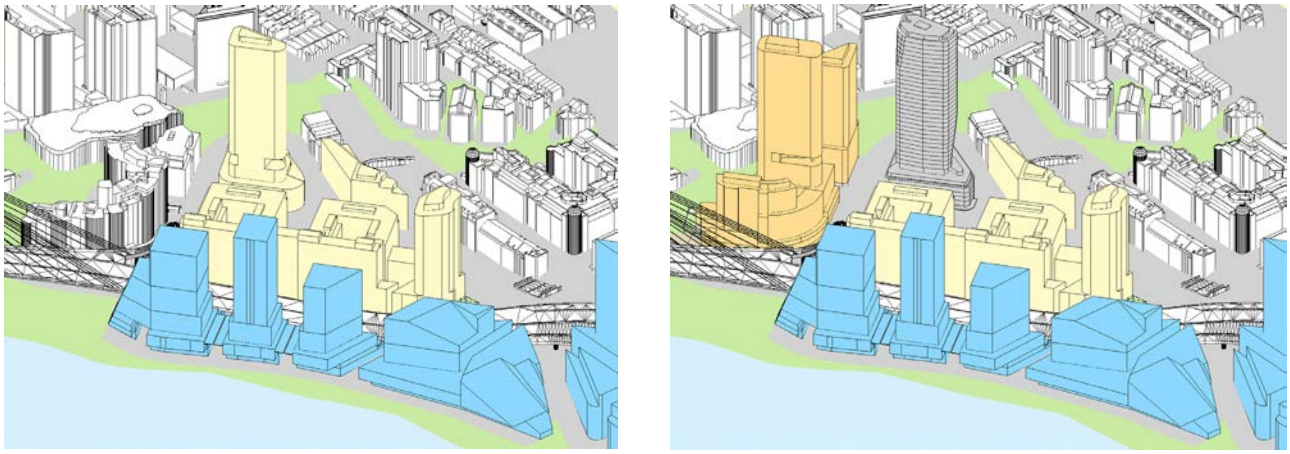


Figure 15. Approved built form controls from Ultimo Pyrmont – Stage 1 (shown at left), and proposed controls for Stage 2 (at right); subject site shown in orange, with DA for 26-38 Saunders Street shown in grey

Table 4. Existing development and planning controls at 120-122 Saunders Street and 2-10 Quarry Master Drive

	120-122 Saunders Street		2-10 Quarry Master Drive	
	Existing building	Existing controls	Existing building	Existing controls
Land use & zoning	Residential	MU1	Residential	MU1
Floor space ratio	-	4.0	-	4.0
Height of building	48m	45m	30m	30m
Height in storeys	16	13	10	9
Deep soil	-	-	-	-

Existing development and controls
120-122 Saunders Street and 2-10 Quarry Master Drive (the three sites), currently comprise 2 multi-residential apartment buildings totalling 316 strata units split over 3 strata plans.

The northern boundaries of the sites are bordered by 2 public reserves - Bank Street Reserve and the Saunders Street Cliff Face. These reserves sit at foot of the cliff face of the former sandstone quarry, below the park on the top of The Knoll. The cliff face is a heritage item listed in the Sydney LEP2012. The reserves contain a publicly accessible walkway that is fenced off from the sites along their boundaries. Above, at the level of park on The Knoll, there is another walkway and stairway located in the lot of 1 Distillery Drive that connects down along the top of the cliff onto the Western Escarpment that sits above Bank Street. The location of the historically significant Tinkers Well spring is located in this vicinity. Along the Bank Street boundary the site at 120 Saunders Street is supported by the remnant stone retaining wall that was part of the incinerator complex designed by Walter Burley Griffin.

The sites are very close to the elevated roadway of the Western Distributor leading onto the Anzac Bridge. Blackwattle Bay is directly south. As such the site is exposed to significant winds from the south to the northwest, and also to the noise and air from the passing traffic on the elevated roadway. A plan of the sites appears below at Figure 16 and Table 6 above describes the existing building and planning controls.

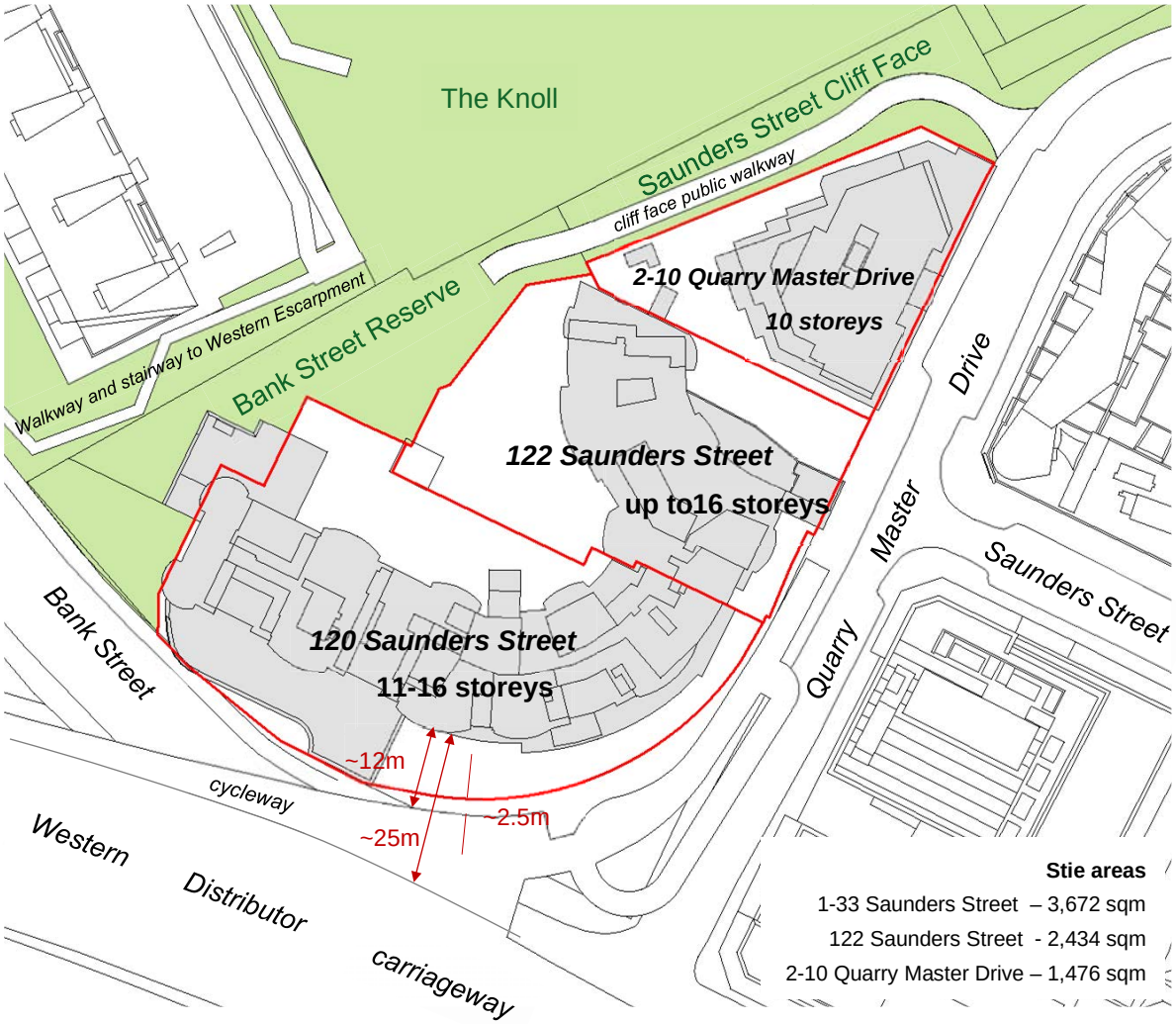


Figure 16. The existing development at 120-122 Saunders Street and 2-10 Quarry Master Drive

Urban design principles

In Stage 2 of the planning proposal, the changes proposed to the planning controls on this site were considered in relation to the objectives of the urban design principles outlined below.

More deep soil for **more trees** and cool green spaces –

The proposed building setback along the Bank Street and Quarry Master Drive boundaries allows for space to support additional tree canopy along the street. Similar setbacks along the rear boundaries of the site adjacent to the neighbouring reserves provide further opportunities, along with new areas of deep soil either side of the proposed through-site link.

More public space for more people – streets and open spaces –

The proposed site layout features a complex of podium and tower forms occupying 120-122 Saunders Street, and a separate building at 2-10 Quarry Master Drive. The two forms are separated to account for amenity requirements of the Apartment Design Guide. This allows for open space in between to accommodate the through-site link with areas of deep soil either side. The through site links gives access to the Bank Street Reserve and the Saunders Street Cliff Face from Saunders Street making these areas more accessible and more integrated with the surrounding streets.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties, including the approved Blackwattle Bay planning envelopes, have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan

Reinforce **'street wall' form** of most buildings –

The higher street wall form along Bank Street protects the area from the noise of the Western Distributor. This steps down from 14 to 9/8 storeys as the site rounds the curve from Bank Street to Quarry Master Drive. The tower forms are set back from the street wall alignment to support the street wall form.

Along Bank Street Reserve and the Saunders Street Cliff Face there is a 3 metre setback to a street wall like building giving more space for trees that grow in the reserve and ensuring that the reserves are overlooked day and night from apartments to increase the perception of safety.

Conserve **heritage** values –

There are no heritage items in the vicinity of the site.

Good **design for wind and noise** –

The site is exposed to winds from the west, southwest, and south. The continuous building form along Bank Street accommodates non-residential uses at street level. Apartments in the tower above are located in a slim building floor plate that enables the living areas to be oriented away from the noise.

Effects of wind downdraft at street level are minimised by podium and upper level setbacks as well as modulation of the building line in plan. The tower has a horizontal slot that intercepts the downdraft directing the wind above the street rather than down on to it.

Match **land use** to place –

Non-residential uses at street level are in character with neighbouring sites along Bank Street and residential uses respond the context of land use around Quarry Master Drive.

Consider **views** to and from public places –

The site is not constrained by view corridors.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

Proposed controls

The proposed scheme for the sites is for 2 buildings separated by a publicly accessible through-site link from Quarry Master Drive to the walkway along the base of the cliff face at the northern boundaries. The through site link increases access to the walkway and provides alternative paths to exit it improving its safety.

The building scheme is for mixed use with different FSRs and height limits for each building. At 120-122 Saunders Street, the FSR proposed is 4.74:1 plus provision for a Design Excellence bonus (up to 10%). The height limit for 120 Saunders Street is 60m., and for 122 Saunders Street, RL144. At 2-10 Quarry Master Drive, the FSR is 6.5:1 plus Design Excellence, and height limit of 95m.

Similar to the existing building, the scheme provides for 2 levels of non-residential floor space at street level in the building at 120-122 Saunders Street. These floors would not provide reasonable residential amenity. The building form comprises a street wall building following the curved boundary from Saunders Street around to Bank St, a similar building alignment as the existing development. It is 8 to 14 storeys in height. Further away from the noise and pollution of the western Distributor is a 37-storey tower and a rear wing of 4 to 8 storeys. The street wall building is a slim floor plate with a single loaded corridor and apartments facing away from boundary. This allows for a quieter aspect to living spaces and acts as a buffer to the interior of the site, protecting it from the noise and air of the roadway and winds coming off Blackwattle Bay. Similarly, the floor plate of the tower can be designed for apartments to face towards the northeast through to northwest, away from the noise and towards the sun. Windows for ventilation of habitable rooms should not be placed on the southern face of the tower

The second building is located on the site of 2-10 Quarry Master Drive, comprising a 27 storey tower with the floor plate orienting apartments towards the north and northwest.

Each of the buildings can achieve a deep soil area equal to 20% of the site area on which they sit.

Details of the controls such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described in Figure 17. The planning controls are summarised in Table 5 below.

Table 5. Proposed planning provisions for 120-122 Saunders Street and 2-10 Quarry Master Drive

	120-122 Saunders Street		2-10 Quarry Master Drive	
	Existing controls	Proposed controls	Existing controls	Proposed
Land use & zoning	R1	MU1	R1	MU1
Floor space ratio	4.0	4.74 + D. Ex.	4.0	6.5 + D. Ex.
Height of building	45m	60m (120 Saunders) RL144 (122 Saunders)	30m	95m
Height in storeys	13	37	9	27
Deep soil	-	20% (120 Saunders) 20% (122 Saunders)	-	20%

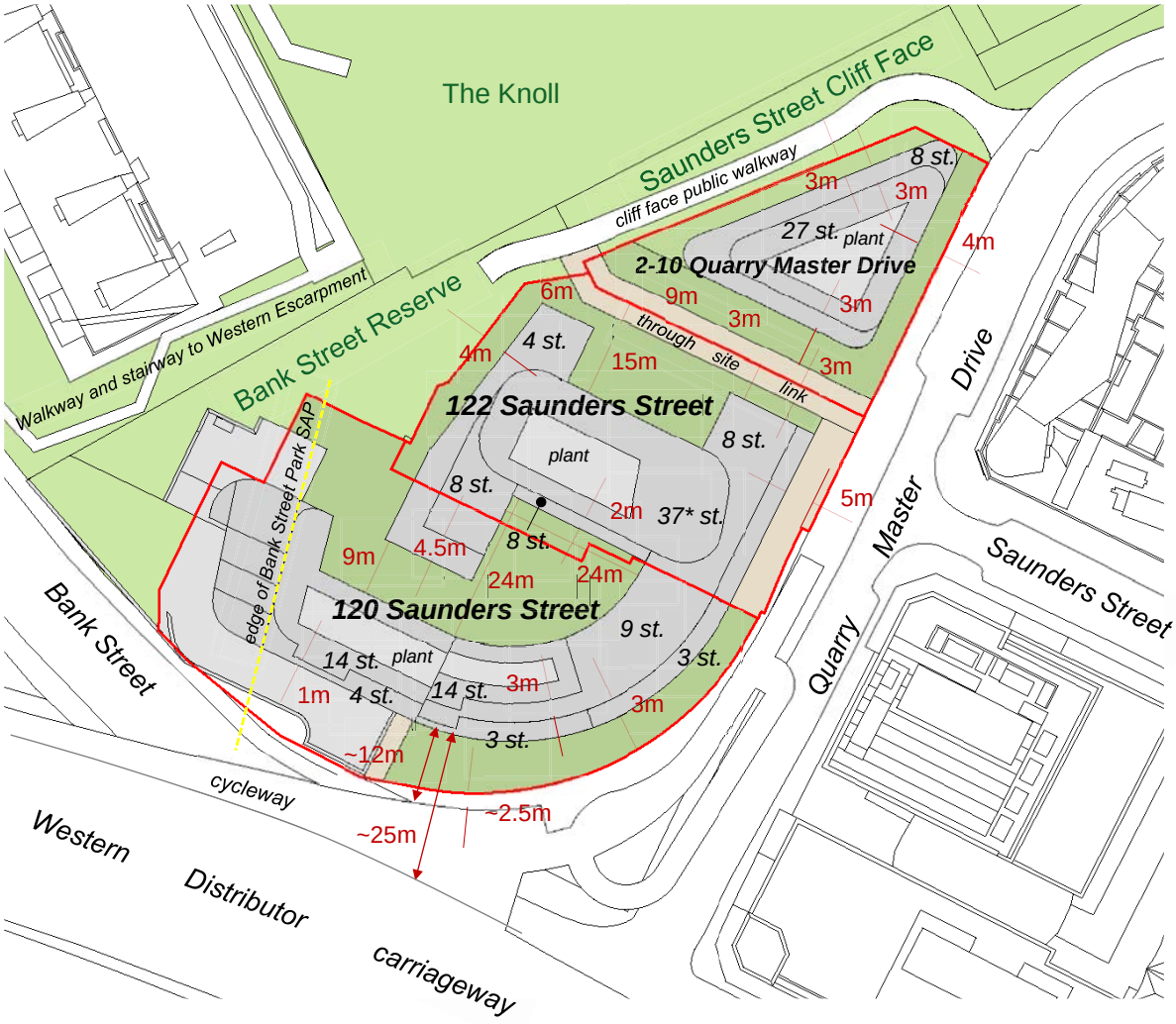


Figure 17. The proposed development at 120-122 Saunders Street and 2-10 Quarry Master Drive

View studies

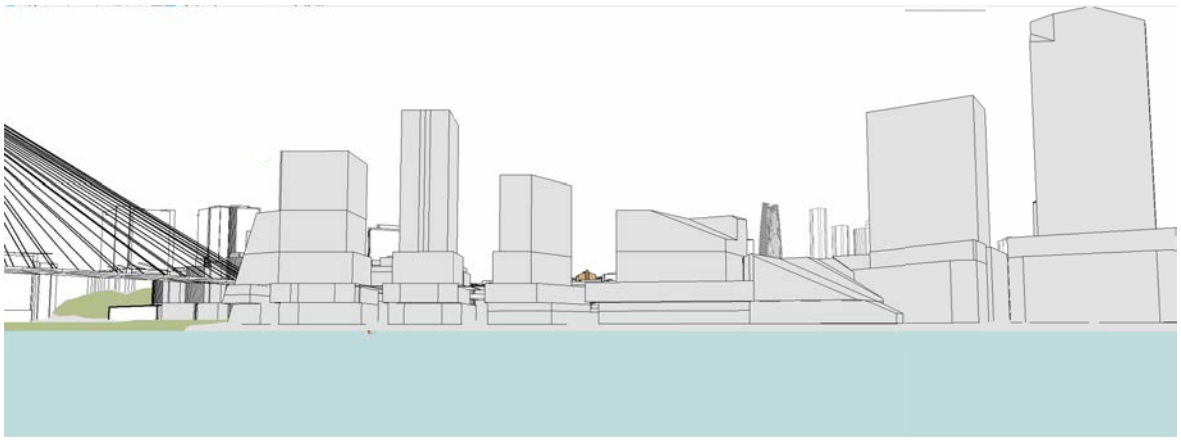


View of Blackwattle Bay looking east from Glebe Foreshore Walk

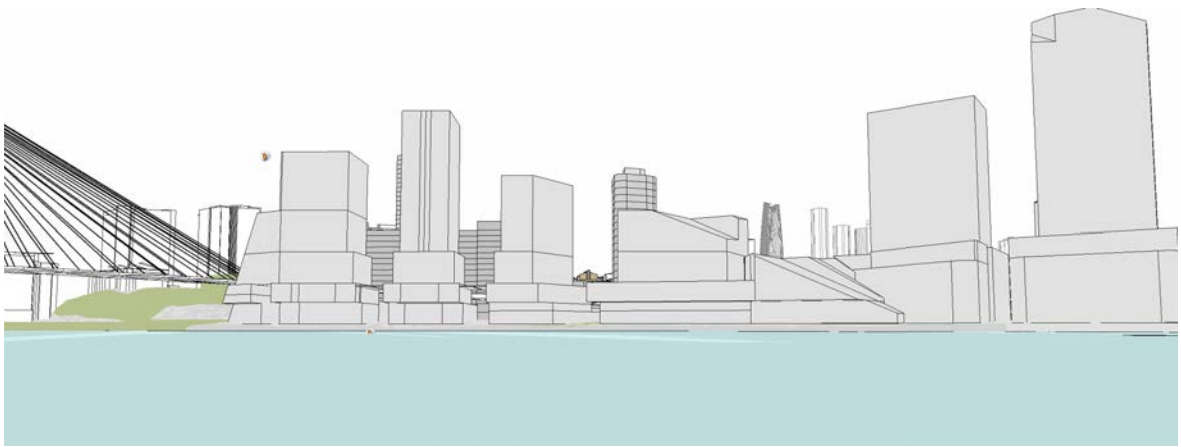
Figure 18. View study – comparison of existing and proposed controls viewed from Glebe Foreshore Walk



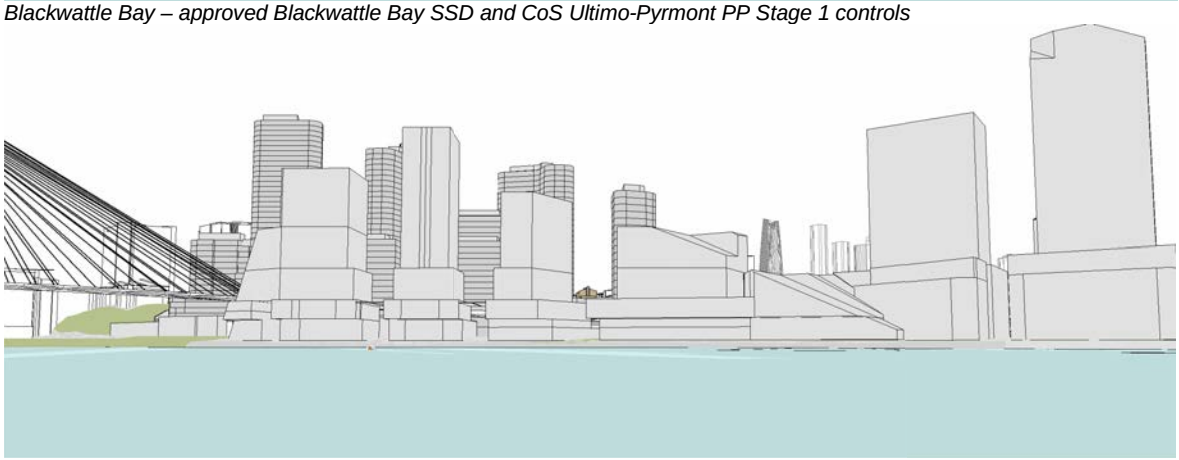
Blackwattle Bay - existing development



Blackwattle Bay – approved Blackwattle Bay SSD built form envelopes



Blackwattle Bay – approved Blackwattle Bay SSD and CoS Ultimo-Pyrmont PP Stage 1 controls

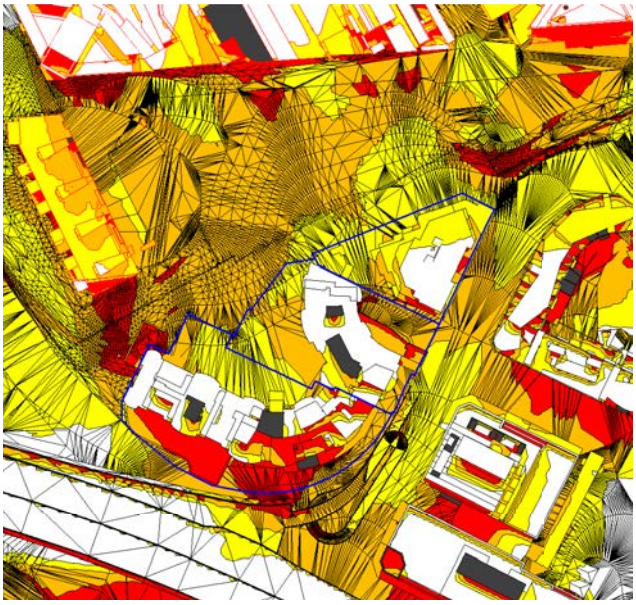


Blackwattle Bay – approved Blackwattle Bay SSD and CoS Ultimo-Pyrmont PP Stage 2 controls

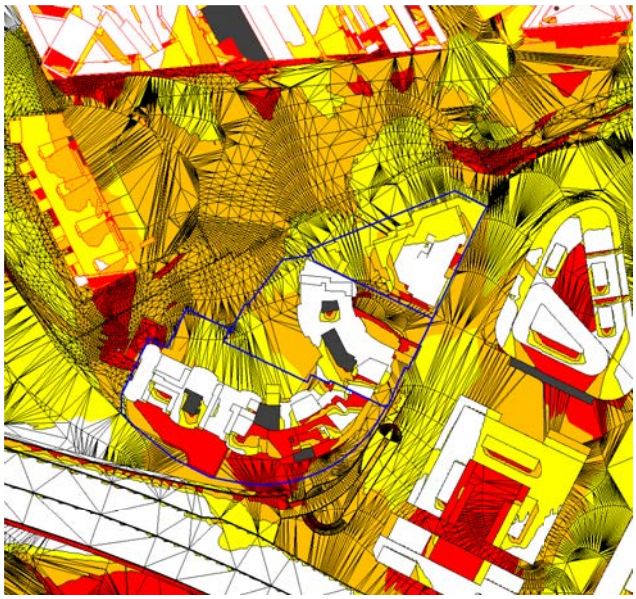
Sunlight access to public spaces



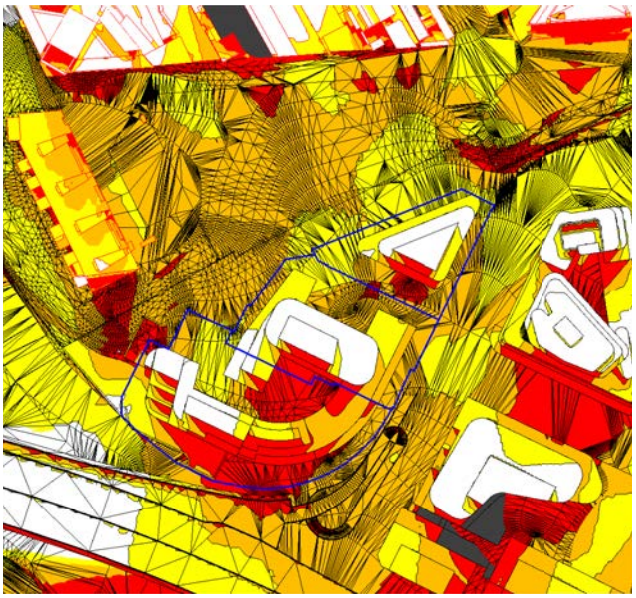
Aerial view of sites at 120-122 Saunders Street and 2-10 Quarry Master Drive



Sunlight access to site surrounds - 21 June, 9am – 3pm Existing development

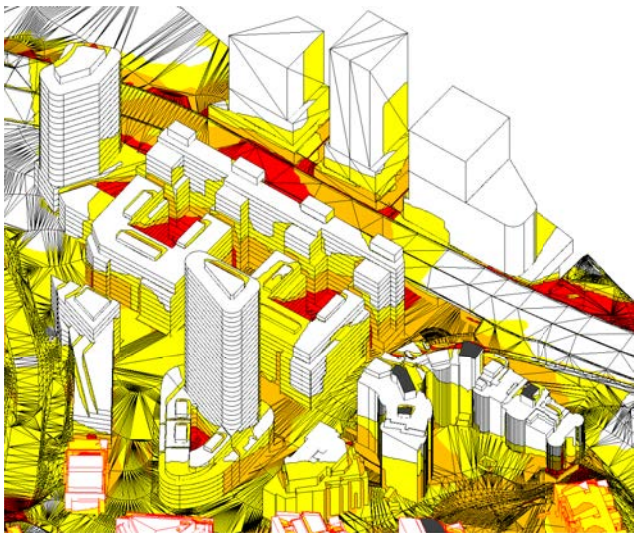


Sunlight access to site surrounds - 21 June, 9am – 3pm Ultimo-Pyrmont Planning Proposal – Stage 1 approved controls

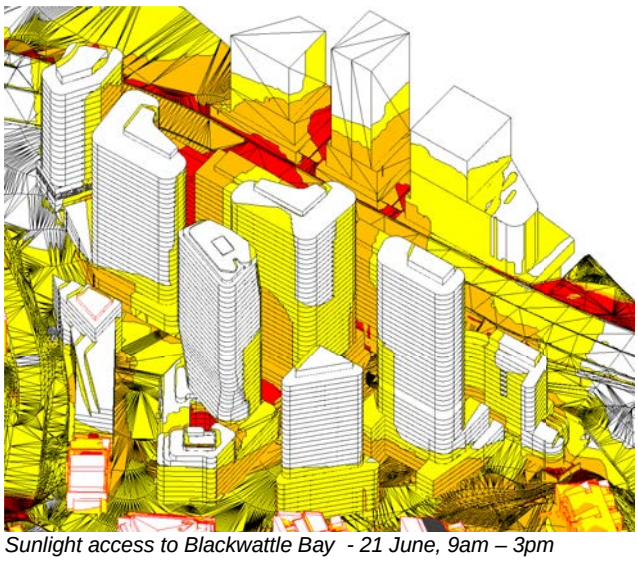


Sunlight access to site surrounds - 21 June, 9am – 3pm Ultimo-Pyrmont Planning Proposal – Stage 2 proposed controls

Figure 19. Plan diagrams comparing sunlight access to publicly accessible open spaces around the sites.



Sunlight access to Blackwattle Bay LEP - 21 June, 9am – 3pm
Ultimo-Pyrmont Planning Proposal – Stage 1 approved controls



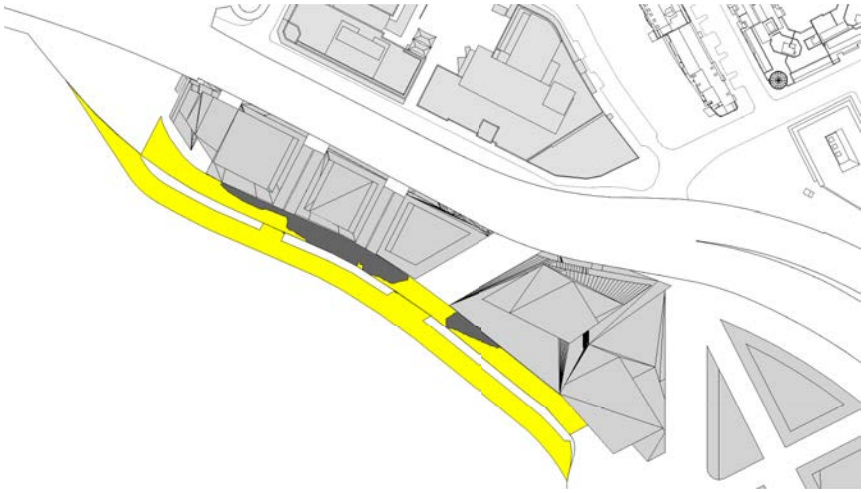
Sunlight access to Blackwattle Bay - 21 June, 9am – 3pm
Ultimo-Pyrmont Planning Proposal – Stage 2 proposed controls

Figure 20. Aerial views comparing sunlight access to Blackwattle Bay LEP planning envelopes.

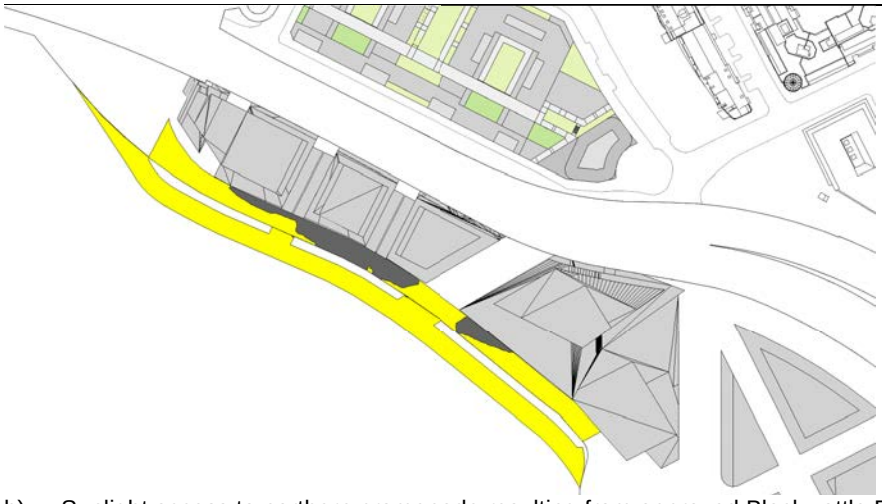
Sunlight to Blackwattle Bay Foreshore Walk

The Blackwattle Bay Design Guidelines specify that a "*minimum of two hours sunlight at equinox is to be provided to **70%** of the northern foreshore promenade between 8am and 4pm…"* (S3.3.3, p.25). The three plan diagrams at Figure 10 below show the proposed scheme for 1-33 Saunders Street conform to this requirement.

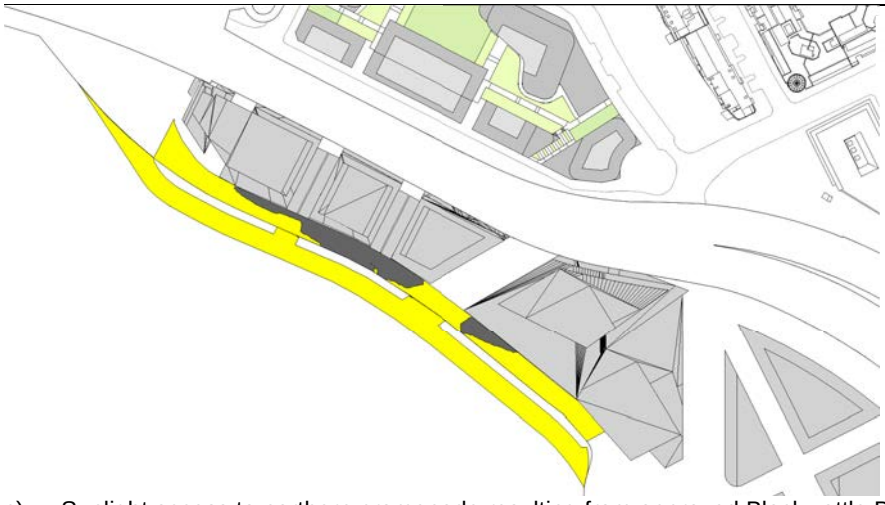
Diagrams comparing the outcomes for sunlight access in existing, approved and proposed planning schemes appear below at Figure 21.



a) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and existing development at 1-33 Saunders Street.



b) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and approved development at 1-33 Saunders Street (Stage 1 planning proposal).



c) Sunlight access to northern promenade resulting from approved Blackwattle Bay SSD controls and proposed development at 1-33 Saunders Street (Stage 2 planning proposal).

Figure 21. Plan diagrams showing no change to sunlight access to the Blackwattle Bay northern foreshore promenade resulting from approved and proposed controls at 1-33 Saunders Street.

Managing wind and noise

Due to the proximity to Blackwattle Bay foreshore and the Western Distributor, 120-122 Saunders Street is subject to the significant winds from the bay, and the noise and air quality associated with the elevated roadway of the Western Distributor. The site layout and design of the building forms respond to these conditions to ensure good amenity for the residents of the apartments and people in the public spaces surrounding the sites.

The street wall building facing onto Bank Street is designed as a slim floor plate, with the Bank Street frontage accommodating circulation and utility spaces and the living areas and bedrooms located on the opposite side, so that windows for ventilation open away from the noise and air of the elevated roadway.

The street wall height and the setbacks help to shield the site and its surrounds from the wind impacts of Blackwattle Bay so that comfortable and safe wind conditions are experienced on footpaths, crossings and in the surrounding parks and reserves. The outer curved face of the building close to the expressway is articulated to slow wind speeds that follow it around the corner. A 2-storey clear horizontal break in the tower also contributes to lower wind speeds at ground level by reliving the downdraft of winds that hit the tower. The placement and detail of these elements may vary provided a comfortable and safe wind environment is maintained in the surrounding public spaces. s. Figure 22 below illustrates these design principles, which also apply to other sites facing onto Bank Street.

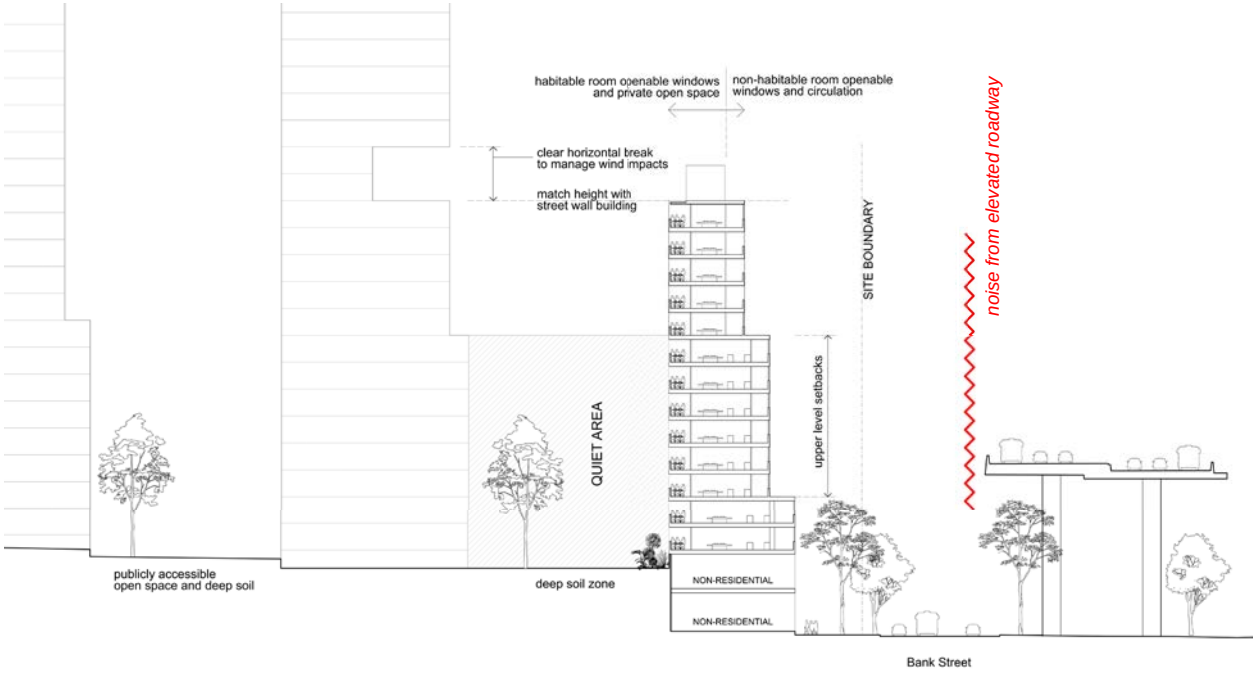
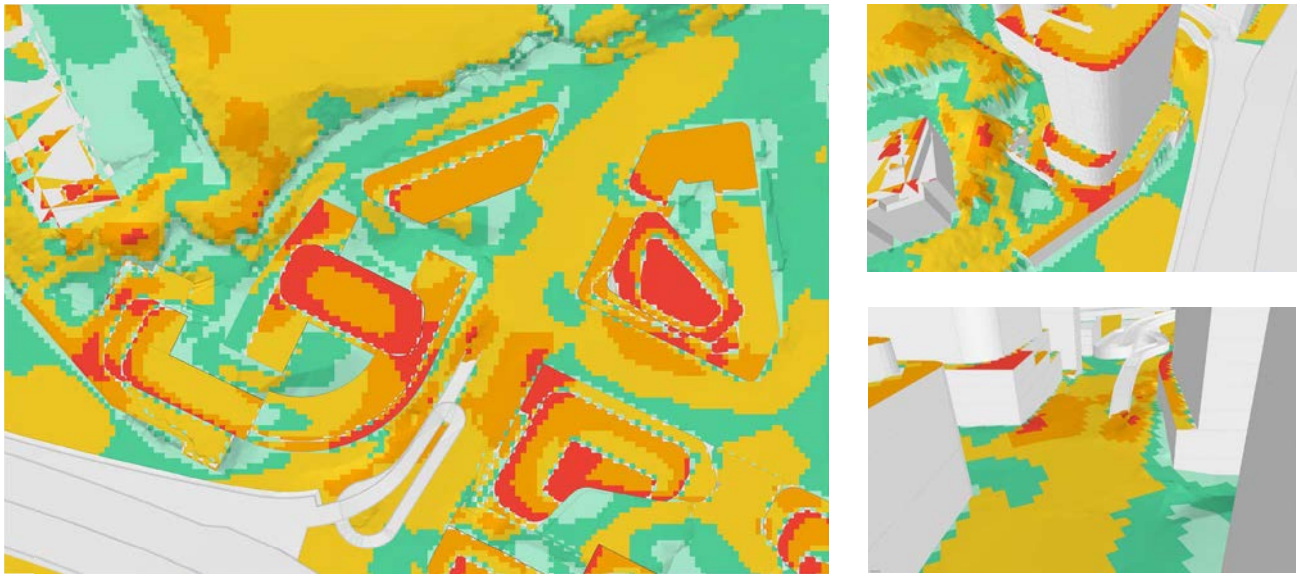


Figure 22. Section drawing showing design responses to the conditions of wind, noise and air quality associated with the elevated roadway and Blackwattle Bay.

Wind testing

To inform the design development of the built form controls for 120-122 Saunders Street, an iterative design process was used involving a desktop CFD wind modelling methodology. This methodology enables the prediction of likely wind comfort over and around the site, and how these change in response to changes in the building form. Where a proposed building form may lead to unsafe wind conditions at street level the design is adjusted to resolve the issue.

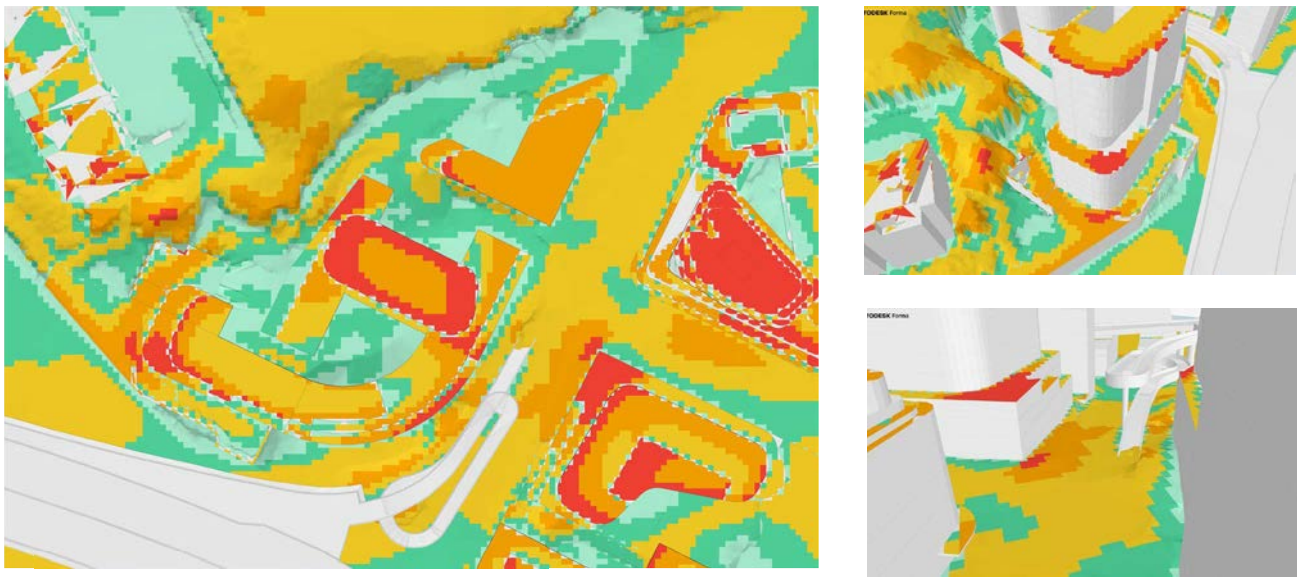
Below at Figure 23 and Figure 24 is a series of images illustrating the iterative design process used for these sites and how the challenge of wind can be resolved.



Predicted wind speed (using Lawson LDDC scale)

Sitting	2.5 – 4 m/s (< 5%)	Walking	8 m/s (< 5%)
Standing	6 m/s (< 5%)	Uncomfortable	8 m/s (> 5%

Design draft A

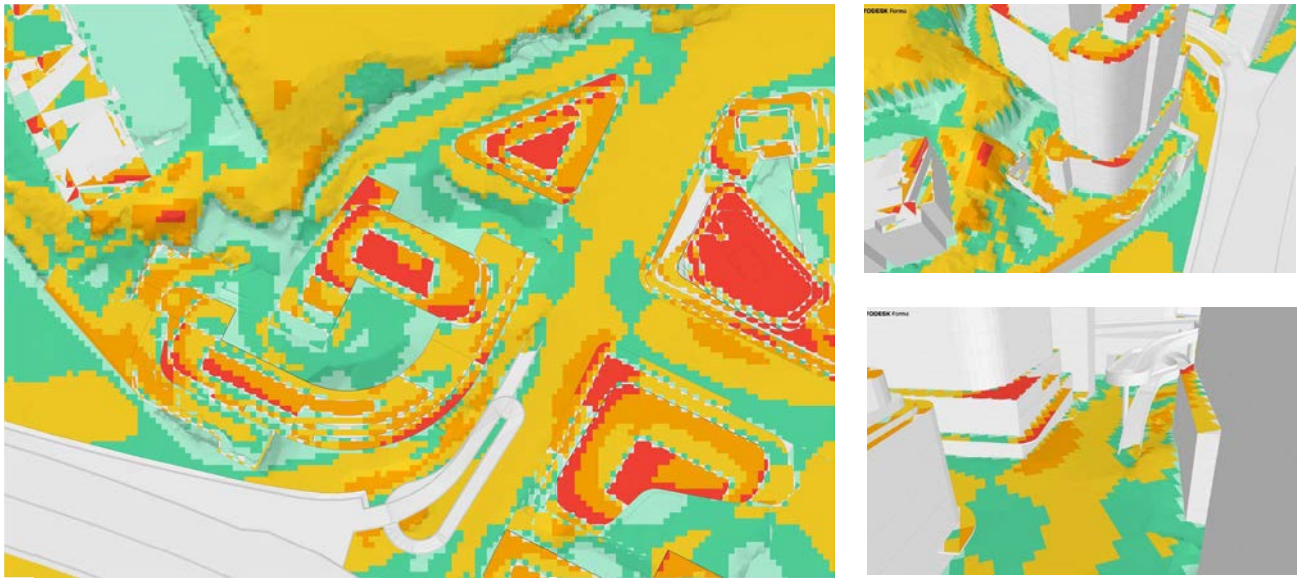


Predicted wind speed (using Lawson LDDC scale)

Sitting	2.5 – 4 m/s (< 5%)	Walking	8 m/s (< 5%)
Standing	6 m/s (< 5%)	Uncomfortable	8 m/s (> 5%

Design draft B

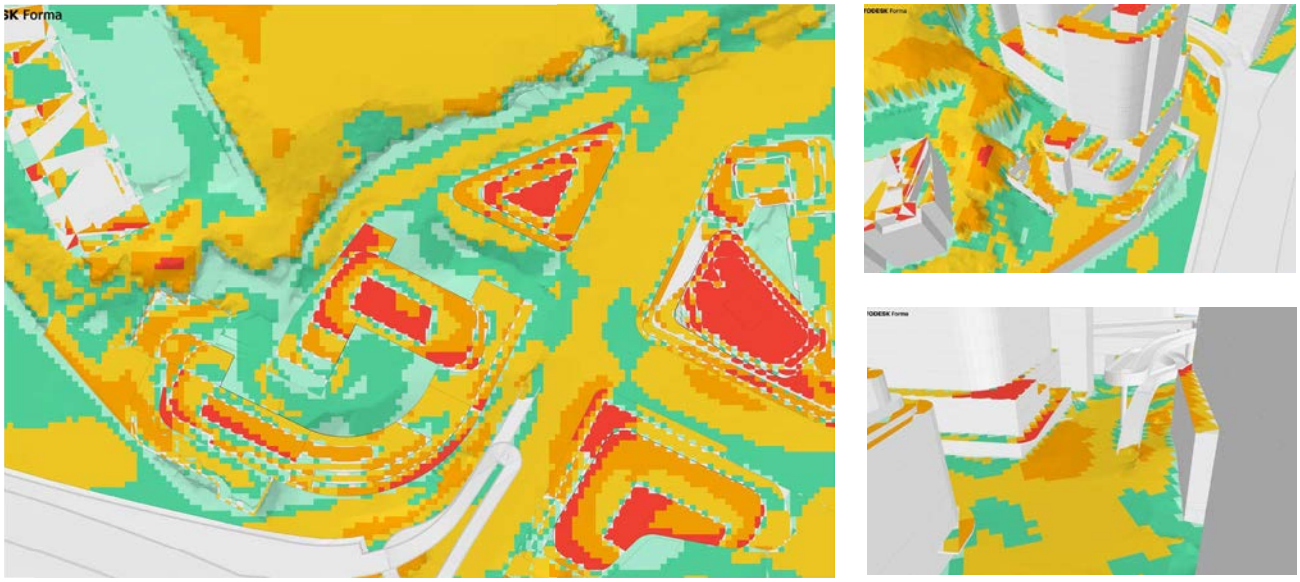
Figure 23. Plan and detail views of design iterations using desktop CFD wind testing – (A) and (B)



Predicted wind speed (using Lawson LDDC scale)

Sitting	2.5 – 4 m/s (< 5%)	Walking	8 m/s (< 5%)
Standing	6 m/s (< 5%)	Uncomfortable	8 m/s (> 5%

Design draft C



Predicted wind speed (using Lawson LDDC scale)

Sitting	2.5 – 4 m/s (< 5%)	Walking	8 m/s (< 5%)
Standing	6 m/s (< 5%)	Uncomfortable	8 m/s (> 5%

Final [A small area of uncomfortable wind remains on an inaccessible part of public space at the top of the cliff, away from the walkway to Knoll Park.]

Figure 24. Plan and detail views of design iterations using desktop CFD wind testing (C) and final design

Visualisation



Figure 25. Viewpoint locations for following view studies.

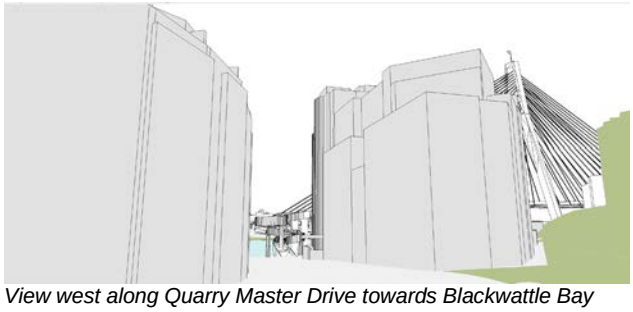
Existing (35mm lens)



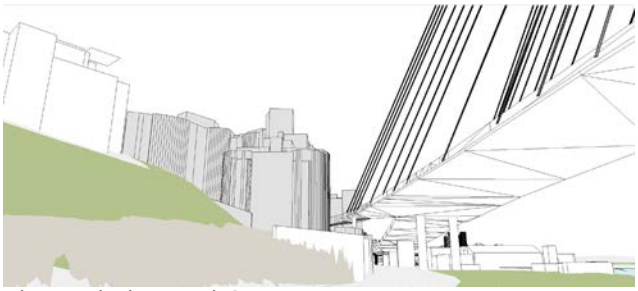
View east looking up Quarry Master Drive from Bank Street



View north along Saunders Street towards The Knoll park

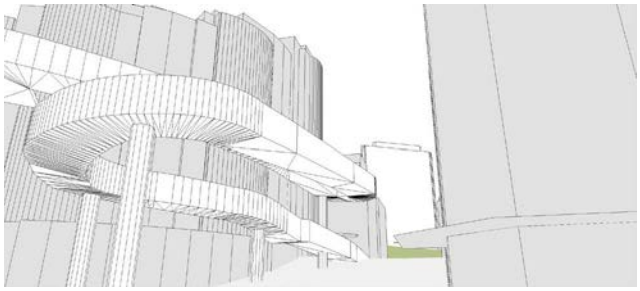


View west along Quarry Master Drive towards Blackwattle Bay

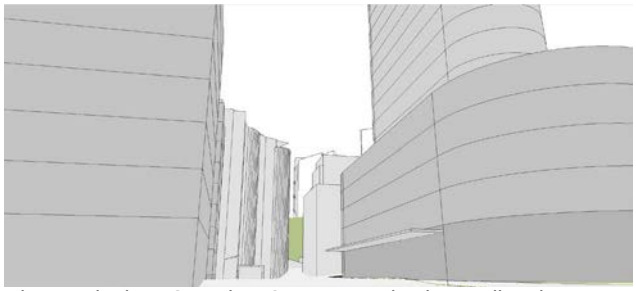


View south along Bank Street

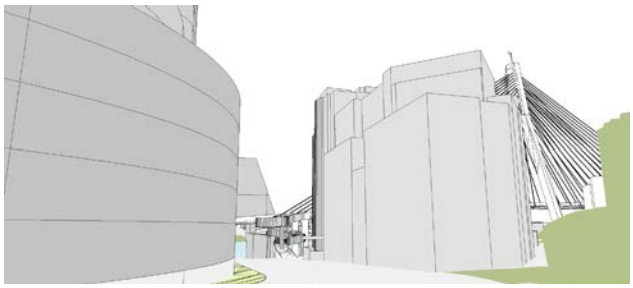
Existing and approved controls (28mm lens)



View east looking up Quarry Master Drive from Bank Street



View north along Saunders Street towards The Knoll park

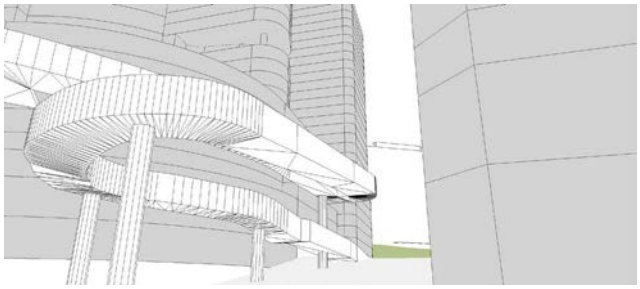


View west along Quarry Master Drive towards Blackwattle Bay

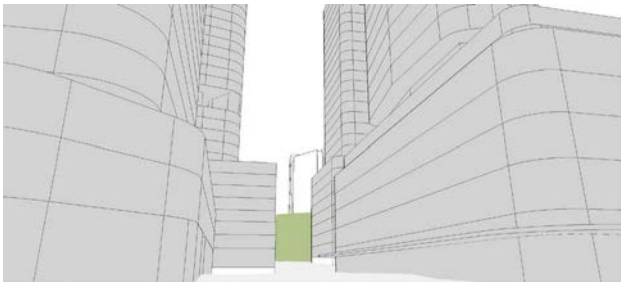


View south along Bank Street

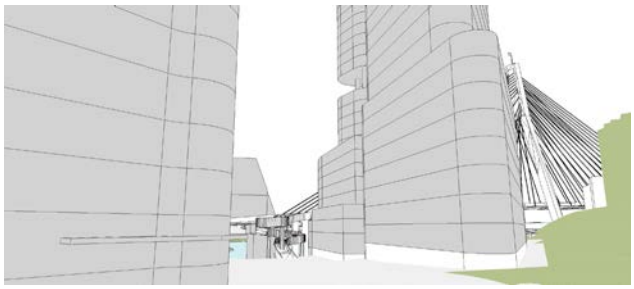
Proposed controls (35mm lens)



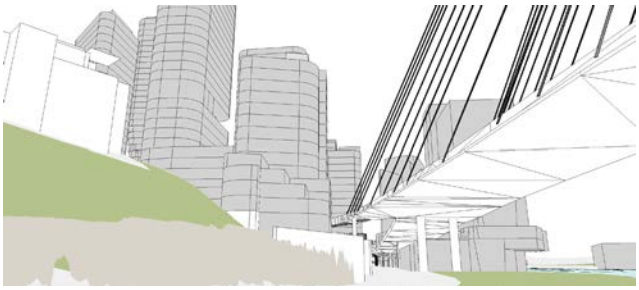
View east looking up Quarry Master Drive from Bank Street



View north along Saunders Street towards The Knoll park

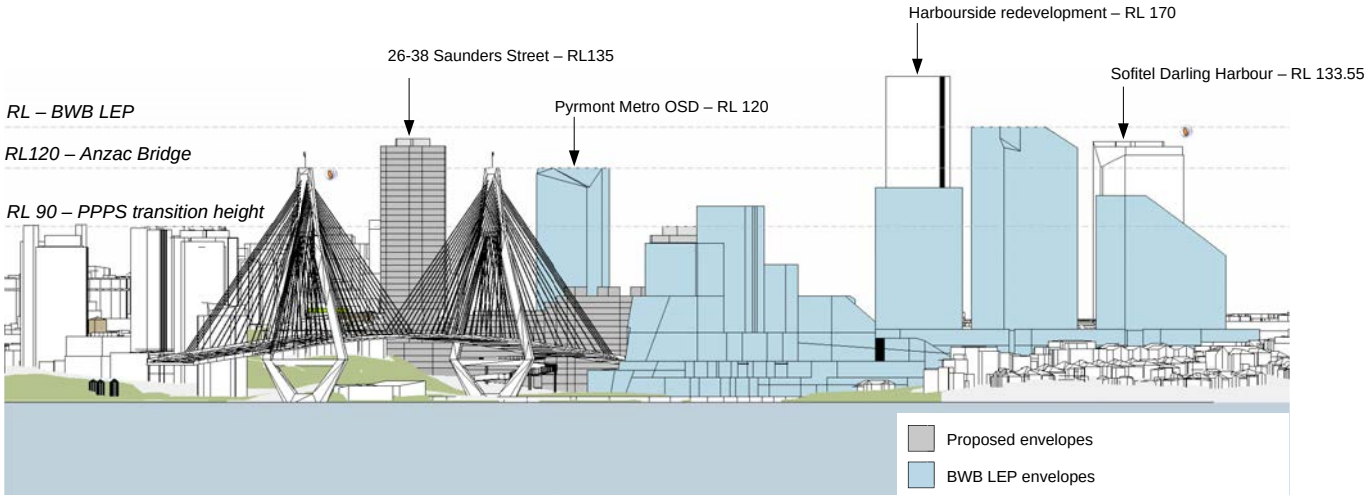


View west along Quarry Master Drive towards Blackwattle Bay

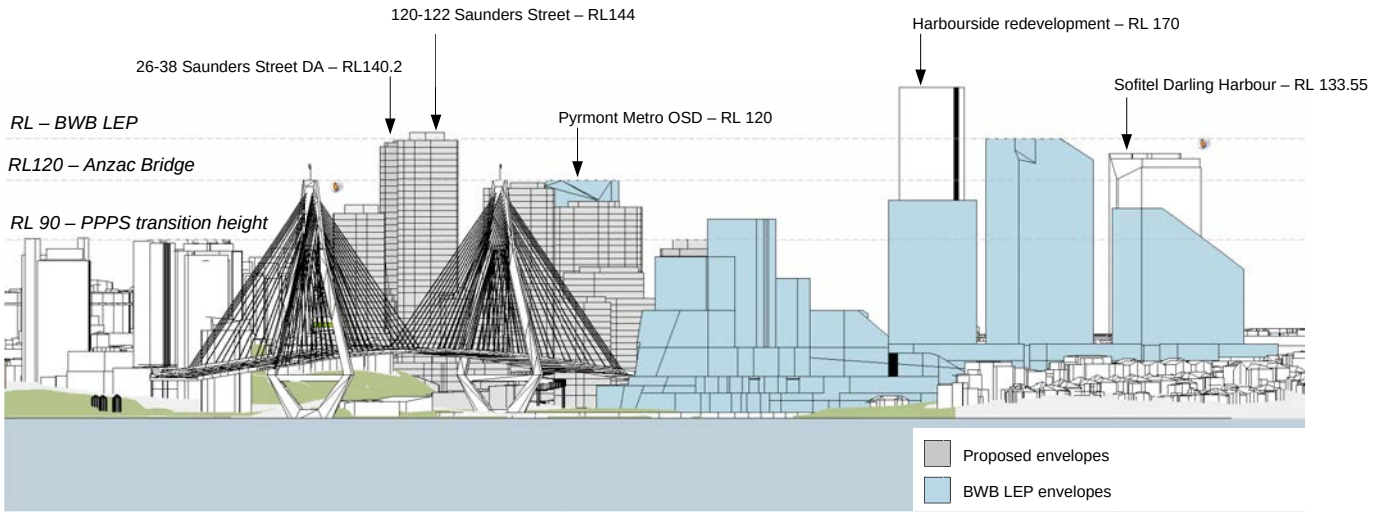


View south along Bank Street

View comparison looking east from Blackwattle Bay



View looking east showing approved planning controls for Blackwattle Bay LEP and Ultimo Pyrmont Stage 1 planning proposal



View looking east showing approved planning controls for Blackwattle Bay LEP and proposed planning controls for Ultimo Pyrmont Stage 2.

56 Harris Street Pyrmont

Overview

The site known as 56 Harris Street (88 John Street; Lot 22, DP 878273) runs the full length of a street block. It has 3 frontages – Harris Street, John Street and Point Street, and it sits adjacent the light rail cutting located directly to the north. John Street light rail stop is 1 minute walk away. Refer Figure 26 and Figure 27 below.



Figure 26. Location plan showing 56 Harris Street highlighted in red



Figure 27. aerial view of 56 Harris Street

Background

56 Harris Street was not identified as a site for investigation by the Department of Planning and was not considered by the City of Sydney in Stage 1. Subsequent to the Stage 1 exhibition period the City has considered possible changes to this site in response to submissions received. The proposed changes are focussed at the western end of the site, in response to optimising sunlight access to surrounding existing development. Aerial views of the site showing the existing development and proposed changes appear in Figure 28 below.

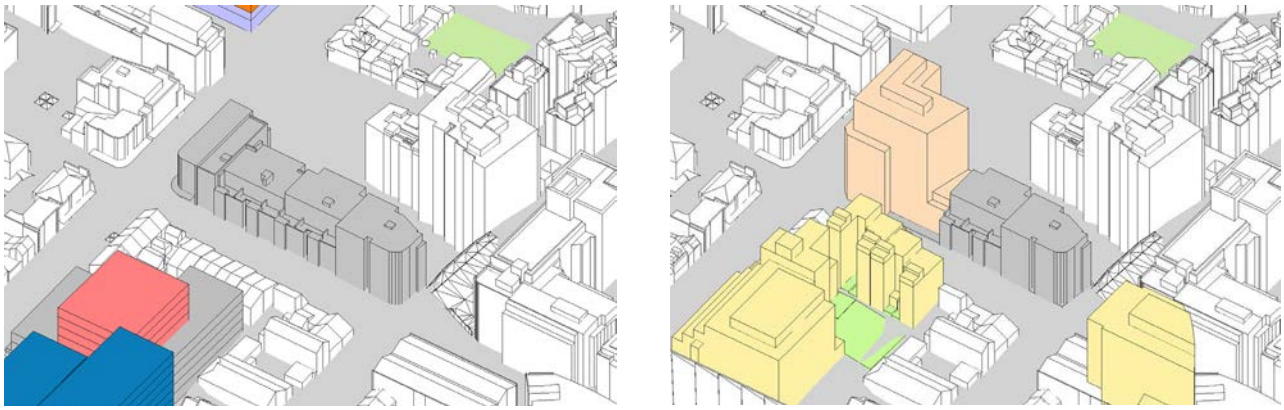


Figure 28. Aerial view of model showing the existing building at 56 Harris Street (at left, shown in grey), and the proposed scheme considered by the City of Sydney in Stage 2.

Existing site and controls

56 Harris Street currently accommodates 81 apartments held by a community housing provider. It comprises 4 buildings of various heights built on top of a common basement carpark. The arrangement of the existing development is shown in Figure 29, and the existing development and planning controls are summarised in Table 6 below.

Table 6. Existing development and planning controls at 56 Harris Street

	Existing building	Existing controls
Land use & zoning	Residential	MU1
Floor space ratio	2.84	4.0
Height of building	12m	24m
Height in storeys	5-7	7
Deep soil	0%	10%



Figure 29. Site plan showing the existing development at 56 Harris Street

Urban design principles

More deep soil for **more trees** and cool green spaces –

Open space proposed for the rear of the site along its northern boundary with deep soil areas can support the contribution to tree canopy within the site.

More public space for more people – streets and open spaces –

A 3-metre setback to the building from the northern boundary allows for outdoor uses that could be associated with the street level commercial floor space uses, and potentially able to be used by the public.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of apartments at 209 Harris Street has been minimised, following the design guidance of the Apartment Design Guide (refer Figure 30).

Reinforce **'street wall' form** of most buildings –

The building envelope presents an 8-storey street wall height to Harris Street and John Street. Additional height of up to 12 storeys is set back 3 metres from the street wall alignment.

Conserve **heritage** values –

The site is not located within a heritage conservation area. The nearest heritage item is located on Pyrmont Street and is separated from the proposed building changes by the existing 7-8 storey development that would remain on the site.

Good **design for wind and noise** –

The site is generally protected from winds by neighbouring development and setbacks to the upper levels will assist in minimising any impacts of down draft at street level.

Match **land use** to place –

The proposed mixed use for the site is in keeping with the current character of the street and is consistent with the existing land use pattern on the site.

Consider **views** to and from public places –

The site is not constrained by view corridors.

Other issues –

The proposed new building form and the existing sit on top of an existing underground carpark. It is assumed the carpark would be retained with some internal reconfiguration to accommodate the proposed changes above.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

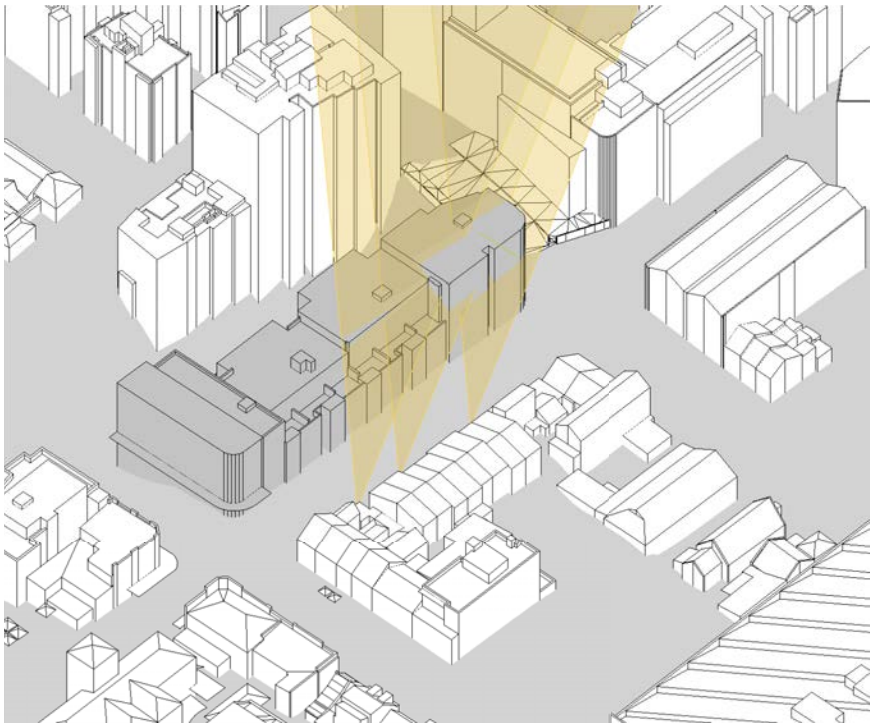


Figure 30. Aerial view of 56 Harris Street showing sunlight protection controls to John Street terraces opposite

Proposed controls

The controls proposed for 56 Harris Street provide for uplift in floor space and height to the western half of the site only. This is in order to optimise available sunlight to existing development on the southern side of John Street.

The scheme accommodates mixed use with a total FSR of 4:1 plus a Design Excellence bonus across the whole site, a maximum height limit of 45 metres and 12 storeys, and a deep soil area equal to 15% of the area of the site that accommodates the proposed changes. Additional controls such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described below. The planning controls are summarised in Table 7 below and a plan describing the site arrangement and building form appears at Figure 31.

Table 7. Planning provisions for 56 Harris Street – existing and proposed controls.

	Existing	Existing controls	Proposed
Land use and zoning	Residential	MU1	Mixed use
Floor space ratio	2.84	4.0	4.0 + Des. Ex.
Height of building	12m	24m	45m
Height in storeys	5-7	7	12
Deep soil	Residential	-	15%



Figure 31. Plan view of proposed changes to planning controls for 56 Harris Street.

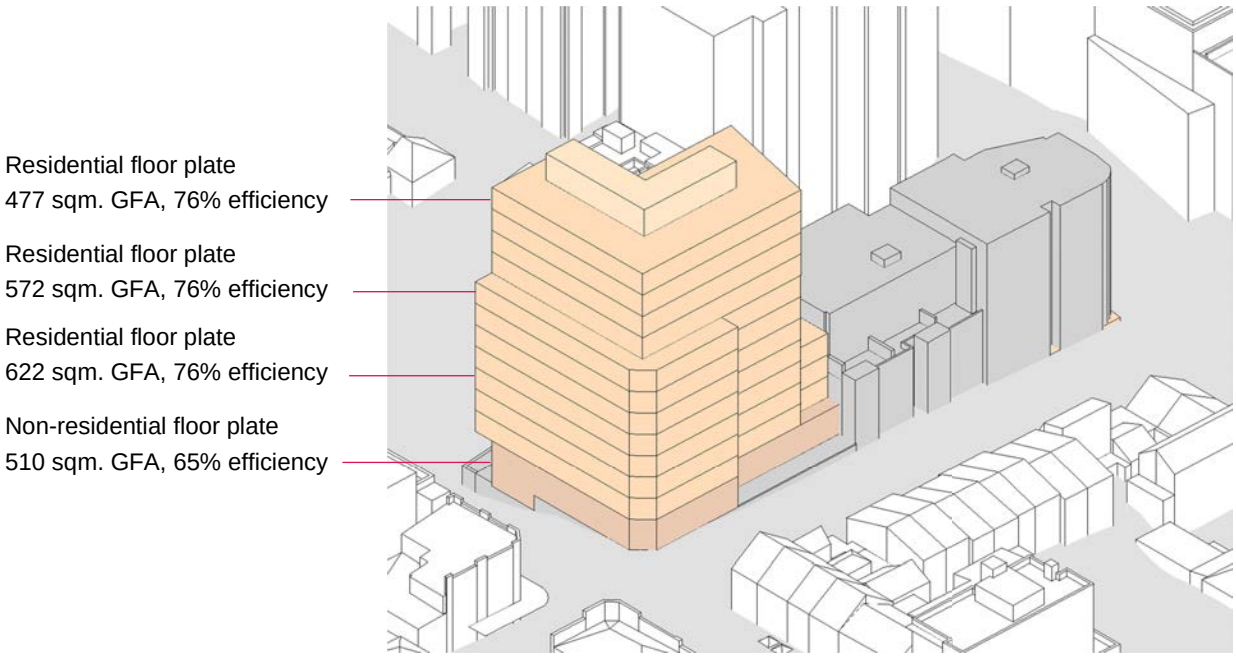


Figure 32. Aerial view showing floor plate arrangement of new addition to 56 Harris Street.

Visualisation



Figure 33. Aerial view of 56 Harris Street with view locations indicated by blue arrows.

Existing environment

View north along Harris Street



View south along Harris Street



View west along John Street



View east along John Street



Existing environment and approved controls

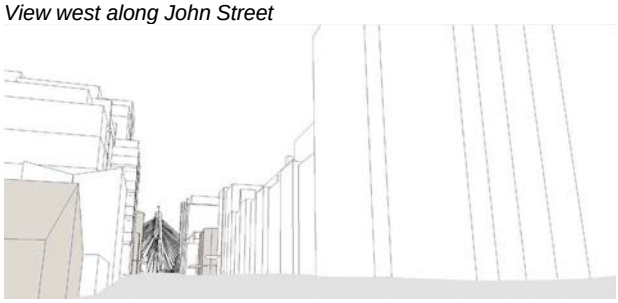
View north along Harris Street



View south along Harris Street



View west along John Street

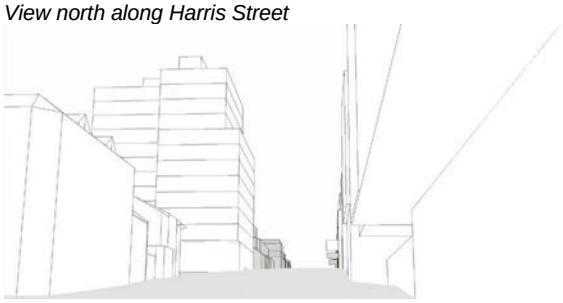


View east along John Street



Existing environment and proposed controls

View north along Harris Street



View south along Harris Street



View west along John Street



View east along John Street



26-52 Mount Street Pyrmont

Overview

26-52 Mount Street (Lot 1 DP 633390) is located on the rock outcrop that extends east from McCaffrey's Cliff Walk, above the Maybanke Community Centre. The site is split over two levels between Harris Street and Mount Street. A rock face runs roughly north-south through the site, creating a height difference of approximately 5 metres from Harris Street to Mount Street. It features a 3-storey row of flats fronting onto Harris Street, a heritage listed manor house behind (the former CSR Manager's House), and a group of 2 storey 1980s town houses fronting onto Mount Street. There are currently 39 dwellings across a mix of family and pensioner units, town houses and the youth accommodation located in the Manager's House. Total GFA is approximately 3,700 sqm. Refer to aerial views at Figure 34 and Figure 35 below.

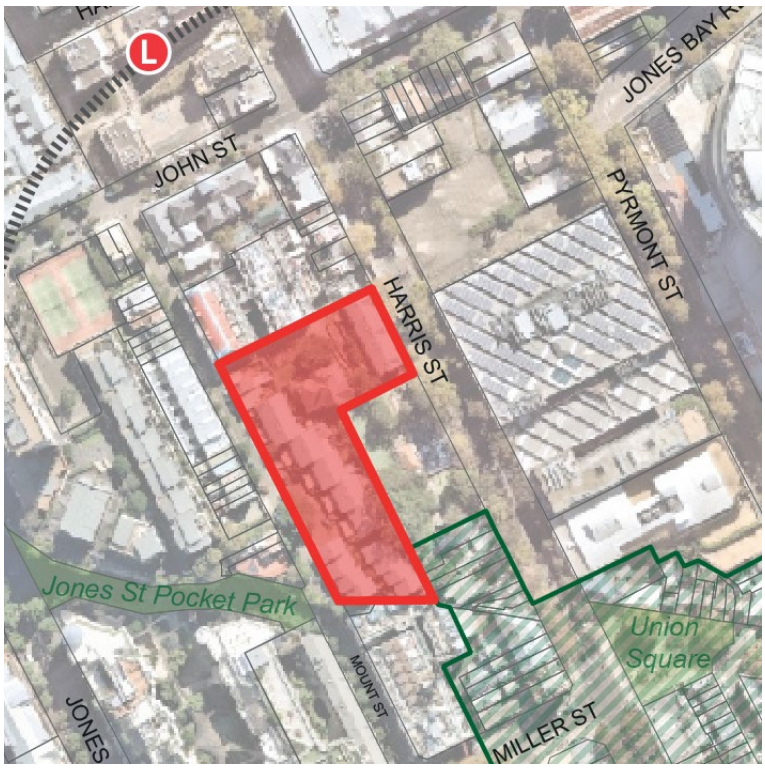


Figure 34 – location plan showing 26-52 Mount Street Pyrmont



Figure 35 – aerial view showing 26-52 Mount Street Pyrmont

Background

26-52 Mount Street was included in the Department of Planning's initial study. In this review the Manager House and Harris Street row were retained and the 2-storey townhouses replaced with new built forms. The resulting FSR was 1.4:1 including a Design Excellence bonus and buildings of 4 to 8 storeys in height were considered. This study is shown at left in Figure 52 below. Aside from the topography and heritage items on the site, other constraints include sun access to neighbouring development to the south, and servicing access to the site from Mount Street. The proposal shown at right in Figure 36 below accounts for these constraints. Table 8 shows the corresponding controls for this scheme.

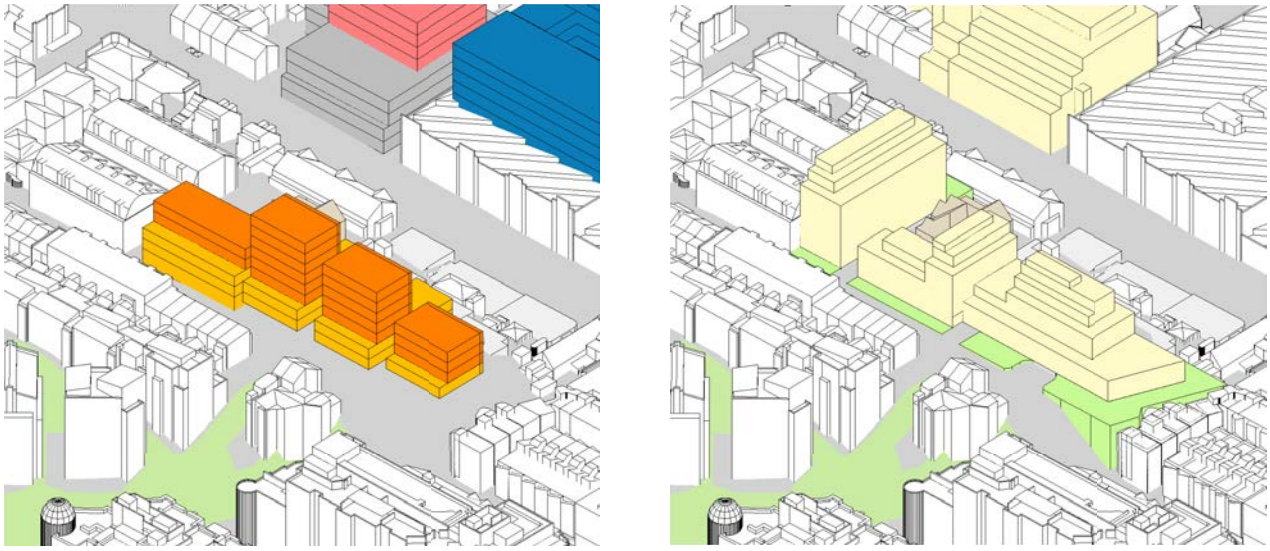


Figure 36 – studies for 26-52 Mount Street, the Department of Planning's initial study (at left), and the scheme proposed in Stage 2 (at right)

Table 8 – Comparison of proposed planning controls for 25-52 Mount Street – Dept. of Planning initial study and controls proposed by the City of Sydney.

	Dept. of Planning – initial study	City of Sydney - proposed controls
Gross floor area	8,745 sqm	8,810 sqm
Floor space ratio	1.7	1.7
Height of building	30 m	26 m
Height in storeys	9^	7^
Deep soil	-	25% of site area

^ Storey count is taken from Mount Street. Allowance for plant room is additional.

Existing development and controls

Of the 3,700 sqm. of floor space on the site, approximately 1,500 sqm. is accommodated in the Harris Street flat building and the former CSR manager's house. These two buildings would remain in any proposal to renew the site. There is a stepped pathway through the site providing access from Harris Street to Mount Street, however this does not provide universal access through the site. Details of the existing development and planning controls are appear in Table 9 below. The site layout and positioning of buildings is shown in Figure 37.

Table 9 – existing development and existing planning controls for 26-25 Mount Street

	Existing building	Existing controls
Land use & zoning	*Residential*	*R1 - Residential*
Floor space ratio	*0.7 approx.*	1.0
Height of building	*10m*	*12m*
Height in storeys	*3*	3
Deep soil	-	10%



Figure 37 – existing site plan for 26-25 Mount Street

Proposed controls

The proposed scheme for this site replaces the 2 storey townhouses along Mount Street with a series of buildings between 6 and 7 storeys. The buildings are set back from the Mount Street frontage to provide appropriate separation and retain existing tree canopy along the street. A turning bay is provided to allow service vehicles to enter and exit Mount Street. Accessible through site access is provided by ramps, a lift and a stairway. Site arrangement and positioning of buildings can be seen in Figure 38 below and proposed controls appear in Table 13

Table 10 – proposed planning controls for 26-52 Mount Street

	Existing building	Existing controls	Proposed controls
Land use & zoning	*Residential*	*R1 - Residential*	Residential
Floor space ratio	*0.7 approx.*	1.0	1.7
Height of building	*10m*	*12m*	26 m
Height in storeys	*3*	3	7^
Deep soil	-	10%	25% of site area

^ Storey count is taken from Mount Street. Allowance for plant room is additional.



Figure 38 – plan showing proposed changes for 26-52 Mount Street

Urban design principles
More deep soil for **more trees** and cool green spaces –

The proposed building forms are set back from Mount Street and side boundaries allowing for deep soil areas that could support tree canopy.

More public space for more people – streets and open spaces –

The proposed site layout provides for a series of walkways, stairways and a lift that would support an accessible through-site link from Mount Street down to Harris Street, exiting adjacent to the Maybanke Community Centre site.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan (refer Figure 45).

Reinforce **'street wall' form** of most buildings –

The 5-6 storey street wall form along Mount Street responds to the scale of the adjacent site to the north. The building height decreases toward to the south in response to sunlight access and is of similar height to residential development opposite.

Conserve **heritage** values –

The new building forms are set back from the existing heritage item of the CSR Manager residence. The alignment of the 6-7 storey building to the north responds to the eastern building line of the house.

Good **design for wind and noise** –

The site sits on top of the ridge and so would be exposed to some wind. However lower street wall heights upper level setbacks will be beneficial in minimising wind impacts.

Match **land use** to place –

The site maintains its current use for social housing and provides an opportunity to add to this housing type.

Consider **views** to and from public places

The site is not effected by view corridors.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

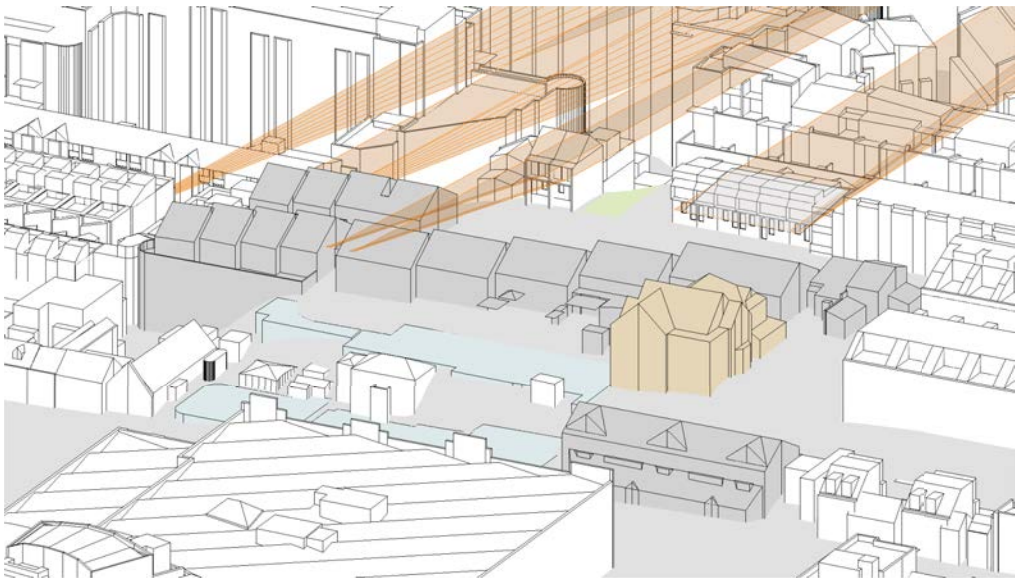


Figure 39 – solar access to neighbouring residential properties around 26-52 Mount Street

Visualisation



Figure 40 – view locations

Existing

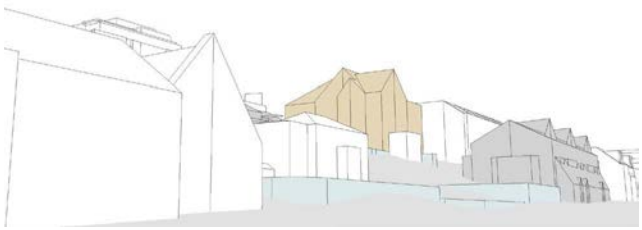
View north along Mount Street



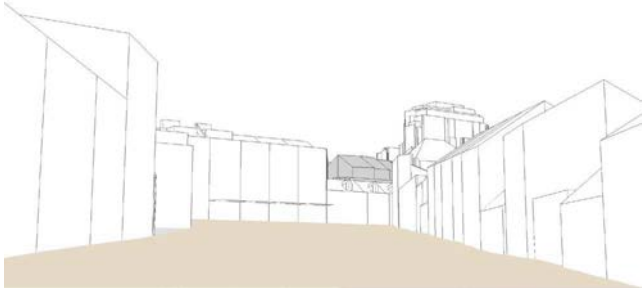
View south along Mount Street



View north along Harris Street



View east towards Union Square



Existing + approved

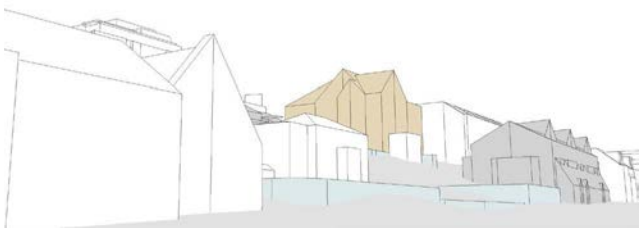
View north along Mount Street



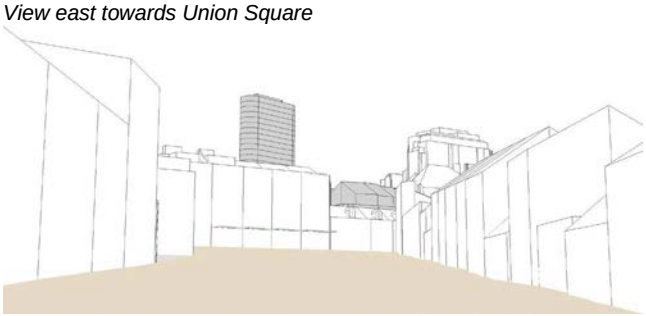
View south along Mount Street



View north along Harris Street

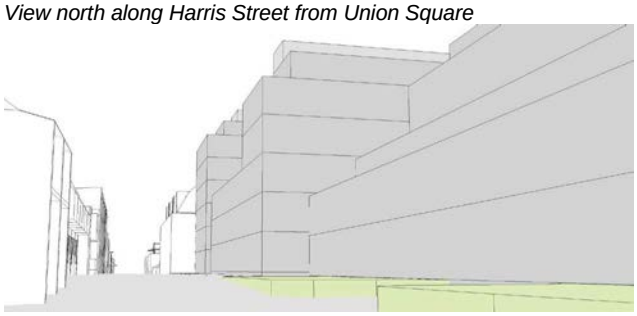


View east towards Union Square

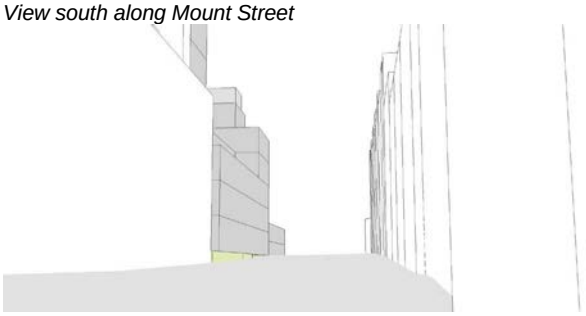


Proposed

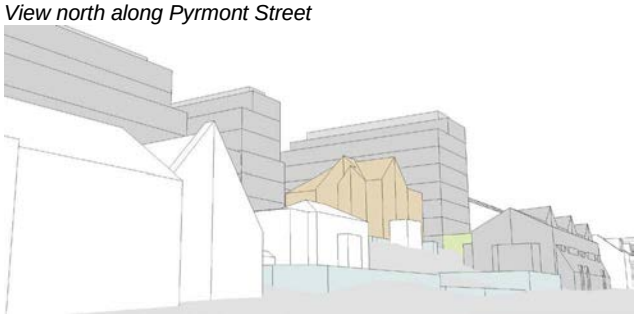
View north along Harris Street from Union Square



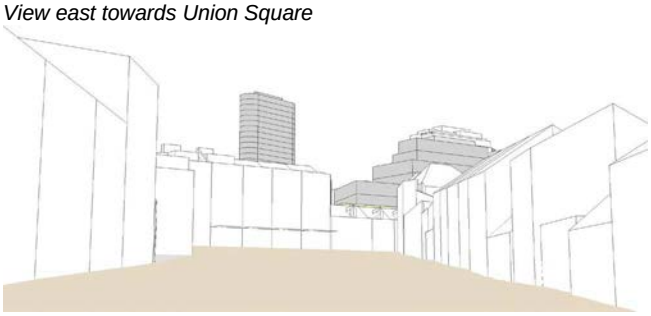
View south along Mount Street



View north along Pyrmont Street



View east towards Union Square



100 Harris Street

Overview

100 Harris Street (Lot 100 DP 1219280) is located between Harris Street and Pyrmont Street, north of Union Square. There are two buildings on the site. A refurbished Federation warehouse at the northern end comprises 24,677 sqm. of commercial floor space. The building at the southern end comprises 6 levels of carparking and 2,177 sqm. commercial floor space above. Refer to Figure 41 and Figure 42 below. The southern building (shaded in blue below) is the subject of the proposed planning changes.



Figure 41 – location plan of 100 Harris Street



Figure 42 – oblique aerial of 100 Harris Street

Background
In Stage 1 of the Ultimo-Pyrmont planning proposal, new controls were implemented for the site that maintain the existing warehouse as is and provide for a new building at the south end with 10 storeys of commercial floor space. New controls provide for an FSR of 3.32 plus Design Excellence and height controls of 39 metres. The approved Stage 1 building envelope is shown below in Figure 43 at left. In this Stage 2 of the planning proposal, new planning controls are proposed, shown at right in Figure 43.



Figure 43 – studies for 100 Harris Street, approved Stage 1 (at left), and proposed Stage 2 (at right)

Table 11 – Comparison of planning controls for 100 Harris Street – approved Stage 1, and proposed Stage 2

	Stage 1 (approved)	Stage 2 (proposed)
Gross floor area	28,470 sqm	35,670 sqm
Floor space ratio	3.32 + Des. Ex.	4.16 + Des. Ex.
Height of building	38 m	40 m
Height in storeys	10^	12^
Deep soil	600 sqm of green roof	450 sqm of green roof

^ Storey count is taken from Pyrmont Street and assumes the retention of the existing floor levels in the first 8 storeys. The plant room is additional.

Existing controls

The majority of 100 Harris Street is currently occupied by the heritage-listed Federation Warehouse style former woolstore of "Schute, Bell, Badgery and Lumby Woolstore". The former woolstore has been recently restored and refurbished as a commercial office space. To the south of the heritage building is a multi-storey carpark, with two levels of commercial above. This building occupies an area of approximately 1,551 sqm. The existing controls, along with the layout and position of the site can be seen in Table 12 and Figure 44, respectively.

Table 12 – existing building and existing planning controls for 100 Harris Street

	Existing building	Existing controls
Land use & zoning	*Commercial*	*E2 – CC*
Floor space ratio	*1.4 approx.*	*3.5*
Height of building	*26m*	*24m*
Height in storeys	*8*	*5*
Deep soil	*0%*	10%



Figure 44 – existing site plan for 100 Harris Street

Urban design principles

More deep soil for **more trees and cool green spaces** –

The setting among zero setback street wall heritage buildings and already excavated to rock site means that deep soil cannot be found on this site. Instead, green rooftops are proposed to add greenery and shade.

More public space for more people – streets and open spaces –

The setting among zero setback street wall heritage buildings means that new publicly accessible open space is not appropriate for this site.

Minimise overshadowing of existing residential properties –

The upper level setbacks are located to minimise overshadowing to the living rooms and private open space of adjoining residential

properties have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan (refer Figure 45).

Reinforce **'street wall' form** of most buildings –

The height of the building fits comfortably among the existing and proposed street wall height of buildings in the vicinity.

Conserve **heritage values –**

The southern wall and openings of the adjacent heritage items are conserved and remain open to the courtyard in the position of the existing courtyard on the site.

Good **design for wind and noise –**

The site is protected from winds surrounding development.

The site is exposed to noise from the adjacent late night entertainment uses, the commercial use ensures that the noisy environment will not cause nuisance.

Match **land use** to place **–**

The proposed tourist and visitor accommodation use is consistent with the zoning.

Consider **views** to and from public places

The site is not affected by view corridors.

Maximise development within constraints –

Within the limits set by other urban design principles described above the potential floor area is maximised.

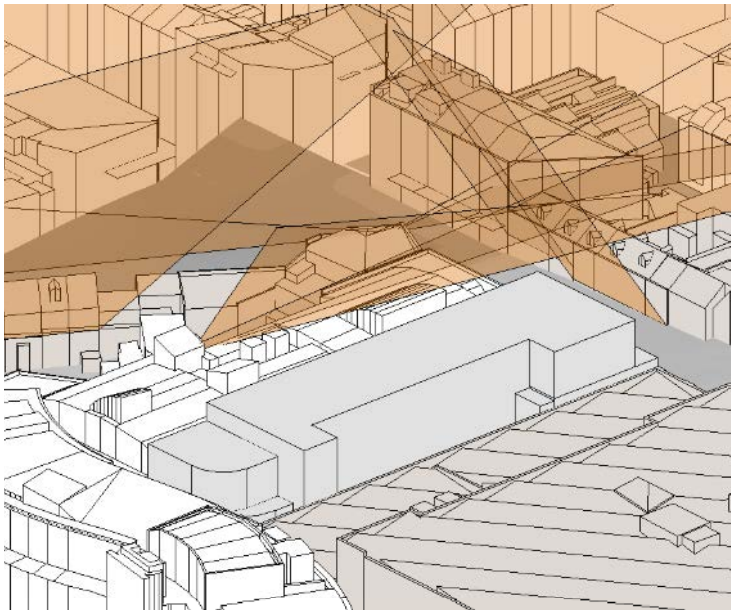


Figure 45 – solar access to neighbouring residential properties and Union Square

Proposed controls

For 100 Harris Street, the proposed controls are for a hotel use with an FSR of 4.16:1 with a Design Excellence clause; a height limit of 39 metres and 10 storeys; and 450 sqm of green roof, as shown in Table 13 below. In addition to these planning controls there are various street and upper-level setbacks, street wall height, site layout requirements, and streetscape improvements proposed, as can be seen in Figure 46.

Table 13 – proposed planning controls for 100 Harris Street

	Existing building	Existing controls	Proposed controls
Land use & zoning	*Commercial*	E2 – CC	Hotel
Floor space ratio	*1.4 approx.*	3.5	4.16 + Des. Ex.
Height of building	*26m*	24m	38 m
Height in storeys	*8*	5	12
Deep soil	*0%*	10%	450 sqm of green roof
NOTE: height standards and controls apply only to the southern component of 100 Harris Street (all land south of the heritage listed 'Former Woolstore). The floor space ratio applies to the whole site, including the existing floor space in the former woolstore and the proposed floor space in the new built form to the south			



Figure 46 – proposed controls for 100 Harris Street

Visualisation

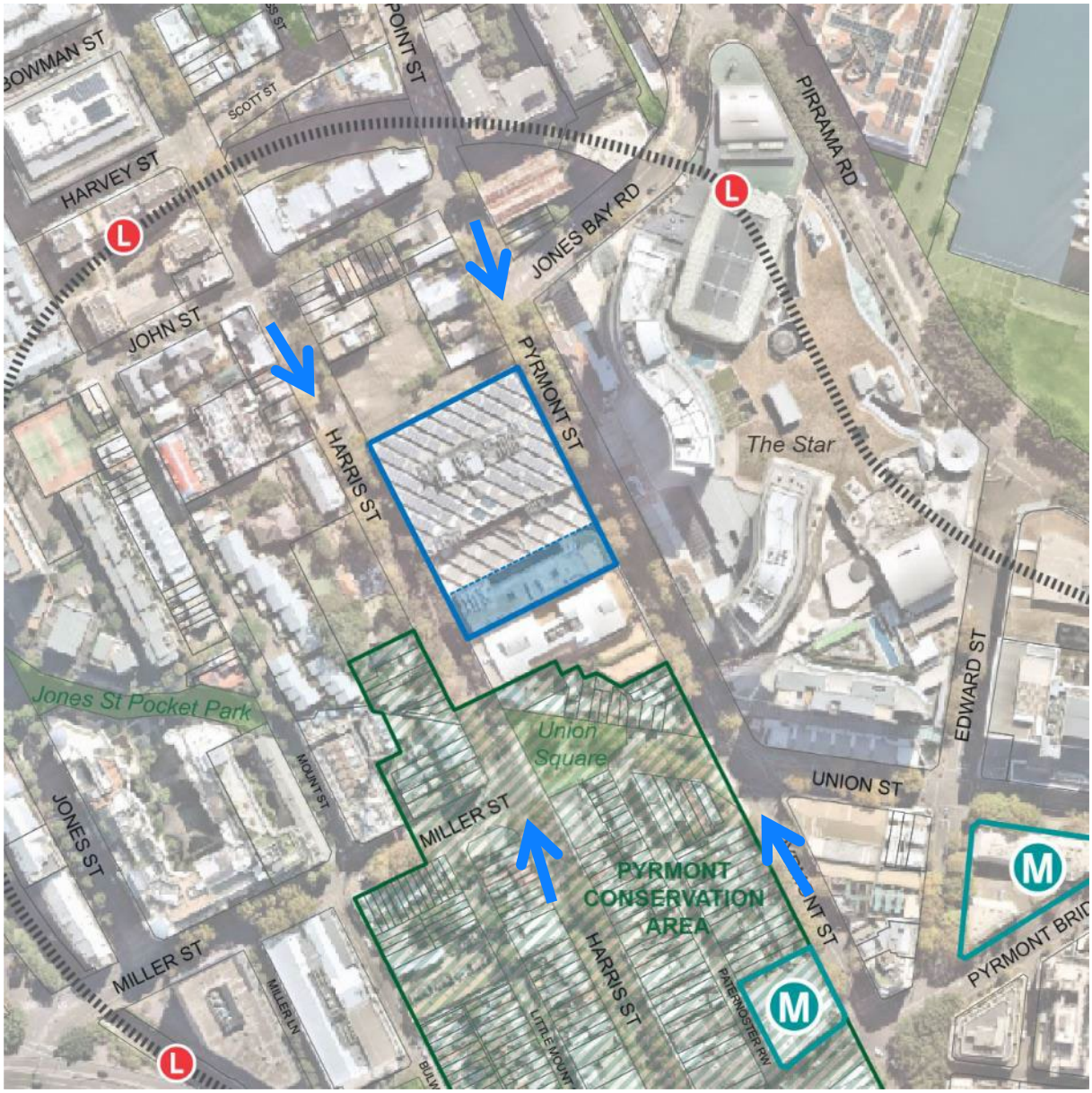
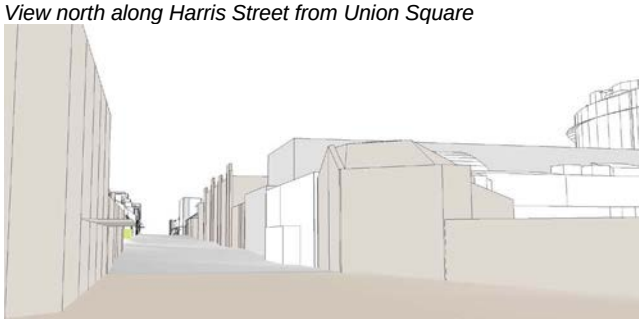


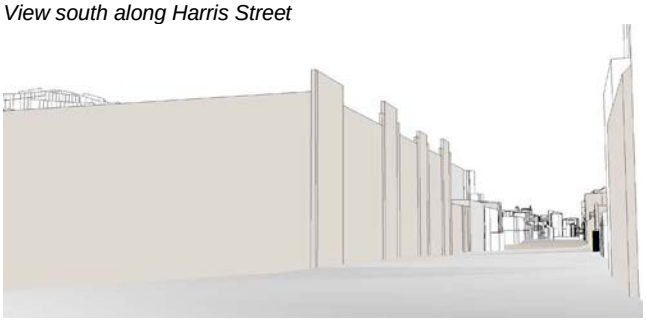
Figure 48 – location plan

Existing

View north along Harris Street from Union Square



View south along Harris Street



View north along Pyrmont Street

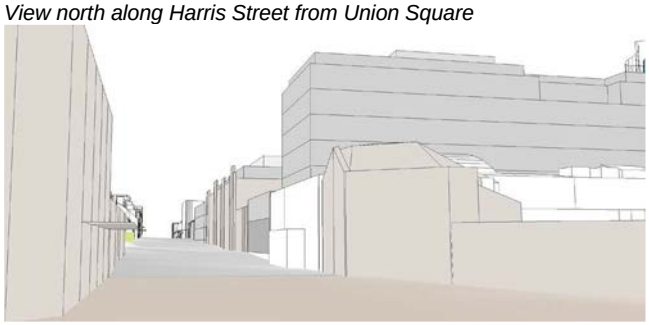


View south along Pyrmont Street

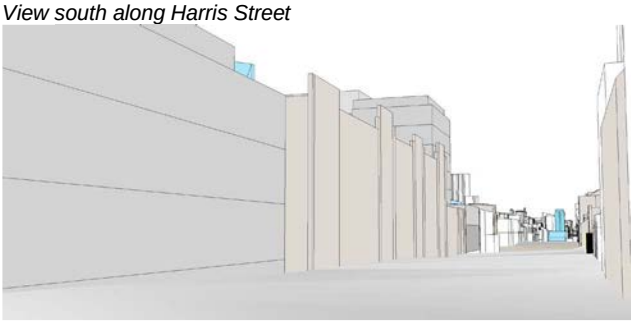


Existing + approved

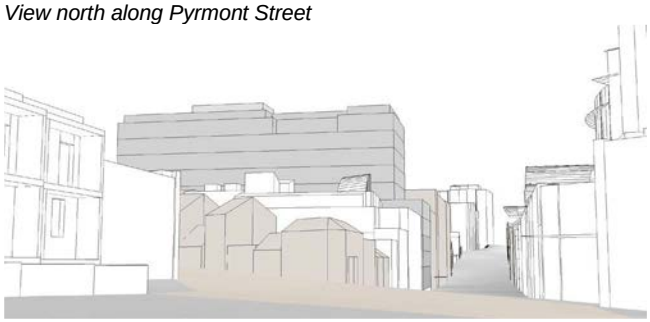
View north along Harris Street from Union Square



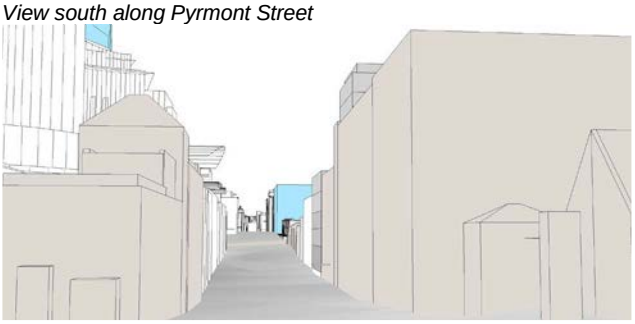
View south along Harris Street



View north along Pyrmont Street

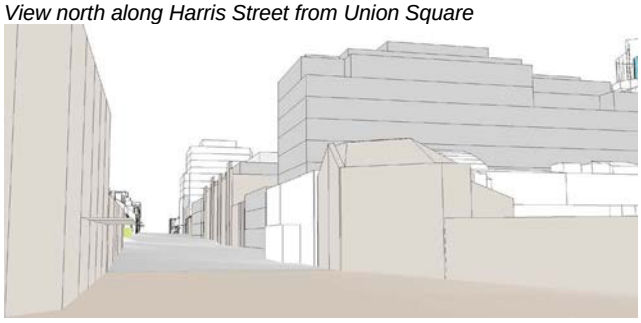


View south along Pyrmont Street



Proposed

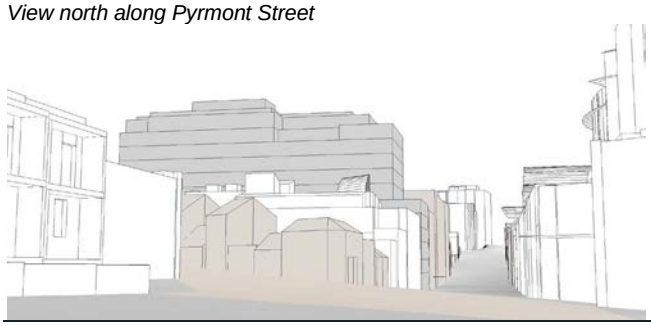
View north along Harris Street from Union Square



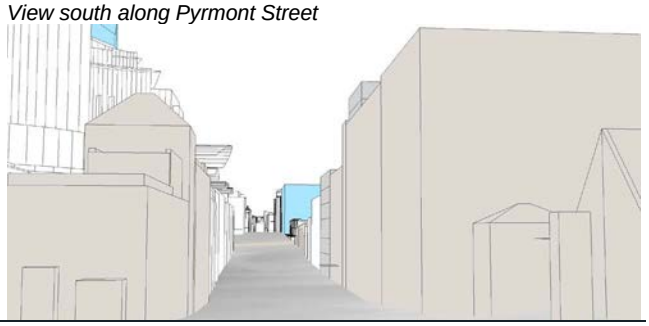
View south along Harris Street



View north along Pyrmont Street



View south along Pyrmont Street



1-19 Allen Street and 313-319 Harris Street Pyrmont

Overview

1-19 Allen Street (Lot 100 DP 711434, Lots 1-78 SP 301560) and 313-319 Harris Street (Lot 100 DP 613788, Lots 1-156 SP 18021) are adjacent sites located either side of Ada Place, running the full length of the block between Allen Street and Fig Street in Pyrmont. They lie along the ridge line of Pyrmont peninsula. The elevated expressway of the Western Distributor runs past their south and western boundaries. The sites are a 5 minute walk to either Wentworth Park or Convention light rail stations. Refer Figure 49 and Figure 50 below.

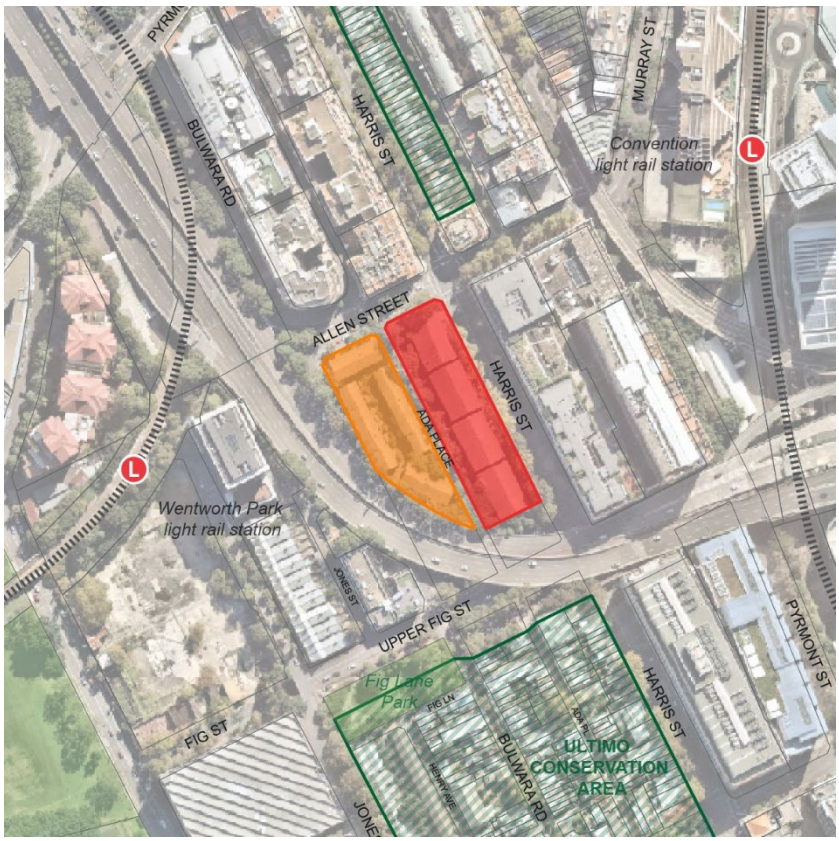


Figure 49. Plan view showing 1-19 Allen Street (orange) and 313-319 Harris Street (red)



Figure 50. Aerial view of 1-19 Allen Street (orange outline) and 313-319 Harris Street (red outline)

Background

These two sites were not identified for investigation by the Department of Planning and were not considered by the City of Sydney in Stage 1. The City considered possible changes to these sites in response to submissions received during Stage 1 exhibition. The proposed changes account for existing tree cover, noise impacts of the nearby Western Distributor, and optimising sunlight access to surrounding development. The existing and proposed development controls for the site appear at Figure 51.

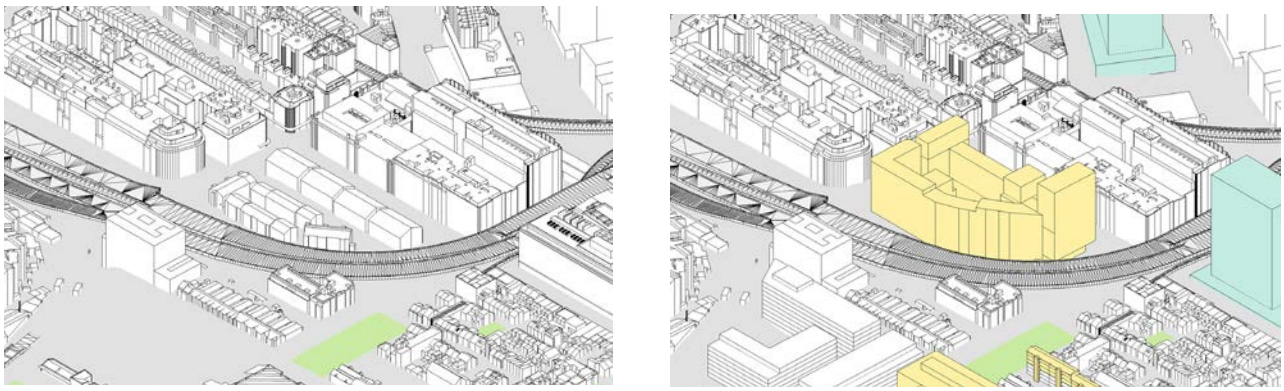


Figure 51. Existing development at 1-19 Allen Street and 313-319 Harris Street (shown at left) and proposed planning controls (shown at right).

Existing site and controls

1-19 Allen Street comprises a single storey enclosed carpark at ground level with four 3-storey apartment buildings above arranged around the perimeter of the lot. It is solely a residential strata scheme comprising 78 lots. 313-319 Harris Street comprises a partially underground carpark, commercial tenancies at street level fronting onto Harris Street, and 4 residential levels above. There are 26 business lots and 136 residential lots in the strata scheme.

Table 14 below summarises the existing building, planning controls, and proposed controls for each site. A plan view of the existing development follows at Figure 52.

Table 14. Existing development and planning provisions for 1-19 Allen Street and 313-319 Harris Street

	Existing development	Existing controls
1-19 Allen Street		
Land use and zoning	Residential	R1
Floor space ratio	1.2	2.0
Height of building	18m	15m
Height in storeys	4	-
Deep soil	-	-
313-319 Harris Street		
Land use and zoning	Residential	R1
Floor space ratio	1.2	2.0
Height of building	18m	15m
Height in storeys	4	-
Deep soil	-	-

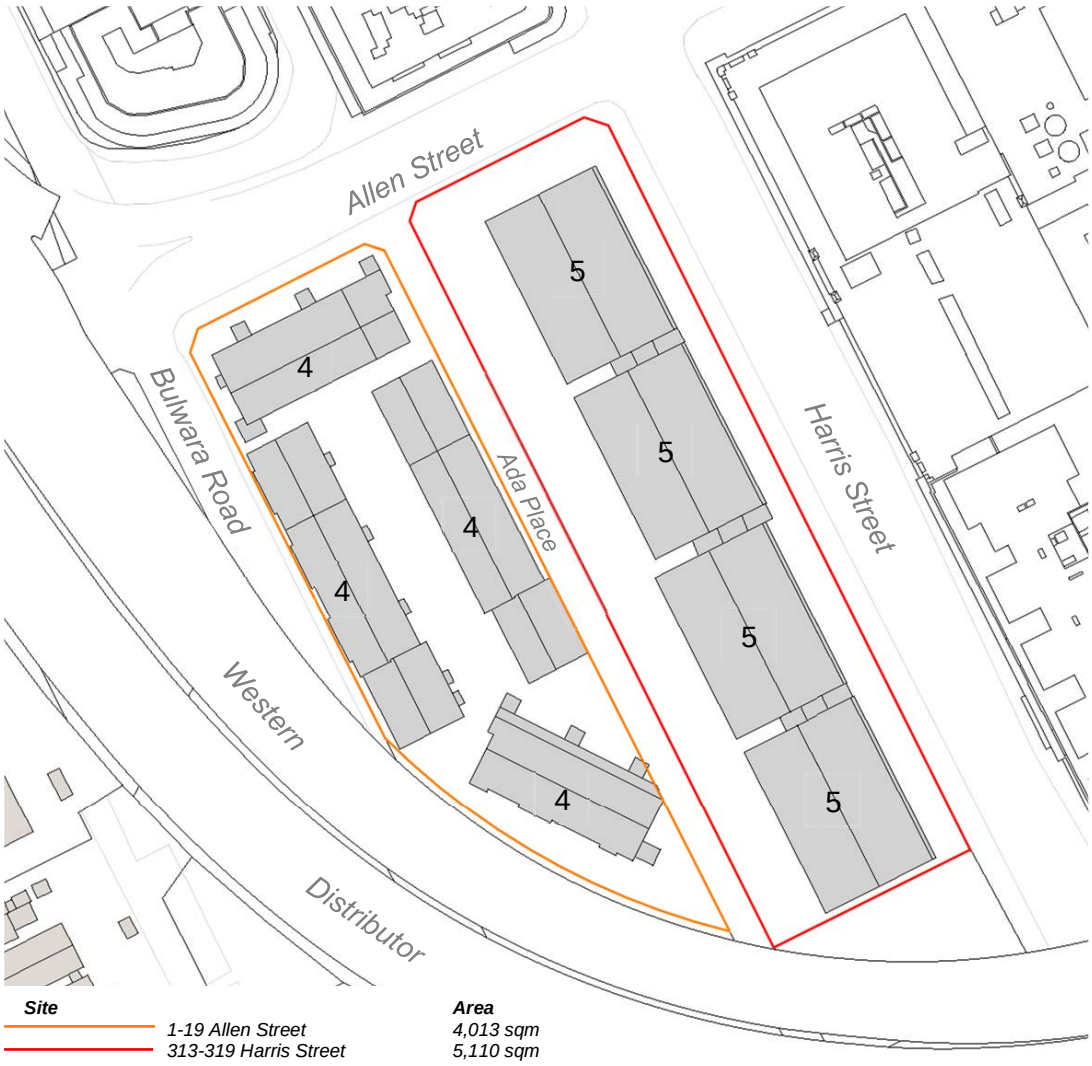


Figure 52. Site plan showing the existing development at 1-19 Allen Street (site boundary in orange) and 313-319 Harris Street (site boundary in red).

Urban design principles

More deep soil for **more trees** and cool green spaces –

Setbacks along Ada Place are designed to support the existing tree canopy and further opportunities for street tree canopy are provided in the setbacks along Allen Street and Harris Street. Both sites able to accommodate up to 20% of their site area as deep soil areas that could be publicly accessible. Refer Figure 57.

More public space for more people – streets and open spaces –

A 6-metre setback along Harris Street frontage allows for more space for people along this high street. Ground floor retail and small commercial uses are located along the frontage and are sheltered by awnings and colonnades provisions.

Minimise overshadowing of existing residential properties –

The buildings height and modelling has been designed to minimised overshadowing to the living rooms and private open space of apartments at 209 Harris Street, following the design guidance of the Apartment Design Guide (refer Figure 53).

Reinforce **'street wall' form** of most buildings –

The street wall height along the length of Harris Street is 8 storeys, with tower forms at either end located at the street intersections. Higher street wall forms are located along the Bulwara Road frontage and are constrained by sun access controls that minimise overshadowing to neighbouring properties

Conserve **heritage** values –

The site is separated from the nearby Ultimo heritage conservation area by the elevated roadway of the Western Distributor. Heritage items on Jones Street to the west also lie on the other side of the motorway.

Good **design for wind and noise** –

The site would experience some exposure to wind from the west and south. However, the elevated roadway and its height above street level in this vicinity contribute to the protection of the areas surrounding the site.

The elevated roadway of the Western Distributor is a significant source of noise. On the Allen Street site, the building form is designed to respond to these conditions. A slim floor plate allows for a single loaded corridor configuration with circulation and utility uses adjacent to the motorway, and the windows for ventilation to living spaces and bedrooms located on the opposite side, oriented away from the noise and towards the north east.

Match **land use** to place –

The existing land use pattern of mixed use with street level residential/commercial and residential above is maintained. Retail uses at street level along Harris Street will support the preferred place outcomes of the Pyrmont Peninsula Place Strategy for Harris Street..

Consider **views** to and from public places –

The site is not constrained by view corridors.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

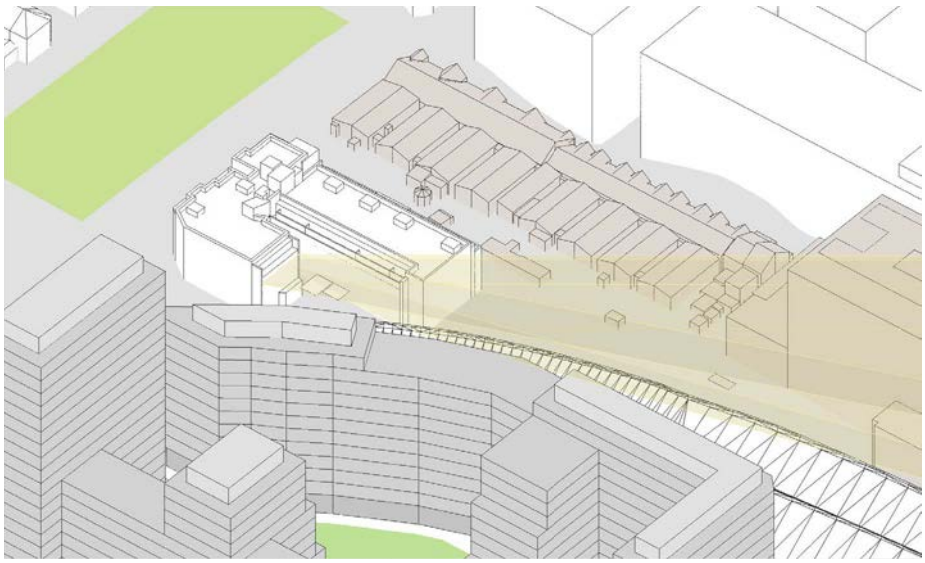


Figure 53. Aerial view of 1-19 Allen Street showing sunlight protection controls to existing development at 80-89 Fig Street.

Proposed controls

The controls proposed for 1-19 Allen Street provide for a mixed use outcome with non-residential uses at street level and residential above. The scheme accommodates an FSR of 4.13:1 plus a Design Excellence bonus, a maximum height limit of 45 metres and 12 storeys, and a deep soil area equal to 15% of the site area.

For 313-319 Harris Street, proposed controls provide for a mixed use outcome, with non-residential uses at street level fronting onto Harris Street and residential above. The scheme accommodates an FSR of 4.16 plus a Design Excellence bonus, a maximum height limit of 65 metres and 18 storeys, and a deep soil area equal to 15% of the site area.

The controls are summarised in Table 15 below and additional detail such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described in Figure 54.

Table 15 . Planning provisions for 1-19 Allen Street and 313-319 Harris Street– existing and proposed controls

	Existing development	Existing controls	Proposed
1-19 Allen Street			
Land use and zoning	Residential	R1	R1 with additional permitted uses
Floor space ratio	1.2	2.0	4.13 + Des. Ex.
Height of building	18m	15m	45m
Height in storeys	4	-	12
Deep soil	-	-	15%
313-319 Harris Street			
Land use and zoning	Residential	R1	R1 with additional permitted uses

	Existing development	Existing controls	Proposed
Floor space ratio	1.2	2.0	4.16 + Des. Ex.
Height of building	18m	15m	65m
Height in storeys	4	-	18
Deep soil	-	-	15%

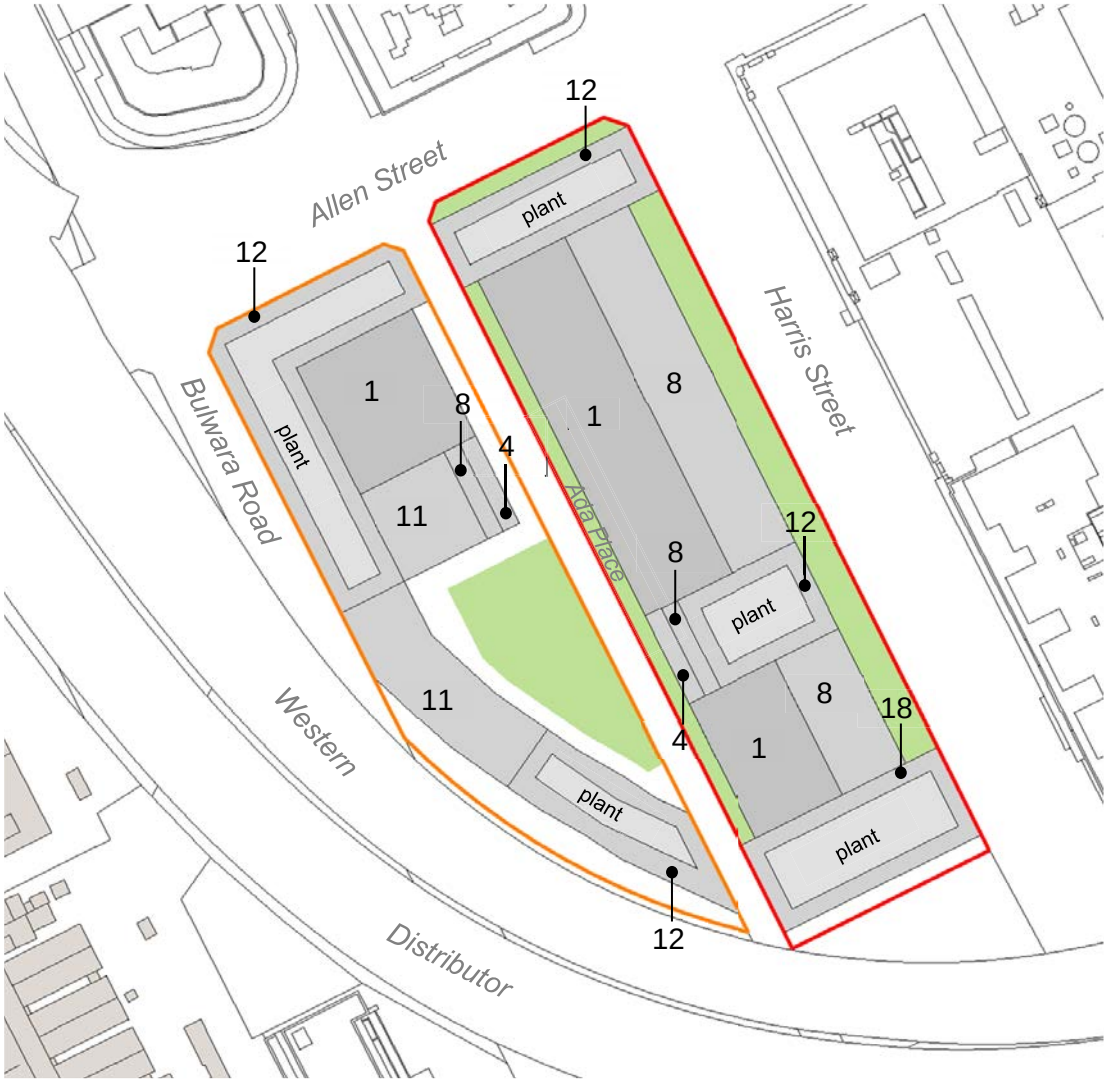


Figure 54. Site plan showing proposed planning controls at 1-19 Allen Street (site boundary in orange) and 313-319 Harris Street (site boundary in red).

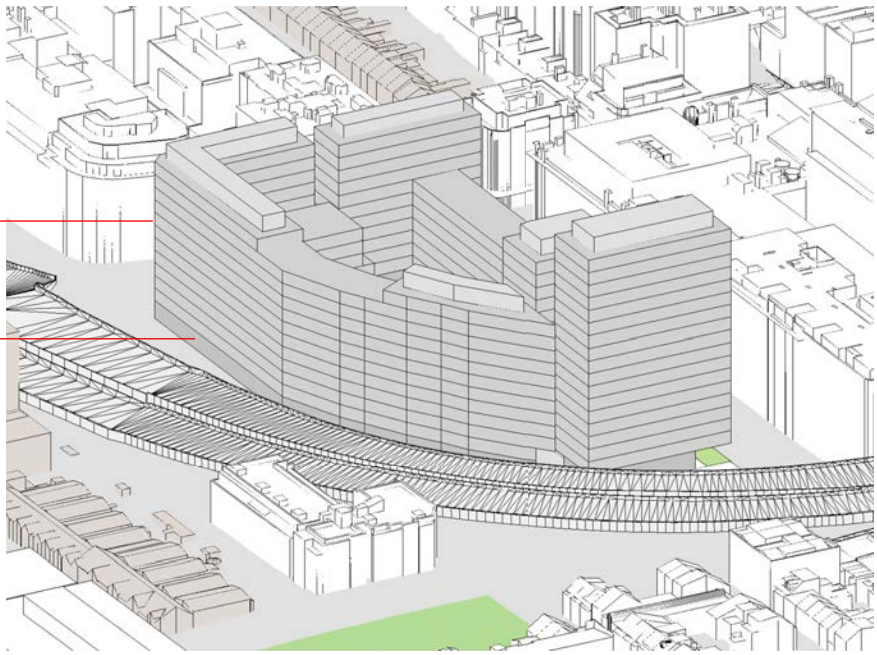


Figure 55. Aerial view looking from south west: 1-19 Allen Street in the foreground.

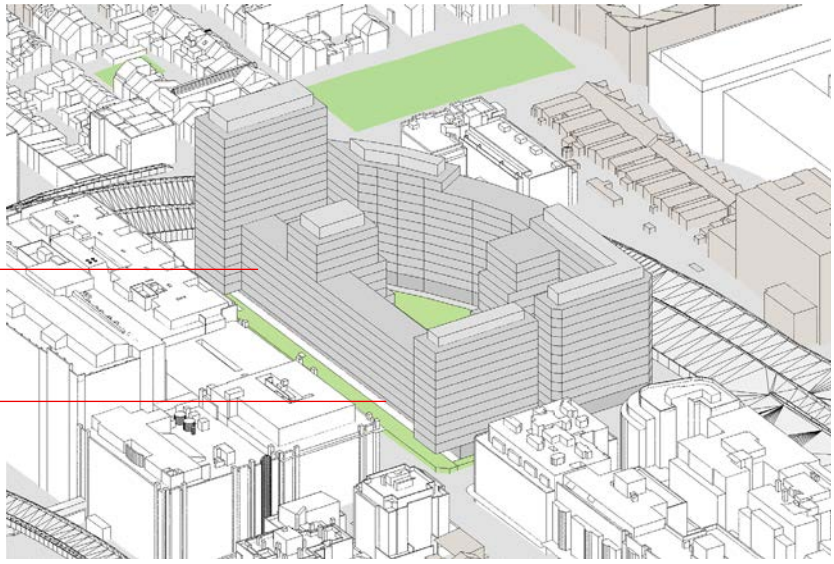


Figure 56. Aerial view from north east. 313-319 Harris Street in foreground.

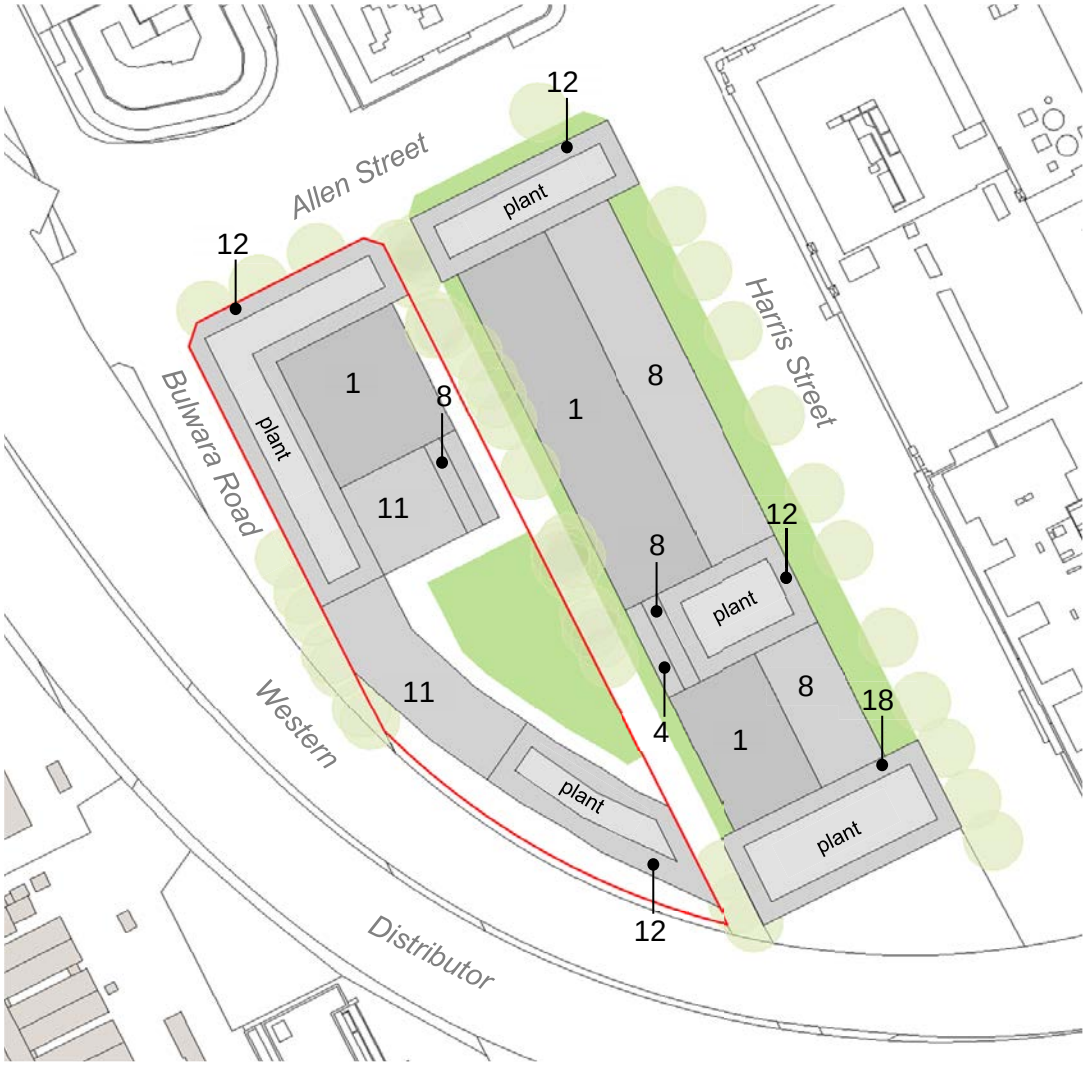


Figure 57 Plan view showing how the site layout responds to the location of existing tree canopy around the site.

Visualisation

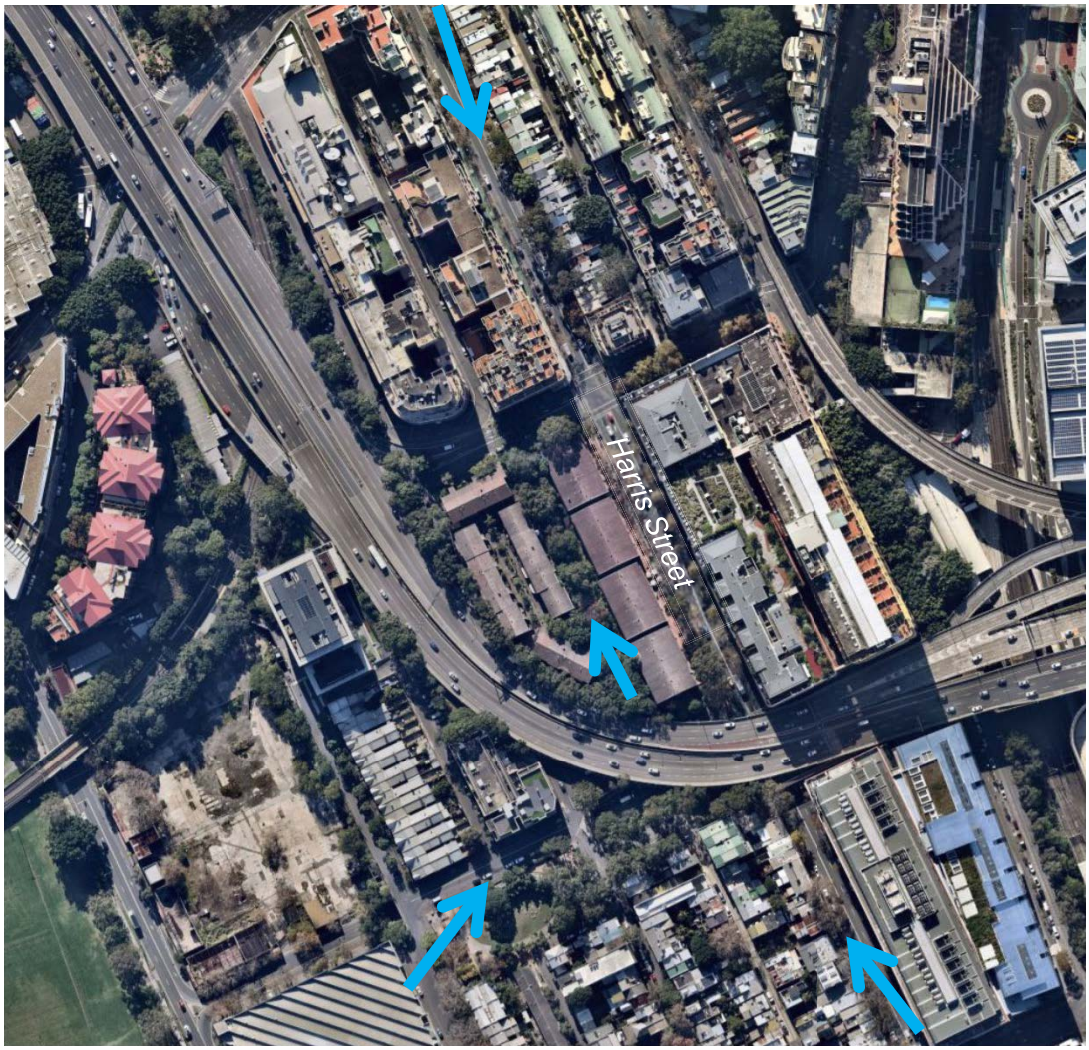


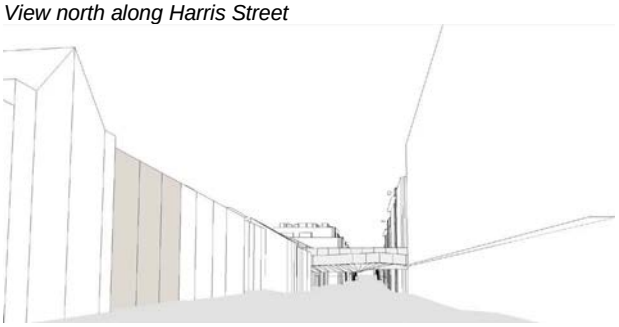
Figure 58. Aerial view of 1-19 Allen Street and 313-319 Harris Street with view locations indicated by blue arrows.

Existing environment

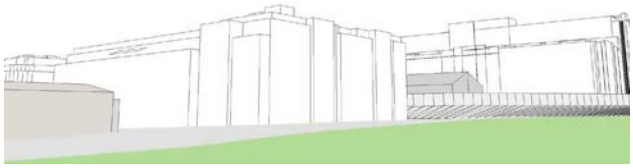
View south along Harris Street



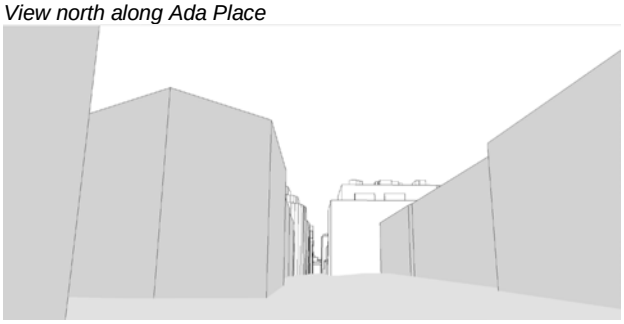
View north along Harris Street



View north east across Fig Lane park



View north along Ada Place

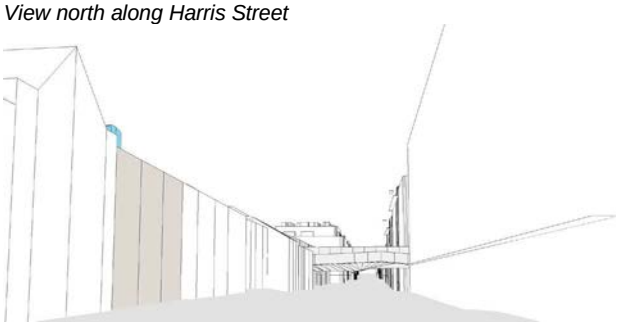


Existing environment and approved controls

View south along Harris Street



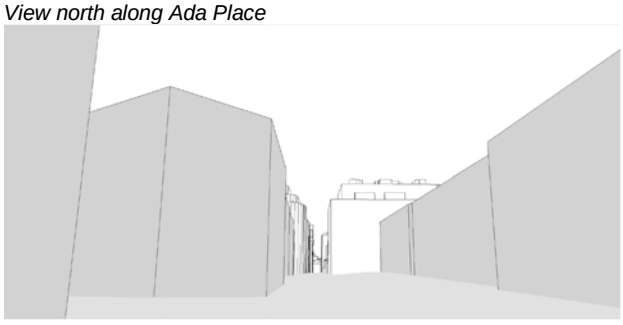
View north along Harris Street



View north east across Fig Lane park



View north along Ada Place

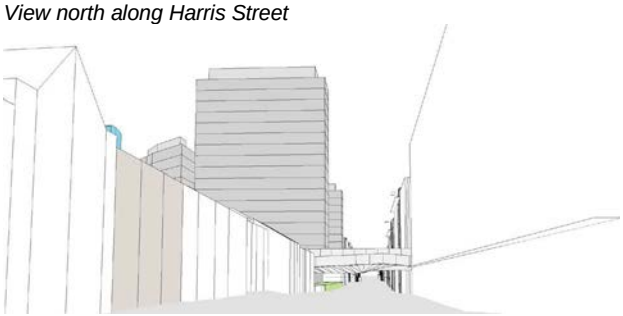


Existing environment and proposed controls

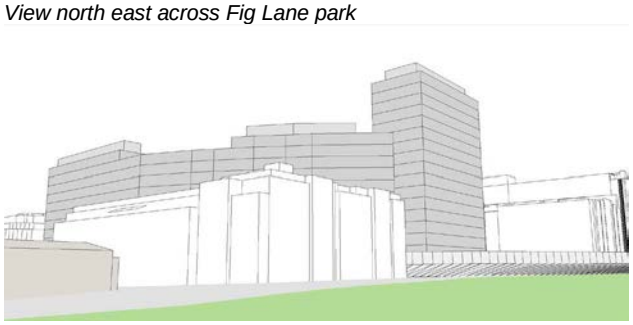
View south along Harris Street



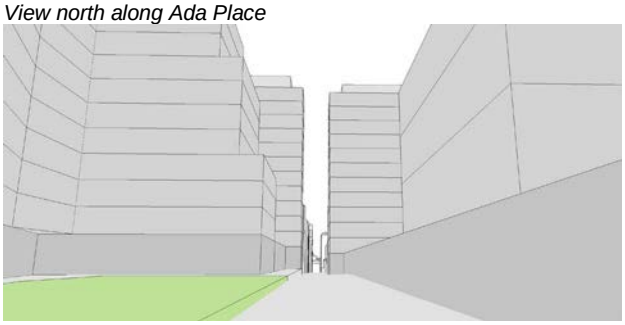
View north along Harris Street



View north east across Fig Lane park



View north along Ada Place



1-7 Henry Avenue and 336-368 Jones Street & 370-374 Jones Street

Overview

The site at 1-7 Henry Avenue and 336-368 Jones Street (Lot 1 DP 829164) runs the full length of the block between Fig Lane and Quarry Lane. Fig Lane Park is situated directly to the north. At the southern end lies Quarry Lane Streetscape, a small, mainly paved public space occupying 370-374 Jones Street (Lot 2 DP 829164). Refer to Figure 59 and Figure 60 for location details.



Figure 59. Location plan showing 1-7 Henry Avenue and 336-368 Jones Street highlighted in red.



Figure 60. Aerial view of 1-7 Henry Avenue and 336-368 Jones Street.

Background

1-7 Henry Avenue and 336-368 Jones Street were not identified by the Dept. of Planning in their initial study. The site is owned by Homes NSW and was not included Stage 1 of City's planning proposal for Ultimo/Pyrmont. Subsequent to Stage 1 after consultation with relevant state government agencies, this site is now included for consideration the provision of additional social housing.

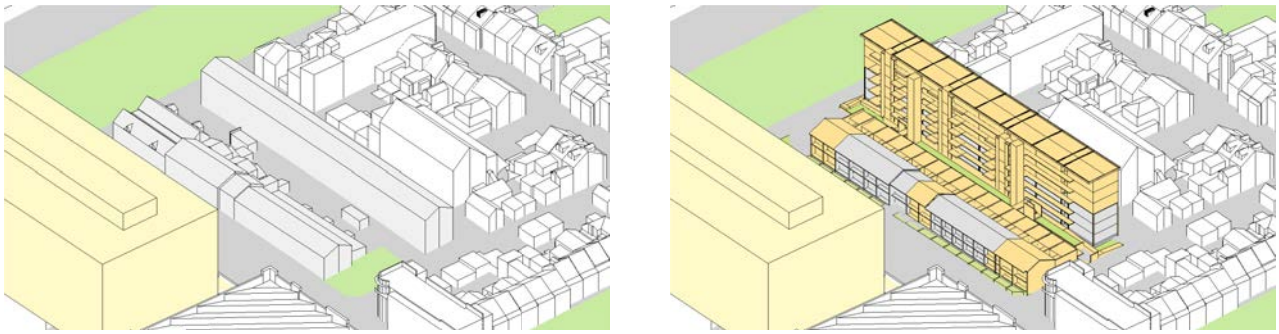


Figure 61. Existing development at 463-467 Harris Street with planning changes for adjacent sites proposed in Stage 1 (shown at left) and proposed planning controls for 463-467 Harris Street (shown at right).

Existing development and controls

The existing development on the site comprises four 2-storey townhouses (1990s) at 336-342 Jones Street (8 homes), a row of 2-storey terrace houses at 344-368 Jones Street (13 homes), and a 3-storey flat building comprising 28 homes in 1-bedroom and bed-sit format. Table 16 below summarises the existing building and planning controls, and Figure 63 shows a plan view of the existing site.

Table 16. Existing development and planning controls at 1-7 Henry Avenue and 336-368 Jones Street

	Existing development	Existing controls
Land use and zoning	Residential	R1
Floor space ratio	~ 1.0	1.5
Height of building	12m	12m
Height in storeys	2 and 3	2
Deep soil	-	10%



Figure 62. Site plan - 1-7 Henry Avenue and 336-368 Jones Street and 370-374 Jones Street.

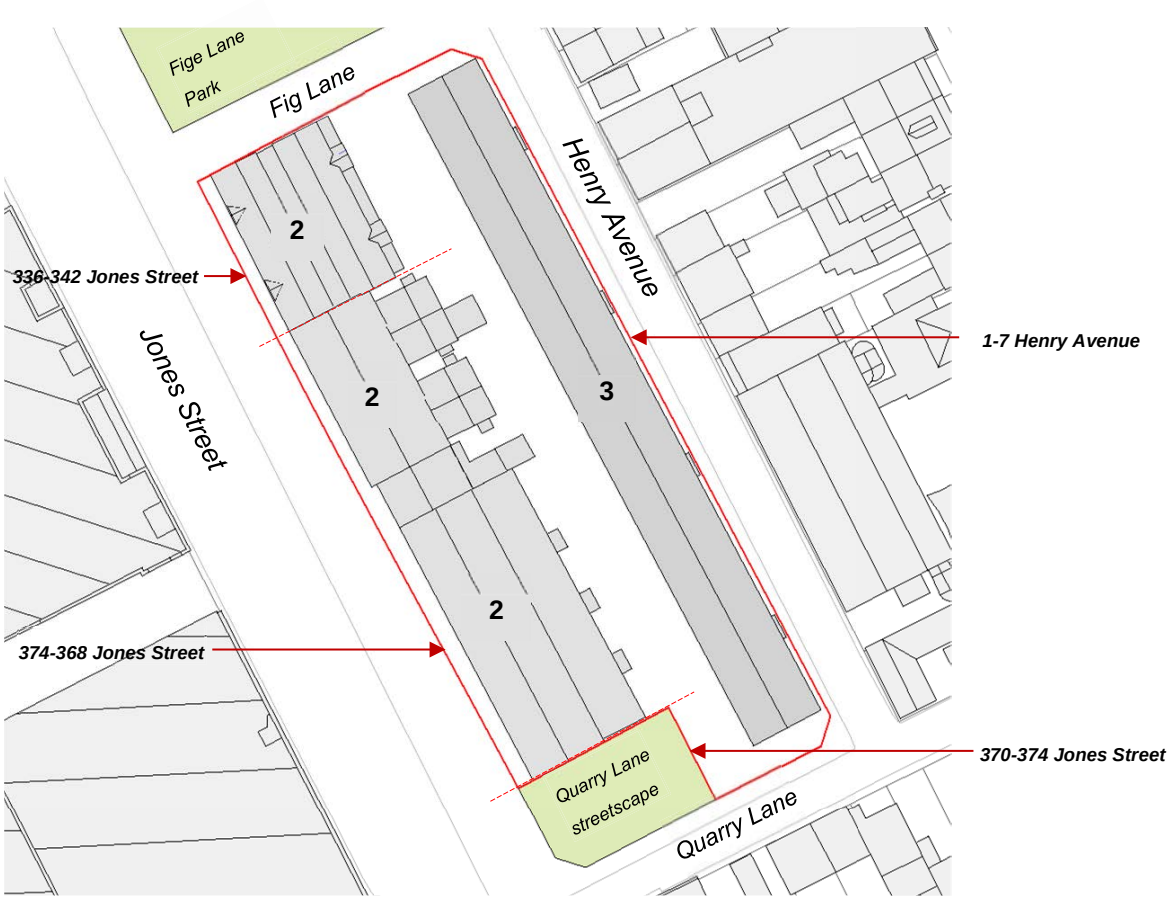


Figure 63. Plan view of 1-7 Henry Avenue and 336-368 Jones Street (red boundary) showing existing development. Quarry Lane streetscape at 370-374 Jones Street shaded in green.



Figure 64. Views of 3-storey flat building at 1-7 Henry Avenue: from Fig Lane Park (left), and from Henry Avenue street frontage (right).



Figure 65. View of terrace row and reserve at 336-374 Jones Street: viewed from corner of Jones Street and Quarry Lane (left); and detail view of Quarry Lane Streetscape reserve (right).

Urban design principles
More deep soil for **more trees** and cool green spaces –

The proposed relocation of the small reserve to the northern end of the street block allows for an open space with better sunlight access and connection to Fig Lane Park adjacent. Existing setbacks and soft landscape areas along Jones Street are retained. The open space currently occupied by hardscape surfaces in the middle of the site is to be converted to deep soil areas.

More public space for more people – streets and open spaces –

The relocation of the small reserve to be next to Fig Lane Park will provide for a more enjoyable open space with a better connect to the existing park.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan. Refer to Figure 66. Sunlight to the private open spaces of the residential development to the south, fronting onto Quarry Street, is maintained.

Reinforce **'street wall' form** of most buildings –

The existing 2-storey building forms along Jones Street are retained. The eastern side of Henry Avenue is a mix of rear 2 and 3-storey warehouse forms, with some lots fronting Bulwara Road having their rear access off this street. The block is not characterised by a consistent street wall height. The additions on Henry Avenue maintain the street wall form.

Conserve **heritage** values –

The 2 storey warehouse on Henry Avenue opposite the site, at the corner of Quarry Lane, is a heritage item. The proposed changes to the Henry Avenue building maintain the current street setback along this frontage.

Good **design for wind and noise** –

The site is not exposed to winds as it is protected by surrounding development.

The site is sheltered from winds by surrounding development. The scale of the proposed building forms will not result in adverse wind conditions at street level.

Match **land use** to place –

The existing land use for social housing is maintained and provides an opportunity to increase this provision on the site.

Consider **views** to and from public places

The sites are not affected by view corridors. The buildings are separated from Fig Lane Park at the northern end by Fig Lane.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

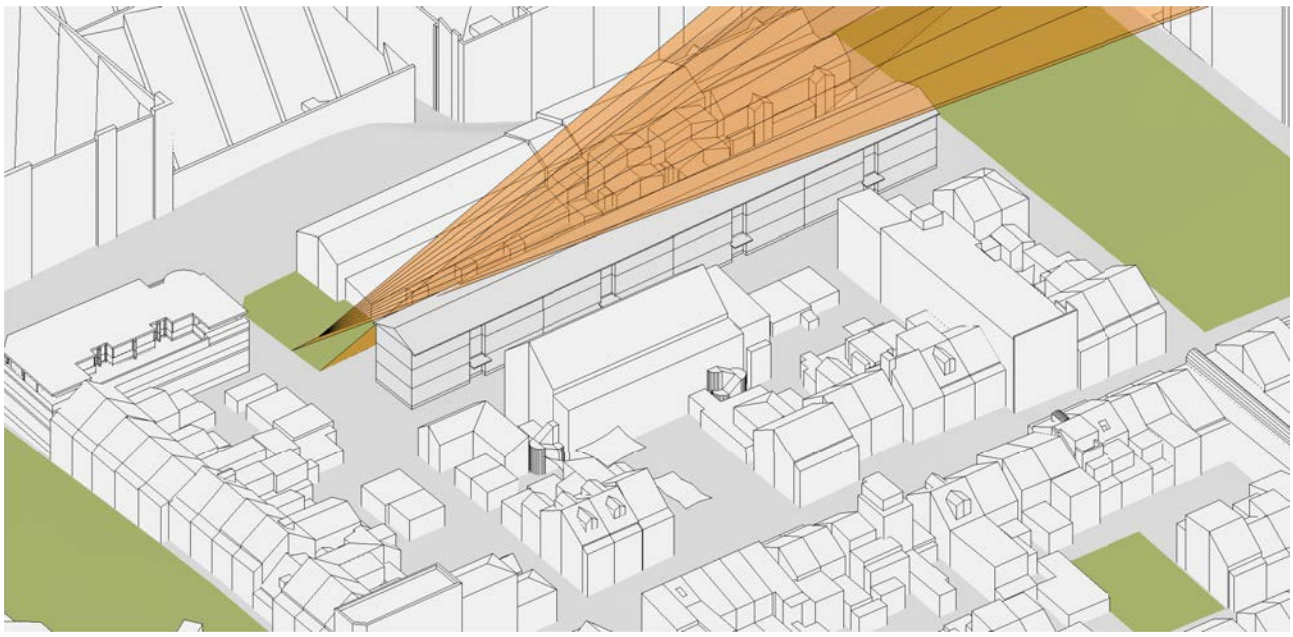


Figure 66. Height control planes required to maintain existing sunlight access to Quarry Lane streetscape.

Proposed controls

Quarry Lane streetscape at the southern end of the block imposes height limitations on the site if its sunlight is to be protected in its current location (refer Figure 66 above). This limits the ability of the site to provide for more social housing.

The proposed changes for this block consider removing the four 1990s townhouses at the northern end of the block, the relocation of Quarry Lane streetscape from the southern end of the block (370-374 Jones Street) to the northern end to front onto Fig Lane, and the addition of 2 two-storey terrace forms on the remnant land at 370-374 Jones Street. This allows for the public open space of the small park to be connected to Fig Lane Park and, situated at the northern end, will enjoy good access to sunlight year round.

For the existing terrace row at 344-368 Jones Street, the rear wings of the terraces are removed and new 2-storey rear additions arranged with courtyards for each lot are proposed. The houses are converted from a single 2-storey house into two single storey apartments, one above the other. On the remnant land at 370-374 Jones Street, this type is repeated in 2 new terrace forms similar to the existing.

At 1-7 Henry Avenue the 3-storey flat building is maintained, and 3 additional storeys are added. The additional storeys can be designed as pre-fabricated units built off-site, craned into location and supported on a structural frame that sits over and outside the existing building on independent foundations.

New circulation ways are located in the middle of the site between the two developments, providing for universal access to all levels.

The proposed controls for the block maintain the current use as residential. The new configuration of housing can accommodate a floor space equal to 1.6:1, with a new height limit of 20 metres and 6 storeys, and a deep soil area equal to 15% of the site area.

The controls are summarised in Table 17 below. A plan and aerial diagram of the site reconfiguration appear at Figure 67 and Figure 68. Drawings of indicative floor plan layouts appear at Figure 69 to Figure 71.

Table 17 . Planning provisions for 463-467 Harris Street– existing and proposed controls

	Existing development	Existing controls	Proposed
Land use and zoning	Residential	R1	Residential
Floor space ratio	~ 1.0	1.5	1.6
Height of building	12m	12m	20m
Height in storeys	2 and 3	2	6
Deep soil	-	10%	~15%



Figure 67. Site plan showing proposed planning controls and reconfiguration of site at 336-374 Jones Street and 1-7 Henry Avenue.

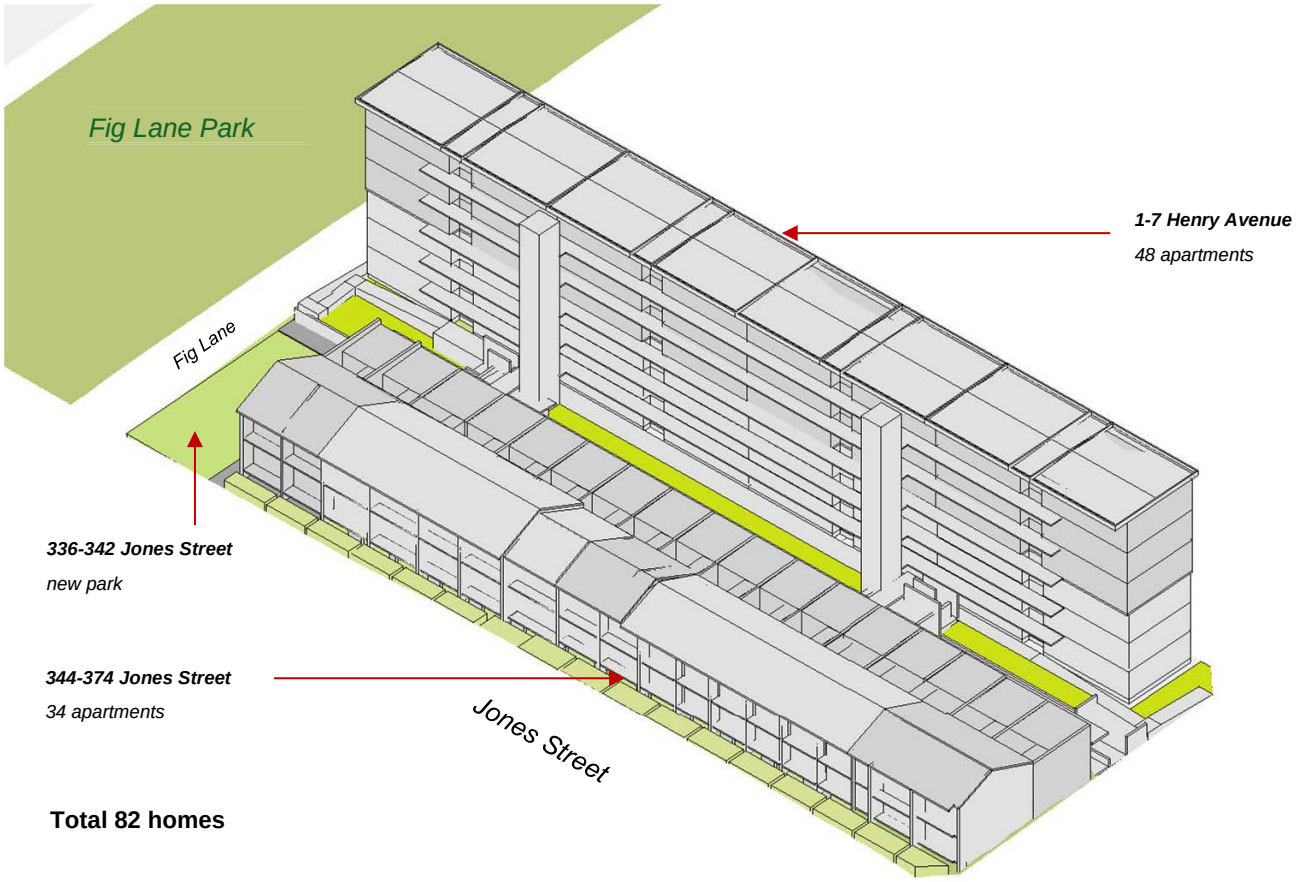


Figure 68. Diagrammatic aerial view showing proposed planning controls and reconfiguration of site at 336-374 Jones Street and 1-7 Henry Avenue.



Figure 69. Indicative floor plans at 336-374 Jones Street and 1-7 Henry Avenue.

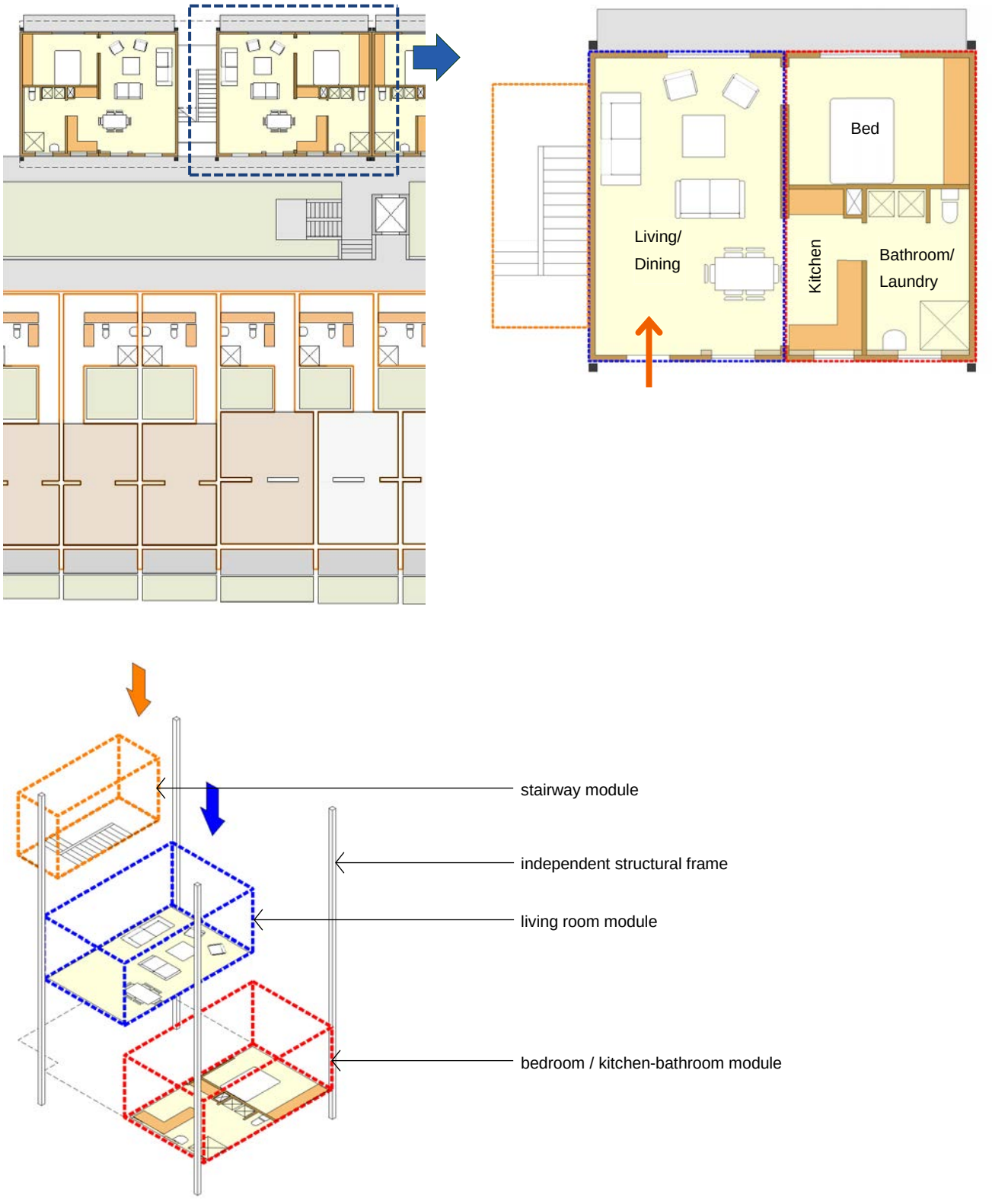
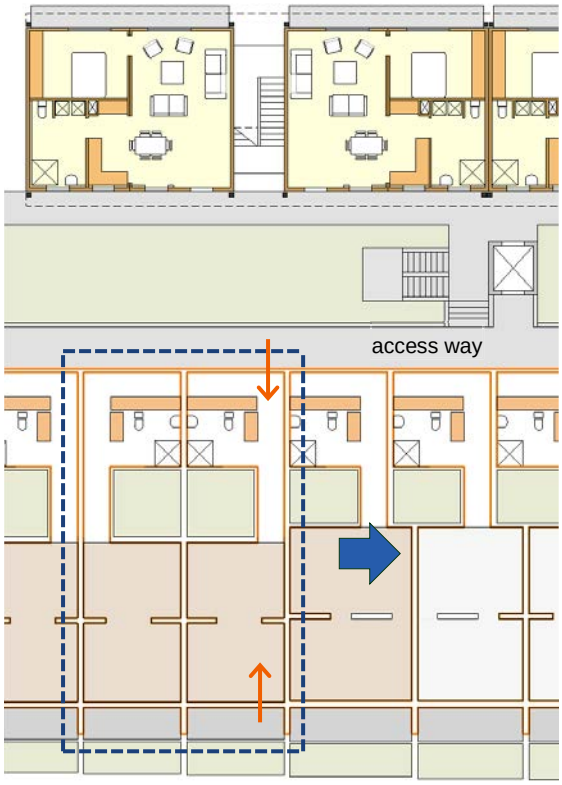
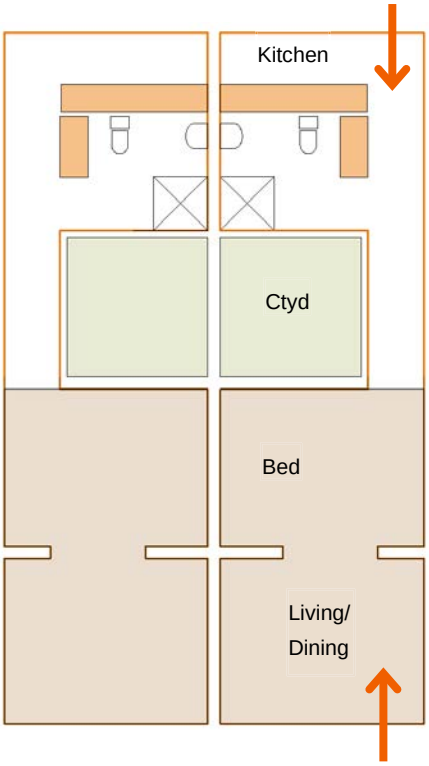


Figure 70. Floor plans and configuration diagram for new apartments at 1-7 Henry Avenue.





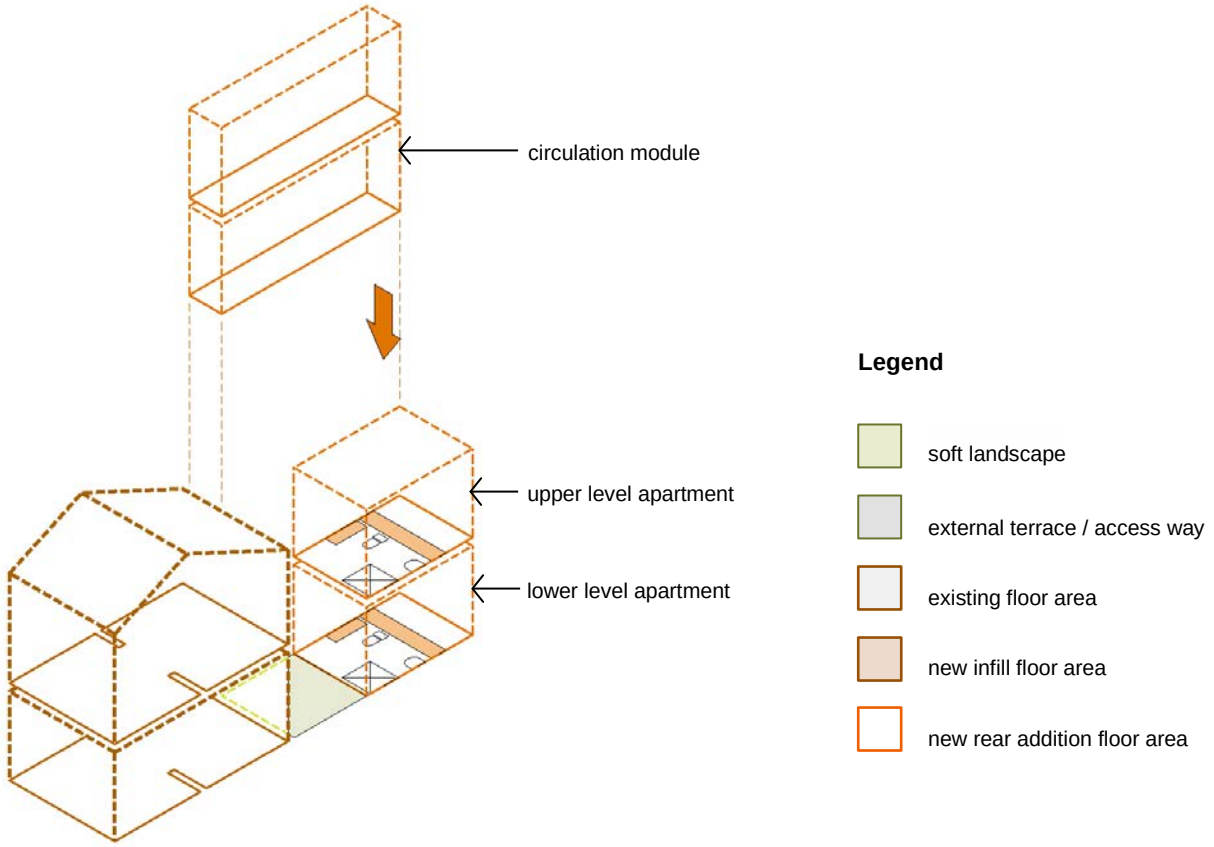


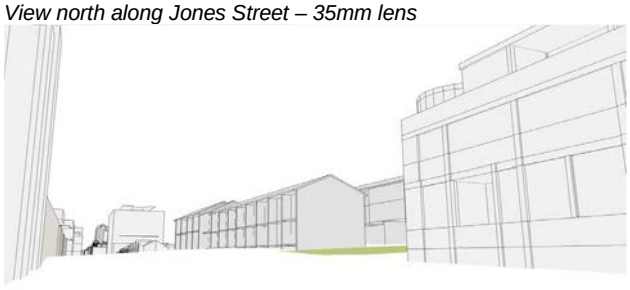
Figure 71. Floor plans and configuration diagram for new apartments at 336-374 Jones Street.

Visualisation



Existing development

View north along Jones Street – 35mm lens



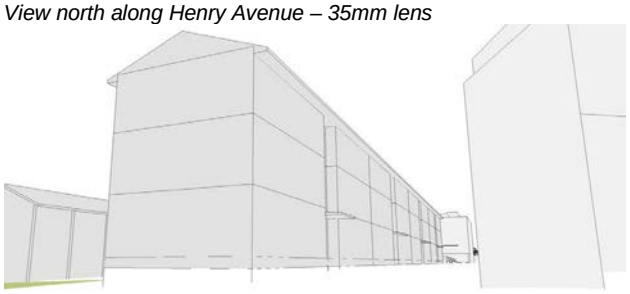
View south along Jones Street – 35mm lens



View south across Fig Lane Park – 35mm lens

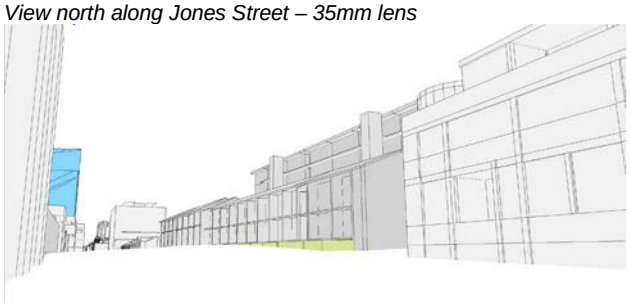


View north along Henry Avenue – 35mm lens

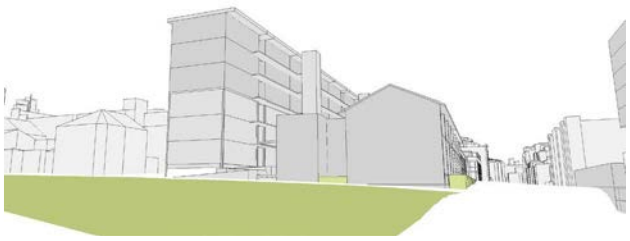


Existing development with proposed changes

View north along Jones Street – 35mm lens



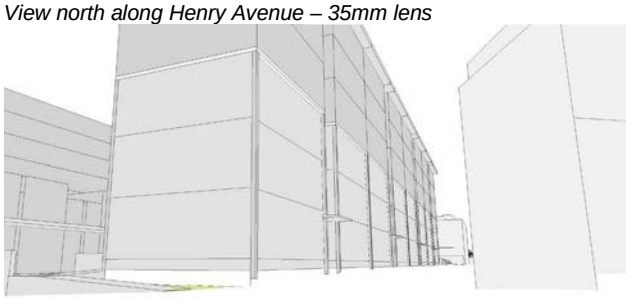
View south along Jones Street – 35mm lens



View south across Fig Lane Park – 35mm lens



View north along Henry Avenue – 35mm lens



463 – 467 Harris Street Ultimo

Overview

463-467 Harris Street, Ultimo (Lot 1 DP80155) is a corner site with frontages onto Harris Street, Quarry Street and Kirk Street. Refer to Figure 72 and Figure 73 for detail.



Figure 72. Location plan showing 463-467 Harris Street highlighted in red.



Figure 73. Aerial view from north east showing 463-467 Harris Street outlined in red.

Background

463-467 Harris Street was not identified by the Dept. of Planning in their initial study. During Stage 1 of City's planning proposal for Ultimo/Pyrmont, the sites adjacent were considered for change. In response to submissions received during exhibition, this site is now included.



Figure 74. Existing development at 463-467 Harris Street with planning changes for adjacent sites proposed in Stage 1 (shown at left) and proposed planning controls for 463-467 Harris Street (shown at right).

Existing development and controls

The existing development at 463-467 Harris Street is a three storey building containing commercial uses, with carpark and loading entry off Quarry Street. Table 18 below summarises the existing building and planning controls, and Figure 75 shows a plan view of the existing site.

Table 18. Existing development and planning controls at 463-467 Harris Street

	Existing development	Existing controls
Land use and zoning	Commercial	MU1
Floor space ratio	2.5	2.5
Height of building	12m	12m
Height in storeys	3	2
Deep soil	-	-

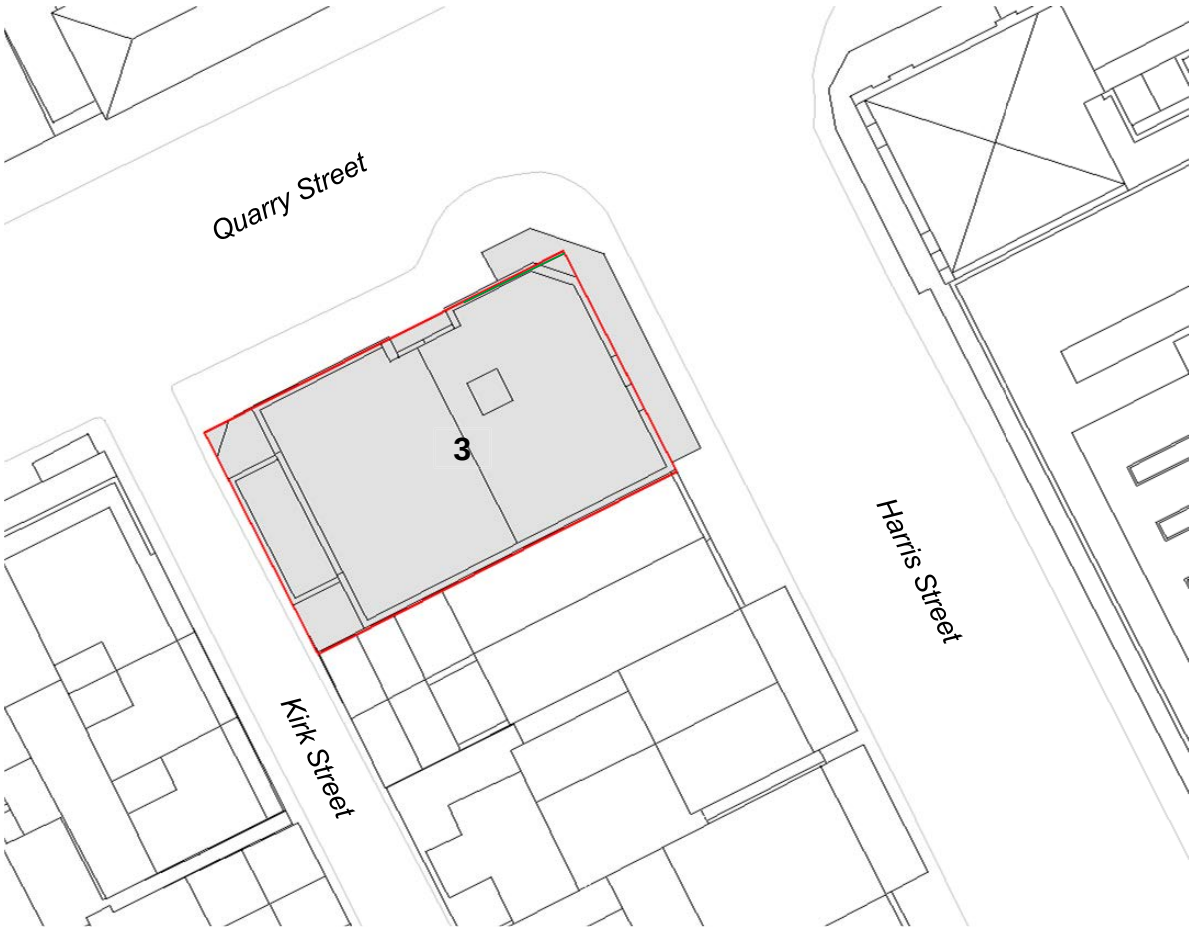


Figure 75. Plan view of 463-467 Harris Street site (red boundary) showing existing development.

Urban design principles
More deep soil for **more trees** and cool green spaces –

Courtyards at the centre of the site provide deep soil for the planting of trees.

More public space for more people – streets and open spaces –

The street wall building form and small site sizes combine such that new public space on this site is not appropriate.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties have been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan

Reinforce **'street wall' form** of most buildings –

The height of the building along Harris Street responds to the existing heights of nearby buildings extending the existing street wall. Similarly on Kirk Street the building height responds to the heights of the existing buildings opposite.

Conserve **heritage** values –

The are no heritage items on the site.

Good **design for wind and noise** –

The site is not exposed to winds as it is protected by surrounding development.

The site is exposed to noise from Harris Street, a busy road. The building form is designed to be narrow in depth and continuous to Harris Street to form a barrier to noise. Larger rear wings combine with the narrow depth to enable openable windows to habitable rooms and private open space to face away from the noise.

Match **land use** to place –

The existing residential land use is maintained.

Consider **views** to and from public places

The sites are not affected by view corridors.

Maximise development **within constraints** –

Within the limits set by other urban design principles described above the potential floor area is maximised.

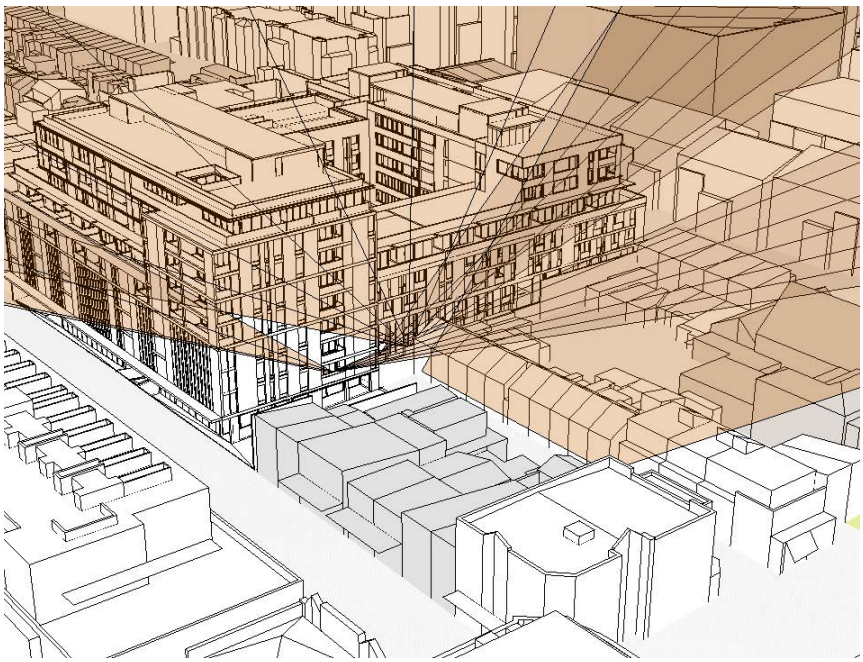


Figure 76. Height control planes to maintain sunlight access to neighbouring residential development.

Proposed controls

The controls proposed for 463-467 provide for street level commercial use fronting onto Harris and Quarry Streets, and residential development above. The scheme accommodates an FSR of 3:1, a maximum height limit of 27 metres and 7 storeys, and a deep soil area equal to 15% of the site area.

The controls are summarised in Table 19 below and additional detail such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described in Figure 77.

Table 19 . Planning provisions for 463-467 Harris Street– existing and proposed controls

	Existing development	Existing controls	Proposed
Land use and zoning	Commercial	MU1	Mixed use
Floor space ratio	2.5	2.5	3.0
Height of building	12m	12m	27m
Height in storeys	3	2	7
Deep soil	-	-	15%



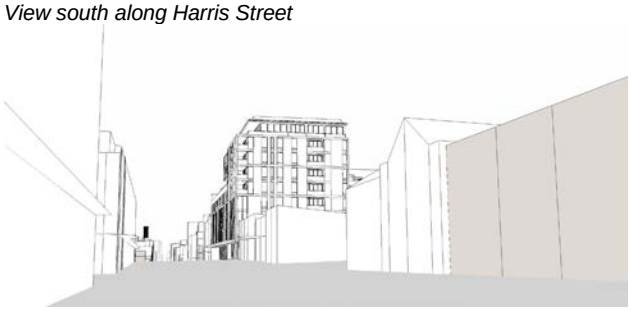
Figure 77. Site plan showing proposed planning controls at 463-467 Harris Street

Visualisation



Existing environment

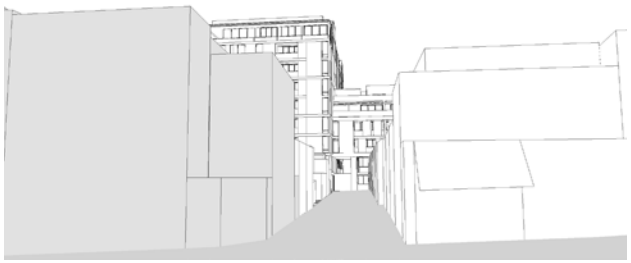
View south along Harris Street



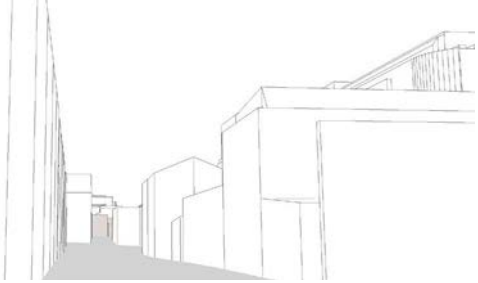
View north along Harris Street



View south along Kirk Street

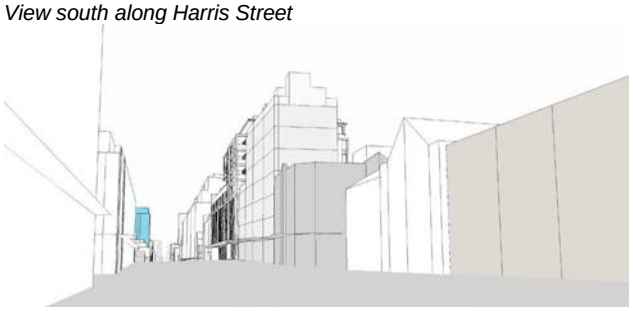


View north along Kirk Street



Existing environment with approved controls from Stage 1

View south along Harris Street



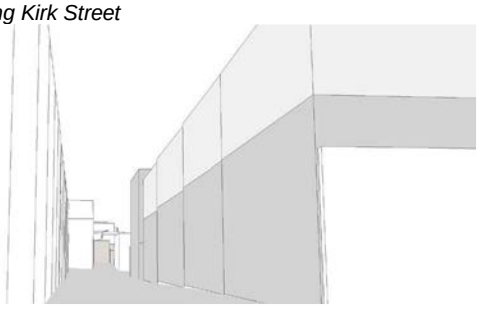
View north along Harris Street



View south along Kirk Street

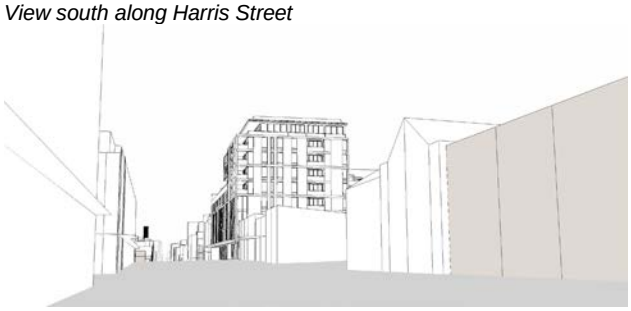


View north along Kirk Street



Existing environment

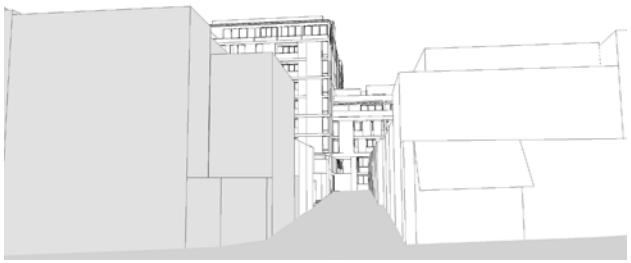
View south along Harris Street



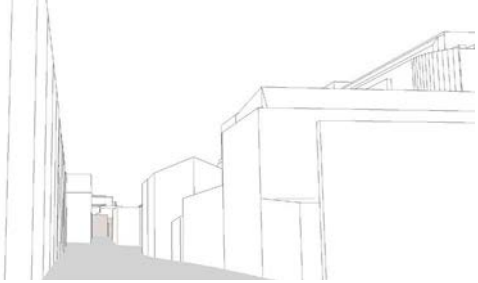
View north along Harris Street



View south along Kirk Street

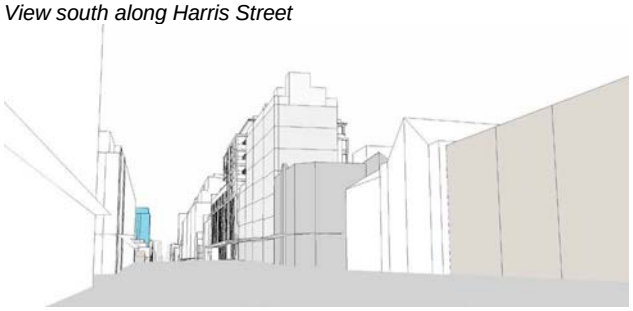


View north along Kirk Street



Existing environment with approved controls from Stage 1

View south along Harris Street



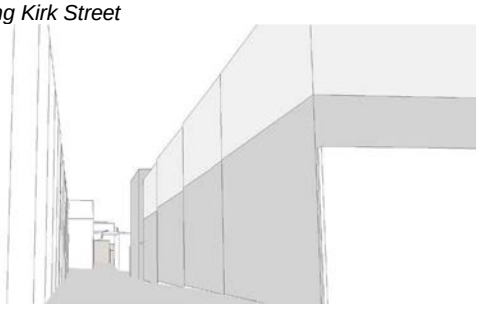
View north along Harris Street



View south along Kirk Street

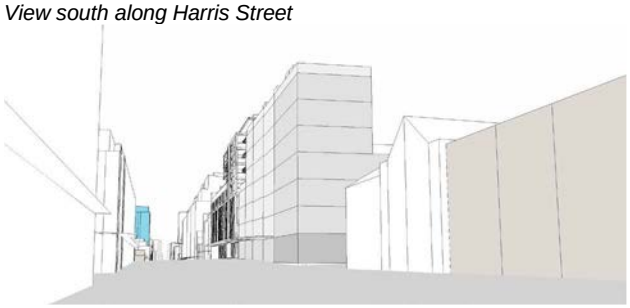


View north along Kirk Street



Existing environment, approved controls, and proposed controls for 463-467 Harris Street

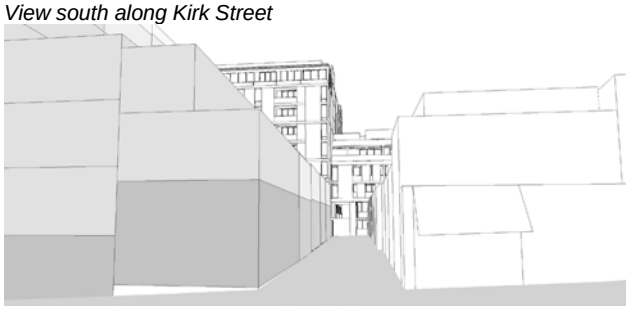
View south along Harris Street



View north along Harris Street



View south along Kirk Street



View north along Kirk Street



344 Bulwara Road Ultimo

Overview

344 Bulwara Road, Ultimo (Lot 101 DP 736100, Lots 1-102 SP 31316) sits opposite Mary Ann Street Reserve, with frontages onto Bulwara Road, Macarthur Street and Hackett Street. The terrain falls 4.5m. from the north west corner to the south east corner of the site. The southern site boundary is bordered by a through site link located within the two neighbouring sites to the south, linking Bulwara Road and Hackett Street. The footpath along Bulwara Road is narrow at only 1 metre, often obstructed by trees and services. The Refer to Figure 78, Figure 79 and Figure 80 for detail.



Figure 78. Location plan showing 344 Bulwara Road highlighted in red.



Figure 79. Aerial view with 344 Bulwara Road outlined in red.



Figure 80. Street views showing footpath to Bulwara Road frontage (left) and through site link at southern boundary of site (right).

Background

344 Bulwara Road was not identified by the Dept. of Planning in their initial study. During Stage 1 of City's planning proposal for Ultimo/Pyrmont the site opposite, 383-389 Bulwara Road, was considered for change. In response to submissions received during exhibition, 344 Bulwara Road is now included.

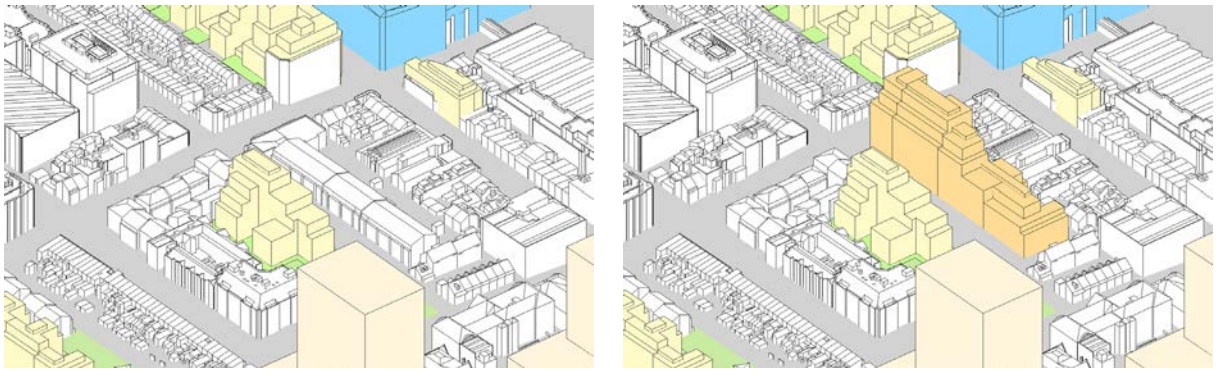


Figure 81. Existing development at 344 Bulwara Road (shown at left) and proposed planning controls (shown at right).

Existing development and controls

The existing development at 344 Bulwara Road is a mixed use development. It comprises 3 storeys along Macarthur Street with street level commercial and residential above, and 4 storeys of multi-unit residential along Bulwara Road sitting atop a partially submerged car park.
Table 20 below summarises the existing building and planning controls, and Figure 82 shows a plan view of the existing site and surrounds.

Table 20. Existing development and planning controls at 344 Bulwara Road

	Existing development	Existing controls
Land use and zoning	Mixed use	MU1
Floor space ratio	2:1	2:1
Height of building	15.5m	15m
Height in storeys	4	4
Deep soil	-	-

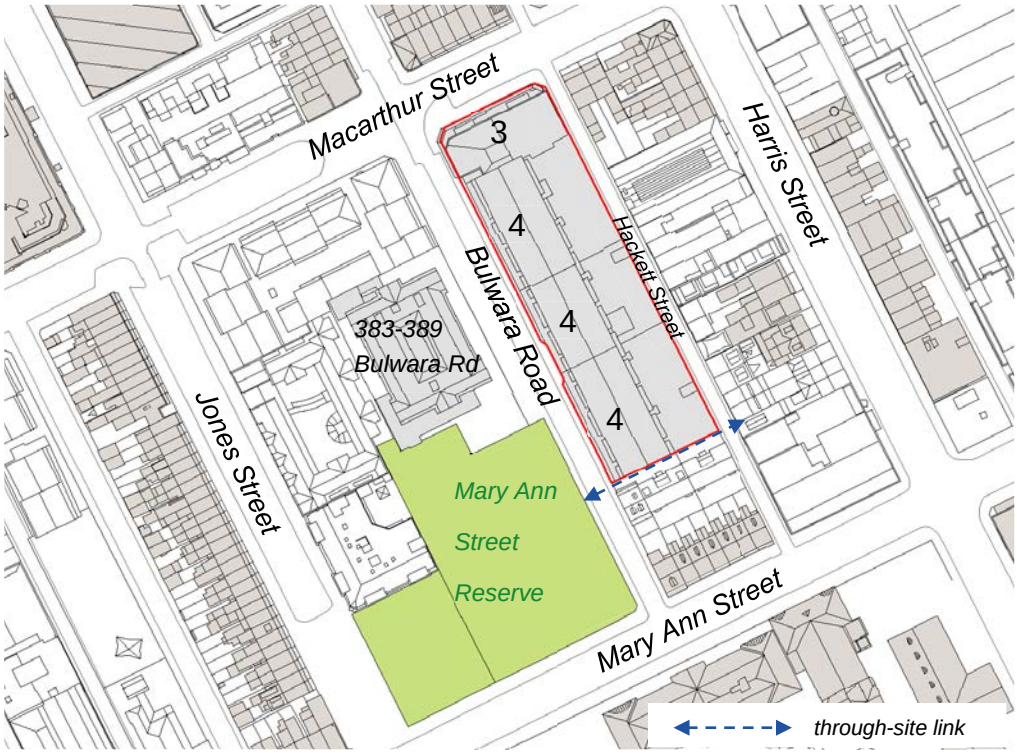


Figure 82. Plan view of 344 Bulwara Road site (red boundary) showing existing development.

Urban design principles
More deep soil for **more trees** and cool green spaces –

The courtyard arrangement along the eastern side of the site fronting onto Hackett Street allows for contribution to tree canopy on the site.

More public space for more people – streets and open spaces –

The building setback along Bulwara Road and proposed dedication of a 3-metre strip of land for footpath widening will improve the amenity at street level for people.

Minimise overshadowing of existing residential properties –

Additional overshadowing to the living rooms and private open space of adjoining residential properties has been minimised, as guided by the Apartment Design Guide and the City's Development Control Plan (refer Figure 83). The building also minimises overshadowing to nearby Mary Ann Street Park by responding to the proposed sun access controls that are part of the Stage 2 planning proposal.

Reinforce **'street wall' form** of most buildings –

The height of the building along Bulwara Road responds to the existing heights of nearby buildings extending the existing street wall.

Conserve **heritage** values –

The are no heritage items on the site.

Good **design for wind and noise** –

The site is not exposed to winds as it is protected by surrounding development.

The site is not exposed to noise.

Match **land use** to place –

Residential land use extends the existing surrounding residential land use.

Consider **views** to and from public places

The sites are not affected by view corridors.

Maximise development **within constraints** –
Within the limits set by other urban design principles described above the potential floor area is maximised.

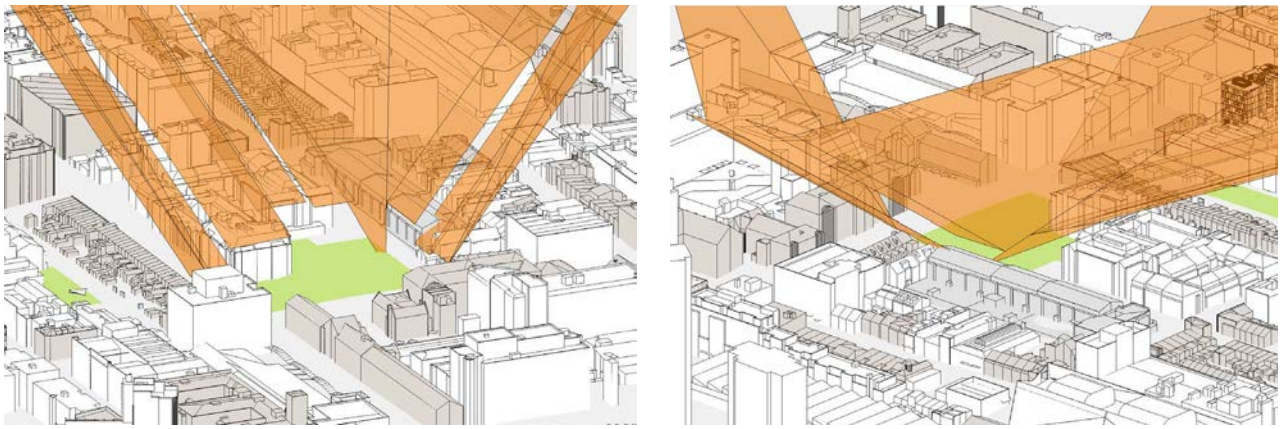


Figure 83. Height control planes maintain sunlight access to Mary Ann Street Reserve

(left – viewed from south west; right – viewed from north east).

Proposed controls

The controls proposed for 344 Bulwara Road provide for street level commercial use along Macarthur Street and Bulwara Road frontages with residential development above. Carparking is accessed from Hackett Street. The scheme accommodates an FSR of 3.18 plus a Design Excellence bonus, a maximum height limit of 44 metres and 12 storeys, and a deep soil area equal to 15% of the site area.

The controls are summarised in below Table 21 . Planning provisions for 344 Bulwara Road – existing and proposed controlsand additional detail such as street-level and upper-level setbacks, street wall height, site layout requirements, access and streetscape improvements are described in Figure 84.

Table 21 . Planning provisions for 344 Bulwara Road – existing and proposed controls

	Existing development	Existing controls	Proposed
Land use and zoning	Mixed Use	MU1	Mixed use
Floor space ratio	2.0	2.0	3.18 + Des. Ex.
Height of building	15m	15m	44m
Height in storeys	4	4	12
Deep soil	-	-	15%

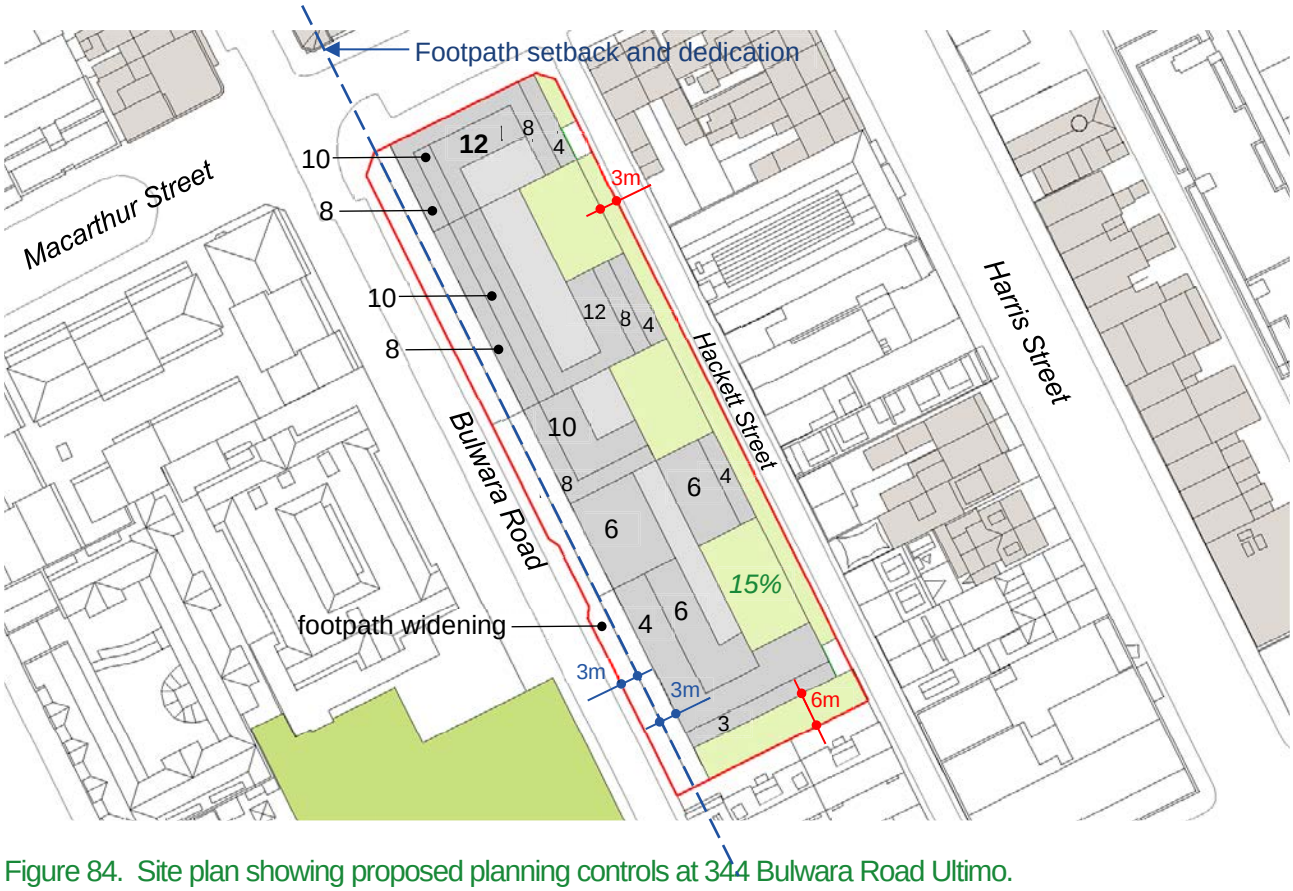


Figure 84. Site plan showing proposed planning controls at 344 Bulwara Road Ultimo.

Visualisation



Existing environment

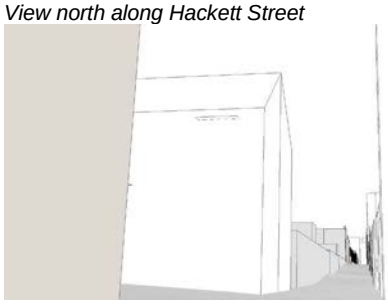
View north east across Mary Ann Street Reserve



View north along Bulwara Road



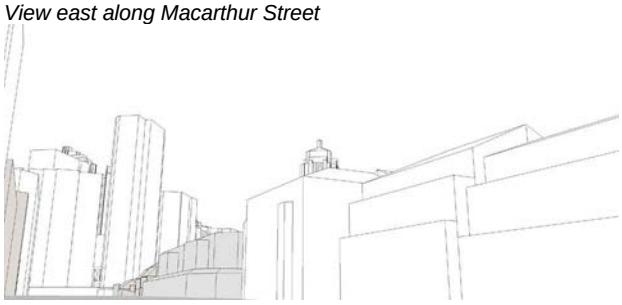
View north along Hackett Street



View south west along Macarthur Street

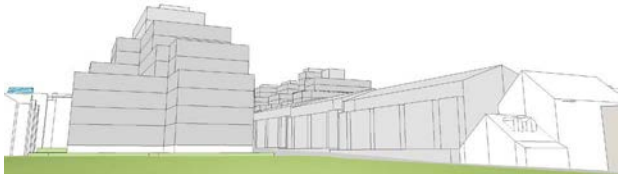


View east along Macarthur Street



Existing environment with approved controls from Stage 1

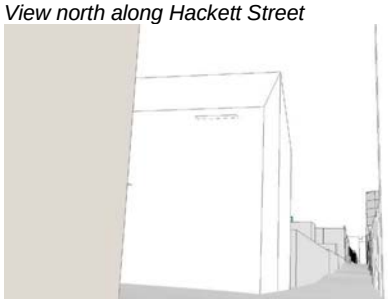
View north east across Mary Ann Street Reserve



View north along Bulwara Road



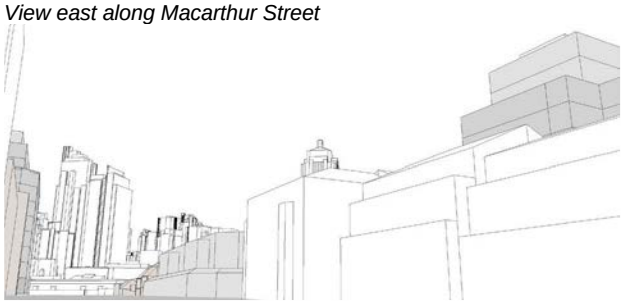
View north along Hackett Street



View south west along Macarthur Street

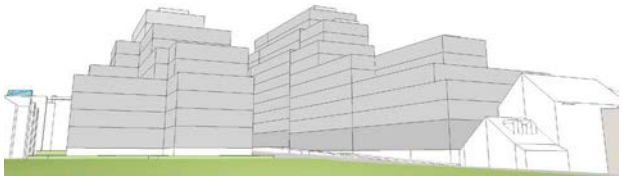


View east along Macarthur Street



Existing environment with approved controls, and proposed controls for 344 Bulwara Road

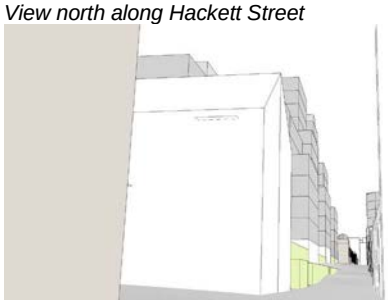
View north east across Mary Ann Street Reserve



View north along Bulwara Road



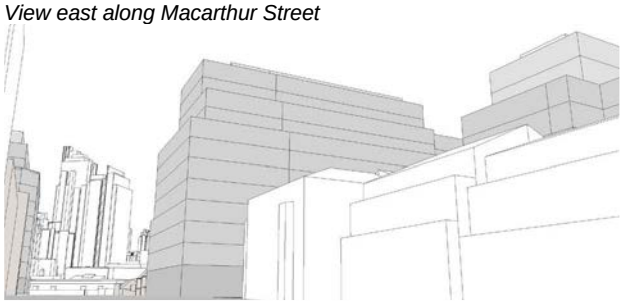
View north along Hackett Street



View south west along Macarthur Street



View east along Macarthur Street



Attachment D

Flood impact and risk assessment

DEPARTMENT OF PLANNING, HOUSING AND INFRASTRUCTURE

PYRMONT AND ULTIMO PLANNING PROPOSAL – FLOOD IMPACT AND RISK ASSESSMENT – STAGE 2 ADDENDUM

FINAL REPORT



JUNE 2026

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PYRMONT AND ULTIMO PLANNING PROPOSAL – FLOOD IMPACT AND RISK ASSESSMENT – STAGE 2 ADDENDUM

FINAL REPORT

JUNE 2026

Project Pyrmont and Ultimo Planning Proposal – Flood Impact and Risk Assessment – Stage 2 Addendum	Project Number 124030
Client **Department of Planning, Housing and Infrastructure**	**Client's Representative** Simon Coleman
Project Manager **Michael Reeves**	

Revision History

Revision	Description	Distribution	Authors	Reviewed by	Verified by	Date
1	Draft Stage 2	DPHI, CoS	Aaron McAllister, Michael Reeves	Michael Reeves	Michael Reeves	MAY 2026
2	Final Stage 2	DPHI, CoS	Michael Reeves	Richard Dewar	Richard Dewar	JUN 2026

Cover Image: Pyrmont Peninsula looking south, Source: Google Maps 2024

PYRMONT AND ULTIMO PLANNING PROPOSAL – FLOOD IMPACT AND RISK ASSESSMENT – STAGE 2 ADDENDUM

TABLE OF CONTENTS

PAGE

EXECUTIVE SUMMARY viii

1. INTRODUCTION 1

1.1. Overview 1

1.2. Stage 2 Sites 2

2. BACKGROUND 3

2.1. Planning Proposal Description 3

2.2. Flood-related Development Controls 3

2.3. New Information Available 3

2.3.1. Australian Rainfall and Runoff Version 4.2 3

2.3.2. Darling Harbour and City Area Flood Study Update 5

2.3.3. Shelter-in-place Guideline for Flash Flooding 6

2.3.4. Climate Change & Natural Hazards SEPP 6

3. FLOOD CONSTRAINTS REVIEW 8

3.1. Overview of Flood Behaviour and Risks 8

3.2. Adopted Flood Modelling 8

3.3. Hydraulic Hazard Classification 8

3.4. Flood Function 8

3.5. Emergency Management and Risk to Life 9

3.6. Extreme Flood Events and the Probable Maximum Flood 9

3.7. Flood Planning Level 9

3.7.1. Flood Tagging 9

4. PLANNING PROPOSAL SITE ASSESSMENT 10

4.1. 26-52 Mount Street 10

4.1.1. Site Characteristics and Flood Behaviour 11

4.1.2. Flood Planning Levels 12

4.1.3. Impact Considerations 12

4.1.4. Hazard Consideration 12

4.2. 1-7 Henry Avenue and 336-374 Jones Street 12
4.2.1. Site Characteristics and Flood Behaviour 13
4.2.2. Flood Planning Levels 14
4.2.3. Impact Considerations 14
4.2.4. Hazard Consideration 14
4.3. 463-467 Harris Street 14
4.3.1. Site Characteristics and Flood Behaviour 15
4.3.2. Flood Planning Levels 15
4.3.3. Impact Considerations 16
4.3.4. Hazard Consideration 16
4.4. 344 Bulwara Road 16
4.4.1. Site Characteristics and Flood Behaviour 17
4.4.2. Flood Planning Levels 19
4.4.3. Impact Considerations 20
4.4.4. Hazard Consideration 20
4.5. 100-130 Harris Street 20
4.5.1. Site Characteristics and Flood Behaviour 21
4.5.2. Flood Planning Levels 22
4.5.3. Impact Considerations 23
4.5.4. Hazard Consideration 23
4.6. 56 Harris Street 23
4.6.1. Site Characteristics and Flood Behaviour 24
4.6.2. Flood Planning Levels 24
4.6.3. Impact Considerations 24
4.6.4. Hazard Consideration 24
4.7. 1-19 Allen Street and 313-369 Harris Street 25
4.7.1. Site Characteristics and Flood Behaviour 26
4.7.2. Flood Planning Levels 29
4.7.3. Impact Considerations 29
4.7.4. Hazard Consideration 29
4.8. 1-33 Saunders Street 30
4.9. Site Constraint Summary 31
5. FACTORS AFFECTING FLOOD BEHAVIOUR 34
5.1. Blockage Sensitivity 34
5.2. Climate Change 35

5.3. Increase in Impervious Surfaces 37
5.4. Flood Risk Management Measures 37
6. CONSISTENCY WITH MINISTERIAL DIRECTIONS 38
7. CONCLUSIONS 43
8. REFERENCES 45

LIST OF TABLES

Table 1: Flood tagging for 26-52 Mount Street 11
Table 2: Indicative site flood characteristics for 26-52 Mount Street, Mount Street frontage 11
Table 3: Indicative site flood characteristics for 26-52 Mount Street, Harris Street frontage 11
Table 4: Flood tagging for 1-7 Henry Avenue and 336-374 Jones Street 14
Table 5: Flood tagging for 463-467 Harris Street 15
Table 7: Flood tagging for 344 Bulwara Road 19
Table 8: Indicative site flood characteristics for 344 Bulwara Road, Bulwara Road frontage 19
Table 9: Indicative site flood characteristics for 344 Bulwara Road, Hackett Street frontage 19
Table 10: Flood tagging for 100-130 Harris Street 22
Table 11: Indicative site flood characteristics for 100-130 Harris Street (Harris Street frontage) 22
Table 12: Indicative site flood characteristics for 100-130 Harris Street (Pyrmont Street frontage) 22
Table 13: Flood tagging for 56 Harris Street 24
Table 14: Indicative site flood characteristics for 56 Harris Street 24
Table 15: Flood tagging for 1-19 Allen Street 28
Table 16: Flood tagging for 313-369 Harris Street 28
Table 17: Indicative site flood characteristics for 1-19 Allen Street 28
Table 18: Indicative site flood characteristics for 313-369 Harris Street 29
Table 19: Summary Table of Site Constraints 32
Table 20: Consistency with Ministerial Direction 4.1 38

LIST OF PHOTOGRAPHS

Photo 1: Southeast facing photo of no. 26-52 Mount Street. *Google Streetview* 10
Photo 2: Northwest facing photo of no. 79-83 Harris Street frontage (the site). *Google Streetview* 11
Photo 3: Southeast facing photo over Jones Street and Fig Lane. *Google Streetview* 13
Photo 4: Southwest facing photo over Henry Avenue and Fig Lane. *Google Streetview* 13
Photo 5: South facing photo over 463-467 Harris Street. *Google Streetview* 15
Photo 6: North facing photo over Bulwara Avenue. *Google Streetview* 16
Photo 7: North facing photo over Hackett Street. *Google Streetview* 17
Photo 8: Loading zone sag point on Bulwara Road. *Google Streetview* 18
Photo 9: Bulwara Road garage entrance, with flow modelled to occur on the left side of the image. *Google Streetview* 19
Photo 10: East facing over 100 Harris Street frontage. *Google Streetview* 21

Photo 11: North facing over Pyrmont Street access to no. 100 Harris Street garage in relation to Pyrmont Street sag point. *Google Streetview* 21
Photo 12: Northeast facing photo over the 56 Harris Street. Harris Street (Left) and John Street (right). *Google Streetview* 23
Photo 13: Northwest facing photo over Harris Street. *Google Streetview* 25
Photo 14: Ada Place walkway between 1-19 Allen Street (left) and 313-369 Harris Street (right), looking north from Fig Street, with the Western Distributor overhead. *Google Streetview* 26
Photo 15: Northern end of walkway where ponding occurs at the rear of no. 1-19 Allen Street. North facing. *Google Streetview.* 27
Photo 16: No. 313-369 Harris Street in relation to the Harris Street sag point. South facing. *Google Streetview* 28

LIST OF FIGURES

Figure 2.1: Study area and sites
Figure 2.2: Map extents
Figure 2.3: Area A Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.4: Area A Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.5: Area A Peak Flood Depth and Level Contours – PMF Event
Figure 2.6: Area A Peak Hydraulic Hazard – 1% AEP Event
Figure 2.7: Area A Peak Hydraulic Hazard – PMF Event
Figure 2.8: Area B Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.9: Area B Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.10: Area B Peak Flood Depth and Level Contours – PMF Event
Figure 2.11: Area B Peak Hydraulic Hazard – 1% AEP Event
Figure 2.12: Area B Peak Hydraulic Hazard – PMF Event
Figure 2.13: Area C Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.14: Area C Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.15: Area C Peak Flood Depth and Level Contours – PMF Event
Figure 2.16: Area C Peak Hydraulic Hazard – 1% AEP Event
Figure 2.17: Area C Peak Hydraulic Hazard – PMF Event
Figure 2.18: Flood Function – 1% AEP Event
Figure 2.19: Pit Blockage Sensitivity – 1% AEP Event with High Blockage
Figure 2.20: Climate Change Sensitivity – SSP3-7.0 2100 1% AEP Event

LIST OF ACRONYMS

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ARI	Average Recurrence Interval
ARR	Australian Rainfall and Runoff
BW	Blackwattle Bay
CoS	City of Sydney
DCP	Development Control Plan
DHCA	Darling Harbour and City Area
DPHI	NSW Department of Planning, Housing and Infrastructure
FFL	Finished Floor Level
FIRA	Flood Impact and Risk Assessment
FPL	Flood Planning Level
FRMS&P	Floodplain Risk Management Studies and Plan
FSR	Floor Space Ratio
IFD	Intensity Frequency Duration
LEP	Local Environmental Plan
LiDAR	Light Detection and Ranging or known as ALS (Airbourne Laser Scanning)
LGA	Local Government Area
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
SSP	Shared Socioeconomic Pathway

EXECUTIVE SUMMARY

The City of Sydney prepared a Planning Proposal to set new planning controls for sites identified within the suburbs of Pyrmont and Ultimo, in response to the NSW Government's Pyrmont Peninsula Place Strategy. The Pyrmont and Ultimo Planning proposal – Flood Impact and Risk Assessment was finalised in August 2024 by WMAwater for these sites, known as the 'Stage 1' sites.

There were 8 additional sites subsequently identified as part of 'Stage 2' of the Planning Proposal that is currently being drafted. The Stage 2 sites are assessed in this report, which serves as an addendum to the main report. This report only focusses on the 8 additional sites, with a FIRA undertaken that is consistent with the Stage 1 sites. Further background information can be found in the Stage 1 report, this addendum should be read in conjunction with the Stage 1 report.

The detailed breakdown of the sites in Section 4 show that Pyrmont and Ultimo has varying degrees of flood affectation. It should be noted that the sites that are shown to be flood affected are currently developed and occupied. The most significant constraints for flood affected sites are achieving minimum floor level requirements and site access and evacuation requirements. The Planning Proposal may improve the feasibility of redevelopment in those lots as it may enable less sensitive uses of the ground floor in mixed use developments and increased height restrictions may allow for building floor levels to be raised to meet flood planning level requirements. Redevelopment of some buildings may also enable emergency access to be incorporated, with internal connections enabling flood free frontages to be accessed from any point within the building. In most cases, the requirement for deep soil areas has the potential to improve local flood conditions by increasing infiltration capacity. The redevelopment of the lots identified is likely to allow for a design that caters for the flood conditions of the site.

WMAwater considers that the Planning Proposal is consistent with the objectives of the Ministerial Directions for flood prone land (see Section 6 for detailed discussion). The Planning Proposal is consistent with other relevant legislation and Council's strategic planning framework for flood planning, in that the flood-related development controls enforced through that framework are not significantly altered by the Planning Proposal. It is recommended that consultation is undertaken with relevant public agencies (such as the NSW State Emergency Service, the Department of Climate Change, Energy, the Environment and Water, and the Department of Planning, Housing and Infrastructure) following Gateway determination. Comments from these public agencies regarding specific constraints or development controls can be addressed as part of the site-specific development control plans.

This review does not include detailed flood modelling of potential development or building layouts and does not constitute a flood impact assessment for specific development sites. Future development proposals for flood prone sites will need to be accompanied by site specific flood assessments demonstrating compliance with Council's flood-related development controls.

1. INTRODUCTION

1.1. Overview

On 29 July 2022, the NSW Government issued a Ministerial Direction to guide the preparation of planning controls for Ultimo and Pyrmont. This was in response to the NSW Government's Pyrmont Peninsula Place Strategy. This strategy aims to provide floor space capacity for 8,500 new residents and up to 23,000 new jobs within Ultimo and Pyrmont. City of Sydney (CoS or Council) subsequently prepared a Planning Proposal (Reference 1) in response to the strategy. The Planning Proposal sets new planning controls for sites that are under the control of the CoS.

WMAwater was engaged to undertake a flood impact and risk assessment (FIRA) for the proposed two rezonings, 57 sites with proposed Local Environmental Plan (LEP) changes and 120 small lots with development potential. The Pyrmont and Ultimo Planning Proposal – Flood Impact and Risk Assessment was finalised in August 2024 (Reference 2) and is herein referred to as the 'Stage 1 report'.

There were 8 additional sites subsequently identified as part of 'Stage 2' of the Planning Proposal that is currently being drafted. The NSW Department of Planning, Housing and Infrastructure (DPHI) engaged WMAwater to prepare a FIRA for the Stage 2 sites. The Stage 2 sites are assessed in this report, which serves as an addendum to the Stage 1 report. This report only focusses on the 8 additional sites, with a FIRA undertaken that is consistent with the FIRA undertaken for the Stage 1 sites. Further background information can be found in the Stage 1 report, and this addendum should be read in conjunction with the Stage 1 report.

The FIRA was undertaken in accordance with the 2023 NSW Flood Risk Management Manual (Reference 3). Utilising existing flood information, the flood affectation of each of the sites was reviewed and the proposed changes under the Planning Proposal were assessed. WMAwater has reviewed and summarised the flood constraints with a view to providing sufficient information for the Planning Proposal to proceed to Gateway Determination.

This review does not include detailed flood modelling of potential development or building layouts and does not constitute a FIRA for specific development sites. Future development proposals for flood prone sites will need to be accompanied by site specific flood assessments demonstrating compliance with Council's flood-related development controls. Site-specific FIRAs should utilise Council's endorsed flood models (Section 3.2) and consider guidelines and policies including Australian Rainfall and Runoff (ARR) 2019 version 4.2 (Section 2.3.1), the Shelter-in-place Guideline (Section 2.3.3) and the Climate Change and Natural Hazards State Environmental Planning Policy (SEPP) (Section 2.3.4).

1.2. Stage 2 Sites

The Stage 2 sites subject to this FIRA are located within the Ultimo and Pyrmont study area, located in the CoS Local Government Area (LGA). The Stage 2 Planning Proposal relates to 8 large lots, as shown in Figure 2.1. For the purpose of showing flood model results in detail, several areas have been identified for which detailed flood results are provided, covering multiple sites. These areas are indicated in Figure 2.2.

2. BACKGROUND

2.1. Planning Proposal Description

The Stage 2 Planning Proposal (yet to be drafted) seeks to amend controls at the sites with the changes generally including:

- Increase zoning, floor space ratio, height of building and height in storeys.
- Increase in required Deep soils to approximately 10%-25%

At some sites this would require the possible change in zoning, commercial to Mixed Use, or commercial to E2.

In addition to the above, changes are proposed to protect sun access to Wentworth Park, ensure affordable housing contributions and other minor amendments. The implementation of these changes would be through proposed amendments to the Sydney LEP 2012 (Reference 4), in addition to amendments to the Sydney Development Control Plan (DCP) 2012 (Reference 5) for the specific sites within the Planning Proposal.

2.2. Flood-related Development Controls

Flood-related development controls are based on the following high-level principles:

1. **Protection of Development**
    - New development is to be adequately protected from flooding through appropriate minimum floor levels (Flood Planning Levels), flood-compatible materials, and structural design capable of withstanding flood forces.
2. **No Worsening of Flood Impacts**
    - Development must not exacerbate flood behaviour on surrounding land, including through obstruction of flow paths, loss of flood storage, or adverse changes to depths, velocities, or flood duration.
3. **Risk to Life Management**
    - Residual flood risk is to be appropriately managed by considering occupant safety, access and egress conditions, and whether shelter-in-place or evacuation is appropriate during flood events.

These principles underpin the flood controls applied to the Planning Proposal and are implemented through the CoS Interim Floodplain Management Policy (Reference 6). Detailed statutory interpretation and policy alignment are provided in the Stage 1 report.

2.3. New Information Available

Since the finalisation of the Stage 1 report, there has been a significant update to ARR and the Darling Harbour and City Area (DHCA) Flood Study. These are outlined in the following sections.

2.3.1. Australian Rainfall and Runoff Version 4.2

ARR guidelines were recently updated in August 2024 (ARR 2019 version 4.2, Reference 7). In

late 2022 the Australian Government Department of Climate Change, Energy, the Environment and Water in partnership with Engineers Australia commenced an 18 month project to update the climate change considerations chapter of the ARR guidelines (Book 1, Chapter 6) to incorporate the most recent and relevant climate science and projections. The project involved the undertaking of a rigorous literature review of hydroclimatology under climate change relevant to design flood estimation, which was peer reviewed and published in a leading international journal. The findings were used to draft practical flood guidance which was finalised after an extensive process of review and feedback by industry. The project report was adapted to replace Book 1 Chapter 6. The chapter commences with the following:

> *There is unequivocal evidence that greenhouse gas emissions have caused global warming. The Intergovernmental Panel on Climate Change's sixth assessment report concluded that global surface temperatures have significantly increased above pre-industrial levels, with significant further warming expected (IPCC, 2023). This warming is causing an increase in many drivers of flood risk, including an intensification of extreme rainfall events and the elevation of average and extreme sea levels (IPCC, 2023).*
>
> *Traditionally, design flood estimation has assumed that historical observations are representative of current and future conditions. This is no longer the case. Records on historical flooding or flood drivers (such as extreme rainfall or sea level) can no longer be assumed to provide a direct analogue of current or future flood risk. To account for significant observed and projected changes to the drivers of flooding, it is necessary to account for the non-stationarity of flooding in the assessment of current and future flood risks.*

The chapter then provides updated advice which can be summarised as follows:

- It is necessary to account for the non-stationarity of flooding in the assessment of current and future flood risks.
- Recommendation to adjust 2016 Intensity Frequency Duration (IFD) curves to present (i.e. current climate) conditions and future climate conditions.
- Provision of guidance for climate change factors across the full range of design storm events considered in ARR up to and including the Probable Maximum Precipitation (PMP). These factors are dependent on the adopted planning horizon (point in time for which flood risk is to be estimated) and Shared Socio-Economic Pathway (SSP, possible future development scenarios that account for various social, political, technological and economic factors which drive fossil fuel use and greenhouse gas emissions) and Representative Concentration Pathway (RCP, future emissions scenarios presented as the level of radiative forcing that is expected to result from greenhouse gas concentrations by the year 2100). This provides an indicative temperature increase, for which an increase in rainfall intensity can be estimated for a range of storm durations.
- Consideration of additional factors that influence design flood estimates; that is, changes in rainfall losses, temporal patterns and sea level rise.

2.3.2. Darling Harbour and City Area Flood Study Update

The Stage 2 sites located within the Darling Harbour catchment have been reviewed with reference to the DHCA Flood Study Update (Reference 8). This flood study was submitted to CoS in draft form in March 2026 for review and, while not yet formally adopted, represents the most recent and comprehensive flood assessment for the catchment. The study reviewed existing flood mapping and updated the hydraulic models using 2020 Light Detection and Ranging (LiDAR) data, incorporated recent development, and revised hydrological inputs to align with ARR version 4.2 guidelines.

The updated modelling framework adopts a conceptual rainfall–runoff approach using the DRAINS hydrologic model (calculates rainfall runoff) in combination with the TUFLOW hydraulic computer model (calculated flood parameters such as flood depths and extents), replacing the previous direct rainfall methodology used in earlier studies. The base TUFLOW model was developed from the existing model, with relevant features updated to reflect known real-world changes. Recent large-scale developments within the Planning Proposal study area are focussed around Darling Harbour, including the International Convention Centre and Darling Square. Most of the underground pit and pipe network remains unchanged from the 2016 Floodplain Risk Management Study and Plan (FRMS&P) model (Reference 9); however, updates were made to blockage parameters in the 2026 model. There is a small overlap with the existing Blackwattle Bay (BW) model (Reference 10), east of the light rail line that runs through the Bank Street station south to Pyrmont Bridge Road. No site from Stage 2 is directly within this area, however it is noted that the DHCA model would represent the most accurate flood behaviour in this area.

Adoption of ARR 4.2 also included explicit consideration of climate change through the application of SSP scenarios. Design flood modelling was updated to reflect current conditions, with the 2030 SSP3–7.0 climate scenario adopted for the study. It is noted that there is no material difference in projected temperature increases between the 2030 SSP3–7.0, SSP2–4.5 and SSP1-2.6 scenarios. The study includes a detailed sensitivity analysis of future climate conditions, comparing SSP3-7.0 2030 to SSP3-7.0 2050 and 2100, unlike earlier studies which commonly used the 0.5% Annual Exceedance Probability (AEP) and 0.2% AEP flood events as proxies for climate change impacts for the 1% AEP event. Drainage blockage assumptions were also updated as part of the revised modelling. Previous modelling adopted blockage parameters of 50% on-grade inlet blockage and 100% sag inlet blockage, applied to events greater than the 5-year Average Recurrence Interval (ARI). The updated design assumptions adopt 20% on-grade blockage and 50% sag blockage, reflecting current best-practice guidance.

The Stage 2 assessment adopts the existing flood tagging established under the Stage 1 FIRA as this was not yet produced in the March 2026 draft DHCA report. The finalised DHCA Flood Study Update will likely result in updates to flood tagging and notations on Section 10.7 planning certificates. When finalised and adopted, the updated flood tagging should inform development applications (DA's).

2.3.3. Shelter-in-place Guideline for Flash Flooding

The Shelter-in-Place guideline for flash flooding (Reference 11) was released in January 2025 and aims to assist consent authorities to undertake site-specific, risk-based assessment to assess if shelter-in-place is a suitable emergency management strategy for development proposed in flash flood environments. The guideline suggests that shelter-in-place may be suitable where flooding occurs "*within 6 hours from the commencement of causative rain and the duration of shelter-in-place due to isolation by floodwaters is less than 12 hours*." (Reference 11, p. 5). Given the nature of flooding in the Pyrmont and Ultimo area, this suggests that all sites in this area are suitable for shelter-in-place based on the timing of flooding in the catchment. It is recognised that there are numerous other requirements that need to also be met for shelter-in-place to be viable, however, given the potential for flooding to occur rapidly, the relatively short duration of inundation and the availability of flood-free areas (including upper levels), shelter-in-place is likely to be the most suitable response to flooding in the catchments. This reduces the risk of people entering floodwater (on foot or in a vehicle) and potentially coming to harm.

However, it is recognised that even if a flood refuge is provided in an area of flash flooding, there may be situations in which access is still required during a flood event for additional emergencies (requiring medical assistance or the fire brigade for example). As such, this FIRA assesses access to and from the site in events up to and including the Probable Maximum Flood (PMF).

2.3.4. Climate Change & Natural Hazards SEPP

The DPHI has released a draft Climate Change and Natural Hazards SEPP for public exhibition in February 2026. The proposed policy introduces a clear, consistent framework for tackling current and future risks, including climate change and natural hazards (coastal hazards, flooding, bushfires and urban heat), and rebuilding after natural disasters. The policy would replace the existing Resilience and Hazards SEPP, with the aim of providing a more consistent and streamlined approach to managing climate and natural hazard risks under the *Environmental Planning and Assessment Act 1979*.

The draft SEPP introduced Draft Climate Change Scenario Guidelines (February 2026, Reference 12). The guidance emphasises that consideration of climate change in planning decisions should be proportionate to the scale, context and lifetime of the decision. Rezoning and strategic planning decisions operate at a broader scale than site specific development assessments and can influence land use outcomes for many decades. As such, these decisions warrant consideration against higher emissions scenarios and longer modelling timeframes than individual developments. The intent is to ensure that future climate risks are appropriately understood and managed at a strategic level, without applying disproportionate requirements intended for critical infrastructure or sensitive land uses.

Context further influences how climate risk should be assessed, particularly the consequences of failure or exposure. Higher intensity development, increased population exposure, or uses involving vulnerable occupants or critical services justify more conservative climate assumptions.

The guidance assigns rezoning and major development decisions a 50–100-year decision lifetime,

and strategic planning a 100+ year reflecting the extended period over which zoning controls typically apply. However, it is recognised that timeframes extending beyond 100 years exceed the reliability of current climate guidance and socio-economic and emissions pathways, particularly in relation to temperature rise and derived rainfall intensity assumptions. Beyond this horizon, uncertainty increases substantially and projections move outside policy aligned climate targets. Accordingly, climate risk assessment for rezoning should focus on robust mid to long term scenarios (up to 100 years), with longer term risks considered qualitatively in terms of residual risk awareness and future adaptability rather than fixed design outcomes.

The guideline identifies a minimum requirement of considering the SSP2-4.5 scenario for local development over a timeframe of 50 years, with SSP3-7.0 scenario for major development over a timeframe of 50 and 100 years. It is noted that the SSP3-7.0 scenario was adopted in the draft DHCA study (Reference 8).

3. FLOOD CONSTRAINTS REVIEW

Detailed flood constraints review can be found in Section 3 of the Stage 1 assessment. The following provides a summary of points and notes any changes resulting from the use of the DHCA model.

3.1. Overview of Flood Behaviour and Risks

Flooding within the Planning Proposal area is dominated by urban overland flow generated when rainfall exceeds the capacity of the existing pit and pipe drainage networks. Drainage systems typically surcharge in relatively frequent events, resulting in shallow, fast moving, short duration "flash flooding" along historical drainage lines, roads, and low points. Due to the established urban form, flood risk is primarily managed through development controls rather than large scale infrastructure upgrades. Further detail on flood processes is provided in the Stage 1 report.

3.2. Adopted Flood Modelling

This Stage 2 assessment adopts the most recent CoS endorsed flood models for the BW catchment, consistent with Stage 1 and the updated DHCA model as noted in Section 2.3.2.

No amendments were made to the models, and no redevelopment scenarios were tested in relation to the Stage 1 or Stage 2 sites. Flood depth, level and hazard outputs for relevant design events (including 10% AEP, 1% AEP and PMF) are used to inform site-based planning considerations only. Refer to Stage 1 for detailed modelling assumptions and limitations. Flood behaviour is presented in Figure 2.3 to Figure 2.17 for the various areas shown in Figure 2.2.

3.3. Hydraulic Hazard Classification

Hydraulic hazard classifications are based on flood depth and velocity relationships consistent with contemporary national guidance and as outlined in the Stage 1 report. For the DHCA and BW catchment, hazard outputs were adopted directly from the respective latest flood studies. The results are used at a strategic level to inform land use compatibility rather than detailed building design.

3.4. Flood Function

Flood function mapping from the adopted catchment studies is used to identify areas sensitive to obstruction or filling. As documented in Stage 1, no sites are affected by 1% AEP floodways, and mapped flood storage areas are generally located adjacent to, rather than within, nominated sites (see Figure 2.18). Given the highly urbanised context and existing site disturbance, redevelopment is not expected to result in adverse off-site flood impacts, subject to future site-specific FIRA's where required. The recent DHCA Flood Study used the same flood function criteria as noted in the Stage 1 report.

3.5. Emergency Management and Risk to Life

Flooding in the study area is characterised by rapid onset flash flooding with limited warning time. As outlined in the Stage 1 report, emergency response in such catchments largely relies on building resilience and passive safety, rather than evacuation during events. Accordingly, risk to life is best managed through appropriate floor levels, avoidance of hazardous uses at lower levels, and discouraging pedestrian and vehicle exposure to floodwaters.

3.6. Extreme Flood Events and the Probable Maximum Flood

Consistent with Stage 1 and Council policy, consideration has been given to residual risk associated with events larger than the 1% AEP, including the PMF. While the PMF is extremely unlikely, it is used to inform planning decisions for vulnerable or critical land uses where tolerance to risk is low. PMF depth and hazard mapping is included to support this strategic assessment.

3.7. Flood Planning Level

Flood Planning Levels (FPLs) applied in this assessment are based on the CoS Interim Floodplain Management Policy (Reference 6), consistent with the Stage 1 report. Indicative flood levels have been identified for each site to assess redevelopment feasibility only and must not be relied upon for detailed design. The levels are indicative only and may vary across the lot or across different road frontages. Final FPLs will require confirmation through site specific FIRA's at the DA stage.

3.7.1. Flood Tagging

Flood tagging information adopted in this assessment reflects the CoS lot-based flood tagging review process (Reference 13), as outlined in the Stage 1 report. Tagging is used here solely to assist in understanding whether sites are subject to flood related planning controls under Clause 7A (now Clause 9) of Schedule 4 of Environmental Planning and Assessment Regulation 2000 (the Regulation), contained in the Environmental Planning and Assessment Amendment (Flood Planning) Regulation 2021 (the Amendment). The presence or absence of a flood tag does not replace the need for detailed FIRA for future development.

The Stage 2 assessment does not use updated tagging based on DHCA results, instead using the existing tagging available for sites in this catchment.

4. PLANNING PROPOSAL SITE ASSESSMENT

For each site, an assessment of the flood risk was undertaken. The following information is provided for each site:

- Planning Proposal changes
- Flood Behaviour
- Flood Planning Levels
- Impact Considerations
- Hazard Considerations

The last three points address those floodplain management principles identified in Section 2.2.

4.1. 26-52 Mount Street

The site sits on a local rise, plateauing above a sharp 14 m drop to the south. The lot has two frontages, with the primary frontage being Mount Street (Photo 1). There is a small frontage 73-83 Harris Street to the east (Photo 2). There is an approximate 10 m elevation drop from Mount Street to Harris Street. The site is within the DHCA model. Flood depths, level contours and hazard categorisation are shown in Area A on Figure 2.3 to Figure 2.7.



Photo 1: Southeast facing photo of no. 26-52 Mount Street. *Google Streetview*



Photo 2: Northwest facing photo of no. 79-83 Harris Street frontage (the site). *Google Streetview*

4.1.1. Site Characteristics and Flood Behaviour

26-52 Mount Street is indicated to be free of any flood risk, as water flows away from the site on all sides. Flood modelling in Harris Street indicates that floodwaters remain in the gutter on the opposite (western) side of the street in both the 1% AEP and PMF events. At the southern end of Mount Street the water builds in the gutter, when it tops it flows south and off the high cliff face. The site is considered to be 'Local Drainage'. The flood tagging status of the lot is shown in Table 1. Indicative site flood characteristics are shown in Table 2 and Table 3.

Table 1: Flood tagging for 26-52 Mount Street

Clause 9(1)	Clause 9(2)
No	Yes

Table 2: Indicative site flood characteristics for 26-52 Mount Street, Mount Street frontage

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard[1]	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local drainage	28.4	28.76	H5	H6

1. High hazard assumed due to shallow, high velocity flow falling off small cliff face.

Table 3: Indicative site flood characteristics for 26-52 Mount Street, Harris Street frontage

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local drainage	20.05	20.08	H1	H1

4.1.2. Flood Planning Levels

Minimum FFL requirements for Local Drainage are:

- Non-sensitive use – 1% AEP flood level;
- Sensitive use – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Basement parking – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Enclosed parking – 1% AEP flood level;
- Open parking – 5% AEP flood level.

Meeting minimum FFL requirements is considered reasonable and practicable for construction based on the indicative flood levels and existing site topography.

4.1.3. Impact Considerations

Local stormwater conveyance may have nominal impact if stormwater outlet locations are modified, however this would be managed through adequate stormwater design. No flood impacts are expected from development of the site.

4.1.4. Hazard Consideration

Access is available to the lot for vehicles and pedestrians in both the 1% AEP and PMF events. The H1 hazard rating is only in the road carriageway on Harris Street. Due to the low flow depth in the street, there are no access constraints.

4.2. 1-7 Henry Avenue and 336-374 Jones Street

The site is bounded by Jones Street (Photo 3), Henry Avenue (Photo 4), Fig Lane and Quarry Lane. Jones Street slopes towards the north and south, with the overall natural landform falling west, towards Wattle Street. The site is within the BW catchment. Flood depths, level contours and hazard categorisation are shown in Area B on Figure 2.8 to Figure 2.12.



Photo 3: Southeast facing photo over Jones Street and Fig Lane. *Google Streetview*



Photo 4: Southwest facing photo over Henry Avenue and Fig Lane. *Google Streetview*

4.2.1. Site Characteristics and Flood Behaviour

The natural landform falls west from Henry Avenue towards Jones Street and onto Wattle Street. Local stormwater would flow to the north and south away from the site along Henry Street and Jones Street, and west along Fig Lane and Quarry Lane past the site (to Jones Street). There is

minimal overland flood risk at the site. Some of the most significant flooding in the catchment occurs one block to the west on Wattle Street, however Jones Street is approximately 18 m above the flooding on Wattle Street. Based on the BW model results; accumulation of floodwater commences in the gutter at the intersection of Jones Street and Quarry Steet approximately 50 m to the south from the site. The site itself is not modelled to be affected by any overland flood risk and is considered to be 'outside the floodplain'. 1-7 Henry Avenue and 336-374 Jones Street are considered a single parcel and the flood tagging status of the lot is shown in Table 4.

Table 4: Flood tagging for 1-7 Henry Avenue and 336-374 Jones Street

Clause 9(1)	Clause 9(2)
No	No

4.2.2. Flood Planning Levels

Minimum FFL requirements for 'outside the floodplain':

- Habitable floors – 0.3 m above surrounding ground
- Basement parking – 0.3 m above surrounding ground

The site is 'outside the floodplain' and as such flood related FFLs are not applicable for commercial sites (except basement level parking or any habitable floors). It is advisable in such conditions that a minimum of 0.3 m freeboard be constructed above the adjacent landform, usually taken from the gutter invert. Meeting minimum FFL requirements is considered reasonable and practicable for construction based on the indicative flood levels and existing site topography.

4.2.3. Impact Considerations

The existing building utilises much of the lots and the proposed changes would require a minimum of 15% deep soil landscaping (including a new proposed park), adding flood storage and infiltration capacity. As such, redevelopment of the site could provide a net positive impact for the local flood conditions.

4.2.4. Hazard Consideration

The site is above all modelled flood hazard with access available to the immediate area available up to and including the PMF.

4.3. 463-467 Harris Street

The site is bounded by Harris Street, Quarry Street and Kirk Street, with a frontage to each of these streets (Photo 5). The site is within the DHCA model. Flood depths, level contours and hazard categorisation are shown in Area B on Figure 2.8 to Figure 2.12.



Photo 5: South facing photo over 463-467 Harris Street. *Google Streetview*

4.3.1. Site Characteristics and Flood Behaviour

There is minimal modelled inundation surrounding the building in the 1% AEP and PMF events. There are minor flows in the Quarry Street gutter, although the flows do not exceed 0.15 m in the gutter on the southern side of Quarry Street (adjacent to the site), in events up to and including the PMF. The site is considered to be 'outside the floodplain'. The flood tagging status of the lot is shown in Table 5.

Table 5: Flood tagging for 463-467 Harris Street

Clause 9(1)	Clause 9(2)
No	No

4.3.2. Flood Planning Levels

Minimum FFL requirements for 'outside the floodplain':

- Habitable floors – 0.3 m above surrounding ground
- Basement parking – 0.3 m above surrounding ground

The site is 'outside the floodplain' and as such flood related FFLs are not applicable for commercial sites (except basement level parking or any habitable floors). It is advisable in such conditions that a minimum of 0.3 m freeboard be constructed above the adjacent landform, usually taken from the gutter invert. Meeting minimum FFL requirements is considered reasonable and practicable for construction based on the indicative flood levels and existing site topography.

4.3.3. Impact Considerations

The existing structures utilises 100% of the respective lots and the Planning Proposal requires a minimum of 15% deep soil landscaping, adding flood storage and infiltration capacity. As such, redevelopment of the site could provide a net positive impact for the local flood conditions.

4.3.4. Hazard Consideration

Access is available to the building in both the 1% AEP and PMF events on multiple frontages. There is very low flow depth in the street and there are no access constraints for people or vehicles.

4.4. 344 Bulwara Road

The site is bounded by Bulwara Road (Photo 6), Hacket Street (Photo 7) and Macarthur Street at the northern end of the lot. The site is within the DHCA model. Flood depths, level contours and hazard categorisation are shown in Area C on Figure 2.13 to Figure 2.17.



Photo 6: North facing photo over Bulwara Avenue. *Google Streetview*



Photo 7: North facing photo over Hackett Street. *Google Streetview*

4.4.1. Site Characteristics and Flood Behaviour

There is minimal modelled flooding surrounding the Bulwara Road site. Runoff on Bulwara Road flows south and accumulates within the eastern gutter (adjacent to the site). The model indicates that there are two minor local sag points on Bulwara Road where flooding occurs adjacent to the site. The first at a loading zone on Bulwara Road (Photo 8), the second approximately 20 m downstream (south) of that location. At these locations water will build up until it continues to spill down the street or over the gutter. The modelling indicates that the over gutter flow is minor. The largest flood depths at these sag points are approximately 0.2 m in the 1% AEP and 0.3 m in the PMF. The imagery and LiDAR topography suggest that once the water builds up at the sag, it should follow the gutter down the street, however if the rise is rapid, there is a chance the gutter will overtop. Currently, there are ventilation openings to the basement car park in the vicinity of the sag points if water was to overtop the footpath (Photo 8).



Photo 8: Loading zone sag point on Bulwara Road. *Google Streetview*

On Hackett Street the modelling indicates that water accumulates into a significant flow approximately at the rear of 625-629 Harris Street, with depths of 0.15 m in the 1%AEP and above 0.2 m in the PMF event, although this is primarily in the eastern gutter on the opposite side of the road to the site. The existing garage entrance location is located outside of the modelled flood risk (modelled to commence at approximately 625 Harris Street), with additional protection from a crest level above the street level into the site (Photo 9).



Photo 9: Bulwara Road garage entrance, with flow modelled to occur on the left side of the image. *Google Streetview*

There is only shallow water over Macarthur Street in the 1% AEP and PMF event. The flood tagging status for 344 Bulwara Road is shown in Table 6. Indicative site flood characteristics are shown in Table 7 and Table 8.

Table 6: Flood tagging for 344 Bulwara Road

Clause 9(1)	Clause 9(2)
No	No

Table 7: Indicative site flood characteristics for 344 Bulwara Road, Bulwara Road frontage

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local drainage	15.03	15.11	H1	H1

Note: at the location of the Loading zone sag point

Table 8: Indicative site flood characteristics for 344 Bulwara Road, Hackett Street frontage

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local drainage	12.19	12.41	H1	H2

4.4.2. Flood Planning Levels

Minimum FFL requirements for Local Drainage are:

- Non-sensitive use – 1% AEP flood level;
- Sensitive use – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Basement parking – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);

- Enclosed parking – 1% AEP flood level;
- Open parking – 5% AEP flood level.

Meeting minimum FFL requirements is considered reasonable and practicable for construction based on the indicative flood levels and existing site topography. The northern (upper) sections of Bulwara Road and Hacket Street are above the flood risk, therefore access to a below ground car park is achievable above the 1% AEP +0.5 m or the PMF if placed in the upper portions of the lot, noting that the existing car park entrance is assumed close to, if not already compliant.

4.4.3. Impact Considerations

The existing structure covers the majority of the lot, with an estimated 3% of the lot being pervious. The Planning Proposal would require a minimum of 25% deep soil landscaping, adding flood storage and infiltration capacity. As such, redevelopment of the site could provide a net positive impact for the local flood conditions.

4.4.4. Hazard Consideration

Access is available to the building in both the 1% AEP and PMF events, for pedestrians and vehicles, with the flood hazard not exceeding H1 on any frontage adjacent to the building.

4.5. 100-130 Harris Street

The site is bound by Harris Street to the west (Photo 10) and Pyrmont Street (Photo 11) to the east. There is approximately a 12 m difference in elevation between the streets, with Pyrmont Street being the lower of the two. The building under consideration is located at the southern end of the lot. The base of the building has been constructed and occupied; the proposal is for an increase to the height level and number of storeys. The site is within the DHCA model. The lot as a whole was assessed in Stage 1, although new commentary had been provided based on the updated DHCA Flood Study (Reference 8) and changes to planning controls. Flood depths, level contours and hazard categorisation are shown in Area A on Figure 2.3 to Figure 2.7.



Photo 10: East facing over 100 Harris Street frontage. *Google Streetview*



Photo 11: North facing over Pyrmont Street access to no. 100 Harris Street garage in relation to Pyrmont Street sag point. *Google Streetview*

4.5.1. Site Characteristics and Flood Behaviour

Flooding occurs on both Harris Street and Pyrmont Street. Flooding on Harris Street occurs when water accumulates in the gutter and flows south towards Union Street. In front of the site the water in the 1% AEP event is modelled to most likely still be in the gutter at approximately 0.15 m depth.

In the PMF event, however, the water spills out of the gutter and flows past the site with a depth of approximately 0.25 m.

There is a trapped sag point on Pyrmont Street, adjacent to the site where runoff ponds in events greater than the 5% AEP, when the capacity of the stormwater system (with design blockage of pits considered) is exceeded. The sag point is drained by a 2.25 m (W) x 1.9 m (H) box culvert that conveys flows to the north, discharging to Pyrmont Bay. The flood depths at the Pyrmont Street sag reach 0.3 m and 2.6 m in the 1% AEP and PMF events, respectively. There is no overland relief point for inundation and as such, ponding increases (subject to the performance of the drainage network) until overflows commence down Jones Bay Road (to the north), followed closely by overflows down Union Street (to the south). Flood depths need to exceed approximately 4 m at the sag point for these overflow points to be activated.

The flood tagging status of the lot is shown in Table 9 and flood characteristics for the site are shown in Table 10 and Table 11. The site is sensitive to changes in rainfall intensity (climate change) and drainage conditions (blockage). The site is not sensitive to sea level rise due to climate change. When considering blockage to the pits on Pyrmont Street there is an expected increase to the flood depth by approximately 0.7 m and 1.7 m in the 1% AEP event for increased blockage and full blockage, respectively. See Sections 5.1 and 5.2 for discussion on blockage and climate change sensitivity, respectively.

Table 9: Flood tagging for 100-130 Harris Street

Clause 9(1)	Clause 9(2)
Yes	Yes

Table 10: Indicative site flood characteristics for 100-130 Harris Street (Harris Street frontage)

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Mainstream Flooding	19.6-17.8	19.8-17.9	H1	H5

Table 11: Indicative site flood characteristics for 100-130 Harris Street (Pyrmont Street frontage)

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Mainstream Flooding	6.5	8.9	H1	H5

4.5.2. Flood Planning Levels

Minimum FFL requirements for Mainstream Flooding are:

- Non-sensitive use – 1% AEP flood level;
- Sensitive use – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Basement parking – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Enclosed parking (above ground) – 1% AEP flood level;
- Open parking – 5% AEP flood level.

The Planning Proposal would result in no changes to the ground floor or car park entrance, since there would only be additional storeys added above the existing development. It is assumed that

the relatively new construction is complaint with the contemporary FPL requirements.

4.5.3. Impact Considerations

Proposed zoning changes to have nil impact on surrounding flood levels, as proposed changes do not alter the existing building footprint.

4.5.4. Hazard Consideration

A hotel development would significantly increase the occupancy rates of the site at any given time. Evacuation up until and including the 1% AEP event is reasonably feasible by foot on both Pyrmont Street and Harris Street. At a point above the 1% AEP event and in circumstances where the inlet pits on Pyrmont Street are blocked, Pyrmont Street becomes unsafe to evacuate to, with the area categorised as H5 in the PMF due to the depth of water expected. Harris Street is mainly categorised as H1 in the PMF event, although the gutter line is categorised as H5. Access to the site via Harris Street is possible even in the PMF event, particularly for pedestrians, although if a large number of people were to evacuate to Harris Street in a greater than 1% AEP event, it may be difficult to ensure all people refrain from entering the street where the rapid flows in the gutter may be unsafe.

4.6. 56 Harris Street

The site is primarily bounded by John Street to the south and Harris Street to the west. The rear (north) of the site overlooks the light rail line, which is in a deep cutting. The site is within the DHCA model. Flood depths, level contours and hazard categorisation are shown in Area A on Figure 2.3 to Figure 2.7.



Photo 12: Northeast facing photo over the 56 Harris Street. Harris Street (Left) and John Street (right). *Google Streetview*

4.6.1. Site Characteristics and Flood Behaviour

The highest elevation for the area is at the junction of John Street and Cadigal Avenue, approximately 150 m to the west of the site. From this point the surface water flows in the local gutter network to the east and west along John Street, and north along Cadigal Avenue. Being so high in the catchment, the flows along John Street to the east do not exceed 0.1 m in the gutter, even in the PMF event. These flows are directed onto Harris Street at the location of the site (Photo 12) and continue to the north. The light rail line is inundated in the PMF, although it is a significant elevation drop, from the site to the line (over 16 m). The area is considered to be 'local drainage'. The flood tagging status of the lot is shown in Table 12. Indicative site flood characteristics are shown in Table 13.

Table 12: Flood tagging for 56 Harris Street

Clause 9(1)	Clause 9(2)
No	Yes

Table 13: Indicative site flood characteristics for 56 Harris Street

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local drainage	-	21.2	-	H5

4.6.2. Flood Planning Levels

Minimum FFL requirements for Local Drainage are:

- Non-sensitive use – 1% AEP flood level;
- Sensitive use – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Basement parking – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Enclosed parking – 1% AEP flood level;
- Open parking – 5% AEP flood level.

Meeting minimum FFL requirements is considered reasonable and practicable for construction based on the indicative flood levels and existing site topography.

4.6.3. Impact Considerations

The existing structures utilises a large percentage of the lot and the Planning Proposal requires a minimum of 15% deep soil landscaping, adding flood storage and infiltration capacity. As such, redevelopment of the site could provide a net positive impact for the local flood conditions.

4.6.4. Hazard Consideration

The immediate footpath around the site is located outside of H1 hazard categorisation for the 1% AEP and PMF events. In the PMF event, there are locations of H5 categorisation in gutters leading away from the site. Although the immediate area is safe for evacuation access to and from the site, wider access from the wider suburb may be temporarily restricted. In the PMF event, there is

H5 flow in the gutter coming from John Street, on the east of the road on Harris Street and across the road carriageway on Pyrmont Street to the southeast of the site.

4.7. 1-19 Allen Street and 313-369 Harris Street

The two separate parcels (together considered to be the site) are bounded by Bulwara Road to the west, Harris Street to the east (see Photo 13), Allen Street to the north and Fig Street to the south. There is a public walkway (Ada Place walkway) between the lots and the elevated Western Distributor runs along the southern corner of the site (see Photo 14). The site is within the DHCA model. Flood depths, level contours and hazard categorisation are shown in Area B on Figure 2.8 to Figure 2.12.



Photo 13: Northwest facing photo over Harris Street. *Google Streetview*

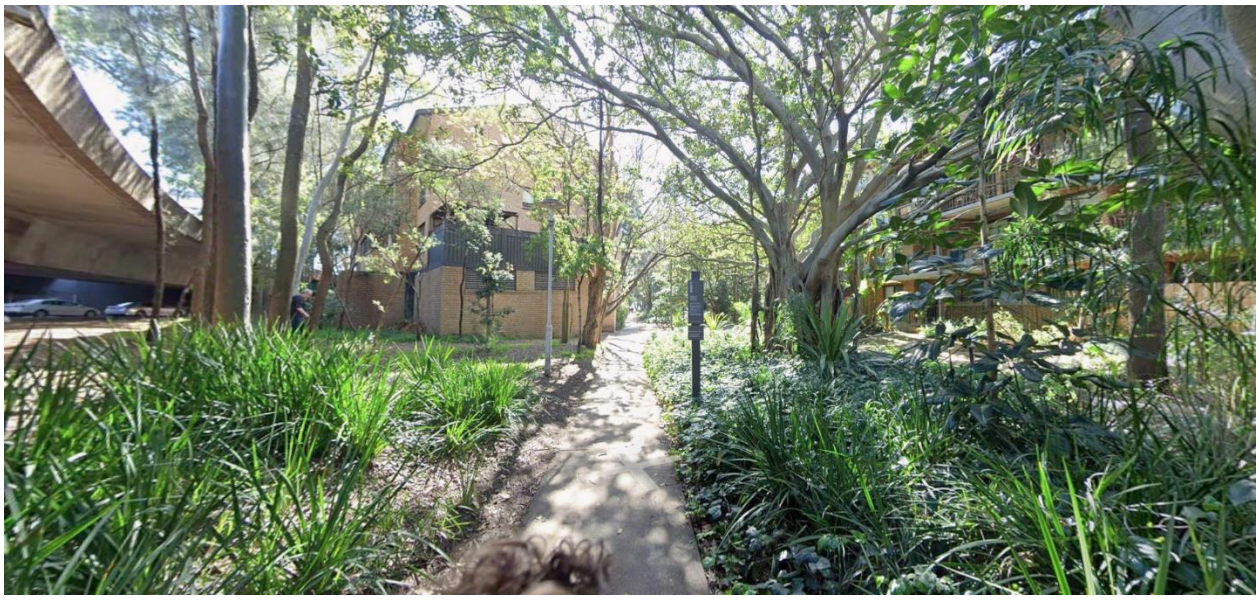


Photo 14: Ada Place walkway between 1-19 Allen Street (left) and 313-369 Harris Street (right), looking north from Fig Street, with the Western Distributor overhead. *Google Streetview*

4.7.1. Site Characteristics and Flood Behaviour

Bulwara Road and the Ada Place walkway slope north. There is no flooding on Bulwara Road and only minor flows within the walkway. Flood depths at the northern end of the walkway are less than 0.3 m in the 1% AEP event and 0.4 m in the PMF event. The modelling indicates that this ponding is adjacent to structures on the northeast of 1-19 Allen Street (Photo 15). The water builds up due to assumed subtle undulations in the LiDAR and then spills onto Allen Street. There is no suggestion that this is a significant sag or trapped point and water is free to flow through the area in all events. Due to the relatively low depths and the absence of a trapped low point, 1-19 Allen Street is considered to be a ‘local drainage’ classification.



Photo 15: Northern end of walkway where ponding occurs at the rear of no. 1-19 Allen Street. North facing. *Google Streetview.*

Flows from the Ada Place walkway discharge onto Allen Street and continue to the east to the intersection with Harris Street. From this location, the majority of flow enters Harris Street and ponds at a trapped sag point mid-way between Harris Street and Fig Street, adjacent to 313-369 Harris Street. Ponding occurs in events greater than the 20% AEP, when the capacity of the stormwater (with design blockage of pits considered) is exceeded. The sag point is drained by a 375 mm diameter pipe that conveys flows from the western side of the street to the north, and a 525 mm diameter pipe that conveys flows from the eastern side of the street to the south.

The flood depths at the Harris Street sag reach 0.5 m and over 1 m in the 1% AEP and PMF events, respectively. The modelling indicates that the 1% AEP event does not reach the footpath in front of the building on Harris Street (as it is more than 0.5 m above the sag point, see Photo 16). The footpath slopes up to the existing building such that floor levels are approximately 1 m above the sag point, however, the PMF is large enough to reach the building and may cause above floor inundation of approximately 0.2 m depth. There is no overland relief point for inundation and as such, ponding increases (subject to the performance of the drainage network) until overflows commence down Allen Street (to the north). Flood depths need to exceed approximately 0.7 m at the sag point for these overflow points to be activated. The proximity to this trapped low point results in 313-369 Harris Street being classified as mainstream flooding.



Photo 16: No. 313-369 Harris Street in relation to the Harris Street sag point. South facing. *Google Streetview*

The site is sensitive to changes in rainfall intensity (climate change) and drainage conditions (blockage). Noting that the site is not sensitive to sea level rise due to climate change. When considering blockage to the pits on Harris Street there is an expected increase to the flood depth by approximately 0.08 m and 0.47 m in the 1% AEP event for increased blockage and full blockage, respectively. Refer Sections 5.1 and 5.2 for discussion on blockage and climate change sensitivity, respectively.

The flood tagging status for 1-19 Allen Street and 313-369 Harris Street is shown in Table 14 and Table 15 with indicative site characteristics shown in Table 16 and Table 17.

Table 14: Flood tagging for 1-19 Allen Street

Clause 9(1)	Clause 9(2)
No	No

Table 15: Flood tagging for 313-369 Harris Street

Clause 9(1)	Clause 9(2)
Yes	Yes

Table 16: Indicative site flood characteristics for 1-19 Allen Street

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Local Drainage	17.24	17.41	H1	H2

Note: taken at the northeast lot corner

Table 17: Indicative site flood characteristics for 313-369 Harris Street

Model	Type of Flooding	Peak Flood Level (mAHD)		Hazard	
		1% AEP	PMF	1% AEP	PMF
DHCA	Mainstream Flooding	14.71	15.45	H2 - H3	H3 - H4

Note: taken at the sag point location on Harris Street. Indicative site characteristics for 1-19 Allen Street (Table 16) relevant to 313-369 Harris Street when considering Ada Place walkway frontage.

4.7.2. Flood Planning Levels

Minimum FFL requirements for Mainstream Flooding and Local Drainage:

- Non-sensitive use – 1% AEP flood level;
- Sensitive use – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Basement parking – 1% AEP flood level + 0.5 m or the PMF (whichever is the higher);
- Enclosed parking (above ground) – 1% AEP flood level;
- Open parking – 5% AEP flood level,

The roads/pathways are tiered between the buildings, meaning that the primary flood risk to 313-369 Harris Street is from the Harris Street sag, however, the building floor levels are currently approximately 0.5 m above the 1% AEP flood level. If considering the flood risk from Bulwara Road on the upstream side, a reasonable design should ensure a minimum of 0.3 m above the surrounding ground for the Bulwara Road frontage. The FPLs for the site are considered readily achievable.

4.7.3. Impact Considerations

The existing structures utilises a large percentage of the lot and the Planning Proposal requires a minimum of 15% deep soil landscaping, adding flood storage and infiltration capacity. As such, redevelopment of the site could provide a net positive impact for the local flood conditions. In the PMF event, there is a minor flow path from Bulwara Road under the Western Distributor to the site that flows around the existing building and onto the Ada Place walkway. This flow path would need to be confirmed with site-specific survey and modelling (as LiDAR data does not necessarily accurately represent the topography under the Western Distributor), however, if this is correct a larger building footprint for 1-19 Allen Street is likely to redirect this flow along an alternate path to the Ada Place walkway and impacts are expected to be negligible. Development of 313-369 Harris Street should maintain the existing raised pathway within the site boundary on the Harris Street frontage as this provides flood storage in the PMF event.

4.7.4. Hazard Consideration

The footpath at the front of 313-369 Harris Street remains free of inundation until above the 1% AEP. In the PMF event the footpath is categorised as H1. In the PMF the road would be unsafe for children and vehicles to enter, however the footpath would still be manageable for persons to navigate away from the buildings if required. Maintaining connectivity through the building and providing access to Fig Street, or providing access from the building to the Ada Place walkway would improve evacuation potential in an event greater than the 1% AEP. From 1-19 Allen Street, access is available to the building in both the 1% AEP and PMF events, for pedestrians and

vehicles.

4.8. 1-33 Saunders Street

The site was assessed in Stage 1. The Stage 2 proposed controls would not be expected to have any material difference on the risk to the site compared to Stage 1 proposed controls in relation to planning levels and impact considerations. Refer the Stage 1 report Section 4.7 for full site evaluation.

The site consists of two adjacent lots, bounded by Bank Street, Quarry Master Drive and Saunders Street. The Western Distributor is elevated adjacent to Bank Street. Flood depths, level contours and hazard categorisation are shown in Area A on Figure 2.3 to Figure 2.7.

While the previous assessment of flood risk in the Stage 1 report is considered valid, there is a proposed increase in building height from 15 to 33 storeys, which would substantially increase the number of occupants on site. There is only minor inundation on Bank Street to the south of the site that does not overtop the gutter in the 1% AEP event, with depths of up to 0.2 m in the PMF event in isolated locations. The hazard remains H1 in the PMF event. No flood constraints were identified for this property in the Stage 1 report (in terms of FPLs, impact and hazard considerations) and hence the site is appropriate for the further increase in occupancy.

4.9. Site Constraint Summary

A summary is tabulated of the key constraints considered for each site, as given in Table 18 and described below.

Flood Planning constraint rating

- Nil Constraints
  - Site is free from inundation affecting FPLs.
- Minor Constraints
  - Site is affected by 1% AEP or PMF inundation.
  - FPLs easily achievable.
- Moderate Constraints
  - Site is affected by 1% AEP inundation.
  - FPLs partially or fully achievable with an appropriate design.
- Major Constraints
  - Site is heavily flood affected, with FPLs elevated high above the ground.
  - FPLs difficult to achieve.

Impacts constraint rating

- Nil Constraints
  - No adverse flood level changes anticipated from redevelopment of the site.
- Minor Constraints
  - Potential for minor adverse flood level changes post-development.
  - Impact of redevelopment fully resolvable with an appropriate design.
- Moderate Constraints
  - Potential for moderate adverse flood level changes post-development.
  - Impact of redevelopment partially or fully resolvable and may require a unique design incorporating flood mitigation measures.
- Major Constraints
  - Potential for significant adverse flood level changes post-development.
  - Impacts of redevelopment difficult to resolve.

Hazard constraint rating

- Nil Constraints
  - Site is free from inundation constraining immediate access or affecting occupant safety.
- Minor Constraints
  - Access to and from site affected during PMF event (road inundation).
- Moderate Constraints
  - Access to and from site affected during 1% AEP event (road inundation).
  - Direct access (footpath) to the site is partially affected (inundation above gutter) in the PMF.
- Major Constraints
  - Site isolated during 1% AEP event.

Table 18: Summary Table of Site Constraints

Site Ref.	Site	Summary	Constraint Rating		
			FPL	Impact	Hazard
4.1	26-52 Mount Street	Not affected by PMF mainstream flooding.	Nil	Nil	Nil
4.2	1-7 Henry Avenue	Not affected by PMF mainstream flooding.	Nil	Nil	Nil
	336-374 Jones Street	Not affected by PMF mainstream flooding.	Nil	Nil	Nil
4.3	463-467 Harris Street	Not affected by PMF mainstream flooding.	Nil	Nil	Nil
4.4	344 Bulwara Road	Minor flooding in the 1% AEP and up to the PMF event. Affects lower (southern) areas of the lot.	Minor	Nil	Nil
4.5	100-130 Harris Street	Affected by mainstream flooding during a 1% AEP event.	Minor	Nil	Moderate
4.6	56 Harris Street	Site above 1% AEP and minor affectation in the PMF.	Nil	Nil	Minor
4.7	1-19 Allen Street	Minor flooding in the 1% AEP and up to the PMF event.	Minor	Minor	Nil
	313-369 Harris Street	Affected by mainstream flooding during a 1% AEP event.	Minor	Minor	Moderate
4.8	1-33 Saunders Street	Not affected by 1% AEP event, Minor affectation in the PMF.	Nil	Minor	Nil

In general, the lots are not heavily constrained by flooding. If there were any constraints to FPLs, flood impacts or flood hazard that were classified as ‘major’, it would provide reason to not pursue intensification of a lot. Those lots that do have ‘moderate’ constraints include sites that front areas with deep floodwaters on:

- Pyrmont Street
- Harris Street

The lots on these road frontages (100-130 and 313-369 Harris Street) were identified as having ‘moderate’ constraints, however, in each case, the site has more than one frontage to a road and is located on terrain steep enough that a large portion of the site rises from the frontage that experiences inundation. In this way, FPLs can be met as a raised floor is typically required for the remainder of the site to cater for rising ground levels away from the inundated road. Less sensitive uses (such as commercial) of the ground floor fronting flood affected roads would be a way to reduce the required minimum floor level in addition to avoiding basement carpark entrances on flooded roads (which would also benefit site access in flood events). Access to multiple frontages and the topography of the sites also assist with hazard constraints, where access from the site can be maintained with an appropriate building design. The Planning Proposal allows for multiple storeys such that flood refuge is also possible even if the ground floor is inundated in a flood event. There are no sites with ‘moderate’ flood impact constraints.

The issues associated with flooding at these locations (in terms of redevelopment and intensification potential) would require a design that considers flood affectation of the site at an early stage in the design process to develop solutions to the requirements for minimum floor levels and/or access requirements. In each case, however, the constraint is not considered to preclude development of the lot. Rather, a building design is possible at each site that minimises the flood risk to the building itself (minimum floor levels) and its occupants (ensuring adequate on-site refuge and access to and from the site is maintained). Redevelopment of sites that are flood affected can provide the opportunity to reduce the flood risk to occupants through a building design that is compatible with the flood behaviour, while accommodating increased occupants (where appropriate), particularly on high economic value land such as that found in Pyrmont and Ultimo.

5. FACTORS AFFECTING FLOOD BEHAVIOUR

5.1. Blockage Sensitivity

Blockage sensitivity was analysed across the DHCA and BW catchments. BW was discussed in the Stage 1 report (Reference 2). No changes have been made to the BW sensitivity assumptions and conclusions, refer the Stage 1 report, Section 5.1 for blockage sensitivity details.

The DHCA study (Reference 8) adopted lower design blockage parameters compared to the 2014 Flood Study (Reference 14). As part of the study sensitivity testing was completed with a high blockage and a full blockage scenario. The high blockage scenario is consistent with that modelled for the BW catchment.

Blockage Scenario	On-grade Pit	Sag Pit
Design Blockage	20%	50%
No Blockage[1]	0%	0%
High Blockage	50%	100%
Full Blockage	100%	100%

1. Discussion on the 'No Blockage' scenario is not relevant for the FIRA

Blockage sensitivity was analysed across the DHCA and BW catchments. The 1% AEP change in flood level with increased blockage is shown in Figure 2.19. The mapping shows a high blockage scenario (50% blockage of on-grade pits and 100% blockage of sag pits) compared to the adopted base model flood levels (20% blockage of on-grade pits and 50% blockage of sag pits) for both catchments.

Most of the sites nominated in the Planning Proposal are unaffected by pit blockage assumptions (< 0.02 m change), with no new sites identified as constrained. However, the sites previously found to be constrained by flooding at trapped sag points are adversely affected by blockage. In particular 100-130 Harris Street (Pyrmont Street frontage) (Section 4.5), and 313-369 Harris Street (Section 4.7) are both sensitive to blockage of the stormwater network.

The assessment of 100-130 Harris Street (Section 4.5) indicated that it would likely be feasible to evacuate to both Harris Street and Pyrmont Street in a 1% AEP event with only H1 hazard present. In the high blockage scenario, however, the 1% AEP flood level increases by approximately 0.7 m, making it H3 hazard and unlikely to be safe for vehicles and some pedestrians. This would need to be a consideration for the proposal to increase the building height to accommodate a hotel at the site, noting that the possible need to evacuate may be restricted to Harris Street during a flooding event if severe blockage of the drainage pits occurs. It is recognised, however, that this blockage scenario requires all the 6+ pits located on Pyrmont Street to be 100% blocked such that there are no flows in the large 2.55 m x 1.9 m box culvert that drains the sag point.

313-369 Harris Street (Section 4.7) is also sensitive to blockage, albeit to a much lesser extent, with the 1% AEP flood levels increasing by less than 0.1 m. The 2020 LiDAR indicates that the overland relief point at the end of the street (onto Allen Street) is lower than the footpath and floor level of the current building. Blockage may affect access through the street by slightly increasing

the extent of H2 and H3 hazard on the road, but evacuation by foot is still assumed safe via the footpath. The assessment noted however, that the PMF overtops the footpath and access to Harris Street may be limited in events larger than the 1% AEP.

The blockage sensitivity modelling indicates that a requirement to include a high blockage factor would not preclude any site from pursuing redevelopment under the Planning Proposal. However, it would be prudent to consider the additional risk that blockage poses to a development.

5.2. Climate Change

The Stage 1 report (Reference 2) details the climate change sensitivity analysis undertaken in the BW Flood Study (Reference 10) and used 0.5% AEP and 0.2% AEP events as proxies to show the 1% AEP event sensitivity of the catchment to changes in rainfall intensity. The Stage 1 report detailed the resulting differences in flood levels across the BW catchment for the 0.2% AEP event, representing a 23% increase in rainfall intensity, concluding that the given Stage 1 sites could accommodate the changes in flood levels in the FPLs and that the developments would not change the flood behaviour in a future climate scenario.

Since the Stage 1 report was finalised, ARR has updated guidance related to climate change scenarios and impacts, as outlined in Section 2.3.1. This updated guidance was utilised in the DHCA Flood Study (Reference 8) by simulating SSP3-7.0 rainfall intensity for 2050 and 2100. The 2100 scenario was selected to indicate the potential impacts due to rainfall intensity increases. This represents approximately a 40% increase in rainfall intensity, which is much larger than previous estimates (such as those assumed in the BW Flood Study). The SSP3-7.0 2100 1% AEP impact (compared to the SSP3-7.0 2030 base case) is shown in Figure 2.20 for the DHCA catchment, together with the difference between the 0.2% AEP and 1% AEP events for the BW catchment.

The increase in rainfall intensity indicates that the sag points through the catchments are sensitive to the increase in rainfall intensity. In the DHCA catchment, the peak flood levels in the 1% AEP event rise on Pyrmont Street by 0.35 m (100-130 Harris Street, Section 4.5) and Harris Street by 0.26 m (313-369 Harris Street, Section 4.7) at the sag points. The other sites within DHCA (Sections 4.1, 4.3, 4.4, 4.5, 4.6, and 4.7) are not sensitive to changes in rainfall intensity. The increase in rainfall intensity does not generate a new flood risk by forming new flow paths through or adjacent to the sites, nor is it likely to generate additional over floor flood risk for the remaining DHCA sites.

The two sites within the BW study area, 1-33 Saunders Street (Section 4.8) and 1-7 Henry Avenue and 336-374 Jones Street (Section 4.2) have low flood risk in the existing climate conditions. 1% AEP flood levels on Bank Street at 1-33 Saunders Street only increase by up to 0.02 m. At 1-7 Henry Avenue and 336-374 Jones Street, there is no modelled overland flood risk as water sheds away from the site and it sits relatively high in the catchment with no sag points nearby.

Sea level rise significantly impacts floods at the lower elevations of the catchments, particularly around Tumbalong Park in DHCA and Wentworth Park in BW. However, the Stage 2 sites are relatively elevated such that the majority of the sites would not be affected by sea level rise. The

only site that could potentially be affected is 1-33 Saunders Street (Section 4.8). The DHCA Flood Study (Reference 8) assessed recent sea level rise projections for the SSP3-7.0 for 2050, 2100 and 2150. For the 2150 scenario, the adopted sea level was 2.58 mAHD. The 2020 LiDAR data indicates that the low point of Banks Street is approximately 4 mAHD. Since the site is more than 1 m above the SSP3-7.0 2150 sea level, it is concluded that the Stage 2 sites are not significantly affected by future sea level rise.

The climate change sensitivity modelling indicates that a requirement to include climate change would not preclude any site from pursuing redevelopment under the Planning Proposal. However, it would be prudent to consider climate change impacts at 100-130 Harris Street and 313-369 Harris Street.

The existing controls are guided by the CoS LEP 2012 5.21 (3)(a), in which any development must demonstrate satisfactory compliance to the flood planning provisions considering future climate change conditions (Reference 4). The Interim Floodplain Management Policy is more prescriptive in its requirements for developments (Reference 6). Three requirements are given to prevent the potential impact of climate change:

- For those developments which have a lifespan of more than fifty years the impact due to sea level rise and impacts due to increased rainfall intensities shall be considered.
- Meet the allowances for sea level rise as recommended in the NSW Government Coastal Planning Guideline: Adopting Sea Level Rise 2010 (now withdrawn from publication). Specifically, this shall include and allowance of 40cm by 2050 and a 90cm by 2100 from the 2009 Mean Sea Level.
- Where in the opinion of the City the proposed development is of reasonable impact to regional or catchment trunk drainage, the drainage system design shall allow for a minimum of 10% increased rainfall.

In the context of the draft Climate Change and Natural Hazards SEPP guidelines (Reference 12), the DHCA modelling adopts a 2100 SSP3-7.0 scenario for sensitivity analysis for potential future rainfall intensity increase and sea level rise. A further 2150 SSP3-7.0 sea level rise projection was also simulated. This corresponds to an approximately 74-year horizon for rainfall intensity and a 124-year horizon for sea level rise. These horizons are considered reasonable, as it aligns with the practical limits of confidence in rainfall projections (to around 2100), while acknowledging the more predictable nature of sea level rise beyond this period. As such, the DHCA sensitivity testing provides an appropriate basis for understanding site vulnerability over the expected lifetime of development.

By contrast, the use of proxy approaches within the BW model does not provide an equivalent level of understanding of climate change impacts over the lifetime of development, particularly in relation to rainfall intensity and sea level rise. It is noted, however, that the Stage 2 sites within the BW are relatively insensitive to changes in rainfall intensity.

While the report does not specify finished floor levels or directly quantify development specific climate change impacts, the sensitivity testing indicates that the sites are likely capable of complying with applicable planning controls, even under increased hazard levels associated with

climate change. Detailed design responses, including floor level setting and site-specific risk mitigation, would be addressed at the DA stage, where proponents would undertake detailed assessments consistent with the Draft Guidelines and relevant Council DCP and LEP requirements.

5.3. Increase in Impervious Surfaces

When considering flood behaviour, unmitigated intensification of the land correlates with potential adverse flood level impacts. That is, the increase in (or establishment of) more impervious surfaces, results in more stormwater run-off concentrating in the surrounding flow paths and potentially raising neighbouring flood levels. In the case of the Planning Proposal there is little to negligible intensification projected in terms of new impervious surfaces. Most of the catchment is already highly urbanised. In most cases 100% of the site is utilised by the existing structure and/or hardstand (i.e. car park). In general, the existing urbanised conditions suggest that there is limited potential for increasing stormwater run-off post-development. Included in the Planning Proposal is a requirement of 10-15% deep soils for most sites. Where most sites currently exist with 100% imperviousness, the increase in deep soils allows for infiltration of water locally, reducing run-off entering downstream. Therefore, if implemented as proposed the changes could have a net reduction in flood levels, an inverse on the historical outcome of unmitigated intensification.

5.4. Flood Risk Management Measures

The Stage 1 report (Reference 2) identified relevant flood risk management measures that may affect the Stage 1 sites, with details contained in Section 5.4 of that report. The Stage 2 sites are not directly affected by any of the flood modification measures proposed in the previous FRMS&Ps, with the exception of 100-130 Harris Street (Section 4.5). The proposed flood mitigation option ‘FM-DH06’ in the Darling Harbour FRMS&P (Reference 9) examined upgrading the trunk drainage and pit inlet capacity at the sag point on Pyrmont Street. Details of this option were discussed in the Stage 1 report, Section 5.4.1. The Harris Street sag point affecting 313-369 Harris Street (Section 4.7) was identified as a flood ‘hot spot’ in Reference 9, however, no flood modification measures were proposed for this area.

6. CONSISTENCY WITH MINISTERIAL DIRECTIONS

The Stage 2 Planning Proposal is required to comply with Directions issued by the Minister for Planning under section 9.1(2) of the Environmental Planning and Assessment Act 1979 (previously section 117(2)). The applicable directions for flooding are found in Direction 4.1 (Reference 15), which commenced 20 February 2023. Consistency with these directions are assessed in Table 19.

Table 19: Consistency with Ministerial Direction 4.1

Direction	Assessment
(1) A planning proposal must include provisions that give effect to and are consistent with: (a) the NSW Flood Prone Land Policy, (b) the principles of the Floodplain Development Manual 2005, (c) the Considering flooding in land use planning guideline 2021, and (d) any adopted flood study and/or floodplain risk management plan prepared in accordance with the principles of the Floodplain Development Manual 2005 and adopted by the relevant council.	The Planning Proposal and referenced flood studies (& FRMS&Ps) are consistent with the NSW Flood Prone Land Policy, the principles of the Floodplain Development Manual 2005 (Reference 16, now superseded by the 2023 Flood Risk Management Manual), and the Considering flooding in land use planning guideline 2021.
(2) A planning proposal must not rezone land within the flood planning area from Recreation, Rural, Special Purpose or Conservation Zones to a Residential, Employment, Mixed Use, W4 Working Waterfront or Special Purpose Zones.	No site in the Planning Proposal is currently zoned Recreation, Rural, Special Purpose or Conservation Zones.
(3) A planning proposal must not contain provisions that apply to the flood planning area which: (a) permit development in floodway areas,	The Planning Proposal does not include sites within floodway areas (see Figure 2.18).
(b) permit development that will result in significant flood impacts to other properties,	The existing requirements of the LEP/DCP/Interim Floodplain Management Policy ensure that there are no adverse impacts of potential developments. It will be necessary for future DA's to demonstrate the proposed works will not result in significant flood impacts to other developments, through modelling as part of a FIRA where appropriate. Satisfaction of this requirement depends on the details of the proposed development as is enforced through Council's strategic planning framework at the DA stage. These controls already apply to the land under consideration, and the nature of the controls and the development constraints presented by the controls would not be altered by the Planning Proposal. This FIRA has not identified any significant constraints to this requirement being met for the proposed sites. The approval of the

	Planning Proposal does not provide a guarantee or an implication that these requirements can be waived at subsequent development approval stages.
(c) permit development for the purposes of residential accommodation in high hazard areas,	The Planning Proposal does not include sites within high hazard areas (see Figure 2.7, Figure 2.12 and Figure 2.17).
(d) permit a significant increase in the development and/or dwelling density of that land,	It is unclear in this context what "significant increase in the development and/or dwelling density of that land" means. From the perspective of flood risk, the land is generally fully urbanised, and primarily covered by hardstand and buildings. The Planning Proposal will not significantly increase the development with regards to how much runoff will occur from the area. The Planning Proposal will increase the development of the land in terms of intensity of floor space and the population density in the area – that is the entire purpose of the Planning Proposal. With regards to flood risk, this increase in population density is largely offset by the following considerations: i. The increase in floor space will be primarily related to additional building storeys that are not at risk of damage from flooding, or new buildings that are located outside the floodplain. ii. With appropriate building design, some level of access to and from each site can be maintained in the PMF event. iii. In some areas the increase in population density will be associated with higher density land use zoning. It is more likely that consolidated high-density redevelopment of some lots would be able to resolve these flood issues (such as evacuation), compared to existing uses. The change in zoning (for example to mixed use) may allow less sensitive development on the ground floor (such as commercial facilities) and more sensitive development on upper floors (such as residential apartments). Rezoning of the flood affected lots and consolidation of buildings would generally be an effective long-term strategy for reducing flood risks in the areas under consideration, as a higher density development proposal with a larger

	building is more likely to be able to provide a design solution that complies with the LEP/DCP requirements. iv. New buildings would need to comply with minimum floor level controls and protection of basement areas, which in many cases are not satisfied by the existing buildings. Redevelopment of the land will therefore reduce the likely flood damages for the ground floor and basement levels, as well as reducing the risk to life to people within the buildings, despite the concurrent increase in total population. Redevelopment of urbanised areas is an inevitable result of increases to population in the Sydney metropolitan area. The NSW Flood Prone Land Policy recognises that: *"Flood prone land is a valuable resource and that development applications and proposals for rezoning of flood prone land should be the subject of careful assessment which incorporates consideration of local circumstances."* The Flood Risk Management Manual (Reference 3) indicates that development within the floodplain should be undertaken on a merit-based approach, ensuring that the development is compatible with the flood hazard of the land. Based on the review of available flood information as part of this assessment, the Planning Proposal improves the likelihood that redevelopment of the subject land can meet the required development controls and be compatible with the flood hazard, relative to existing zoning and height/FSR controls.
(e) permit development for the purpose of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate,	In areas where evacuation was considered a 'moderate' constraint, it is recommended that sensitive development, including centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing (where applicable based on zoning), not be permitted, unless safe and effective evacuation can be demonstrated in the PMF event. This direction applies to the sites at 100-130 Harris Street (Section 4.5), and 313-369 Harris Street (Section 4.7). For these sites the proximity to

	inundation in the 1% AEP event may make evacuation difficult in the 1% AEP event, depending on the specific design of the building.
(f) permit development to be carried out without development consent except for the purposes of exempt development or agriculture. Dams, drainage canals, levees, still require development consent,	WMAwater understands that the development indicated in the Planning Proposal will require development consent.
(g) are likely to result in a significantly increased requirement for government spending on emergency management services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities, or	The development resulting from the Planning Proposal is unlikely to result in substantially increased requirement for government spending on emergency management or flood mitigation measures. The primary flood risk mitigation measure to reduce existing flood risks in this region would be to redevelop land to be consistent with the planning controls, including increasing the building floor levels up to the relevant standard, which is achieved through redevelopment of the land in accordance with the Planning Proposal. No site would require a significant increase in government spending to allow redevelopment to comply with the existing LEP/DCP/Interim floodplain management controls and the existing flood risk management measures identified for the catchments (Stage 1 report, Section 5.4) would remain.
(h) permit hazardous industries or hazardous storage establishments where hazardous materials cannot be effectively contained during the occurrence of a flood event.	Based on the proposed changes, there should be no hazardous industries or hazardous storage establishments.
(4) A planning proposal must not contain provisions that apply to areas between the flood planning area and probable maximum flood to which Special Flood Considerations apply which: (a) permit development in floodway areas,	As discussed for Direction 4.1 (3) (a).
(b) permit development that will result in significant flood impacts to other properties,	As discussed for Direction 4.1 (3) (b).
(c) permit a significant increase in the dwelling density of that land,	As discussed for Direction 4.1 (3) (d).
(d) permit the development of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate,	As discussed for Direction 4.1 (3) (e).
(e) are likely to affect the safe occupation of	As discussed for Direction 4.1 (3) (e). While there

and efficient evacuation of the lot, or	are some sites that may be inundated in the PMF event (subject to specific building design and FFLs), CoS's Interim Floodplain Management Policy will dictate the required FFL's and hence the associated acceptable level of risk of inundation depending on the proposed use of the floor. These minimum floor levels are considered to be reasonable and commensurate with the flood risk in the Pyrmont and Ultimo area. The FPLs are consistent with the principals of the Flood Risk Management Manual (Reference 3). Evacuation of some lots is a concern (primarily 100-130 Harris Street (Section 4.5), and 313-369 Harris Street (Section 4.7)), given the hazardous flooding that may be present in the streets adjacent to the building. However, each lot has at least one frontage with access in the PMF event, such that an appropriate building design can ensure access is maintained to the building even in the most extreme flood event.
(f) are likely to result in a significantly increased requirement for government spending on emergency management services, and flood mitigation and emergency response measures, which can include but not limited to road infrastructure, flood mitigation infrastructure and utilities.	As discussed for Direction 4.1 (3) (g).
(5) For the purposes of preparing a planning proposal, the flood planning area must be consistent with the principles of the Floodplain Development Manual 2005 or as otherwise determined by a Floodplain Risk Management Study or Plan adopted by the relevant council.	The flood planning area was taken from a study (Reference 13) that was based on the relevant flood studies and undertaken in accordance with the principles of the Floodplain Development Manual 2005.

The Planning Proposal is therefore consistent with the Section 9.1 Ministerial Directions, with the exception of Directions 4.1 (3) (d) and 4.1 (4) (c) – that is, permitting a significant increase in the development and/or dwelling density of that land. It has been demonstrated that although the Planning Proposal seeks to increase the development of some land within Pyrmont and Ultimo that is flood affected, the increase in floor space will typically not be flood affected (additional stories above flood levels or buildings outside the floodplain), access to and from the sites can be maintained during flood events with appropriate building design and redevelopment of the sites will typically result in a building that is more commensurate with the flood risk, having regard for the relevant flood-related development controls. As such, the Planning Proposal is considered to be consistent with the objectives of the Section 9.1 Ministerial Directions.

7. CONCLUSIONS

Some of the Stage 2 sites are affected by flood constraints. The details and constraints of each site have been discussed in Section 4, with a summary presented in Section 4.9. Where flood constraints are identified, there are no instances where redevelopment of the sites is wholly prohibitive, either under the existing LEP/DCP/Interim Floodplain Management Policy or under the amendments resulting from the Planning Proposal. However, future developments at these sites would still be required to demonstrate compliance with the existing LEP/DCP/Interim Floodplain Management Policy.

The current LEP/DCP provisions and controls are not prohibitive to redevelopment of the sites within the Planning Proposal. Where sites are affected by flood constraints, the controls in the DCP and Interim Floodplain Management Policy ensure the development is compatible with the flood risk for the site and an acceptable level of detail is required as to how the flood risks are managed with any proposed development. The nature of these constraints and the solutions to satisfy the development controls are not significantly altered by the Planning Proposal. However, as with the current LEP zoning, height allowances and maximum FSR, the flood constraints may preclude full development of some sites to the maximum allowable density. This is because compliance with various flood controls (such as basement carpark entrances or minimum ground floor levels) may reduce the achievable FSR or number of building storeys within a given site.

The detailed breakdown of the sites in Section 4 show that Pyrmont and Ultimo has varying degrees of flood affectation. It should be noted that the sites that are shown to be flood affected are currently developed and occupied. The most significant constraints for flood affected sites are achieving minimum floor level requirements and site access and evacuation requirements. The Planning Proposal may improve the feasibility of redevelopment in those lots as it may enable less sensitive uses of the ground floor in mixed use developments and increased height restrictions may allow for building floor levels to be raised to meet FPL requirements. Redevelopment of some buildings may also enable emergency access to be incorporated, with internal connections enabling flood free frontages to be accessed from any point within the building. In most cases, the requirement for deep soil areas has the potential to improve local flood conditions by increasing infiltration. The redevelopment of the lots identified is likely to allow for a design that caters for the flood conditions of the site.

WMAwater considers that the Planning Proposal is consistent with the Ministerial Directions for flood prone land (see Section 6 for detailed discussion), with the exception of permitting a significant increase in the development and/or dwelling density of that land. It was demonstrated that the increase in floor space will typically not be flood affected (additional storeys above flood levels or buildings outside the floodplain), access to and from the sites can be maintained during flood events with appropriate building design and redevelopment of the sites will typically result in a building that is more commensurate with the flood risk, having regard for the relevant flood-related development controls. As such, the Planning Proposal is considered to be consistent with the objectives of the Section 9.1 Ministerial Directions.

The Planning Proposal is consistent with other relevant legislation and Council's strategic planning framework for flood planning, in that the flood-related development controls enforced through that

framework are not significantly altered by the Planning Proposal. It is recommended that consultation is undertaken with relevant public agencies (such as the NSW State Emergency Service, the Department of Climate Change, Energy, the Environment and Water, and the Department of Planning, Housing and Infrastructure) following Gateway determination. Comments from these public agencies regarding specific constraints or development controls can be addressed as part of the site-specific DCPs.

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FIGURES

Figure 2.1: Study area and sites
Figure 2.2: Map extents

Figure 2.3: Area A Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.4: Area A Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.5: Area A Peak Flood Depth and Level Contours – PMF Event
Figure 2.6: Area A Peak Hydraulic Hazard – 1% AEP Event
Figure 2.7: Area A Peak Hydraulic Hazard – PMF Event

Figure 2.8: Area B Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.9: Area B Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.10: Area B Peak Flood Depth and Level Contours – PMF Event
Figure 2.11: Area B Peak Hydraulic Hazard – 1% AEP Event
Figure 2.12: Area B Peak Hydraulic Hazard – PMF Event

Figure 2.13: Area C Peak Flood Depth and Level Contours – 10% AEP Event
Figure 2.14: Area C Peak Flood Depth and Level Contours – 1% AEP Event
Figure 2.15: Area C Peak Flood Depth and Level Contours – PMF Event
Figure 2.16: Area C Peak Hydraulic Hazard – 1% AEP Event
Figure 2.17: Area C Peak Hydraulic Hazard – PMF Event

Figure 2.18: Flood Function – 1% AEP Event
Figure 2.19: Pit Blockage Sensitivity – 1% AEP Event with High Blockage
Figure 2.20: Climate Change Sensitivity – SSP3-7.0 2100 1% AEP Event

FIGURE 2.1
STUDY AREA AND SITES

N

4.6
4.5
4.1
4.8
4.7
4.2
4.3
4.4

365

Stage 2 Sites
Cadastral
BW Catchment Area
DH Catchment Area

0 300 600 m

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FIGURE 2.2
MAP EXTENTS

N

4.6
4.1
4.5
4.8
Area A

4.7
4.2
4.3
Area B

4.4
Area C

PIRRAMA ROAD
WULUGUL WALK
BOWMAN STREET
HARRIS STREET
PYRMONT STREET
BANK STREET
WESTERN DISTRIBUTOR
DARLING DRIVE
ADA PLACE
COOK STREET
FORSYTH LANE
FERRY ROAD
FERRY LANE
BRIDGE ROAD
DARLING STREET
WATTLE STREET
JONES STREET
HACKETT STREET
SYDNEY STREET
MCKEE STREET
WATTLE LANE
QUEEN STREET
CROWN STREET
GLEBE STREET
DERWENT LANE
DERWENT STREET
GLEBE LANE

Stage 2 Sites
Cadastral

0 300 600 m

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FIGURE 2.3
AREA A
PEAK FLOOD DEPTH
10% AEP EVENT

REFINERY DRIVE
BOWMAN STREET
TAMBUA STREET
JONES STREET
DISTILLERY DRIVE
QUARRY MASTER DRIVE
HARVEY STREET
SCOTT STREET
POINT STREET
JONES BAY ROAD
JOHN STREET
CADIGAL AVENUE
MOUNT STREET
PYRMONT STREET
HARRIS STREET
SAUNDERS STREET
BANK STREET
WESTERN DISTRIBUTOR
JONES STREET
MILLER STREET
MILLER LANE
LITTLE MOUNT STREET
BULWARA ROAD
PATERNOSTER RO

4.1
4.5
4.6
4.8

N

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depth (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

367

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FIGURE 2.4
AREA A
PEAK FLOOD DEPTH
1% AEP EVENT

REFINERY DRIVE
BOWMAN STREET
TAMBUA STREET
JONES STREET
DISTILLERY DRIVE
QUARRY MASTER DRIVE
SAUNDERS STREET
BANK STREET
WESTERN DISTRIBUTOR
HARVEY STREET
JOHN STREET
POINT STREET
MOUNT STREET
JONES BAY ROAD
PYRMONT STREET
HARRIS STREET
MILLER STREET
MILLER LANE
BULWARA ROAD
PATERNOSTER ROW

4.1
4.5
4.6
4.8

N

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

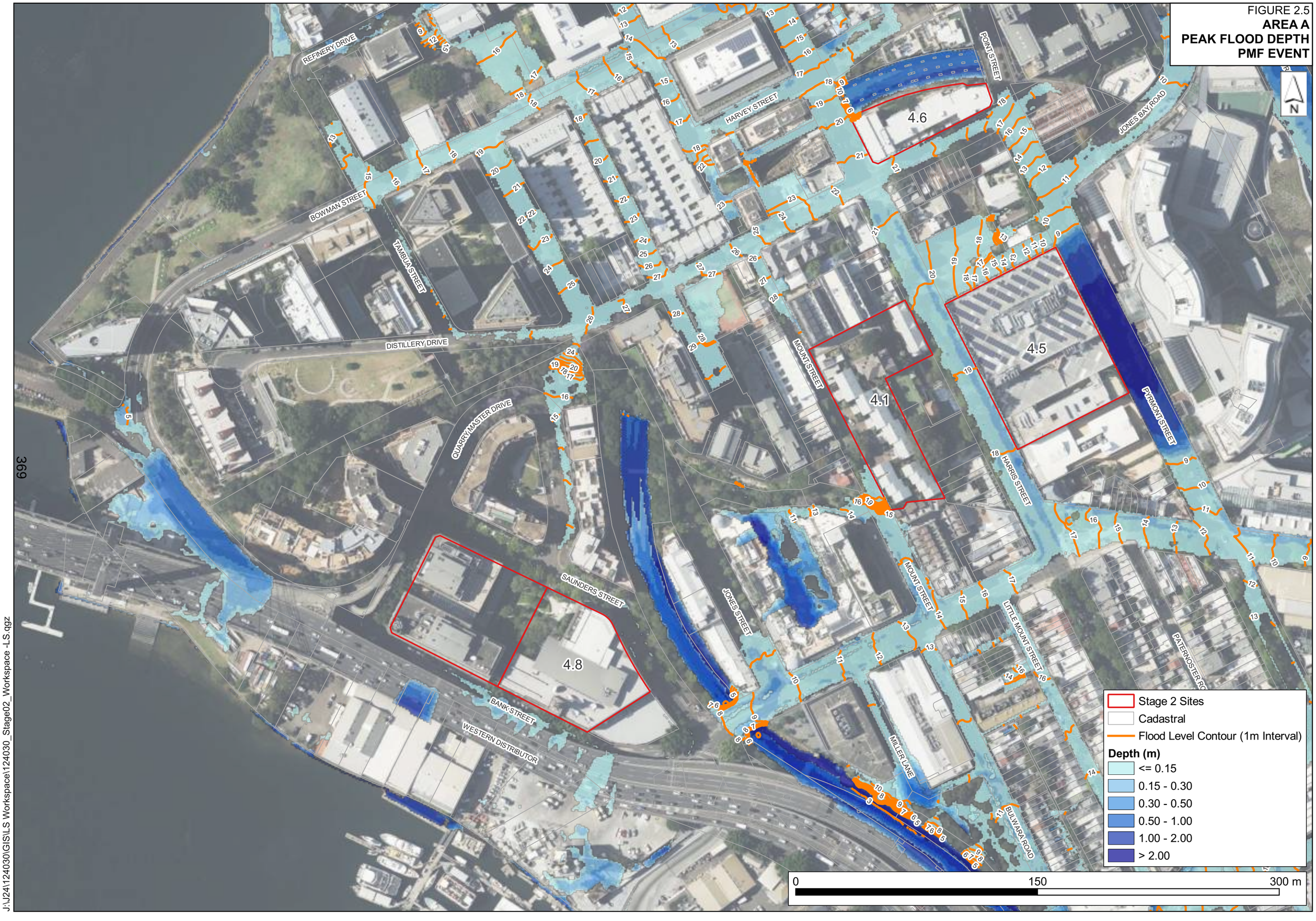
Depth (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

368

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FIGURE 2.5
AREA A
PEAK FLOOD DEPTH
PMF EVENT



369

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FIGURE 2.6
AREA A
PEAK HYDRAULIC HAZARD
1% AEP EVENT

REFINERY DRIVE
BOWMAN STREET
TAMBUA STREET
JONES STREET
DISTILLERY DRIVE
QUARRY MASTER DRIVE
MOUNT STREET WALK
CADIGAL AVENUE
HARVEY STREET
SCOTT STREET
POINT STREET
JOHN STREET
JONES BAY ROAD
MOUNT STREET
HARRIS STREET
PYRMONT STREET
UNION STREET
SAUNDERS STREET
BANK STREET
WESTERN DISTRIBUTOR
MILLER STREET
MILLER LANE
BOULARA

4.1
4.5
4.6
4.8

N

Stage 2 Sites
Cadastral

Hydraulic Hazard

H1 - Generally safe for people, vehicles and buildings
H2 - Unsafe for 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 consider vulnerable to failure

0 150 300 m

370

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FIGURE 2.7
AREA A
PEAK HYDRAULIC HAZARD
PMF EVENT

REFINERY DRIVE
BOWMAN STREET
TAMBUA STREET
JONES STREET
DISTILLERY DRIVE
QUARRY MASTER DRIVE
MOUNT STREET WALK
CADIGAL AVENUE
HARVEY STREET
JOHN STREET
SCOTT STREET
POINT STREET
JONES BAY ROAD
MOUNT STREET
HARRIS STREET
PYRMONT STREET
UNION STREET
SAUNDERS STREET
BANK STREET
WESTERN DISTRIBUTOR
JONES STREET
MOUNT STREET
MILLER STREET
MILLER LANE
PATERNOSTER

4.1
4.5
4.6
4.8

N

Stage 2 Sites
Cadstral

Hydraulic Hazard

H1 - Generally safe for people, vehicles and buildings
H2 - Unsafe for 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 consider vulnerable to failure

0 150 300 m

371

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FIGURE 2.8
AREA B
PEAK FLOOD DEPTH
10% AEP EVENT

N

4.7
4.7
4.2
4.3

PYRMONT BRIDGE ROAD
BRIDGE ROAD
WATTLE CRESCENT
BULWARA ROAD
ADA PLACE
IRON WHARF PLACE
WESTERN DISTRIBUTOR
JONES LANE
FIG STREET
FIG LANE
HARRIS STREET
PYRMONT STREET
DARLING DRIVE
WATTLE STREET
HENRY AVENUE
QUARRY LANE
QUARRY STREET
KIRK STREET
MORIARTY WALK

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depth (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

372

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FIGURE 2.9
AREA B
PEAK FLOOD DEPTH
1% AEP EVENT

N

PYRMONT BRIDGE ROAD
BRIDGE ROAD
WATTLE CRESCENT
BULWARA ROAD
ADA PLACE
IRON WHARF PLACE
WESTERN DISTRIBUTOR
JONES LANE
FIG STREET
FIG LANE
HARRIS STREET
PYRMONT STREET
DARLING DRIVE
WATTLE STREET
HENRY AVENUE
QUARRY LANE
QUARRY STREET
KIRK STREET
MORIARTY WALK

4.7
4.7
4.2
4.3

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depth (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

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FIGURE 2.10
AREA B
PEAK FLOOD DEPTH
PMF EVENT

N

PYRMONT BRIDGE ROAD
WATTLE CRESCENT
BULWARA ROAD
ADA PLACE
WESTERN DISTRIBUTOR
JONES LANE
FIG STREET
FIG LANE
HENRY AVENUE
QUARRY LANE
QUARRY STREET
WATTLE STREET
HARRIS STREET
PYRMONT STREET
IRON WHARF PLACE
DARLING DRIVE
MORIARTY WALK
KIRK STREET

4.7
4.7
4.2
4.3

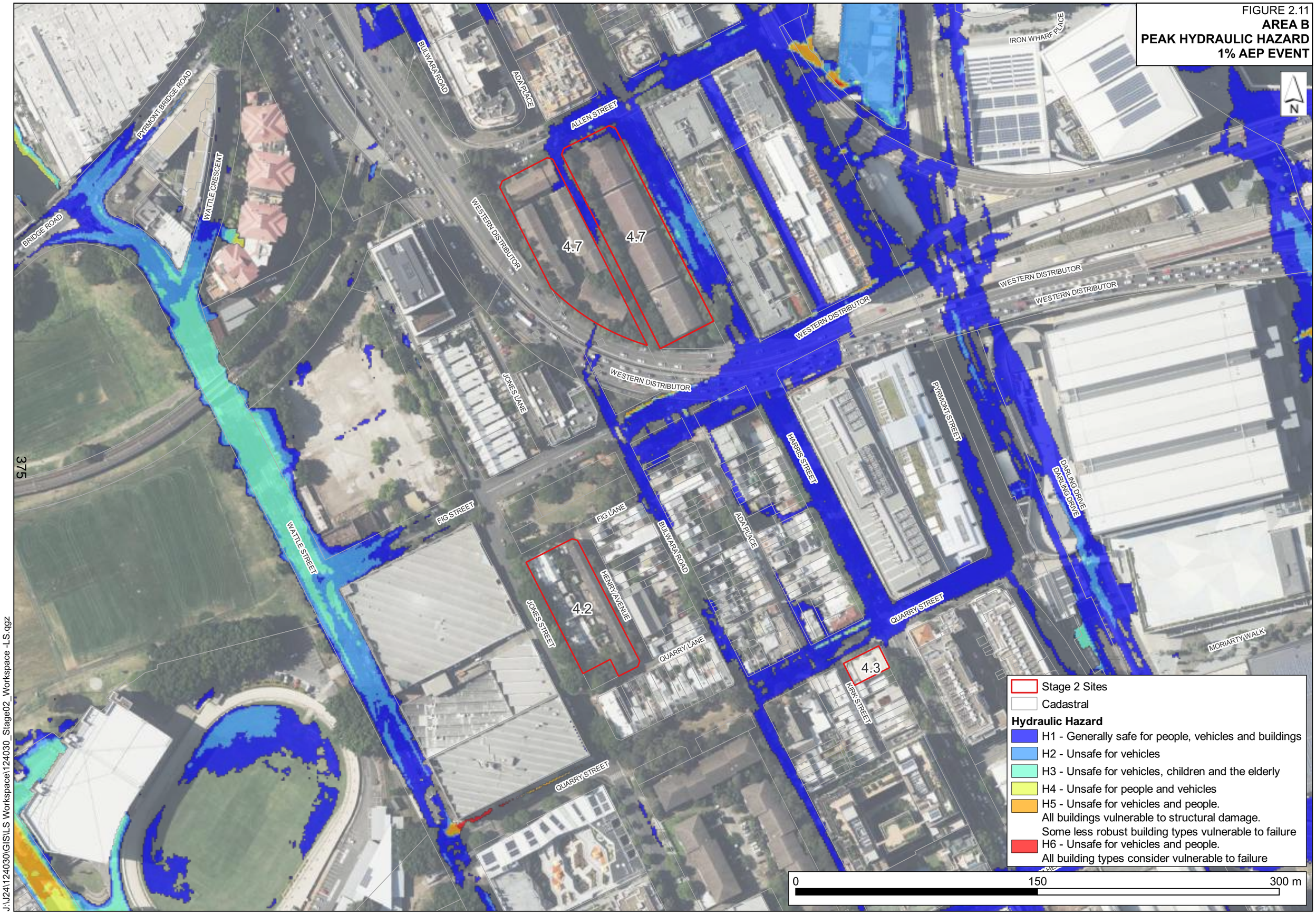
Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depth (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

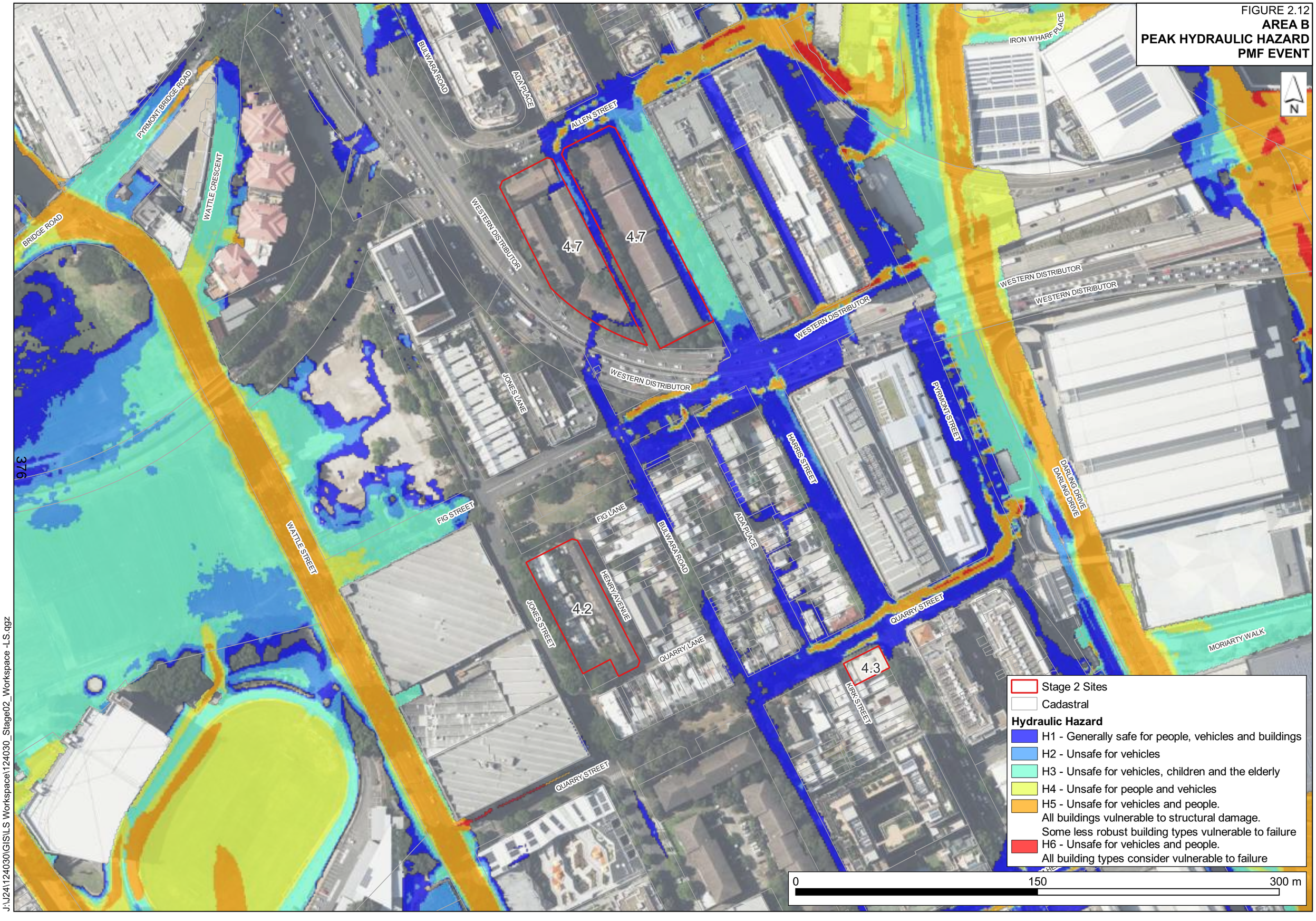
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FIGURE 2.11
AREA B
PEAK HYDRAULIC HAZARD
1% AEP EVENT



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FIGURE 2.12
AREA B
PEAK HYDRAULIC HAZARD
PMF EVENT



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FIGURE 2.13
AREA C
PEAK FLOOD DEPTH
10% EVENT

WILLIAM HENRY STREET
PARBURY LANE
HENSON LANE
BULWARA ROAD
HACKETT STREET
4.4
OMNIBUS LANE
SYDSTRUM STREET
HARRIS STREET
STEAM MILL LANE
LITTLE HAY STREET
TUMBALONG BOULEVARD
HAY STREET
QUAY STREET
DARLING DRIVE
WATTLE STREET
JONES STREET
MACARTHUR STREET
MCKEE STREET
WATTLE LANE
MARY ANN STREET
BAY LANE
BAY STREET
KELLY STREET
MOUNTAIN STREET
BLACKWATTLE LANE
WEST END LANE
MOUNTAIN LANE
KETTLE LANE
THOMAS STREET
ULTIMO ROAD
N

Stage 2 Sites
Cadastral
Flood Level Contour (1m Intervals)

Depths (m)
- <= 0.15
- 0.15 - 0.30
- 0.30 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

0 150 300 m

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FIGURE 2.14
AREA C
PEAK FLOOD DEPTH
1% EVENT

WILLIAM HENRY STREET
PARBURY LANE
HENSON LANE
BULWARA ROAD
HACKETT STREET
OMNIBUS LANE
SYDNEY STREET
HARRIS STREET
STEAM MILL LANE
TUMBALONG BOULEVARD
HAY STREET
QUAY STREET
DARLING DRIVE
ULTIMO ROAD
THOMAS STREET
MARY ANN STREET
JONES STREET
MCKEE STREET
WATTLE LANE
WATTLE STREET
MACARTHUR STREET
BLACKWATTLE LANE
BAY LANE
BAY STREET
KELLY STREET
MOUNTAIN STREET
MOUNTAIN LANE
WEST END LANE
KETTLE LANE

4.4

N

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depths (m)
<= 0.15
0.15 - 0.30
0.30 - 0.50
0.50 - 1.00
1.00 - 2.00
> 2.00

0 150 300 m

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FIGURE 2.15
AREA C
PEAK FLOOD DEPTH
PMF EVENT

WILLIAM HENRY STREET
PARBURY LANE
HENSON LANE
BULWARA ROAD
HACKETT STREET
OMNIBUS LANE
STEAM MILL LANE
LITTLE HAY STREET
TUMBALONG BOULEVARD
HAY STREET
QUAY STREET
DARLING DRIVE
SYDNEY STREET
HARRIS STREET
WATTLE STREET
MACARTHUR STREET
JONES STREET
MCKEE STREET
WATTLE LANE
BAY LANE
BAY STREET
KELLY STREET
MOUNTAIN STREET
BLACKWATTLE LANE
WEST END LANE
MOUNTAIN LANE
KETTLE LANE
MARY ANN STREET
ULTIMO ROAD
THOMAS STREET
4.4

Stage 2 Sites
Cadastral
Flood Level Contour (1m Interval)

Depths (m)
- <= 0.15
- 0.15 - 0.30
- 0.30 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- > 2.00

0 150 300 m

N

379

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FIGURE 16
AREA C
PEAK HYDRAULIC HAZARD
1% AEP EVENT

WILLIAM HENRY STREET
PARBURY LANE
HENSON LANE
BULWARA ROAD
MACARTHUR STREET
HACKETT STREET
4.4
OMNIBUS LANE
SYDNEY STREET
HARRIS STREET
STEAM MILL LANE
LITTLE HAY STREET
TUMBALONG BOULEVARD
HAY STREET
QUAY STREET
DARLING DRIVE
OMNIBUS LANE
ULTIMO ROAD
THOMAS STREET
MARY ANN STREET
MCKEE STREET
WATTLE LANE
JONES STREET
WATTLE STREET
MACARTHUR STREET
BAY LANE
BAY STREET
KELLY STREET
MOUNTAIN STREET
BLACKWATTLE LANE
WEST END LANE
MOUNTAIN LANE
KETTLE LANE
380

N

Stage 2 Sites
Cadastral

Hydraulic Hazard

H1 - Generally safe for people, vehicles and buildings
H2 - Unsafe for 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 consider vulnerable to failure

0 150 300 m

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FIGURE 2.17
AREA C
PEAK HYDRAULIC HAZARD
PMF EVENT

WILLIAM HENRY STREET
PARBURY LANE
HENSON LANE
BULWARA ROAD
MACARTHUR STREET
HACKETT STREET
OMNIBUS LANE
SYDNEY STREET
HARRIS STREET
STEAM MILL LANE
LITTLE HAY STREET
TUMBALONG BOULEVARD
HAY STREET
QUAY STREET
DARLING DRIVE
ULTIMO ROAD
THOMAS STREET
MARY ANN STREET
MCKEE STREET
WATTLE LANE
JONES STREET
WATTLE STREET
BAY LANE
BAY STREET
KELLY STREET
MOUNTAIN STREET
BLACKWATTLE LANE
WEST END LANE
MOUNTAIN LANE
KETTLE LANE
4.4

N

Stage 2 Sites
Cadastral

Hydraulic Hazard

H1 - Generally safe for people, vehicles and buildings
H2 - Unsafe for 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 consider vulnerable to failure

0 150 300 m

381

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FIGURE 2.18
FLOOD FUNCTION
1% AEP EVENT

PIRRAMA ROAD
REFINERY DRIVE
BOWMAN STREET
JONES BAY ROAD
PIRRAMA ROAD
HARRIS STREET
PYRMONT STREET
BANK STREET
WESTERN DISTRIBUTOR
LITTLE MOUNT STREET
HARRIS STREET
EXPERIMENT STREET
BULWARA ROAD
ADA PLACE
MURRAY STREET
DARLING DRIVE
COOK STREET
FORSYTH LANE
FERRY ROAD
FERRY LANE
BRIDGE ROAD
DARLING STREET
WATTLE STREET
ADA PLACE
PYRMONT STREET
MORIARTY WALK
JONES STREET
HACKETT STREET
WATTLE STREET
SYDNEY STREET
HARRIS STREET
DARLING DRIVE
MCKEE STREET
WATTLE LANE
QUEEN STREET
CROWN STREET
GLEBE STREET
GLEBE LANE
DERWENT LANE
DERWENT STREET

4.1
4.2
4.3
4.4
4.5
4.6
4.7
4.8

N

Stages 2 Sites
Cadastral
Hydraulic Category
Floodway
Flood Storage
Flood Fringe

0 300 600 m

382

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FIGURE 2.19
PIT BLOCKAGE SENSITIVITY
1% AEP EVENT
WITH HIGH BLOCKAGE



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FIGURE 2.20

CLIMATE CHANGE SENSITIVITY
SSP3-7.0 2100 1% AEP EVENT



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Attachment E

Precinct transport study

ARUP

Department of Planning, Housing and Infrastructure

Pyrmont-Ultimo Planning Proposal Stage 2

Precinct Transport Study

Reference: 315228-00

C | 23 June 2026



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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 315228-00

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ARUP

Document verification

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Document title	Precinct Transport Study
Job number	315228-00

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		Signature			
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		Description	First draft of the precinct transport study		
			Prepared by	**Checked by**	**Approved by**
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		Signature			
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		Description	Incorporating feedback from review		
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Issue Document Verification with Document ☑

Contents

1.	Introduction	2
1.1	Background	2
1.2	Report purpose	4
1.3	Report structure	4
2.	Strategic context	5
2.1	Policy and planning	5
2.2	Local planned and committed projects	7
3.	Existing movement and place	8
3.1	Understanding place	8
3.2	Understanding movement	12
3.3	Existing transport networks	15
3.4	Classifying the existing movement and place network	22
3.5	Understanding land use-transport integration	23
4.	Challenges	25
4.1	Insufficient walking space	25
4.2	Infrequent crossing opportunities	31
4.3	Missing crossings at signalised intersections	32
4.4	Multiple-stage crossings at signalised intersections	33
4.5	Excessive crossing delay for people walking and cycling	35
4.6	Poor walking network legibility	38
4.7	Lack of protected cycling infrastructure	41
4.8	Dangerous vehicle speed limits	42
4.9	Unattractive east-west public transport connectivity	43
5.	Vision, objectives, and validation framework	44
5.1	Established vision and objectives	44
5.2	Study vision, objectives, and validation metrics	46
6.	Rezoning proposal	47
7.	Transport response	52
7.1	Harris Street corridor	54
7.2	Bulwara Road corridor	58
7.3	Bank Street precinct	60
7.4	Jones Street	62
7.5	Wentworth Park	62
8.	Response validation	66
8.1	Vehicle trip generation	66
8.2	Street capacity	67
8.3	Walking space level of service	67
8.4	Crossing detour and delay level of service	68
8.5	Public transport journey times	68
8.6	Safe systems alignment	69

9. Action plan 71

Tables

Table 1 Details of proposed rezonings 3
Table 2 Report structure 4
Table 3 private vehicle commuting mode share to Pyrmont-Ultimo, Greater Sydney, and the Harbour CBD 12
Table 4 private vehicle commuting mode share from Pyrmont-Ultimo and Greater Sydney, 2016 12
Table 5 mode share for all trip purposes in Inner City Sydney and Greater Sydney 14
Table 6 average vehicles per dwelling in Pyrmont-Ultimo and Greater Sydney 14
Table 7 share of dwellings with no vehicle in Pyrmont-Ultimo and Greater Sydney, 2021 14
Table 8 share of single-family households with no vehicle in Pyrmont, Ultimo, and Greater Sydney, 2021 14
Table 9 walking space along Harris Street 27
Table 10 walking space along Bulwara Road 28
Table 11 walking space on Jones Street 29
Table 12 walking space on Wattle Street 29
Table 13 walking space on Pyrmont Bridge Road 30
Table 14 illegible walking links 39
Table 15 study objectives and corresponding validation metrics 46
Table 16 minimum footpath width on Harris Street between Allen Street and Ultimo Road 55
Table 17 recommended responses to long blocks on Harris Street 55
Table 18 outcomes associated with potential responses to Wattle Street severance 64
Table 19 estimated capacity of Harris Street: existing vs. recommended 67
Table 20 recommended change in walking space level of service 67
Table 21 Austroads LOS rating for pedestrian crossing delay or detour 68
Table 22 potential impact of recommended actions on bus passenger journey time 69
Table 23 safe systems alignment of study recommendations 69
Table 24 recommended actions 71

Figures

Figure 1 Properties proposed for rezoning under stage two 2
Figure 2 Pyrmont-Ultimo in the context of Aboriginal estates (SMALL CAPITALS) and known Aboriginal placenames 8
Figure 3 proportion of road corridor left uncovered without tree canopy, 2022 9
Figure 4 (left) businesses that support outdoor dining. Figure 5 (right) shops and stores 11
Figure 6 density of work locations of residents of Pyrmont-Ultimo 12
Figure 7 walk and public transport travel times for journeys to work from Pyrmont-Ultimo 13
Figure 8 walk and public transport travel times for journeys to work from Pyrmont-Ultimo by car 13
Figure 9 street network 1887 15
Figure 10 controlled crossings 16

Figure 11 existing cycling infrastructure separated from vehicles 17
Figure 12 share bike movements Q1 2026 18
Figure 13 existing public transport network 19
Figure 14 motorways, on/off-ramps, and collectors/distributors 20
Figure 15 classified roads 21
Figure 16 existing functional typologies in movement and place framework 22
Figure 17 gravity measure of access to jobs by walking and/or public transport 08:00-08:59 weekday March 2026 23
Figure 18 gravity measure of access to employment by walk and/or public transport including indicative metro service 08:00-08:59 weekday 24
Figure 19 walking space level of service at key sites: best LOS on left; worst recurring LOS (e.g. because of trees) on right 26
Figure 20 overly long distances between controlled crossings on streets with higher vehicle volumes 31
Figure 21 signalised intersections where pedestrian crossings are not provided on all legs 33
Figure 22 signalised intersections with multi-stage crossings (slip lanes and corner islands) 34
Figure 23 maximum observed traffic signal cycle durations 35
Figure 24 crashes injuring or killing people walking, 2020-2024 37
Figure 25 street network legibility issues 38
Figure 26 probability of a person walking surviving a collision with a motor vehicle travelling at the posted speed limit 42
Figure 27 public transport journey times to Hunter Street compared to walking journey times 43
Figure 28 response precincts 52
Figure 29 recommended transport responses 53
Figure 30 proposed cross-section of Harris Street between Allen Street and Fig Street 58
Figure 31 proposed slow points on Bank Street 61
Figure 32 indicative cross section for Wattle Street 63
Figure 33 public open space 83
Figure 34 existing land use zoning 84
Figure 35 population density (2021) 85
Figure 36 population-weighted mean population density in Pyrmont-Ultimo (red) vs. population-weighted distribution of population density in Greater Sydney (blue) 85
Figure 37 employment density (2016) 86
Figure 38 gravity measure of access to public primary schools by walking 87
Figure 39 gravity measure of access to supermarkets by walking 88
Figure 40 gravity measure of access to gyms by walking 89
Figure 41 gravity measure of access to swimming pools by walking 90

Drawings

Drawing 1 view of proposed controls at 1-33 Saunders Street (forms in orange) 47
Drawing 2 view of proposed controls at 1-19 Allen Street and 313 Harris Street (form in yellow) 48
Drawing 3 view of proposed controls at 344 Bulwara Road (form on right) looking north-east across Mary Ann Street Park 48
Drawing 4 view of proposed controls at 56 Harris Street, looking south along Harris Street 49
Drawing 5 view of proposed controls at 26-52 Mount Street looking north-west from Harris Street 49

Drawing 6 view of proposed controls for 463-467 Harris Street looking south along Harris Street 51

Photographs

Photograph 1 Pyrmont Bridge Road looking west 10
Photograph 2 high-quality historical shopfronts no longer host public-facing uses on Harris Street where narrow footpaths and high vehicle volumes negatively impact place value 10
Photograph 3 (left) narrow footpaths and footpath clutter on Harris Street make it uncomfortable even for couples to navigate together, let alone two strangers passing each other in opposite directions 30
Photograph 4 (right) pedestrians (including a mother with a pram, in the background) walk on the carriageway down Bulwara Road, where bin day has made the footpath impassable; meanwhile a homemade sign attached to a street tree implores drivers to slow down 30
Photograph 5 intersection of Harris Street and Allen Street 32
Photograph 6 (left) the walking link to Pyrmont Street (through the pictured carpark) is entirely illegible from Iron Wharf Place 40
Photograph 7 (right) obscured sight lines and access away from clear paths of travel makes the walking link to Pier Street highly illegible, despite tidy wayfinding signage with small type 40
Photograph 8 (left) existing shared path infrastructure on Pyrmont Bridge Road is inappropriately narrow even for pedestrians to navigate, let alone pedestrians and cyclists in mixed traffic 41
Photograph 9 (right) lawn turned to dust by foot traffic indicates that the shared path adjacent to the signalised mid-block crossing of Wattle Street at the light rail stop is currently over capacity 41
Photograph 10 potential low-cost carriageway treatment to clearly highlight to drivers that there is a change in the road environment and traffic conditions, Brisbane 59
Photograph 11 exemplar slow point treatment with horizontal deflection, vertical deflection, and a yielding requirement 61
Photograph 12 eastern footpath of Jones Street, looking north from Quarry Lane 62

Appendices

Appendix 1: previous recommendations 73
Appendix 2: further place, land use, and transport analysis 83

Executive summary

This precinct transport study has been prepared by Arup on behalf of the Department of Planning, Housing and Infrastructure to support Stage 2 of the Ultimo-Pyrmont Planning Proposal, which enables approximately 1,300 additional dwellings across seven sites.

The study builds on existing plans developed by local and state government. The City of Sydney's *Community Strategic Plan*, the then Department of Planning, Industry, and Environment's *Pyrmont Peninsula Place Strategy*, and Transport for NSW's *Pyrmont-Ultimo Transport Plan* set a consistent direction for the precinct: increased housing supported by increased canopy cover and better walking, cycling, and public transport infrastructure, without a corresponding increase in private vehicle use.

The Pyrmont-Ultimo peninsula already accommodates high residential densities, mixed land uses, low car ownership, and high levels of walking. These are impressive outcomes given the historical prioritisation of motor vehicle through-traffic in the area and the peninsula's circuitous public transport routes.

Several committed changes will further shift the movement and place context over the study horizon: the new Sydney Fish Market has reinvented a major cultural destination with spectacular public access to Sydney Harbour; the return of land at Wentworth Park to the public domain will breathe new life into major green space on the edge of the city; a transformed precinct at Blackwattle Bay (site of the old Sydney Fish Markets) and Sydney Metro West will massively uplift the level of access to diverse opportunities from the Pyrmont peninsula.

The existing network presents several barriers to realising government visions for the precinct. Insufficient walking space, long distances between crossings, and long delay at crossings appear to be suppressing walking demand on Harris Street south of Pyrmont Bridge Road. A lack of safe connected cycleways along the peninsula's north-south streets makes cycling impossible for the majority "interested but concerned" demographic moving along that axis. Throughout the peninsula, vehicle speed limits do not match the place context of the streets that they apply to, make cycling unattractive, and increase the risk of road trauma for people walking and cycling.

The study recommends 21 actions across the precinct, summarised in the action plan in Section 9. Given the site-specific nature of the planning proposal across seven sites, the recommendations focus on sub-precincts and corridors encompassing Harris Street, Bulwara Road, Bank Street, Jones Street, and Wentworth Park. Given future constraints on parking supply, recent cycleway construction, and future uplift in public transport service via the metro, a benchmarking approach to trip generation suggests a very small private vehicle mode share for future development facilitated by the planning proposal. As such, the recommendations focus on improving access by other modes. Recommendations include speed limit reductions, footpath widening, new mid-block wombat crossings, completion of crossings on all legs of signalised intersections, signal cycle redesign to minimise delay for people walking and cycling, separated cycleways on Harris Street and Wattle Street, and a Category 2 shared zone on Bulwara Road.

Pyrmont–Ultimo is at a critical inflection point. With major investments underway and further growth proposed, there is a unique opportunity to reshape the transport network to support a high-quality, sustainable urban environment. If the recommended changes are implemented, population growth in Pyrmont-Ultimo can be translated into livelier, safer streets that support a vibrant public life.

1. Introduction

1.1 Background

In the coming decades, Sydney's population is expected to keep growing, increasing demand for housing and creating an opportunity to make better use of well-located land. Existing transport infrastructure and land use patterns in inner Sydney can support a high residential density—higher than is currently supplied. This presents a valuable opportunity to supply more housing where people want it most.

In 2016, the NSW Government announced plans for Sydney Metro West, a new metro line connecting the Harbour CBD in the east to Parramatta in the west, with Pyrmont identified as a station location in 2018. In response, the then Department of Planning, Industry, and Environment released the *Pyrmont Peninsula Place Strategy* in 2020, outlining 5 big moves and 10 directions for the area, including great homes that can suit the needs of more people.

In 2022, the Minister for Planning and Public Spaces issued a ministerial direction requiring any planning proposals for the Pyrmont peninsula to align with the *Pyrmont Peninsula Place Strategy*. In 2025, the City of Sydney (the City) endorsed the *Ultimo Pyrmont Planning Proposal PP-2024-376* (stage one) that will facilitate approximately 1,269 new dwellings and 5,756 new jobs.

During consultation on the stage one planning proposal, several landholders suggested other properties that were not included but could be rezoned. Stage two responds to these suggestions and allows for up to 1,300 new dwellings on the peninsula. A further stage (stage three), to be led either by council or state government, may allow for a further 1,200 new dwellings on the peninsula and surrounds.

The sites included within the stage 2 proposal are mapped in Figure 1 below and detailed in Table 1.

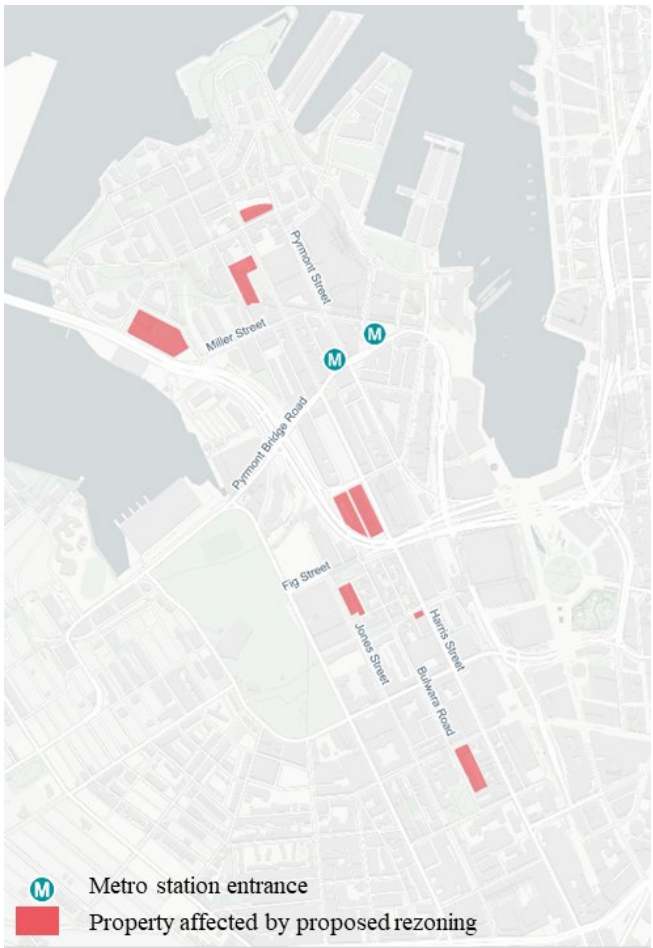


Figure 1 Properties proposed for rezoning under stage two

Table 1 Details of proposed rezonings

Street address	Existing development	Proposed change
56 Harris Street Pyrmont	Five to seven-storey residential flat building operated as affordable housing by City West	Increase the permitted building height up to 8-12 storeys on the southwestern end of the site fronting Harris Street.
52 Mount Street Pyrmont	Two-storey attached dwellings operated as social housing by Homes NSW	Permission for five-seven storey forms with consideration given to impact on existing heritage building on site and neighbouring properties. Through-site link to be provided.
1-33 Saunders Street Pyrmont	Multi-storey commercial development	Permission for mixed use. Planning for two residential towers fronting Saunders Street, plus three hotel forms fronting Bank Street and the Western Distributor. Several through-site links to be provided.
313 Harris Street Pyrmont	Strata-titled shop-top housing development adjoining 1-19 Allen Street	Retain shop-top housing typology on Harris Street but increase land use intensity. Higher forms planned for property boundary fronting the Western Distributor and lower forms fronting Harris Street.
1-19 Allen Street Pyrmont	Strata-titled residential flat building adjoining 313 Harris Street	
1-7 Henry Avenue Ultimo	Three-storey residential flat building and 13 terraces operated as social housing by Homes NSW	Reallocate existing parkland south of the terrace to north of the terrace. Permit six storeys in place of existing three-storey form. Extend terrace at rear and convert into single-storey apartments.
463-467 Harris Street Ultimo	Multi-storey development in mixed use zone	Seven-storey form to Harris Street. Two-three storey form to Kirk Street, enveloping a courtyard in the middle.
344 Bulwara Road Ultimo	Multi-storey residential flat building	Mixed uses permitted. Potential for ground-floor commercial use. Residential development expected above. Built form ranges from four storeys closer to the park to 12 storeys on the northern half. Three-metre setback from Bulwara Road in order to increase space for walking and place activity.

1.2 Report purpose

Arup has been engaged by the Department of Planning, Housing and Infrastructure to deliver this precinct transport study to support the City of Sydney's second stage of proposed rezoning in Pyrmont-Ultimo.

The study will:

- Introduce the proposed rezoning and previous bodies of work
- Establish the current transport context and identify key opportunities and challenges
- Set out the transport vision and the transport needs to support new homes and jobs
- Develop multimodal transport recommendations that enable all areas of the transport vision
- Provide an action plan to put the recommendations into practice

This precinct transport study will provide directions for future transport investment in the area. It should be reviewed in conjunction with other technical documentation relating to the proposed rezoning. This document is for public exhibition and stakeholder consultation. A confirmed outcome will be agreed post engagement.

All information in this study is based on publicly available sources or material provided by stakeholders during the consultation process.

1.3 Report structure

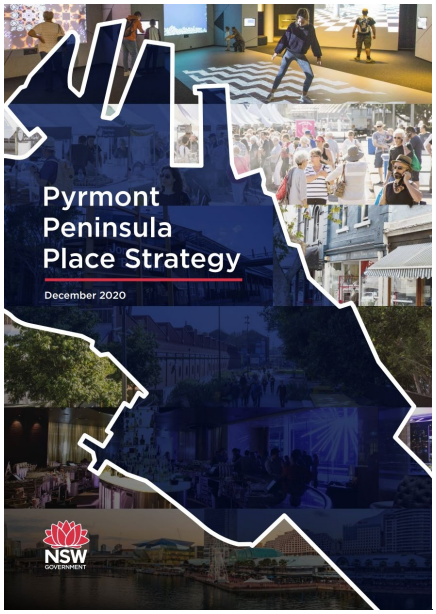
The structure of this document is summarised in Table 2.

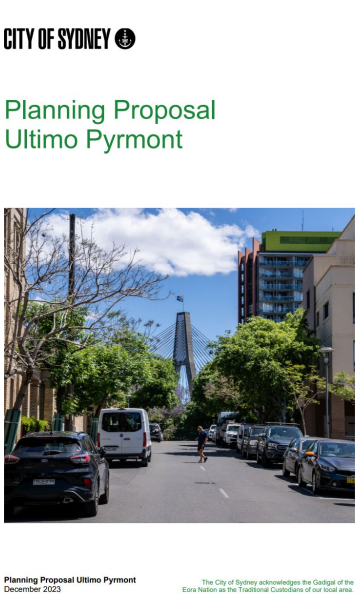
Table 2 Report structure

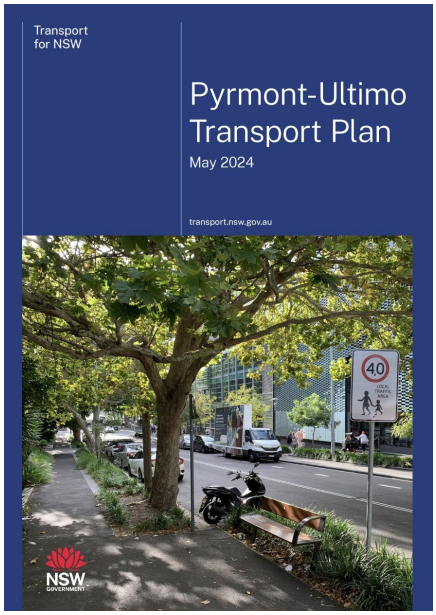
Section	Description
1: Introduction	Provide background to the stage rezoning as well as this study
2: Strategic context	Situate the proposed rezoning within the broader land use and transport planning contexts
3: Existing movement and place	Introduce the existing character of movement and place in the area
4: Vision, objectives, and validation framework	Set out the vision for the area and propose objectives to support that vision
5: Rezoning proposal	Detail the proposed land use changes in response to the vision
6: Transport response	Propose transport changes in response to the vision
7: Response validation	Validate the transport response against the objectives
8: Action plan	Elaborate actions to realise the transport response and identify the relevant authorities for the affected infrastructure

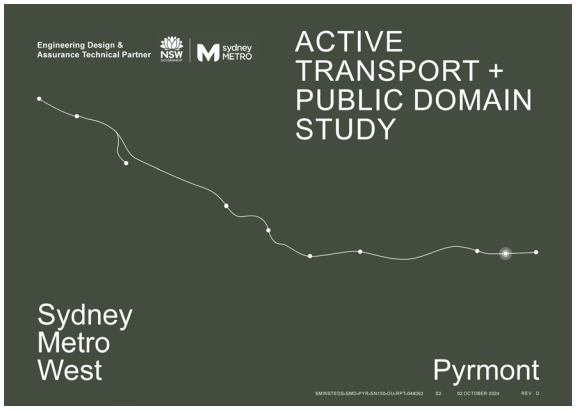
2. Strategic context

2.1 Policy and planning















The stage-two rezoning takes place amidst a backdrop of strategies, plans, and studies made in response to Sydney Metro West and transformation of Sydney Harbour.

The City of Sydney's strategic plans document the local community's wants and translate them into urban and transport planning visions for the area. The *Community Strategic Plan* covers all aspects of the city's development including transport. A city for walking, cycling, and public transport forms Strategic Direction 5, and outcomes for 2050 include more tree canopy cover, road space reallocation to walking and cycling, reduced vehicle speed limits, and more frequent opportunities to cross at traffic signals. The walking and cycling plans elaborate the City's strategy in those domains.

The *Pyrmont Peninsula Place Strategy* represents the first place-based response to Sydney Metro West for the Pyrmont-Ultimo area. While the strategy mostly concerns land use and built form, it establishes a sustainable transport vision for the peninsula where people walk, cycle, and use public transport to get to, from, and around the peninsula. The strategy recommends that this vision is supported by reallocating road space to people walking and staying (including on classified roads like Harris Street), creating new walking links in the network through the development of through-site links and the restoration of the Glebe Island Bridge, installing new crossings for people walking, building separated cycleways, fostering broader tree canopy, creating new on-street transport routes, reallocating road space to public transport (for example a contra-flow bus lane on the southern end of Harris Street), filtering vehicles out of certain streets, lowering vehicle parking rates, and decoupling parking from developments.

The City of Sydney's *Ultimo Pyrmont Planning Proposal* (referred to here as the stage one proposal) responds to the *Pyrmont Peninsula Place Strategy* in allowing for more homes on the peninsula.

The *Pyrmont-Ultimo Transport Plan* builds on the *Pyrmont Peninsula Place Strategy* and enumerates more actions specific to the transport domain. The plan envisions safe, convenient, and legible access by walking, cycling, and public transport, appropriate access for freight, and reduced private vehicle traffic and associated parking. The plan recommends that this vision is achieved by reallocating road space to walking and cycling (including on classified roads like Harris Street and Broadway, and on streets adjoining classified roads like Bay Street), installing new crossings, reducing waiting time at signalised intersections for people walking, increasing tree canopy, removing an on-ramp to the Western Distributor, reducing vehicle speed limits, reducing vehicle traffic on local streets, and reducing private vehicle parking rates.

The *Sydney Metro West Active Transport + Public Domain Study* develops concrete design options for the public domain surrounding the Metro East site, in response to the *Pyrmont Peninsula Design Guidelines*, which themselves build on the *Pyrmont Peninsula Place Strategy*. The study identifies an existing unacceptable level of walking space surrounding the station and proposes scenarios for the future. All scenarios include significantly increased space for walking and staying, and some scenarios include the potential to close Union Street fully to vehicles and to provide a separated cycleway on Pyrmont Bridge Road.

One of the actions of the *Pyrmont-Ultimo Transport Plan* is to improve safe walking access to primary and secondary schools. In response, the City of Sydney commissioned WSP to deliver a *Walking and Place Study* for Ultimo Public School. The study recommends reallocating space to people walking via a shared zone treatment on Bulwara Road, installing new crossings, upgrading existing crossings, reducing pedestrian delay at signalised intersections, and reducing vehicle speed limits.

2.2 Local planned and committed projects

Numerous significant land use and transport changes in Pyrmont-Ultimo have either recently been delivered or are currently underway.

2.2.1 New Sydney Fish Market

The New Sydney Fish Market opened in January 2026. As a major hospitality and retail development, the market attracts a high number of trips and provides a high level of local access to recreation opportunities.

2.2.2 New public open space in Wentworth Park

The NSW Government has announced that the lease on the greyhound precinct will not be renewed and when it expires in 2027 the affected land will be transferred to the City of Sydney. The City has previously established a vision for Wentworth Park as a green place connected to nature that supports sport, exercise, play, and social activities. The redevelopment of the former greyhound precinct will improve local access to open space and recreation opportunities.

2.2.3 Increased light rail frequency

The frequency of light rail service on the L1 line has increased to once every six minutes in 2026.

2.2.4 Ferry service at New Sydney Fish Market

The NSW Government has committed to providing a ferry service to the New Sydney Fish Market from Barangaroo. Vessel type and timetable are yet to be indicated by government, but the service will inform the design of Glebe Island Bridge.

2.2.5 Bridge Road cycleway

Transport for NSW has upgraded and made permanent the previously temporary separated cycleway installed on parts of Bridge Road between Lyons Road in Camperdown and Taylor Street in Glebe. The Bridge Road cycleway and shared path in front of the New Sydney Fish Market form part of the City of Sydney's Regional Bike Network and Transport for NSW's Strategic Cycleway Corridor between Camperdown and Pyrmont, but full separation is only provided intermittently along some blocks; people cycling must merge with vehicles at many intersections and must merge either with people walking or with people driving at the New Sydney Fish Market.

2.2.6 Blackwattle Bay cycleways

The redevelopment of the Blackwattle Bay Precinct, encompassing the old Sydney Fish Market site, will deliver new active transport links in the area. Voluntary planning agreement SVPA2024-33 commits Infrastructure NSW to deliver a cycleway on Pyrmont Bridge Road between the new Sydney Fish Market and Bank Street, and on Bank Street to connect to Miller Street and Glebe Island Bridge.

2.2.7 Sydney Metro West

A new metro station on Pyrmont Bridge Road will provide a direct, high-speed, high-frequency service between Parramatta in the west and Hunter Street in the city in the east. Public transport journeys from Pyrmont to the CBD currently take about the same time as walking owing to circuitous routes. As such, the direct metro service will radically transform public transport access to and from Pyrmont.

3. Existing movement and place

This section describes existing movement and place in the precinct. It provides a concise view of Country and supporting infrastructure for place, such as canopy cover and built forms. The movement analysis focuses on mode share and vehicle ownership and the potential for change. Following this, key aspects of specific modal networks (walking, cycling, public transport, and private vehicle) are presented, culminating in a movement and place classification of all roads and streets in the network. Further supporting analysis of land use and land use-transport integration is supplied in the appendices.

3.1 Understanding place

3.1.1 Country

The Pyrmont-Ultimo area extends from the Pyrmont peninsula in the north through to Broadway in the south. The peninsula itself is Wan.gal Country, separated from Gadigal Country to the east by Tumbalong, also known as Darling Harbour.



Figure 2 Pyrmont-Ultimo in the context of Aboriginal estates (SMALL CAPITALS) and known Aboriginal placenames

3.1.2 Tree canopy cover

Figure 3 below overlays the tree canopy captured for the Department of Planning, Housing and Infrastructure over the NSW government's road corridor geometry to calculate the proportion of each road or street corridor that is left uncovered without tree canopy in 2022.

Pyrmont Bridge Road stands out for long stretches of exposed street, particularly where the road is classified by Transport for NSW, and more so on the northern than the southern side.

William Henry Street also stands out for poor canopy cover, despite a reasonable density of plantings. Burying overhead electrical wires, expanding planting zones, and choosing species with broader crowns may help increase canopy cover on this important east-west link.

Sections of Wattle Street perform poorly for canopy cover. On northern sections, there appears to be a reliance on plantings in Wentworth Park rather than within the road reserve. While some species in the park successfully cover the footpath with expansive crowns, other species, particularly eucalyptus, develop height without such extensive or dense crowns, offering little amenity for people walking within the road reserve. On the eastern side of the street, small natives with limited crowns appear to struggle in constrained beds. On

southern sections of Wattle Street, many trees appear to have been aggressively pruned to accommodate overhead electrical supply.

Broadway currently performs very poorly for canopy cover. Despite some recent plantings, existing trees remain young and provide limited cover. Additionally, the road reserve is so wide that even at full maturity the existing plantings are unlikely to fully cover the road reserve.

It should be noted that some streets on the map that display limited current canopy cover above three metres in height (e.g. Bowman Street) have recently been planted extensively with young street trees that should provide decent cover in due course.



Figure 3 proportion of road corridor left uncovered without tree canopy, 2022

Legend

- < 20% canopy cover
- < 40% canopy cover
- < 60% canopy cover
- < 80% canopy cover
- < 100% canopy cover
- Rezoning



Photograph 1 Pyrmont Bridge Road looking west

A lack of shade leaves people walking and cycling exposed to full sun for the half kilometre between Pyrmont and the city along Pyrmont Bridge

3.1.3 Built form

Most streetscapes in the area provide a high level of visual interest, either from a fine grain in historical terrace subdivisions, or on larger lots from highly articulated historical warehouse facades. Both historical typologies tend to be attached building styles that enclose the street with a well-defined street wall.

While this historical urban form provides the foundations for high place quality, Photograph 2 shows an example streetscape where place performance lags behind potential because of land use changes (e.g. nearby shopping centre development) and transport changes (e.g. high motor vehicle volumes) over the last half-century.



Photograph 2 high-quality historical shopfronts no longer host public-facing uses on Harris Street where narrow footpaths and high vehicle volumes negatively impact place value

3.1.4 Businesses that interact with place activity

Cafes, bars, and restaurants are good indicators of place performance as they both rely on, and themselves contribute to, high place quality. The same is true of street-facing shops and stores, albeit to a lesser degree, as they rely on foot traffic which is attracted by high amenity street environments.

The maps of cafes, bars, and restaurants in Figure 4, and shops and stores in Figure 5, paint a striking picture of place performance in the area. Nearby Glebe Point Road is evidently performing strongly as a high street. Harris Street, by contrast, does not emerge as a high street in terms of its place performance—at least not south of Pyrmont Bridge Road. This stretch of Harris Street has been classified by Transport for NSW and the treatments to prioritise vehicle throughput have clearly damaged the place performance of Harris Street as a high street.

It should be noted that place performance does not determine place function. Harris Street may currently perform poorly in terms of place outcomes, but this does not change its place function.

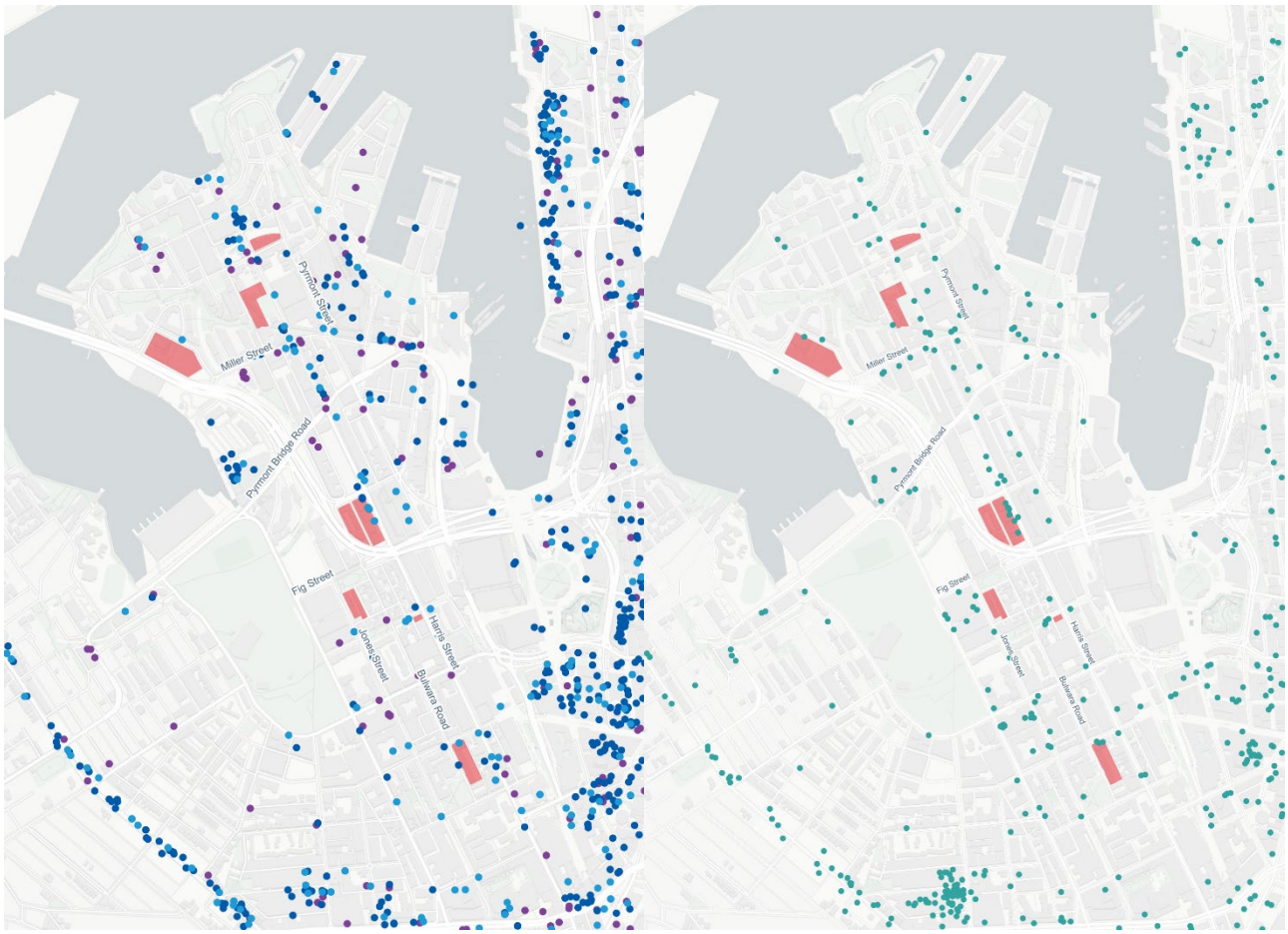


Figure 4 (left) businesses that support outdoor dining. **Figure 5 (right) shops and stores**

Café
Bar
Restaurant
Shop/store

Data source: Overture Maps Foundation

3.2 Understanding movement

3.2.1 Journey to work analysis

Table 3 below shows that private vehicle mode share for commuting to Pyrmont-Ultimo is lower than Greater Sydney as a whole, but still twice the rate of the adjacent Harbour CBD. The higher private vehicle mode share compared to the CBD is likely attributable to the poorer level of public transport accessibility to Pyrmont than to the Sydney CBD and may change with the introduction of metro services.

Table 3 private vehicle commuting mode share to Pyrmont-Ultimo, Greater Sydney, and the Harbour CBD

Measure	Pyrmont-Ultimo	Greater Sydney	Harbour CBD
Private vehicle mode share for commuting to area	40.3%	66.4%	23.7%

Source: ABS census 2016

By contrast, Table 4 below shows that private vehicle mode share for commuting from the area is more than half as low in Pyrmont-Ultimo as in the rest of Greater Sydney. This reflects the high level of access to employment from the peninsula, including walkable access to the Harbour CBD.

Table 4 private vehicle commuting mode share from Pyrmont-Ultimo and Greater Sydney, 2016

Measure	Pyrmont-Ultimo	Greater Sydney
Private vehicle mode share for commuting from area	25.1%	70.6%

Source: ABS census 2016

Figure 6 below shows that most residents in Pyrmont-Ultimo work within a short distance from the peninsula, either on the peninsula itself or in the adjacent CBD.

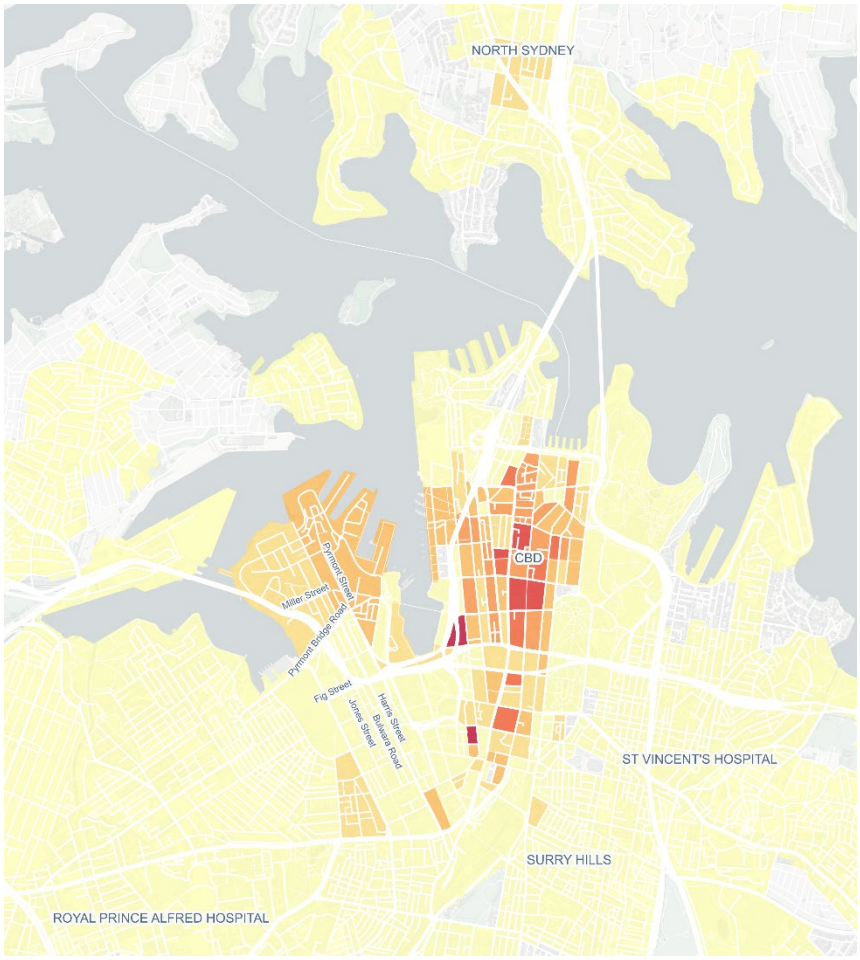
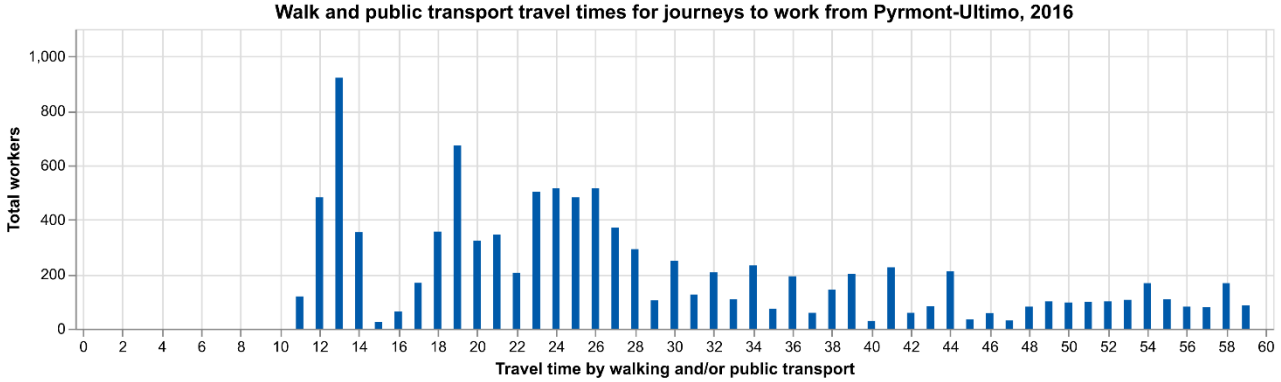


Figure 6 density of work locations of residents of Pyrmont-Ultimo

Source: ABS census 2016

To better quantify the pattern suggested visually on Figure 6 above, Figure 7 below charts the distribution of different travel times required to reach existing work locations by walking and/or public transport (note that 5% of locations more than 60 minutes away are not charted).

Figure 7 walk and public transport travel times for journeys to work from Pyrmont-Ultimo



Source: ABS census 2016 (work locations), Arup analysis of TfNSW 2026 GTFS (travel times)

Summarising the distribution yields the following statistics:

- roughly 64% of residents in 2016 worked in locations that in 2026 are no more than 30 minutes away by walking or public transport
- roughly 83% worked in locations that are no more than 45 minutes away by walking or public transport
- roughly 95% worked in locations that are no more than 60 minutes away by walking or public transport

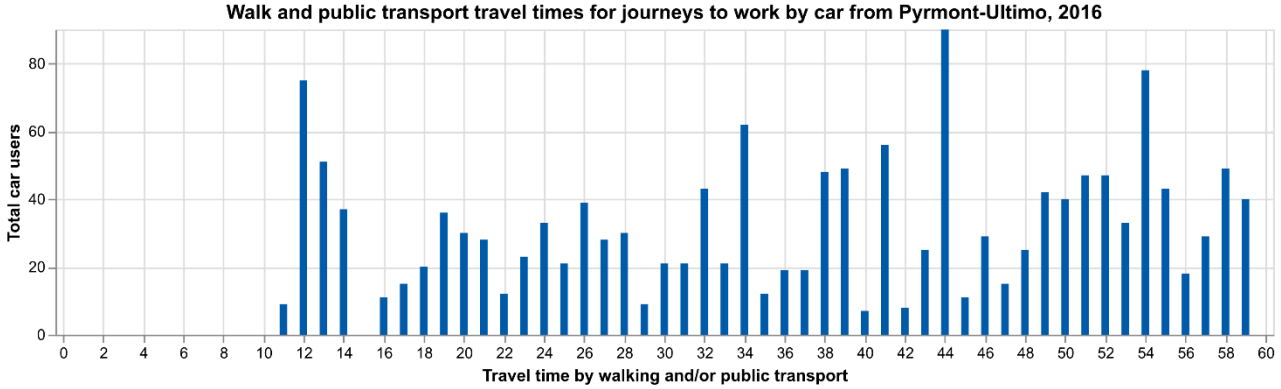
This represents an excellent level of access in Sydney, where the average commute by public transport is 65 minutes (BITRE 2016: 140). That is, almost all residents of Pyrmont-Ultimo can commute by walking or public transport in less time than the average Sydney public transport commuter currently does. This also suggests that the already high walking mode share could increase further if the at-times hostile existing walking environment were ameliorated by appropriate interventions.

This analysis of existing travel times suggests that the historical private vehicle commuting mode share (25%, see Table 4) is elevated, and likely induced by the overprovision of public and private infrastructure (parking, physical road space, temporal road space, etc.) for private vehicles. This is confirmed by Figure 8 below, which shows that in 2016:

- roughly 28% of car commuters drove to workplaces that in 2026 are no more than 30 minutes away by walking or public transport
- roughly 55% of car commuters drove to workplaces that are no more than 45 minutes away by walking or public transport
- roughly 84% of car commuters drove to workplaces that are no more than 60 minutes away by walking or public transport

Figure 8 walk and public transport travel times for journeys to work from Pyrmont-Ultimo by car

Source: ABS census 2016 (work locations), Arup analysis of TfNSW 2026 GTFS (travel times)



Given that 45 minutes is considered a threshold for "lengthy" commuting (BITRE 2016), this analysis suggests that by 2032, car-based trips to work from Pyrmont-Ultimo could be reduced by at least 55% without adversely impacting residents' quality of life. Once metro services are operational, and if improvements are also made to the cycling network, car-based commuting could be reduced even further.

3.2.2 All-purpose mode share (residents)

Private vehicle mode share for all purposes in the Inner City Sydney SA3 (the closest geographical match to Pyrmont-Ultimo reported in TfNSW's *Household Travel Survey*) is also half as low as in Greater Sydney.

Table 5 mode share for all trip purposes in Inner City Sydney and Greater Sydney

Mode	Sydney Inner City SA3 share	Greater Sydney share
Private vehicle	27.1%	67.9%
Walking	51.8%	18.8%

Source: TfNSW Household Travel Survey 2024-2025

Conversely, walking mode share for all purposes is twice as high, accounting for the majority of all trips in the inner city. This is a remarkably high walking mode share for Sydney as a whole and suggests that any interventions designed to reduce walking delay may not just align with the established vision for the area but may also reduce total person delay for people already moving through the area on foot.

3.2.3 Vehicle ownership

Table 6 shows that households in Pyrmont-Ultimo own half as many vehicles on average compared to Greater Sydney.

Table 6 average vehicles per dwelling in Pyrmont-Ultimo and Greater Sydney

Measure	Pyrmont-Ultimo	Greater Sydney
Average vehicles per dwelling	0.8	1.6

Source: ABS census 2021

Table 7 below shows that high proportions of dwellings in Pyrmont and Ultimo do not own a vehicle: two to four times the rate of Greater Sydney, reaching almost half of all dwellings in Ultimo.

Table 7 share of dwellings with no vehicle in Pyrmont-Ultimo and Greater Sydney, 2021

Vehicles per dwelling	Pyrmont	Ultimo	Greater Sydney
No vehicle	28.3%	45.0%	11.1%

Source: ABS census 2021

While this is in part mediated by the area's demographics—namely fewer families—Table 8 below shows that car-free living is still very popular amongst families in the area, with three to six times the rate of families in the area choosing to live car free compared to the rate in Greater Sydney as a whole, and a third of all families in Ultimo living car free.

Table 8 share of single-family households with no vehicle in Pyrmont, Ultimo, and Greater Sydney, 2021

Vehicles per dwelling	Pyrmont	Ultimo	Greater Sydney
No vehicle	17.6%	33.5%	5.2%

Source: ABS census 2021

These low vehicle ownership rates bear on road space allocation considerations in the area, given that large amounts of public space are currently dedicated exclusively to use by a transport mode that more than a third of all households do not use.

3.3 Existing transport networks

3.3.1 Cadastral development

Pyrmont-Ultimo was laid out on a highly regular rectangular grid, as shown in Figure 9 below. The historical grid largely survives, although with extensive disruption of Jones Street and Allen Street, and minor disruption of Gipps Street and John Street.

Jones Street between Allen Street and Miller Street has largely been consumed by Bank Street and the old fish market. Allen Street between Bulwara Road and Wattle Street has been consumed by the Western Distributor motorway and the L1 light rail corridor. Gipps Street has been consumed by Bank Street and the old fish market, although the network topology remains similar owing to the close alignment of Pyrmont Bridge Road. John Street has been lost east of Pyrmont Street, although a similar topological function is provided by Jones Bay Road.

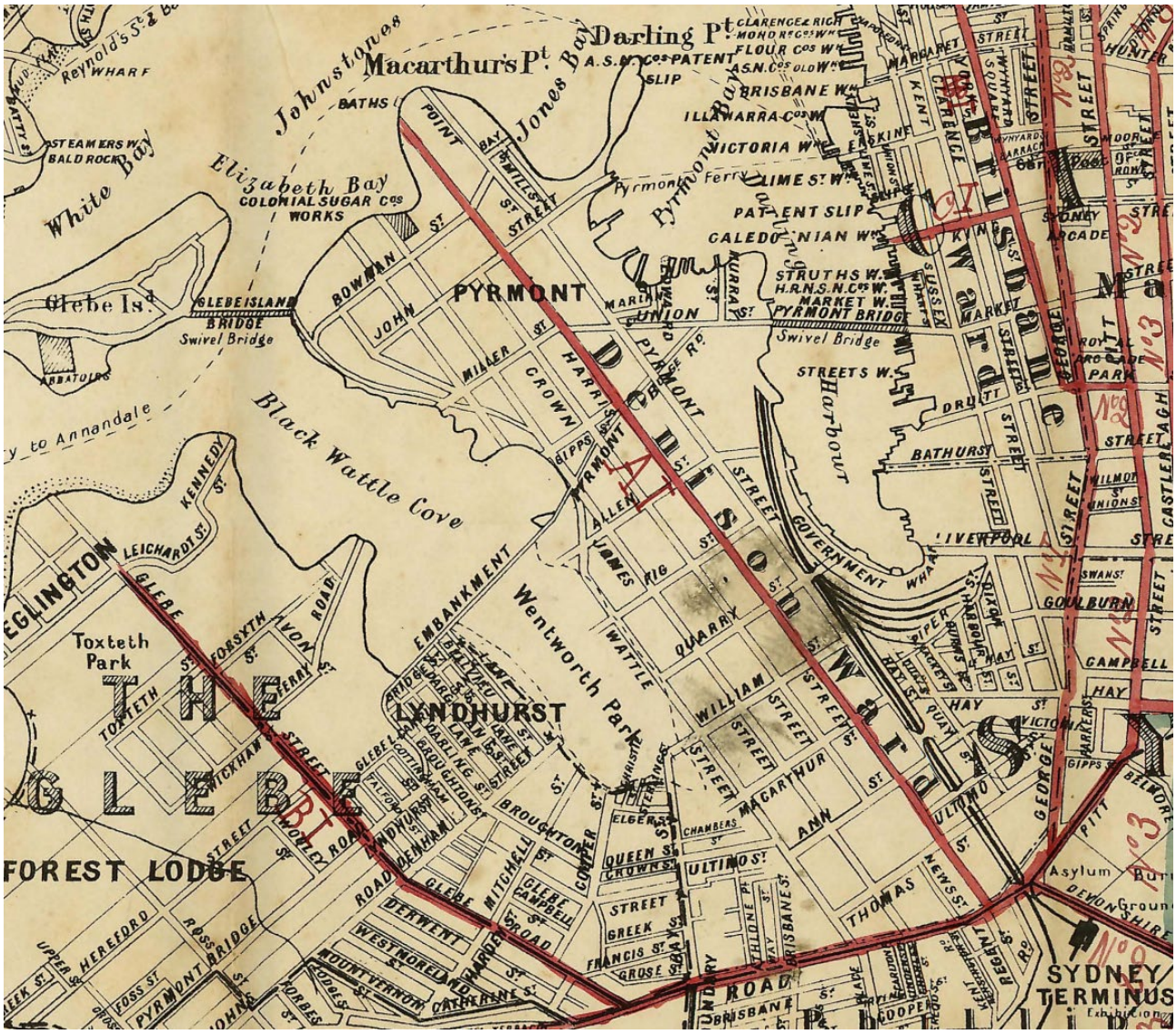


Figure 9 street network 1887

Source: John Sands & Company, *City of Sydney & Suburbs, 1887: Single sheet* (1887), [A-00880474]. City of Sydney Archives

3.3.2 Walking network

Figure 10 below shows controlled crossings in the area: signalised pedestrian crossings, pedestrian crossings (i.e. crossings marked with a zebra pattern), and continuous footpath treatments. Signalised crossings are annotated with recorded maximum cycle durations. Zebra crossings are extremely rare in the area, with only three zebra crossings on the regular street network (others only bridge slip lanes or service lanes).

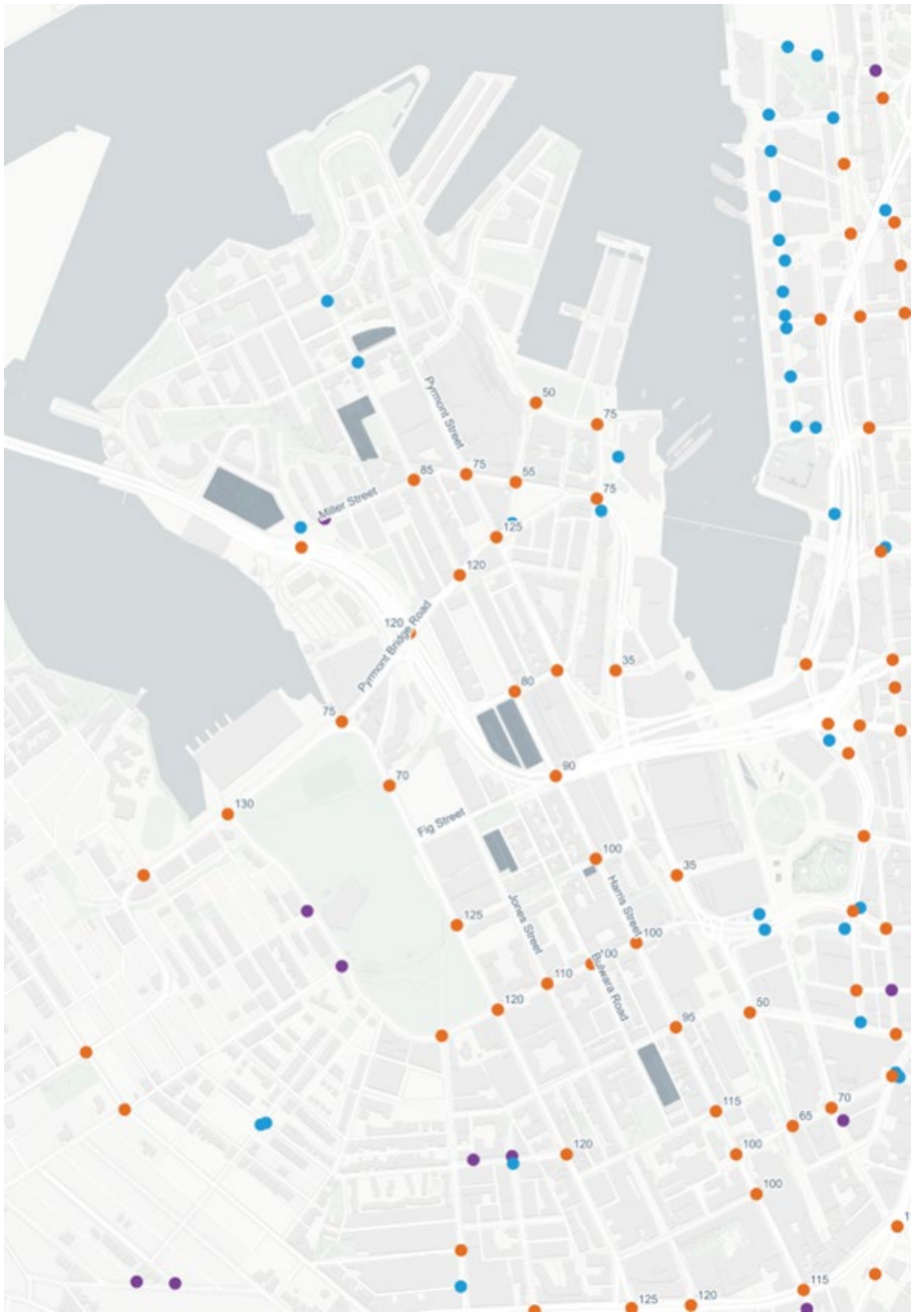


Figure 10 controlled crossings

Legend

- Signalised crossing
- Zebra crossing
- Continuous footpath

3.3.3 Cycling network

While all streets on the peninsula can be ridden on, the network that is available to the majority "interested but concerned" demographic is limited and fragmented.

The most amenable mixed-traffic environments are to be found on Jones Street and Bulwara Road, although a wide carriageway on Jones Street facilitates fast driving and the one-way vehicle flow on Bulwara Road may intimidate concerned cyclists riding contra flow. Both streets are disconnected from the street network north of Allen Street.

Figure 11 below maps the existing cycling infrastructure on the peninsula that provides protection from vehicles. There are only two separated cycleway corridors on the peninsula, and both connect east-west movements: the Saunders Street-Miller Street-Union Street corridor in the northern half of the peninsula, and the Mary Ann Street corridor in the southern half of the peninsula. Additional east-west connections are provided by shared paths on Bridge Road and Quarry Street.

There are no separated cycleways on the north-south axis along the peninsula, severely limiting the ability to travel north south through the area by bike.



Figure 11 existing cycling infrastructure separated from vehicles

Legend

- Shared path
- Separated cycleway

In Figure 12 below, Ride Report data shows significant share bike movements throughout the area.

Pyrmont Bridge is the third-busiest corridor for share bike traffic in Sydney, behind Oxford Street and Taylor Square. Connecting to this corridor are both Pyrmont Bridge Road and Miller Street.

Remarkably, Pyrmont Bridge Road sees about 30% more share bike trips than the parallel corridor on Miller Street despite having no safe separated cycling infrastructure, while Miller Street provides a two-way separated cycleway. This highlights the importance of providing safe separated cycling infrastructure on the most central links in the network.

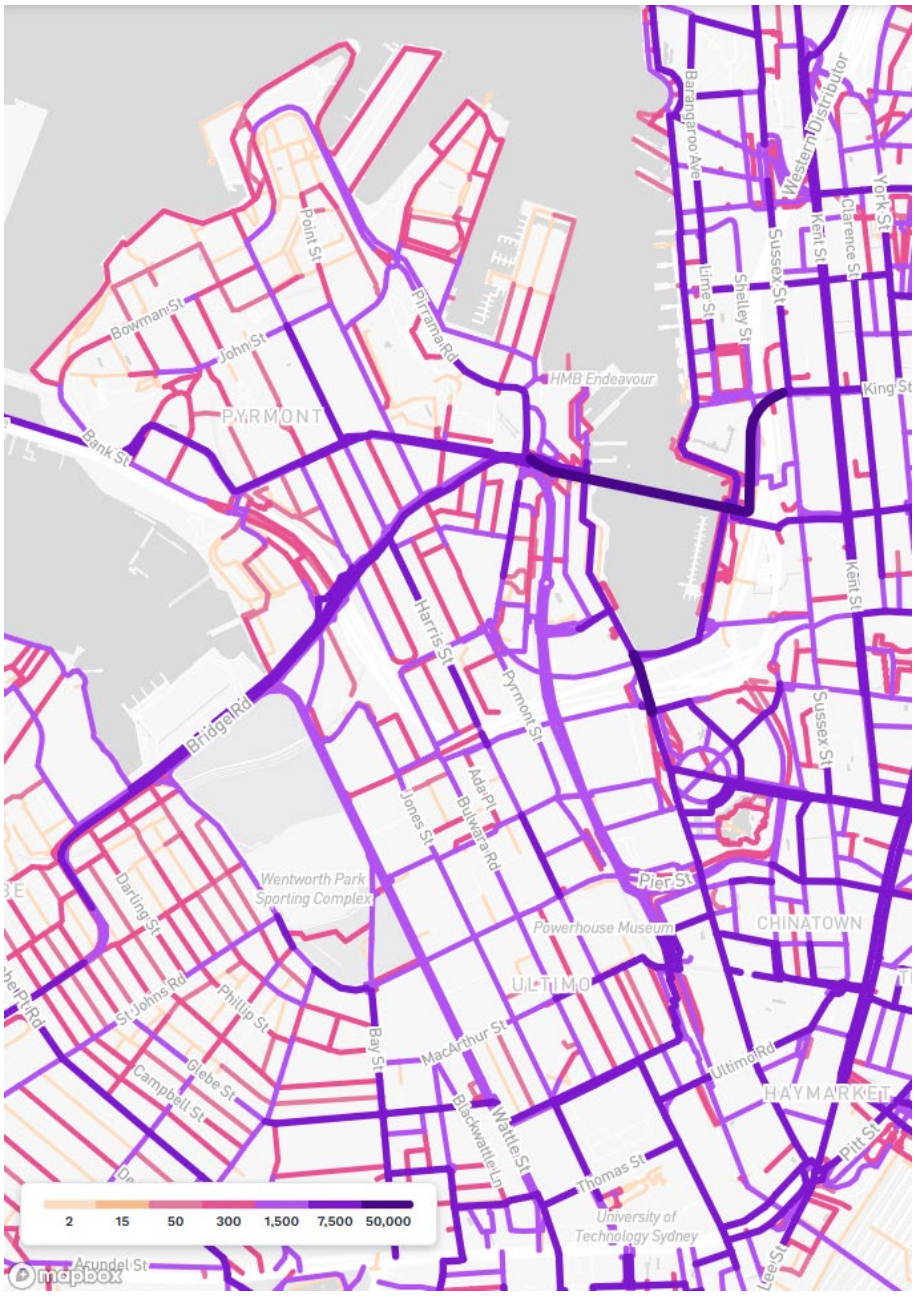


Figure 12 share bike movements Q1 2026

Source: Ride Report

City of Sydney bike counts during weekday peak hours present a slightly different picture: on average twice as many cyclists move through the Miller Street cycleway than Pyrmont Bridge Road. However, these counts only capture six hours on a weekday and are more likely to include habituated commuters.

3.3.4 Public transport network

Figure 13 below maps the existing public transport network in the area.

Notable is the circuity of numerous routes. The light rail is highly circuitous as it follows a repurposed freight line that was aligned close to harbourfront development. The 389 bus, which services the northern- and easternmost parts of the peninsula, forms almost a perfect circle between the western and eastern sides of Tumbalong/Darling Harbour. The 501 bus, which travels along Harris Street to Central Station, doubles back on itself between Broadway and Thomas Street in the northbound direction as Harris Street has no northbound lanes between Broadway and Thomas Street.



Figure 13 existing public transport network

3.3.5 Motor vehicle network

Pyrmont-Ultimo is notable for its high level of connectivity to the motorway network. Motorways, on/off-ramps, and collector/distributor streets are mapped in Figure 14 below. This map shows:

- A total of 4 onramps are found within 400 metres of each other
- A total of 4 offramps are found within 400 metres of each other
- 3 onramps within 400 metres of each other provide access to the same eastbound motorway
- 2 offramps within 400 metres of each other provide egress for the same westbound motorway

Between Miller Street and Fig Street, the motorway consumes about five blocks of urban land.



Figure 14 motorways, on/off-ramps, and collectors/distributors

In addition to and complementing the motorway network, Transport for NSW has classified Pyrmont Bridge Road, Fig Street, Harris Street, and Wattle Street as state roads, as shown in Figure 15 below.

The Department of Main Roads, a predecessor of Transport for NSW, converted Harris Street and Wattle Street to a modified one-way pair in 1987 (Harris Street is only truly one-way south of Thomas Street, but north of Thomas Street Transport for NSW allocates more lanes to southbound than northbound travel).

Both streets form part of the Southern Arterial Route, which extends south through Abercrombie Street and Regent Street and further south towards Waterloo. The Southern Arterial Route reimagined several key streets in Sydney's inner city from streets with multiple functions into roads designed primarily for the through-movement of vehicles.



Figure 15 classified roads

3.4 Classifying the existing movement and place network

Figure 16 below shows the existing movement and place typologies of links in the peninsula's network. Broadway, Harris Street, and Miller Street form the main streets of the precinct. Union Street and Tumbalong Boulevard are important civic spaces that connect to these main streets. The bulk of the remaining links in the network are local streets.



Figure 16 existing functional typologies in movement and place framework

Functional typology

- Local streets – higher movement
- Local streets – lower movement
- Main roads
- Main streets – arterial
- Main streets
- Civic spaces

3.5 Understanding land use-transport integration

3.5.1 Employment

Figure 17 below displays a gravity measure of access to employment by walking and/or public transport (whichever is faster). This map is insightful as the level of access to jobs is not patterned by proximity to existing public transport infrastructure. Instead, the level of access is patterned by walking network distance to the CBD. This highlights that existing public transport routes into the CBD are circuitous, and once wait time is taken into consideration, are slower than walking in some parts (see Figure 27 for more detail).

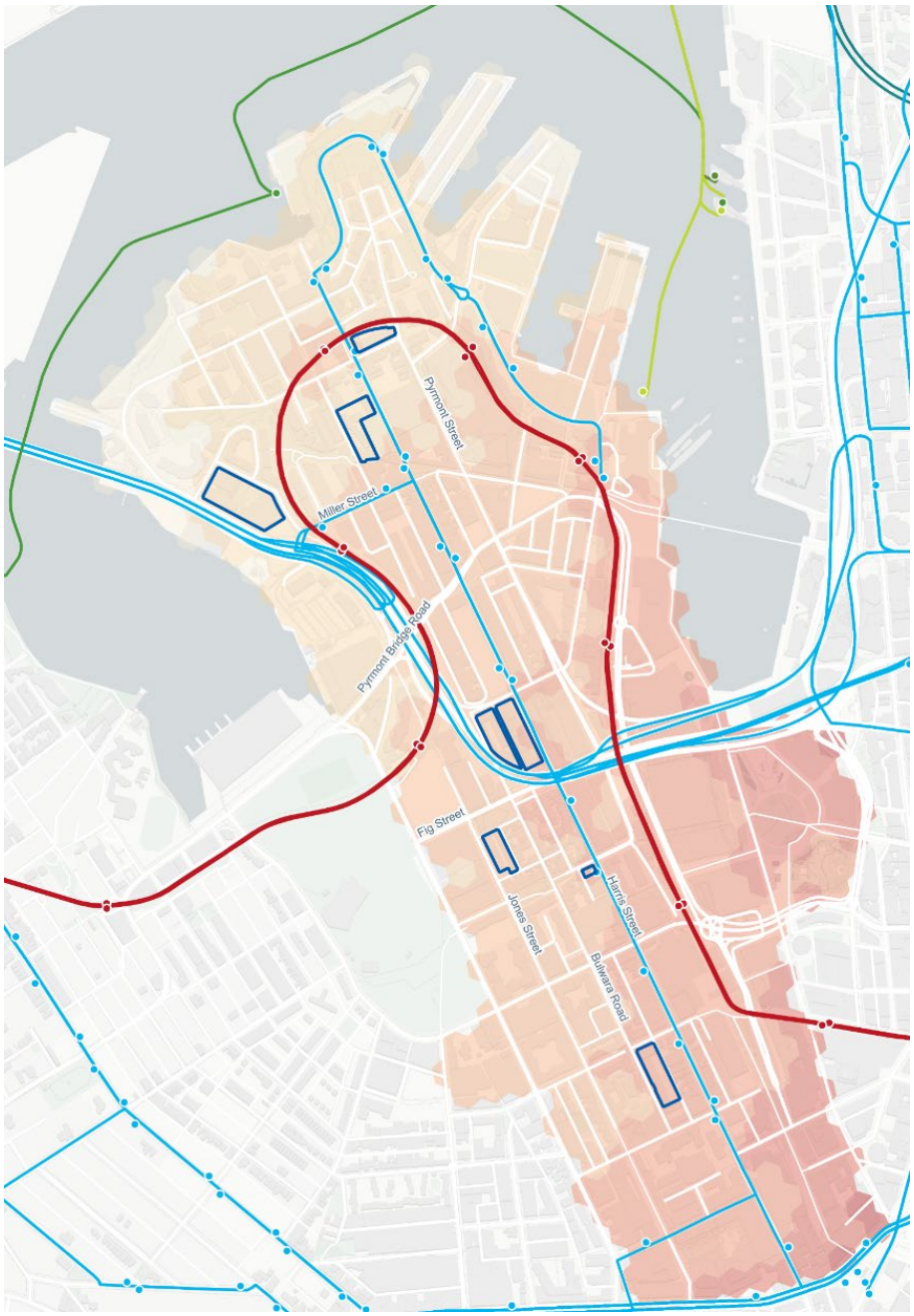


Figure 17 gravity measure of access to jobs by walking and/or public transport 08:00-08:59 weekday March 2026

Legend

Rezoning

Higher access

Lower access

These patterns of access in the northern half of the peninsula are expected to change significantly with the opening of Sydney Metro West, as described in Figure 18 below which recalculates the same gravity measure of access as above but including a metro service based on publicly announced travel times, station locations, and a 4-minute headway in the AM peak.

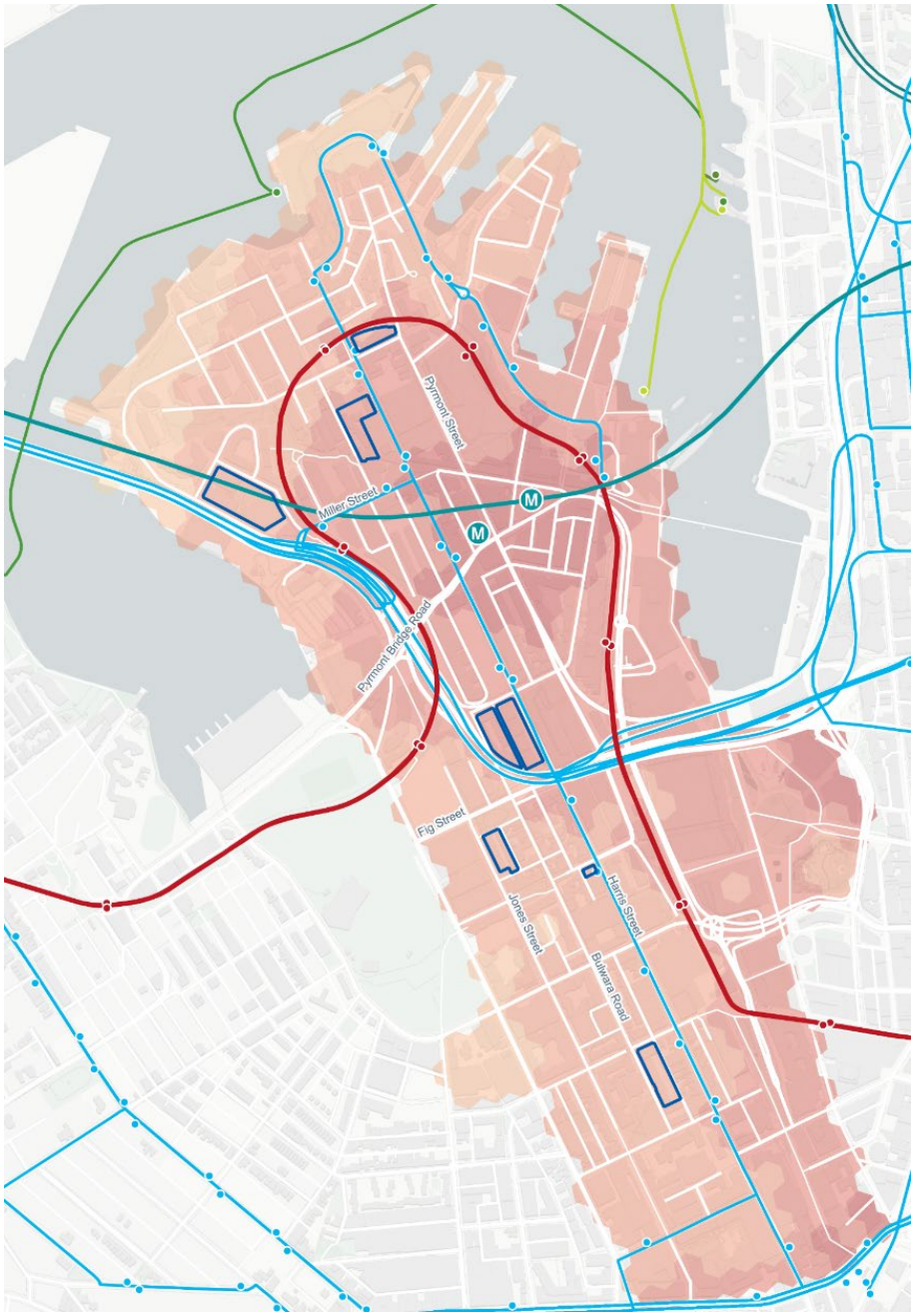


Figure 18 gravity measure of access to employment by walk and/or public transport including indicative metro service 08:00-08:59 weekday

This gravity measure of access to employment after the opening of Sydney Metro West shows a radically different pattern of access, with the northern half of the peninsula moving from the lowest to the highest level of access to employment. The introduction of metro services will allow residents to reach about 40% more doorstep-equivalent jobs. This will provide Pyrmont with one of the highest levels of access to employment by public transport in the state and facilitate ambitious moves towards a healthy and sustainable transport future.

4. Challenges

Transport challenges on the peninsula generally relate to physical topography, infrastructure barriers, and road space allocation decisions that have prioritised private vehicle capacity over safe and comfortable infrastructure for people walking and cycling. Prominent amongst these challenges is physical severance by motorway and light rail corridors, legibility issues on walking links crossing motorway and rail corridors, and vehicle speed limits that are dangerously high and inconsistent with existing movement and place typologies.

In review of the existing movement and place baseline data, onsite observations and stakeholder engagement with the City of Sydney, several critical challenges have been identified below including:

- Insufficient walking space
- Infrequent crossing opportunities
- Missing crossings at signalised intersections
- Multiple-stage crossings at signalised intersections
- Excessive crossing delay for people walking and cycling
- Poor walking network legibility
- Lack of protected cycling infrastructure
- Dangerous vehicle speed limits
- Unattractive east-west public transport connectivity

In responding to these challenges, the peninsula presents significant opportunity to improve walking and cycling outcomes to realise established government visions for the precinct. The road reserves for the main roads and streets on the peninsula are wide enough to accommodate more space for people walking and cycling and maintain private vehicle access throughout. Network operations present an opportunity for quick wins that do not require expensive physical interventions but greatly improve walking and cycling outcomes.

Opportunities to address these challenges are presented as transport responses and recommendations later in this report. Not all challenges can be mitigated as part of this stage two rezoning, a focus has been placed on walking, cycling and public transport improvements at a local level.

4.1 Insufficient walking space

Walking space is poorly balanced on several important streets on the peninsula, with much of the space given to private vehicles on Harris Street, Bulwara Road, Wattle Street, and Pyrmont Bridge Road.

The Transport for NSW *Walking Space Guide* (TS 01589) provides a process for evaluating the amount of unobstructed space available for people walking on footpaths, with the aim of ensuring comfortable walking environments. The guide rates footpath performance using a Level of Service (LOS) framework from A (best) to F (worst), tied to comfort percentiles during the peak hour:

- LOS A (85th percentile) represents the most comfortable conditions
- LOS B (66th percentile) is still highly comfortable
- LOS C (50th percentile) is the minimum design target for new works, upgrades, or footpath resurfacing projects
- LOS D (33rd percentile) is tolerated for existing footpaths: it does not trigger intervention but is not a desirable state
- LOS E (15th percentile) is classified as "at risk", requiring annual monitoring and the commencement of project planning

- LOS F (below 15th percentile) is an "intervention trigger", indicating very poor conditions that demand urgent action to increase walking space

The walking space on different streets throughout the peninsula is tabulated below and illustrated in Figure 19. LOS was calculated using on-site measurements taken by Arup and walking counts undertaken by the City of Sydney. The walking space level of service on many footpaths varies even within the space of one block. Most of this variation can be attributed to tree plantings in the footpath and changing kerbside uses. For example, a footpath which rates LOS E for walking space at its widest point and outside of clearway operation may rate LOS F where trees are planted in the footpath and/or when the clearway is in operation and the kerbside use is a vehicle traffic lane.



Figure 19 walking space level of service at key sites: best LOS on left; worst recurring LOS (e.g. because of trees) on right

Source: Arup, except east of Harris Street (Mott MacDonald)

Legend



4.1.1 Harris Street

The results for Harris Street, provided in Table 9 below, show that walking space on Harris Street only reaches an acceptable level (LOS C-D) in three contexts:

- Where new road space has been added to the corridor from adjacent properties that have been recently developed
- Where the City of Sydney has widened footpaths on the unclassified sections of Harris Street
- On the western footpath of Harris Street between Allen Street and Pyrmont Bridge Road when the clearway is not in operation (the historical reason for the narrower carriageway on this block is unclear)

Even where the City of Sydney has widened footpaths on the unclassified sections of Harris Street, walking space still frequently and regularly achieves LOS F where tree plantings consume footpath space.

Elsewhere on Harris Street, walking space level of service never reaches the minimum standard C, instead varying between D and F. Most footpaths rate at best LOS E, which the *Walking Space Guide* states "coincides with most people expressing a desire to avoid the area". This is borne out in the surveyed walking flows on Harris Street, which are low on the classified sections with little walking space, but which double on the unclassified sections of the street which have ample walking space. A lack of walking space is evidently stopping people from choosing to walk along Harris Street.

Table 9 walking space along Harris Street

Max. people per hour	Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
#185	Broadway Thomas Street	Western	(middle) 2.75 (northernmost) 3.95	1.40	Traffic	E-F
		Eastern	(southernmost) 2.65	1.60	Timed clearway	F
	Thomas Street Ultimo Road	Western	7.30	1.30	Traffic	A
	Ultimo Road Mary Ann Street	Western	2.70	1.20	Traffic	F
		Eastern	2.90	1.05	Traffic	F
185	Mary Ann Street MacArthur Street	Western	2.70	1.25	Timed clearway	E-F
		Eastern	3.05	1.25	Timed clearway	D-F
#195	MacArthur Street William Henry Street	Western	2.75	1.20	Timed clearway	E-F
		Eastern	(currently closed)		Timed clearway	
205	William Henry Street Quarry Street	Western	(historical) 2.95 (new development) 4.00	^1.45	Timed clearway	D-F
		Eastern	(pool) 6.20 (middle) 3.70 (northernmost) 2.75	1.40	Traffic	A-F
#175	Quarry Street Fig Street	Western	2.75	^1.25	Timed clearway	E-F
		Eastern	2.70	0.90	Timed clearway	E-F
145	Fig Street Allen Street	Western	2.75	1.10	Timed clearway	E-F
		Eastern	2.80	0.95	Traffic	D-F
#200	Allen Street Pyrmont Bridge Road	Western	4.10	^1.50	Timed clearway	B-E

Max. people per hour	Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
		Eastern	*4.00	*1.20	Parking	F
260	Pyrmont Bridge Road Miller Street	Western	4.10	^1.35	Parking	B-E
		Eastern	3.95	1.70	Parking	B-F
415	Miller Street John Street	Western	3.95	1.80	Parking	C-F
		Eastern	4.10	1.20	Parking	C-F

*On the eastern footpath of Harris Street between Allen Street and Pyrmont Bridge Road, a rain garden has been planted in the middle of the footpath, yielding walking space of 1.20 and 1.60 metres on either side
^kerb stone is 0.3 metres at this location
#interpolated from neighbouring survey sites

4.1.2 Bulwara Road

The City of Sydney has not surveyed walking flows on Bulwara Road. Footpaths on Bulwara Road are assumed to qualify as Type 2 footpaths[1] according to the land use guidelines given in Transport for NSW's *Walking Space Guide*.

The results for Bulwara Road, provided in Table 10, are even worse than for Harris Street. LOS F is the norm along Bulwara Road, with only some stretches reaching E. This level of service represents an urgent intervention trigger according to the *Walking Space Guide*.

Table 10 walking space along Bulwara Road

Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
Mary Ann Street MacArthur Street	Western	1.50	0.40	Cycling	F
	Eastern	1.50	0.40	Parking	F
MacArthur Street William Henry Street	Western	3.05	1.15	Parking	A-D
	Eastern	1.50	0.60	Parking	F
William Henry Street Quarry Street	Western	1.80	0.50	Parking	E-F
	Eastern	1.80	0.50	Traffic	F
Quarry Street Fig Street	Western	1.80	0.50	Parking	E-F
	Eastern	1.80	0.50	Traffic	F
Fig Street Allen Street	Western	(southernmost) 1.45 (middle) 4.35 (northernmost) 0.00	N/A	Parking	A-F
	Eastern	(southernmost) 2.35 (middle) 0.00 (northernmost) 1.40	N/A	Traffic	F
	Western	1.60	0.95	Traffic	F

[1] Footpath types range from 1-5 and classify footpaths according to maximum walking volumes measured over five-minute intervals and expressed in people per hour

Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
Allen Street Pyrmont Bridge Road	Eastern	1.50	N/A	Parking	F
Pyrmont Bridge Road Miller Street	Western	1.85	N/A	Parking	E
	Eastern	1.55	1.00	Parking	F

4.1.3 Jones Street

The City of Sydney has not surveyed walking flows on Jones Street. Footpaths on Jones Street are assumed to qualify as Type 2 footpaths according to the land use guidelines given in Transport for NSW's *Walking Space Guide*. On the section of street measured for this report, trees are planted in a continuous verge rather than in discrete pits. As reported in Table 11 below, walking space is currently sufficient on the eastern side of Jones Street between Fig Street and Quarry Street.

Table 11 walking space on Jones Street

Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
Fig Street Quarry Street	Eastern	2.30	N/A	Planting; parking	C

4.1.4 Wattle Street

The City of Sydney has not surveyed walking flows on Wattle Street. Footpath types are given below according to the land use guidelines given in Transport for NSW's *Walking Space Guide*.

As reported in Table 12 below, there is too little walking space on the western side of Wattle Street near Bridge Road and this must be urgently addressed. The level of walking space on the eastern side does not currently qualify as an intervention trigger, but this should be monitored closely in case walking volumes change in future: should the footpath move from Type 2 to Type 3, the same walking space would rate as LOS F and qualify as an urgent intervention trigger.

Table 12 walking space on Wattle Street

Assumed footpath type	Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
Type 3	Fig Street Bridge Road and Pyrmont Bridge Road	Western	(southernmost) 2.15 (northernmost) 2.90	N/A	Traffic	F
Type 2		Eastern	3.65	1.35	Traffic	D

4.1.5 Pyrmont Bridge Road

The City of Sydney has not surveyed walking flows on Pyrmont Bridge Road. Footpath types are given below according to the land use guidelines given in Transport for NSW's *Walking Space Guide*. As reported in Table 13 below, walking space on both sides of Pyrmont Bridge Road west of Harris Street currently rates LOS F and represents an urgent intervention trigger.

Table 13 walking space on Pyrmont Bridge Road

Assumed footpath type	Bounded by	Street side	Width of road-related area (metres)	Indicative tree pit width (metres)	Kerbside use	Walking space LOS
Type 3	Wattle Street Bank Street	Northern	3.65	N/A	Traffic	F
Type 2	Wattle Street Bulwara road	Southern	3.10	N/A	Traffic	F

Mott MacDonald has surveyed walking space on Pyrmont Bridge Road east of Harris Street as part of the Sydney Metro West Active Transport and Public Domain Study and found LOS E or F on all footpaths.



Photograph 3 (left) narrow footpaths and footpath clutter on Harris Street make it uncomfortable even for couples to navigate together, let alone two strangers passing each other in opposite directions

Photograph 4 (right) pedestrians (including a mother with a pram, in the background) walk on the carriageway down Bulwara Road, where bin day has made the footpath impassable; meanwhile a homemade sign attached to a street tree implores drivers to slow down

The road reserves on Harris Street, Wattle Street, and Pyrmont Bridge Road present a good opportunity to reallocate space to people walking. The narrow road corridor on Bulwara Road may at first seem like a constraint, but the sense of enclosure helps to signal to drivers to slow down, creating good preconditions for a shared zone, and the existing vehicle traffic lane is surprisingly generous, allowing for potential footpath widening in future.

4.2 Infrequent crossing opportunities

Transport for NSW's *Network Planning in Precincts Guide* recommends that crossing opportunities are provided at least every 130 metres. Most blocks south of Allen Street are approximately 180 metres long and blocks north of Allen Street extend up to 260 metres long. As such, the block pattern on the peninsula does not provide sufficient crossing opportunities. On streets with limited vehicular traffic, crossing can be made informally at any point. On streets with higher vehicular traffic, uncontrolled crossing becomes slow and unsafe and/or requires long detours. In these locations, formal interventions are required to improve crossing safety and maintain a walkable network structure.

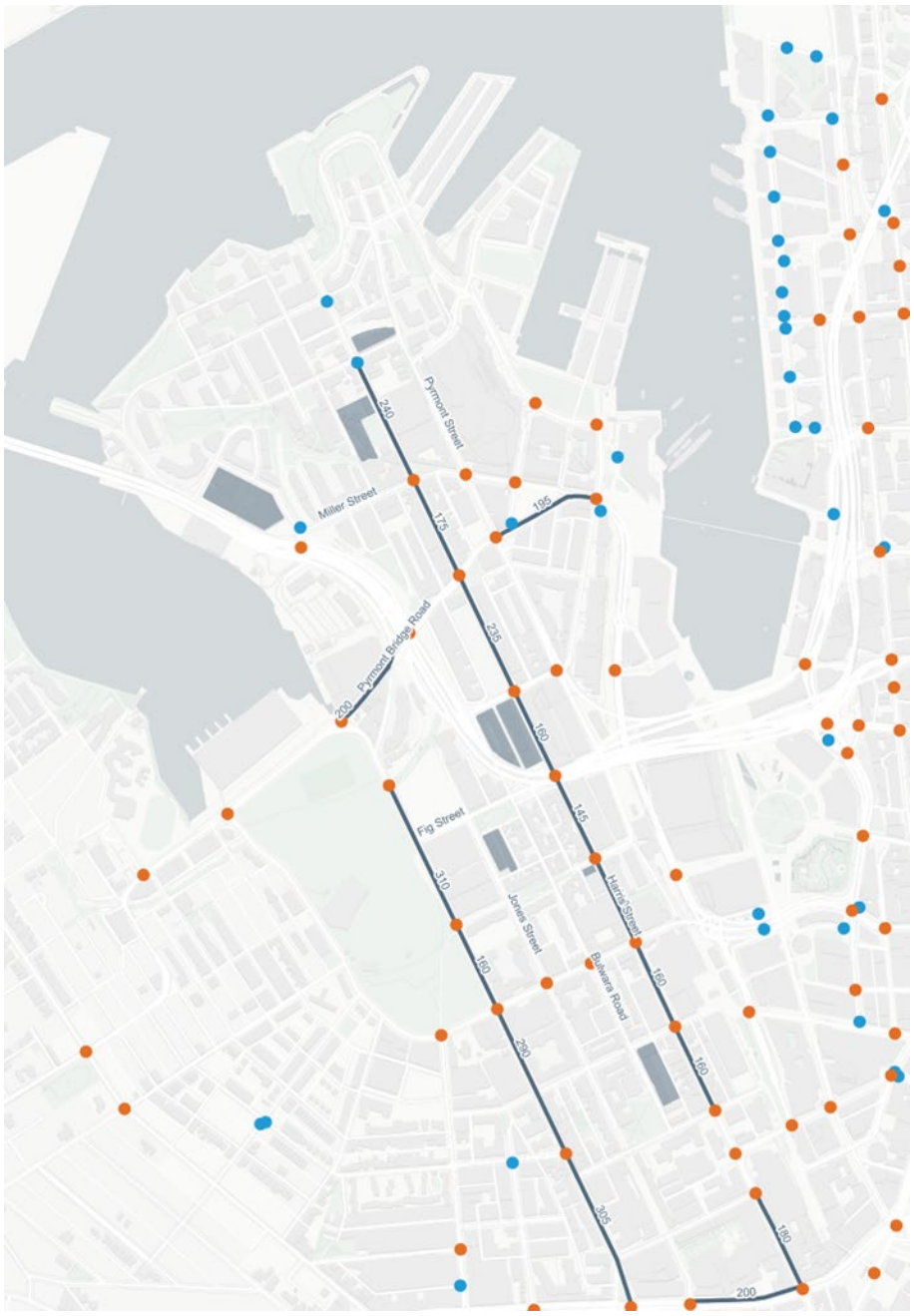


Figure 20 overly long distances between controlled crossings on streets with higher vehicle volumes

Legend

- Signalised crossing
- Zebra crossing
- > 130m between crossings
- Property for rezoning

4.3 Missing crossings at signalised intersections

Several signalised intersections on the peninsula are missing pedestrian crossings on all legs. These are mapped in Figure 21 below. Missing crossings can severely increase delay for people walking and increase the risk of unsafe behaviour, especially at signals with long cycle durations.



Photograph 5 intersection of Harris Street and Allen Street

In 2023, Transport for NSW removed the signalised pedestrian crossing of Harris Street south of Allen Street and erected fencing to obstruct people crossing in order to increase the capacity of the intersection. This design no longer complies with the objectives and priorities of the *Traffic Signal Design Standard (TS 02670.2)*

On Wattle Street, this includes the intersections with:

- Quarry Street
- Pyrmont Bridge Road

On Harris Street, this includes the intersections with:

- Quarry Street
- Fig Street
- Allen Street

On Miller Street, this includes the intersection with:

- Bank Street

On Pyrmont Street, this includes the intersection with:

- Murray Street and Allen Street



Figure 21 signalised intersections where pedestrian crossings are not provided on all legs

Legend

- Signalised intersection missing a pedestrian crossing
- Property for rezoning

4.4 Multiple-stage crossings at signalised intersections

Several signalised intersections on the peninsula include corner islands and slip lanes. This intersection layout is designed to reduce delay for people driving at the expense of people walking (and, where crossings align with shared paths, people cycling too). People walking and cycling must cross one street in two stages, potentially waiting on corner islands that are too small to safely store them between stages, putting them at increased risk of road trauma. This physical and temporal allocation of road space to people driving in preference to people walking conflicts with government visions for the area as a highly walkable precinct.

Multiple-stage crossings can be found at the intersection of:

- Wattle Street and Bridge Road
- Wattle Street and Broadway
- Harris Street and Ultimo Road
- Darling Drive and Murray Street

- Pyrmont Bridge Road and Western Distributor on- and off-ramps

Multiple-stage crossing is also required when pedestrian crossings are missing on legs of signalised intersections, as detailed in section 4.3 above.



Figure 22 signalised intersections with multi-stage crossings (slip lanes and corner islands)

Legend

- Signalised intersection incorporating a two-stage crossing
- Property for rezoning

4.5 Excessive crossing delay for people walking and cycling

Figure 23 below shows that delay at signalised intersections in the area is generally high for people walking during the peak. The data is collected from manual signal observations which may underestimate the real maximum signal cycle duration because the signalling system used in NSW, SCATS, is adaptive and can change from cycle to cycle, so the results reported below should be considered a conservative appraisal of barriers to walking in the area during peak times.



Figure 23 maximum observed traffic signal cycle durations

Legend

Maximum observed cycle duration (seconds)

- < 45
- 50-70
- 70-90
- 90-110
- 110-130

In *'A City for Walking' Strategy and Action Plan* the City of Sydney recommends that people walking wait at most 45 seconds to cross at traffic signals and ideally wait no longer than 30 seconds. As illustrated in Figure 23 above, only 2 out of 36 signals in the area currently satisfy this recommendation.

Austroads provides a level of service framework[2] for evaluating the frequency of crossing opportunities for people walking. This framework encompasses both the spatial and temporal dimensions of frequency: the spacing between crossing opportunities, and the time you must wait before using a crossing opportunity. The levels of service correspond to:

- A: opportunities to cross align with key desire lines; no wait time
- B: opportunities to cross close to key desire lines; small to moderate wait times
- C: opportunities to cross within reasonable distance of key desire lines; moderate wait times
- D: Opportunities to cross not close to key desire lines; moderate to long wait times
- E: Opportunities to cross are an unreasonable distance from key desire lines; long wait times
- F: No opportunities to cross; excessive wait times

Along Harris Street, maximum recorded signal cycle durations vary between 80 and 120 seconds. Given distances of around 180 metres between crossing points, this results in an Austroads LOS rating of D- for pedestrian crossing delay and detour (with two short blocks towards the southern end achieving D+). In the 1.75km stretch of street along which intersections are signalised, 24% of total walking travel time would be spent waiting at traffic lights during peak hours.

Along Wattle Street, controlled crossings are located extremely far apart, with three 300-metre stretches and two 150-metre stretches. These stretches rate between Austroads LOS D- and E- for pedestrian crossing delay and detour.

On Pyrmont Bridge Road, cycle times vary between 75 and 125 seconds, and distances between crossing points vary between 100 and 215 metres. This results in Austroads LOS ratings between D+ and E- for pedestrian crossing delay and detour. In total, 30% of walking time along Pyrmont Bridge Road would be spent waiting at traffic lights during peak hours.

On William Henry Street, distances between crossings are shorter (75-95 metres) but cycle durations are long (100-120 seconds), resulting in Austroads LOS between D+ and D- for pedestrian crossing delay and detour.

This presents a significant barrier to people currently walking in the precinct, but it also represents a significant opportunity for improvement. Halving signal cycle times and introducing pedestrian countdown timers could increase the distance people can walk by 12-15% within the same amount of time, increasing access to employment, education, shops, and cafes without any expenditure on physical infrastructure.

Nevertheless, on Harris Street the distances between crossing points must also be reduced if LOS above D is to be achieved. Mid-block crossings aligned with desire lines must be provided to achieve LOS C or higher.

[2] David Green and Ian Espada. 2015. *Level of service metrics for network operations planning*. Research report AP-R475-15. Austroads.

Figure 24 below shows that people walking in the area are most likely to be hit by a car at a signalised intersection. While the exact causes of each crash are not recorded in the publicly available data, it reinforces the need to do everything possible to make signalised intersections safer for people walking. Long wait times are one of the biggest motivators for people walking to cross signalised intersections during the pedestrian red interval when there are conflicts with vehicles.



Figure 24 crashes injuring or killing people walking, 2020-2024

Legend

- Crash degree
- Fatality
- Serious injury
- Moderate-minor injury
- Classified road

4.6 Poor walking network legibility

The topography and development of the peninsula over time have led to disjunctions and legibility issues for east-west walking connections. Figure 25 provides a high-level overview of these connections. These impacted walking corridors intersect with motorway or light rail infrastructure, which block through-sightlines, require changes in grade, and cause circuitous routes. Additionally, when walkways are available, they lack formal names and wayfinding, further complicating navigation and usage.



Figure 25 street network legibility issues

Legend

— Walking link with poor legibility

The links mapped in Figure 25 above are detailed in Table 14 below.

Table 14 illegible walking links

Map identifier	From	To	Issues
1	Jones Street	Pyrmont Bridge Road	Obscured sight lines Change in grade Circuitous route
2	Bulwara Road south of Allen Street	Bulwara Road north of Allen Street	Obscured sight lines Circuitous route
3	Pyrmont Street	Iron Wharf Place	Obscured sight lines Multiple changes in grade Circuitous route Connects to mid-block, not intersection Travels through private property
4	Harris Street at Fig Street	Tumbalong Boulevard	Obscured sight lines Change in grade Access via lift that may read as private property
5	Quarry Street	Tumbalong Park	Obscured sight lines Multiple changes in grade Circuitous route Travels through private property Closed during nighttime and for special events
6	Through-site link of Ian Thorpe Aquatic Centre	Moriarty Walk	Highly circuitous route
7	William Henry Street at Harris Street	Pier Street at Zollner Circuit	Obscured sight lines Colocation of private property (used for storage by Placemaking NSW) adjacent to stairs reduces legibility of public domain
8	Tumbalong Boulevard at Pier Street	Harbour Street at Pier Street	Obscured sight lines
9	Tumbalong Park	Liverpool Street	Obscured sight lines over pedestrian bridges due to curvature of bridges Misleading sight line to Liverpool Street as crossing is not supported at grade (although technically legal) Circuitous to access south-eastern side of Harbour Street
10	Tumbalong Boulevard underneath Western Distributor	Bathurst Street at Day Street	Obscured sightlines Changes in grade Circuitous route Access via stars and lift that may read as private property
11	Druitt Landing, Darling Harbour	Druitt Street	Obscured sightlines Changes in grade

Map identifier	From	To	Issues
			Lift access obscured from main thoroughfare Integration with Darling Park development reduces legibility of public domain
12	Pyrmont Bridge	Market Street	Obscured sightlines Change in grade Multiple changes in alignment
13	Pyrmont Bridge	King Street	Obscured sightlines Long curved link



Photograph 6 (left) the walking link to Pyrmont Street (through the pictured carpark) is entirely illegible from Iron Wharf Place

Photograph 7 (right) obscured sight lines and access away from clear paths of travel makes the walking link to Pier Street highly illegible, despite tidy wayfinding signage with small type

4.7 Lack of protected cycling infrastructure

The City of Sydney has made good progress in recent years building east-west cycling links across the peninsula. Separated cycleways on the Saunders Street-Miller Street-Union-Street corridor and on Mary Ann Street provide ample space for people cycling and provide good protection from vehicle traffic, making cycling an attractive option for "interested but concerned" adults.

However, there remains no separated north-south cycleway. To move along the major north-south axis throughout the peninsula, people cycling must either share footpaths with people walking (e.g. Wattle Street shared path) or vehicle traffic lanes with people driving. The best-connected streets in the network (Harris Street and Wattle Street) have ordinary speed limits of 50km/h, which create extremely dangerous conditions for vulnerable road users like cyclists. Other long streets on the north-south axis either end halfway along the peninsula (Jones Street), are severed from the parallel street network by the light rail corridor (Darling Drive) or make multiple crossings of motorway ramps and arterial roads (Bulwara Road, Pyrmont Street).

Highly connected streets like Harris Street, Wattle Street, and Pyrmont Bridge Road present an excellent opportunity for a well-connected cycling network that could achieve government visions for a cyclable precinct. They simply require safe, separated cycleways.



Photograph 8 (left) existing shared path infrastructure on Pyrmont Bridge Road is inappropriately narrow even for pedestrians to navigate, let alone pedestrians and cyclists in mixed traffic

Photograph 9 (right) lawn turned to dust by foot traffic indicates that the shared path adjacent to the signalised mid-block crossing of Wattle Street at the light rail stop is currently over capacity

4.8 Dangerous vehicle speed limits

The most important transport connections in the peninsula's street network also have the highest vehicle speed limits. High vehicle speeds prevent cycling, make uncontrolled crossing difficult and dangerous, conflict with the NSW Government's vision for zero road trauma, and conflict with the place contexts set out in the *NSW Speed Zoning Standard 2.0*.

Figure 26 shows that only four streets in the precinct (Paternoster Row, one block of Union Street, one block of Ada Place, and one block of Quarry Lane) have posted speed limits at 30km/h or lower: speeds at which a person walking is likely to survive a motor vehicle crash. On all other streets in the area, are above this threshold. Walking is the most common mode of transport for residents in the area (see section 3.2.2), and this level of risk is inconsistent with Transport for NSW's *2026 Road Safety Action Plan* which sets a goal of zero trauma on NSW roads.



Figure 26 probability of a person walking surviving a collision with a motor vehicle travelling at the posted speed limit

Probability of survival

Improbable

Probable

Property for rezoning

The issuance of the *NSW Speed Zoning Standard 2.0* presents an opportunity to reduce existing speed limits in line with the standard. Evidence[3] from Australia and Europe suggests that reducing urban speed limits from 50 to 40km/h as well as from 40 to 30km/h may reduce fatalities and serious injuries by as much as 40%.

[3] Austraods. 2025. *Keeping people safe when walking – stream 1: recommended pedestrian safety interventions.*

4.9 Unattractive east-west public transport connectivity

As illustrated in Figure 27 below, travelling between Pyrmont and the city centre to the east is in many cases just as fast (or faster) on foot as it is by public transport. This reflects filtered permeability (Pyrmont Bridge), circuitous public transport routes, and frequent stopping patterns.

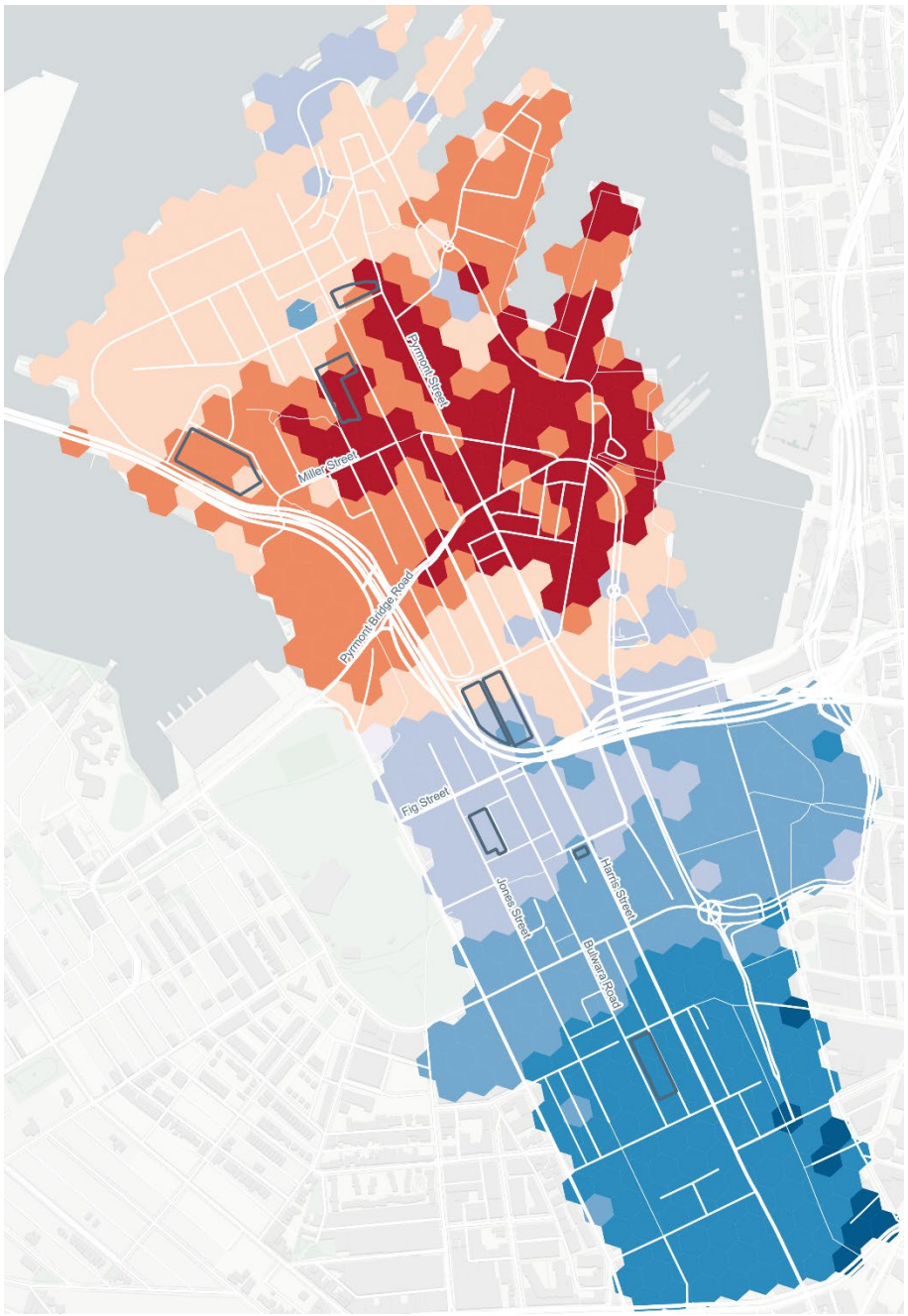


Figure 27 public transport journey times to Hunter Street compared to walking journey times

As illustrated in Figure 18 further above, this is expected to change significantly with the introduction of Sydney Metro West services from Pyrmont Station. The redevelopment of the sites as part of the stage 2 rezoning, are unlikely to trigger the need for public transport service changes beyond the metro under construction and the bus route connecting to The Bays proposed in the *Pyrmont Peninsula Place Strategy*.

5. Vision, objectives, and validation framework

5.1 Established vision and objectives

Both state and local government have established visions for their jurisdictions as a whole as well as the Pyrmont-Ultimo peninsula specifically. A consensus is evident in these visions for a reduction in driving and space for driving, an increase in walking and cycling and space for walking and cycling, and a reduction in all kinds of road trauma.

5.1.1 Established vision

State government

Transport for NSW's strategy *Connecting NSW* establishes the access and transport vision for NSW. The vision includes the following key transport outcomes:

- Net zero growth in vehicle kilometres travelled (p. 28), including a reduction in vehicle kilometres travelled in areas with good public transport access in order to offset expected growth in greenfield areas (p. 29)
- Reallocation of existing road space to active transport (p. 27)
- Zero trauma (p. 11), supported by safer vehicle speeds to encourage walking (p. 13)

Pyrmont Peninsula Place Strategy

The *Pyrmont Peninsula Place Strategy* describes an all-encompassing vision for the area that is centred on land use and built form characteristics. Several elements of the vision pertain to movement and its interaction with place:

- The precinct will be sustainable (p. 21)
- Vehicle parking will be decentralised in the precinct (p. 21)
- People will use public transport, walk or cycle to get to and from the peninsula (p. 22)
- The precinct will host a "richer, broader tree canopy" (p. 21)

Pyrmont-Ultimo Transport Plan

The *Pyrmont-Ultimo Transport Plan* does not set out a transport vision for the area; rather it sets out several transport objectives to support the directions in the *Pyrmont Peninsula Place Strategy*. These are detailed in section 5.1.2

Local government: City of Sydney

A city for walking, cycling and public transport is one of the City of Sydney's 10 strategic directions laid out in its *Community Strategic Plan*. The plan envisions a walkable city where walking is safer, more convenient, and enjoyable; a city where walking and cycling are the first choice for short trips.

The *Community Strategic Plan* envisions street capacity upgrades not through expansion, but through densification. The plan sees the width of existing road corridors as fixed, and envisions change by reallocating space to place activity, walking, and cycling and away from vehicle traffic and parking lanes.

The *Community Strategic Plan* acknowledges that no city has built its way out of congestion. It departs from a mobility paradigm and adopts an access paradigm, envisioning a future where slow movement is acceptable—desirable, even—as long as access remains sufficient.

5.1.2 Established objectives

Supporting the broad visions established by the state and local government planning documents described above are a suite of more specific objectives that describe specific transport outcomes to be achieved.

Local planning direction 5.1 integrating land use and transport

In February 2023, the NSW Minister for Planning issued local planning direction 5.1 *integrating land use and transport*. The objectives of this direction are:

- improving access to housing, jobs and services by walking, cycling and public transport, and
- increasing the choice of available transport and reducing dependence on cars, and
- reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and
- supporting the efficient and viable operation of public transport services, and
- providing for the efficient movement of freight

Pyrmont Peninsula Place Strategy

The *Pyrmont Peninsula Place Strategy* includes several directions that pertain to movement and its interaction with place:

- Deliver through-site links within new developments (pp. 24, 31)
- Transform the southern end of Harris Street into a high amenity pedestrian environment (p. 27)
- New crossings, ramps, and lifts at existing barriers to walking movement (p. 31)
- Achieve 25% canopy cover to improve walkability (p. 32)
- Prioritise walking and cycling for local trips by increasing connectivity and making it easier to cross busy roads (pp. 31, 32)
- Deliver separated cycleways on Jones Street, Pyrmont Street, Union Street, Bridge Road, Quarry Street, and Maryann Street (p. 31), as per the City of Sydney's bike network plan
- Create a new street-based transport route on Harris Street connecting The Bays with Central (pp. 27, 31)
- Adopt lower maximum parking rates for residential and commercial land uses (p. 31)
- Decouple parking from development (p. 31)

Additional objectives are identified in Appendix 1: previously recommended actions.

Pyrmont-Ultimo Transport Plan

Key objectives in the *Pyrmont-Ultimo Transport Plan* include:

- "Ensure safe, convenient and legible access to local destinations…by public transport, walking and cycling" (p. 21)
- "Discourage private vehicles and car parking, where appropriate, while enabling freight and servicing access supporting local centres" (p. 21)
- "Reduce through [vehicle] traffic on local streets and improve walkability of key links to create quality dwelling places for creativity, culture and heritage" (p. 21)
- "Improve the safety and attractiveness of active transport by reallocating road space and prioritising walking and cycling as the preferred mode for trips to, from and within the precinct" (p. 21)
- "Reallocate space to facilitate Green Streets, increased tree canopy to create cooler urban environments and water sensitive urban design" (p. 21)

Additional objectives are identified in Appendix 1: previously recommended actions.

City of Sydney Community Strategic Plan

The City of Sydney's Community Strategic Plan outlines several transport objectives for the City:

- All residents should be able to access their daily needs within a 10-minute walk by 2030
- All footpaths will provide sufficient space for people to walk; where necessary, this may be achieved by reallocating road space from vehicles to walking space
- People will have frequent, universally accessible opportunities to cross the street
- People walking will have to wait no more than 45 seconds to cross a signalised crossing
- Waiting time will make up 15% or less of total walking journey time
- 9 out of 10 workers in the city centre will walk, cycle, or take public transport to work by 2050
- 2 out of 3 workers in the rest of the City will walk, cycle, or take public transport to work by 2050
- Tree canopy cover will reach 27% by 2050

5.2 Study vision, objectives, and validation metrics

5.2.1 Study vision

The transport vision for Pyrmont stage 2 rezoning, prioritises sustainable, transited-oriented developed leveraging on existing and improved walking and cycling connections and new metro station. A precinct where all residents and visitors easy access to their daily needs, responding to its land use character and intensification, utilisation existing space to move more people with a reduction in the need to travel by private vehicle.

5.2.2 Study objectives and validation metrics

In Table 15 below we translate the study vision above into discrete objectives and propose metrics that can be used to test our recommendations against these objectives.

Table 15 study objectives and corresponding validation metrics

Study objective	Study validation metric
Accommodate growth in trip generation by increasing the space efficiency of the existing street network	Vehicle trip generation estimates of proposed change Capacity of each street in people per hour
Enable shorter trips by creating street environments with high place quality that support local businesses	Space available for outdoor dining Walking space level of service
Induce walking trips and increase walking mode share by increasing walking space	Walking space level of service
Improve walking access within existing land use patterns by making crossing quicker	Austroads crossing delay and detour level of service
Improve access to Wentworth Park by walking and cycling	Austroads crossing delay and detour level of service
Maintain access by public transport	Consider likely impacts of recommendations on public transport journey travel times
Eliminate fatalities and serious injuries on roads and streets	Alignment with safe systems pillars and/or evidence that proposed interventions reduce the risk of fatalities and serious injuries

.

6. Rezoning proposal

In 2022, the Minister for Planning and Public Spaces issued a ministerial direction requiring any planning proposals for the Pyrmont peninsula to align with the *Pyrmont Peninsula Place Strategy*. In 2025, the City of Sydney endorsed the *Ultimo Pyrmont Planning Proposal PP-2024-376* (stage one) that will facilitate approximately 1,269 new dwellings on the peninsula.

During consultation on stage one of the proposal, several landholders suggested other properties that were not included but could be rezoned. The stage two Planning Proposal responds to this feedback, considering seven sites and allows for up to 1,300 further dwellings on the peninsula, with almost half of that gain concentrated in the Saunders Street site and another three sites contributing most of the remaining gain.

The City of Sydney has prepared proposed options for each site; these plans have been used to support the development of this precinct transport study. The following section describes the proposed controls and provides estimates of net dwelling gain for each site.

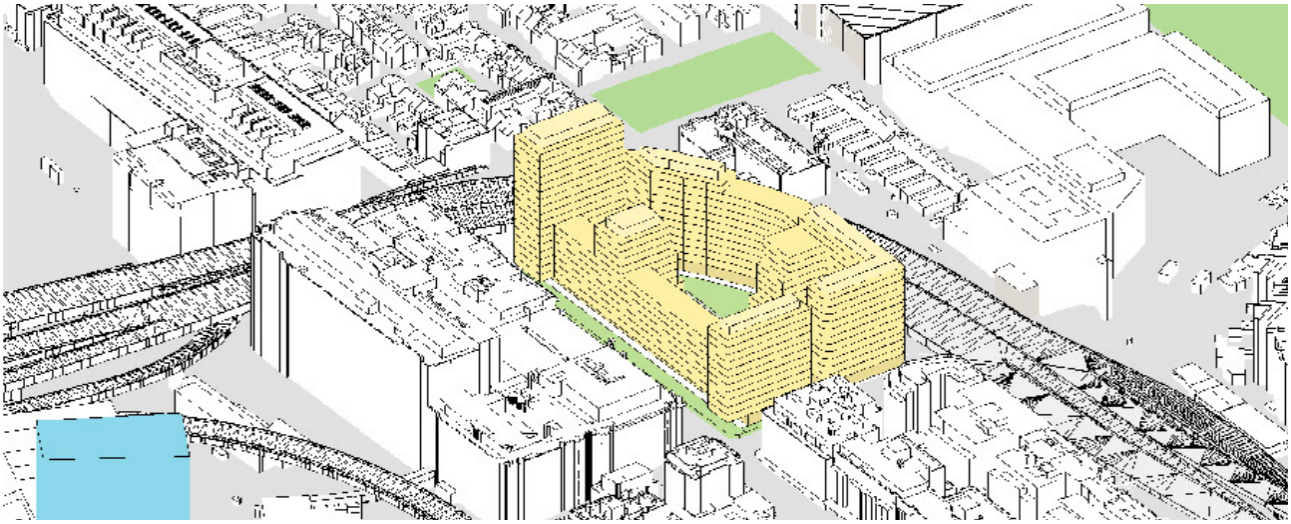
1-33 Saunders Street Pyrmont



Drawing 1 view of proposed controls at 1-33 Saunders Street (forms in orange)

Existing development	Proposed change	Estimated net dwelling gain
Multi-storey commercial development	Permission for mixed use. Planning for two residential towers fronting Saunders Street, plus three hotel forms fronting Bank Street and the Western Distributor. Several through-site links to be provided.	520

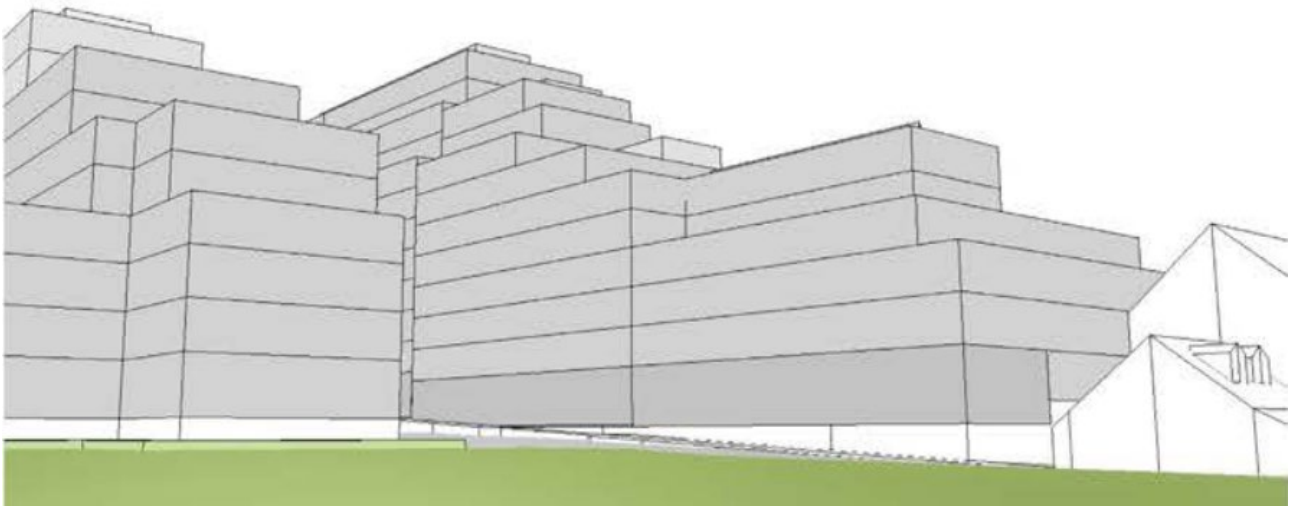
313 Harris Street Pyrmont and 1-19 Allen Street Pyrmont



Drawing 2 view of proposed controls at 1-19 Allen Street and 313 Harris Street (form in yellow)

Existing development	Proposed change	Estimated net dwelling gain
One strata-titled shop-top housing development fronting Harris Street and one strata-titled residential flat building on Bulwara Road	Retain shop-top housing typology on Harris Street but increase land use intensity. Higher forms planned for property boundary fronting the Western Distributor and lower forms fronting Harris Street.	245

344 Bulwara Road Ultimo

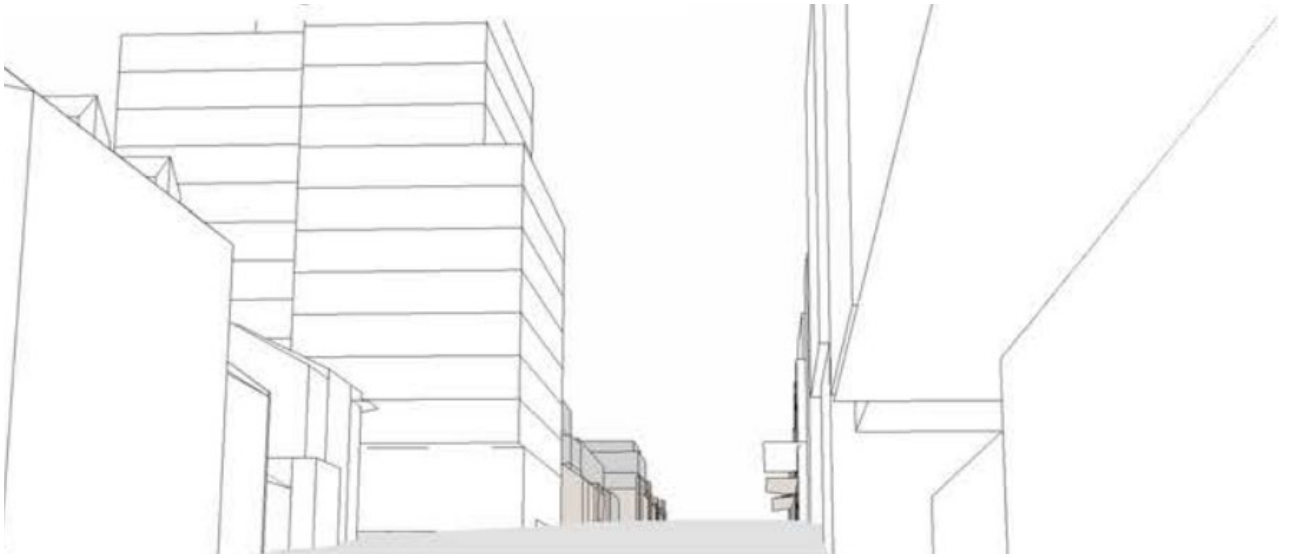


Drawing 3 view of proposed controls at 344 Bulwara Road (form on right) looking north-east across Mary Ann Street Park

Existing development	Proposed change	Estimated net dwelling gain
Multi-storey residential flat building	Mixed uses permitted. Potential for ground-floor commercial use. Residential development expected above. Built form ranges from four storeys closer to the park to 12 storeys	95

Existing development	Proposed change	Estimated net dwelling gain
	on the northern half. Three-metre setback from Bulwara Road in order to increase space for walking and place activity.	

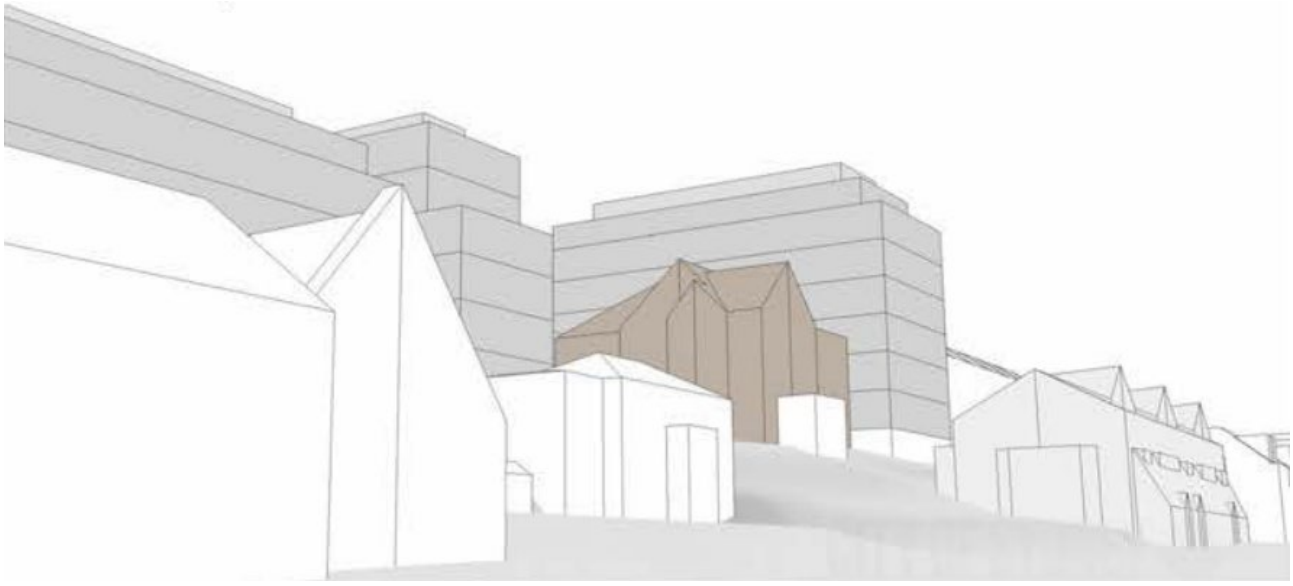
56 Harris Street Pyrmont



Drawing 4 view of proposed controls at 56 Harris Street, looking south along Harris Street

Existing development	Proposed change	Estimated net dwelling gain
Five to seven-storey residential flat building operated as affordable housing by City West	Increase the permitted building height up to 8-12 storeys on the southwestern end of the site fronting Harris Street.	75

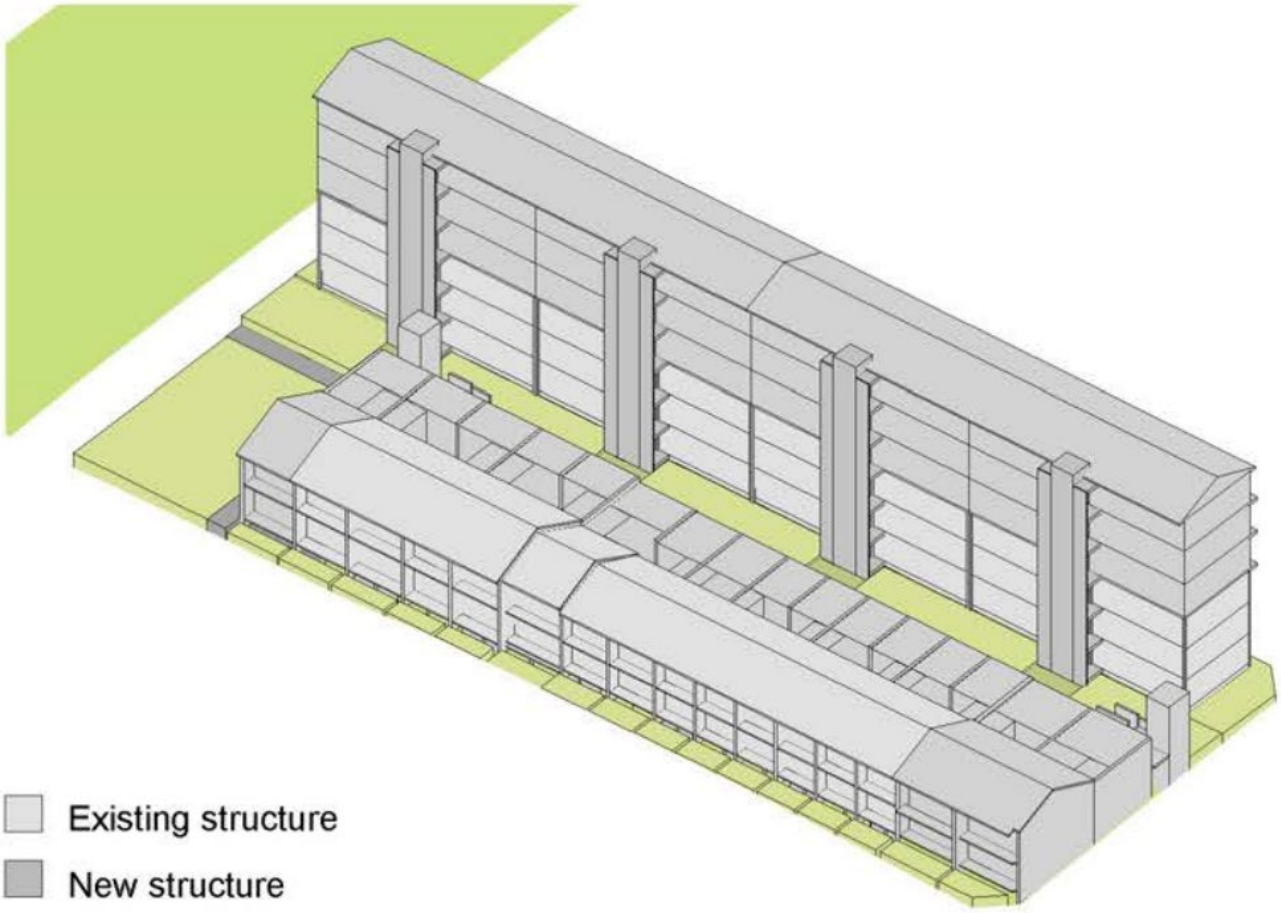
26-52 Mount Street Pyrmont



Drawing 5 view of proposed controls at 26-52 Mount Street looking north-west from Harris Street

Existing development	Proposed change	Estimated net dwelling gain
Two-storey attached dwellings operated as social housing by Homes NSW	Permission for five-seven storey forms with consideration given to impact on existing heritage building on site and neighbouring properties. Through-site link to be provided.	70

1-7 Henry Avenue Ultimo



Existing development	Proposed change	Estimated net dwelling gain
Three-storey residential flat building and 13 terraces operated as social housing by Homes NSW	Reallocate existing parkland south of the terrace to north of the terrace. Permit six storeys in place of existing three-storey form. Extend terrace at rear and convert into single-storey apartments.	35

463-467 Harris Street Ultimo



Drawing 6 view of proposed controls for 463-467 Harris Street looking south along Harris Street

Existing development	Proposed change	Estimated net dwelling gain
Multi-storey building in mixed-use zone	Seven-storey form to Harris Street. Two-three storey form to Kirk Street, enveloping a courtyard in the middle.	10

7. Transport response

In this section we propose 21 transport interventions that respond to the proposed stage two rezoning, identified challenges, and support the established vision for the peninsula.

We focus our transport responses in this precinct transport study on placed-based responses centred around each site. However, sites cannot be assessed in isolation from surrounding transport networks, so wider precinct-level responses are proposed for the following areas:

- Harris Street corridor
- Bulwara Road corridor
- Bank Street precinct
- Jones Street
- Wentworth Park

The extent of these areas is mapped below in Figure 28.

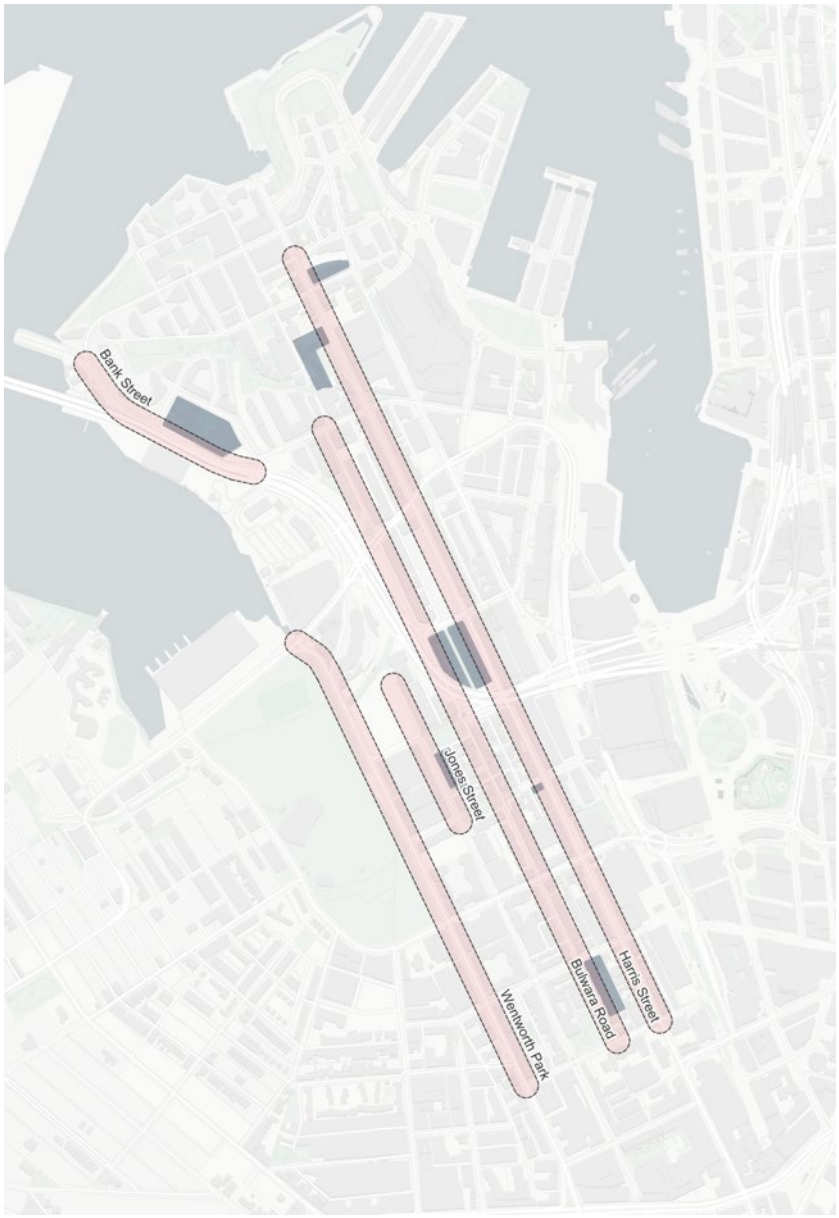


Figure 28 response precincts

The proposed responses are mapped in Figure 29 below and detailed in the following sections. The numbering corresponds to the action numbers tabulated in Table 24. Note that precinct-wide responses such as speed zone review, signal phasing redesign, and footpath extensions are not included on the map below. Additionally, action no. 19 (install a new signalised crossing of Wattle Street between the light rail viaduct and Quarry Street) has not been mapped as the exact location is contingent on the final design for the Wentworth Park redevelopment.

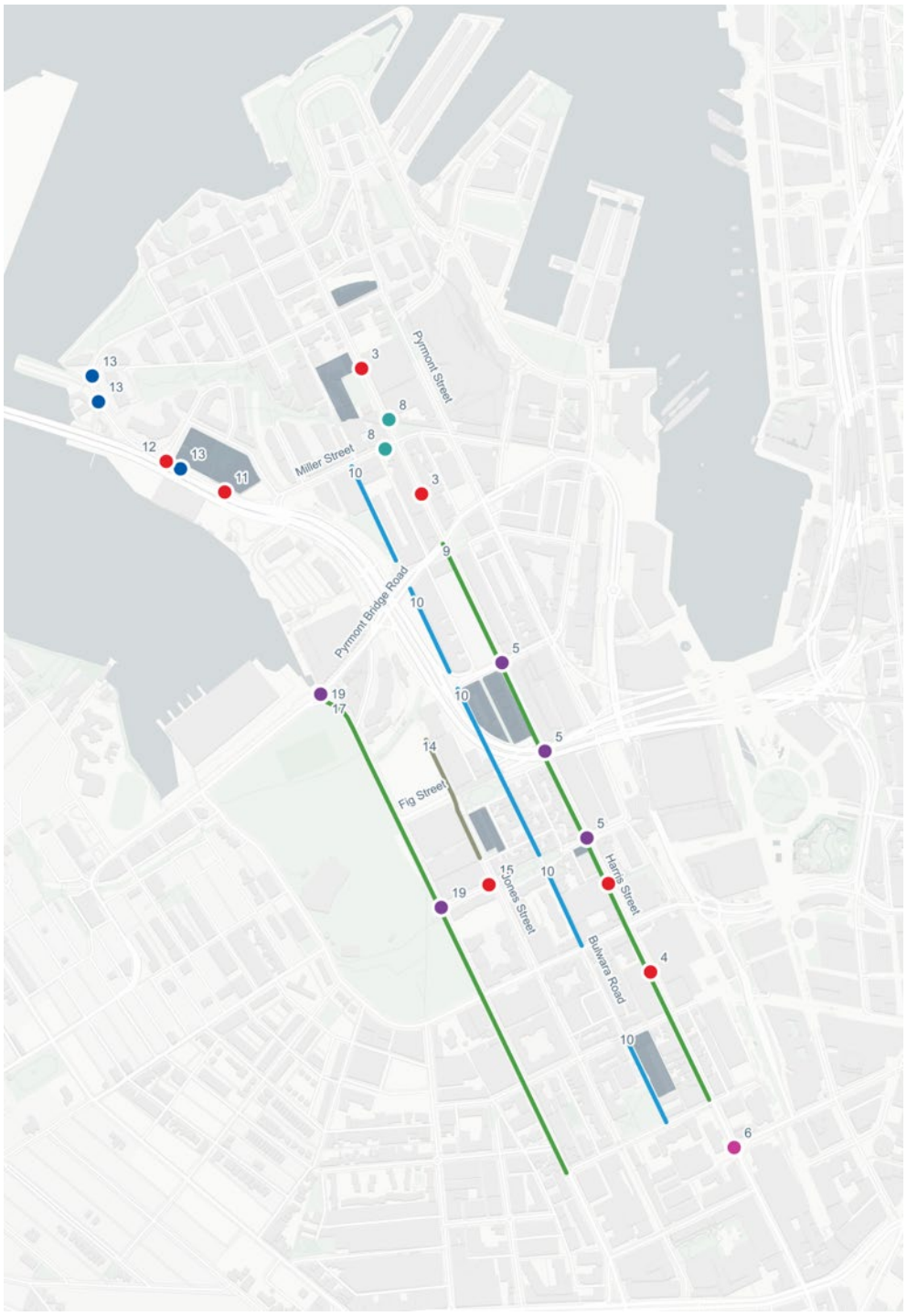


Figure 29 recommended transport responses

Legend

- Shared zone
- Footpath
- Cycleway
- Wombat crossing
- Missing signalised crossing
- Single-stage crossing
- Kerb extension
- Slow point

Additional recommendations not mapped include speed zone reductions, signal phasing redesign, footpath extensions, and a new crossing of Wattle Street between the light rail viaduct and Quarry Street

These recommendations should be read in conjunction with recommendations made by previous studies, namely the Pyrmont Peninsula Place Strategy and the Pyrmont-Ultimo Transport Plan. Those recommendations are summarised in Appendix 1 of this study.

7.1 Harris Street corridor

Four of the seven sites proposed for the stage 2 rezoning front Harris Street, and the site at 344 Bulwara Road is situated one block behind it. Moreover, Harris Street is relevant to all sites proposed for rezoning, and across the peninsula, as it is the only street that runs the length of the peninsula, connecting Broadway and George Street to the harbour and serving a critical central role in the network topology of all transport modes. It also functions as the primary high street on the peninsula. For these reasons, we propose responses along the length of the corridor.

We classify Harris Street as it currently exists as a high street with a consistently high place function and varying levels of movement function. Specifically, we classify Harris Street as:

- A destination high street north of Pyrmont Bridge Road
- An arterial high street south of Pyrmont Bridge Road

We note that both classifications have a high place function regardless of their different movement functions, and walking, cycling, and public transport movement functions must be prioritised to realise established government visions for the peninsula.

The City of Sydney envisions Harris Street south of Pyrmont Bridge Road as a destination high street in future. Our recommendations are designed to better align Harris Street's performance with its existing typology. These recommendations also lay a foundation necessary to achieve a future destination high street vision throughout.

Responses proposed on Harris Street to respond to the rezoning are detailed below.

7.1.1 Reduce speed limits to 30-40km/h

We recommend reducing the speed limits on Harris Street to 30km/h where the street is classified as a destination high street and to 40km/h where the street is currently classified as an arterial high street, in line with Transport for NSW's *Speed Zoning Standard 2.0*.

In the long term, we recommend the speed limit is reduced to 30km/h throughout Harris Street in line with the City of Sydney's vision for Harris Street as a destination high street.

To comply with section 10.3.5 of the *Speed Zoning Standard*, we recommend that the necessary speed zone review extends to the entire precinct. Outside of the motorway network that cuts through the peninsula, all streets in the area have a place function equivalent to Harris Street and/or a lower movement function than Harris Street (see Figure 16). Reducing the speed limit on these streets to 30km/h would create a consistent, self-explaining driving environment across the peninsula that protects vulnerable road users and encourages walking and cycling.

7.1.2 Achieve LOS C for walking space between Allen Street and Broadway

All footpaths in NSW should achieve at least LOS C for walking space, as per Transport for NSW's *Walking Space Guide*. The current street layout south of Allen Street does not provide the minimum standard of walking space. We recommend that footpaths on Harris Street between Allen Street and Broadway are extended to provide sufficient space for people walking.

Provide enough walking space for the desired future state

While these footpaths currently rate as Type 3, have mostly inactive edges and no outdoor dining, this configuration does not reflect the vision for an arterial high street in the movement and place framework. Planning should accommodate for a Type 4 footpath with active edges and outdoor dining, which is how the footpaths north of Pyrmont Bridge Road currently operate.

Provide enough footpath space for both movement and place

As Harris Street has a high place function, space on the footpath should also be provided for place activity, in particular outdoor dining. Transport for NSW's *Walking Space Guide* allows for LOS D adjacent to outdoor dining. As illustrated in Table 16 below, these sections of highly activated footpath will determine the minimum width of the entire footpath, even at LOS D.

Table 16 minimum footpath width on Harris Street between Allen Street and Ultimo Road

Footpath type	Minimum LOS	Edge	Outdoor dining	Total minimum
4	C + 3.7m	Inactive + 0.0m	Absent + 0.0m	3.7m
4	D + 3.2m	Active + 0.2m	Present + 0.8m	4.2m

The ultimate footpath width will depend on the kerbside use: if the dominant use is vehicle parking (no clearway operation), and space is provided between parking bays for future tree plantings, then no extra footpath width is required to achieve the minimum walking space level of service. If an adjacent vehicle traffic lane is provided at the minimum allowable speed of 40km/h, then a further 1.2m of footpath width (5.4m in total) is required to achieve the minimum walking space level of service.

Given that the road reserve is constrained, we reason that it provides a higher level of access and a more efficient use of space to allocate a vehicle parking lane adjacent to one footpath as there is not enough space to provide another vehicle traffic lane in its place. Indicative cross-sections are provided further below in Figure 30 and propose to locate a separated cycleway adjacent to the other footpath. This design would not necessitate footpath extensions beyond 4.2 metres as no kerbside traffic buffer is required.

7.1.3 Provide crossing opportunities at least every 130 metres

Transport for NSW's *Network Planning in Precincts Guide* recommends providing crossing facilities every 130 metres. We recommend the installation of new pedestrian crossings on four of the nine blocks where this threshold is surpassed. At other locations land use configurations and the transport network have been assessed to negate the need for crossings as part of this rezoning proposal.

Table 17 identifies all locations where the distance between controlled crossings exceeds 130 metres and provides our recommended response.

Table 17 recommended responses to long blocks on Harris Street

Between	Distance (metres)	Recommended infrastructure	Notes
John Street - Miller Street/Union Street	240	Wombat crossing	Should be installed to align with proposed through-site link through 26-52 Mount Street Pyrmont and entrance to 100 Harris Street
Miller Street/Union Street - Pyrmont Bridge Road	175	Wombat crossing	Kerb extensions already exist at the midpoint of this block, but the crossing point is uncontrolled and does not slow vehicles
Pyrmont Bridge Road - Allen Street	235	None	Eastern side of Harris Street is almost exclusively low-density residential development
Allen Street - Fig Street	160*	None	*160 metres once missing signalised pedestrian crossing installed at Allen Street intersection. Access/egress to/from apartment developments on the eastern side of Harris Street is only at two points, both of which are close to existing traffic signals.

Between	Distance (metres)	Recommended infrastructure	Notes
Fig Street - Quarry Street	145*	None	*145 metres once missing signalised pedestrian crossing installed at Fig Street intersection. Land use on eastern side of Harris Street is exclusively a data centre development.
Quarry Street - William Henry Street	160*	Wombat crossing	*160 metres once missing signalised pedestrian crossing installed at Quarry Street intersection. Should align primarily with through-site link to Pyrmont Street (eastern side, north of Ian Thorpe Aquatic Centre). A secondary consideration for alignment is the through-site link to Kirk Street on the western side.
William Henry Street - MacArthur Street	160	Wombat crossing	Redevelopment of the Powerhouse Museum site will present an active edge to Harris Street and the City of Sydney is introducing a Special Entertainment Precinct at this site
MacArthur Street - Mary Ann Street	160	None	Eastern side of Harris Street is mostly low-density residential development
Thomas Street - Broadway/George Street	180	None	Existing edges are largely inactive and a grade-separated crossing is available between university buildings on these blocks. Redevelopment of the adjacent properties may present a future opportunity to provide more active edges and an at-grade crossing on this section of Harris Street.

7.1.4 Install pedestrian crossings on all legs of signalised intersections

Currently, crossings of the southern leg of Harris Street are missing at the intersections with Quarry Street, Fig Street, and Allen Street. These layouts severely increase delay for people walking and are an inappropriate allocation of road space for a street with a high place function in an area with a high walking mode share target in government visions.

We recommend installing pedestrian crossings on all legs of the above signalised intersections. Transport for NSW's *Design of Roads and Streets Manual* identifies this as a desirable treatment for arterial high streets like Harris Street.

7.1.5 Provide a single-stage crossing of Ultimo Road along Harris Street

People walking must currently cross two separate signalised crossings in order to cross Ultimo Road when travelling along Harris Street. This intersection design prioritises the throughput of vehicles at the expense of people walking, contrary to government visions for a walkable precinct.

We recommend reconfiguring the intersection to remove the slip lane from Ultimo Road onto Harris Street and allow people walking to cross in one stage. Transport for NSW's *Design of Roads and Streets Manual* identifies single-stage crossings as a desirable treatment for arterial high streets like Harris Street.

7.1.6 Reduce delay at traffic signals for people walking and cycling

Currently, about 24% of walking journey time along Harris Street is spent waiting at traffic signals in the peak hour when most people are walking. The City of Sydney[4], the Department of Planning, Housing, and Infrastructure[5], and Transport for NSW[6] all recommend that waiting time should make up no more than 15% of walking journey time. Moreover, the Transport for NSW *Traffic Signal Design* standard (TS 02670.2:1.1 p. 86) identifies cycle time minimisation as an objective of traffic signal design and identifies active transport delay minimisation as an outcome that has priority over intersection capacity optimisation.

We recommend reducing maximum signal cycle durations such that waiting time makes up no more than 15% of walking journey time on Harris Street. Practically, this may mean reducing a 100-second cycle to a 60-second cycle. This would align with signal operation in Copenhagen, where cycle durations never exceed 70 seconds and range between 48 and 60 seconds in areas with high pedestrian activity. This could be investigated in detail between the City of Sydney and TfNSW.

7.1.7 Make better use of road space at the intersection of Harris Street and Miller Street

Excess road space on two approaches to the intersection of Harris Street and Miller Street provides an excellent opportunity for improved walking and place outcomes.

We recommend:

- Converting the southbound bus stop north of Miller Street (stop ID 200924) to in-lane stopping and correspondingly extending the adjacent footpath. Moving the bus stop away from the clear path of travel on the footpath will make more space for people walking and reduce the crossing distance on the desire line between the northern edge of Union Square and the western side of Harris Street.
- Extending the footpath on the southern footpath of Miller Street adjacent to the intersection with Harris Street. Extending the footpath will provide space for a tree planting which will provide important shade to people walking and waiting at the adjacent traffic signals. Extending the footpath will also provide more space for place activities like outdoor dining and for people walking.

7.1.8 Provide separation from vehicle traffic and pedestrian traffic for people cycling

To achieve local and state government visions for a cyclable peninsula, cycling must be prioritised on central and direct links in the peninsula's street network. The most critical links on the peninsula are Harris Street, Pyrmont Bridge Road, and Miller Street/Union Street.

Harris Street runs uninterrupted along the length of the peninsula, from Broadway and George Street in the south all the way to the harbour's edge in the north. As such, it provides the most direct link for north-south movements.

Harris Street also has a high street role with land uses that attract trips and support significant place activity. Transport for NSW's *Network Planning in Precincts Guide* recommends co-locating priority cycling corridors adjacent to key land uses with high place intensity i.e. on main streets.

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[4] City of Sydney, 2024, *People won't wait: relationship of crossing timing and safety for people walking* [Presentation to Transport for NSW Active Transport Community of Practice] https://www.transport.nsw.gov.au/system/files/media/documents/2025/Active-Transport-Community-of-Practice-City-of-Sydney-People-wont-wait-June-2024.pdf

[5] Department of Planning and Environment, 2022, *NSW Guide to Walkable Public Space*

[6] Transport for NSW, 2026, *Walkable NSW Discussion Paper* https://www.transport.nsw.gov.au/news-and-events/reports-and-publications/walkable-nsw-discussion-paper

As such, we recommend reallocating road space on Harris Street to a separated cycleway. The cycleway should run at least from Mary Ann Street in the south to the Transport for NSW Strategic Cycleway Corridor on Pyrmont Bridge Road in the north.

The cycleway should satisfy as a minimum the design guidance given in Transport for NSW's *Cycleway Design Toolbox*. While paired one-way cycleways represent best practice, we recommend initially installing one two-way cycleway as this is the most efficient reallocation of road space to begin with and leaves open the option of duplication and conversion to one-way operation in future if sufficient demand arises.

An exemplar cross section of the proposed changes to Harris Street is provided in Figure 30 below for the block between Allen Street and Fig Street.

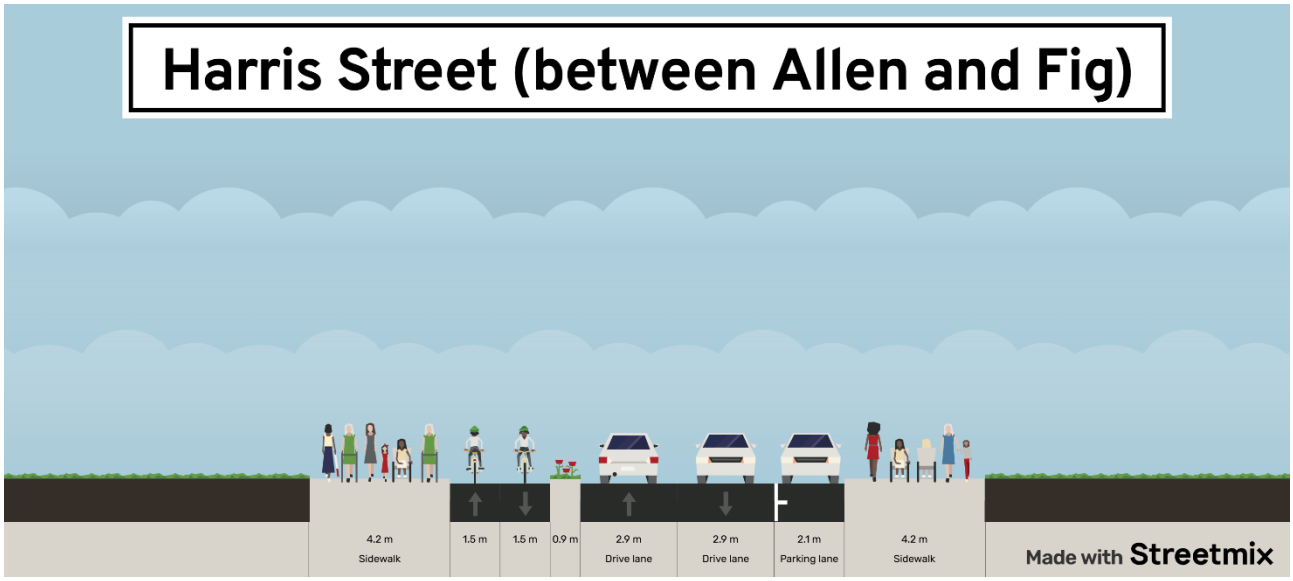


Figure 30 proposed cross-section of Harris Street between Allen Street and Fig Street

7.1.9 Convert bus stops north of Pyrmont Bridge Road to in-lane stopping

Bus stops on Harris Street north of Pyrmont Bridge Road are currently designed such that the bus pulls in and out of a bus zone and passengers wait for the bus in the path of travel of people walking on the footpath. This layout increases delay for bus passengers and encroaches on space for people walking, solely for the benefit of people driving. This allocation of road space conflicts with established government visions for a precinct where people walk and take public transport.

We recommend converting bus stops north of Pyrmont Bridge Road to in-lane stopping in order to reduce bus delay and increase walking space on Harris Street. This is an appropriate treatment for the destination high street typology north of Pyrmont Bridge Road where through-movement is slow. Similar treatments have been applied on other destination high streets in the local government area such as MacLeay Street, Potts Point and Crown Street, Surry Hills.

7.2 Bulwara Road corridor

Two of the seven sites proposed for rezoning in this stage front Harris Street, and the site at 1-7 Henry Avenue is situated one block behind it. Bulwara Road is the third-longest street on the peninsula and is made even more central in the network by the diagonal path that it connects to through Mary Ann Street Park, making it part of the shortest path of more walking journeys on the peninsula. It also provides access to several important local destinations in addition to that park, including the Ultimo Community Centre, the Lord Wolseley Hotel, and Woolworths Metro Pyrmont. For these reasons, we propose a response along the length of the corridor.

Responses proposed on Bulwara Road to support the rezoning are detailed below.

7.2.1 Allocate more space for people walking along the length of Bulwara Road

Existing footpaths on Bulwara Road vary between 1.5 and 1.8 metres, apart from two blocks (between MacArthur Street and William Henry Street, and between Fig Street and Allen Street), resulting in a walking space level of service between E and F along most of the corridor.

In these conditions, residents and visitors walk on the carriageway instead. While this is permissible under Road Rule 238(1) which permits use of the carriageway where the footpath is impassable, it also exposes people walking to punitive fines of up to $2,200 under Road Rule 238(2) which prohibits walking in the centre of the carriageway or walking in groups of three or more. Moreover, it is not a safe system to mix people walking with vehicle traffic at 40km/h.

For these reasons, we recommend reallocating space for people walking on all blocks except the block between MacArthur Street and William Henry Street. We recommend the immediate implementation of a Category 2 shared zone treatment as per *NSW Speed Zoning Standard 2.0*. We recommend that kerbs are retained as the scope of this rezoning constrains the costs that should be incurred by the recommended transport responses. Photograph 10 shows some potential treatments that could be used to highlight the change in the road environment to drivers on a cost-effective basis: treating the carriageway with decorative paint and/or installing small, movable sculptures and plantings.



Photograph 10 potential low-cost carriageway treatment to clearly highlight to drivers that there is a change in the road environment and traffic conditions, Brisbane

In future, as funds become available, we recommend the investigation of two potential options for one-way sections of Bulwara Road:

1. Retain the Category 2 shared zone, reduce the parking lane to 2.1 metres and the traffic lane to 2.7 metres and allocate the resulting difference to the western footpath adjacent to the parking lane
2. Convert the street to a Category 1 shared zone

There are positive and negative consequences of each option that should be explored in further design stages.

7.3 Bank Street precinct

The Saunders Street site is bounded by strategically significant links for walking and cycling. Saunders Street itself already performs strongly for walking and cycling, providing short crossing distances, calm traffic, and a separated cycleway. Quarry Master Drive accommodates an overly wide carriageway at the southern end, but this presents few barriers to walking and cycling given low vehicle volumes. Bank Street will in future provide walking access to a significant foreshore landscape and accommodate a Transport for NSW Strategic Cycleway Corridor between Pyrmont and The Bays but currently provides little amenity for either walking or cycling.

Responses proposed on Bank Street to respond to the rezoning are detailed below.

7.3.1 Install wombat crossing on Bank Street

The signalised intersection of Bank Street and Miller Street currently provides no controlled crossing of the western leg of Bank Street. While crossing the western leg of Bank Street on foot is legal, being more than 20 metres from the signalised crossing of the eastern leg, it is not universally accessible and is dangerous as vehicles, especially the heavy vehicles accessing the concrete facility, are unlikely to expect a person crossing at that point.

We understand that this intersection may be upgraded in conjunction with redevelopment of adjacent properties. Given uncertainties around the timing of these redevelopments we recommend that a wombat crossing be installed nearby on Bank Street to align with the eastern through-site link to be provided in the redevelopment of the Saunders Street site, as this should provide similar if not the same connectivity that a signalised pedestrian crossing at the intersection would.

7.3.2 Give right of way to people walking and cycling at the intersection of Bank Street and Quarry Master Drive

Quarry Master Drive will in future accommodate a desire line to a significant foreshore landscape on Blackwattle Bay. As the nearest crossing will be ~ 130 metres to the east (as recommended above), we recommend installing wombat crossings to give right of way to people walking and cycling on all movements. This will also provide an appropriate gateway treatment to Quarry Master Drive, signalling to drivers that they are entering a quieter street environment.

We note that there are currently driveways adjoining the southern side of Bank Street opposite Quarry Master Drive. The location of vehicle access and egress to and from these properties should be considered in future if they are redeveloped.

7.3.3 Slow vehicle traffic on Bank Street to make cycling more comfortable

Ultimately, a separated cycleway should be provided for the Strategic Cycleway Corridor on Bank Street once Glebe Island Bridge is reopened. However, in the interim, to make cycling more attractive on the carriageway of Bank Street, we recommend reducing the posted speed limit to 30km/h, consistent with other local streets across the peninsula, and installing supporting treatments as per the NSW Speed Zoning Standard 2.0. We recommend installing slow points at three locations, as indicated on Figure 31 below, to introduce the yielding behaviour required by the *Speed Zoning Standard*. Wombat crossings (under construction and as recommended above) will provide the vertical deflection required by the standard.



Photograph 11 exemplar slow point treatment with horizontal deflection, vertical deflection, and a yielding requirement
Source: Transport for NSW

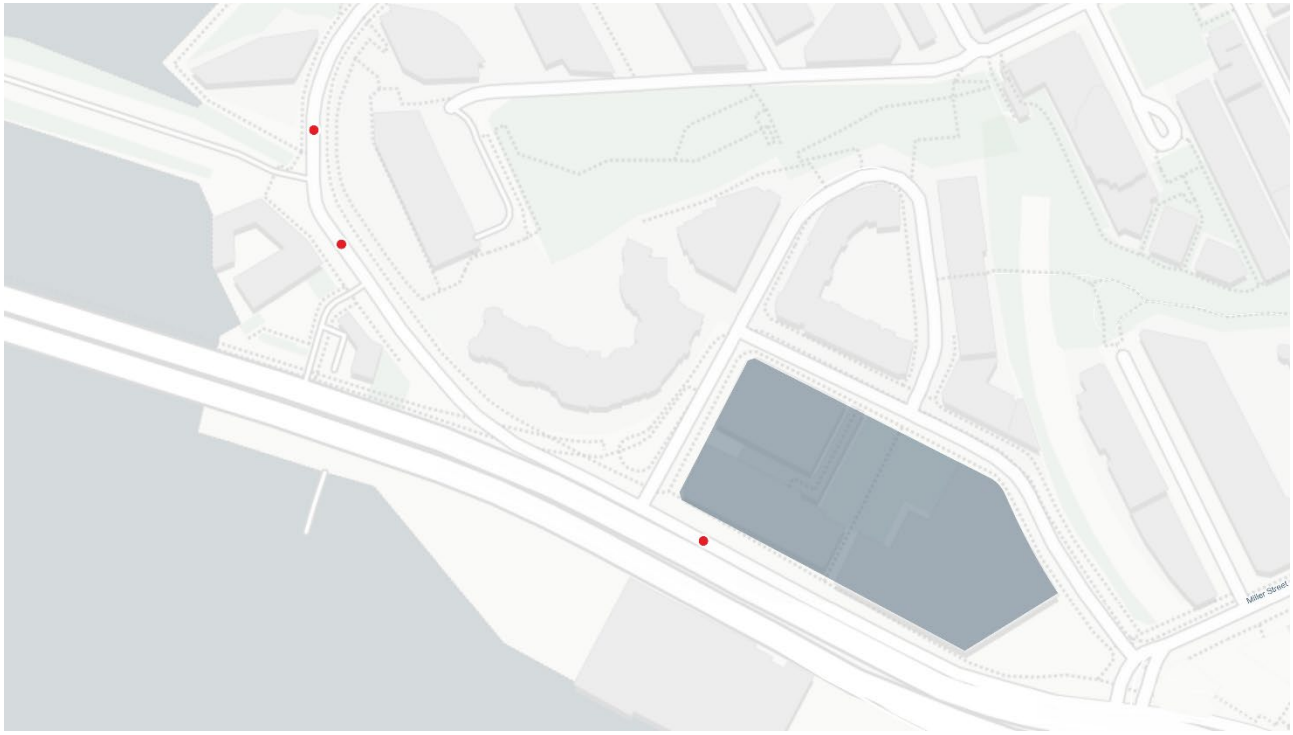


Figure 31 proposed slow points on Bank Street

7.4 Jones Street



Photograph 12 eastern footpath of Jones Street, looking north from Quarry Lane

Jones Street already provides a suitable footpath and excellent canopy cover outside the site proposed for rezoning. Recommendations for the surrounding area are minor and are detailed below.

7.4.1 Provide footpath on western side of Jones Street

The western footpath of Jones Street ends north of 45 Jones Street. We recommend that the footpath be continued at least to Upper Fig Street. These edges interface with the adjoining properties and we recommend that footpath provision is integrated in any redevelopment of those properties.

7.4.2 Install wombat crossing of Quarry Street at intersection with Jones Street

We support the recommendation by WSP's *Walking and Place Study – Ultimo Public School* to install a wombat crossing of Quarry Street at its intersection with Jones Street.

7.5 Wentworth Park

Housing requires appropriate supporting infrastructure, including green infrastructure, and increasing capacity for housing is a key motivation for the NSW Government to let the lease of the Wentworth Park greyhound track lapse and turn the site over to new public open space.

Wentworth Park's public open space is only valuable to those who can access it. As such, walkable access to the park is a key mediating factor between government investment in the park and the community benefit that is realised from the park: every delay and barrier that is removed in walking to the park translates to more residents who can access the park; every improvement in walkability translates to more capacity for housing on the land surrounding the park.

There are two key opportunities to improve local access to Wentworth Park: providing sufficient space for people to walk and cycle to and around the park; and providing safe, universally accessible crossing opportunities that impose limited delay on people walking and cycling.

Responses proposed to support improved integration with Wentworth Park to respond to the rezoning are detailed below.

7.5.1 Provide sufficient space for walking and cycling to and around the park

The existing shared path on the western side of Wattle Street between Bridge Road and the light rail viaduct is too narrow for people walking, and unsafe for people walking and cycling together. Onsite observations noted grass turned to dirt next to the concrete path, which is a sign of insufficient footpath width.

We recommend widening both footpaths on Wattle Street and separating people cycling both from people walking and people driving. We recommend reallocating this space from the easternmost lane on Wattle Street i.e. deleting that lane and moving the other three lanes across. As Wattle Street's vehicular capacity is limited to three lanes at the Fig Street intersection, this change should not affect the vehicular capacity of the street. An indicative cross section is provided below in Figure 32 for the stretch of Wattle Street between Fig Street and Quarry Street. This proposed road space allocation achieves LOS C for walking space, complete separation and protection for people cycling, and maintains vehicle through movement capacity.

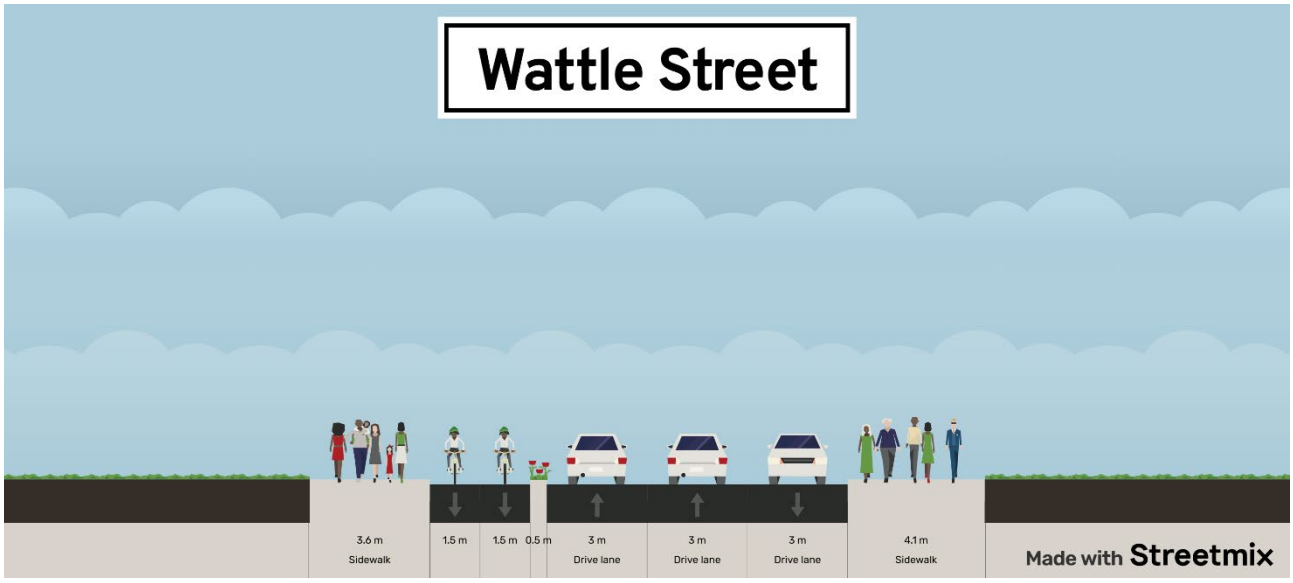


Figure 32 indicative cross section for Wattle Street

Note that the proposed eastern footpath illustrated above is wider than the proposed western footpath despite lower current pedestrian flows. The difference is necessitated by the kerbside traffic buffer on the eastern footpath created by the adjacent vehicle traffic lane.

We recommend continuing the separated cycleway down Wattle Street to connect to the Mary Ann Street cycleway.

7.5.2 Provide a safe, direct crossing of Wattle Street to access Wentworth Park

Wattle Street currently presents a major barrier to accessing Wentworth Park: for 310 metres between the signalised crossing of Wattle Street south of Quarry Street and the mid-block crossing of Wattle Street at the Wentworth Park light rail stop, there is no safe, universally accessible crossing opportunity for people walking. There are four possible options to respond to this situation:

- Do nothing
- Install a signalised mid-block crossing at the future through-site link located south of the existing light rail stop and north of Fig Street
- Install signals at the intersection of Fig Street and Wattle Street
- Install a signalised mid-block crossing at the future through-site link located south of Fig Street and north of Quarry Street

Some of the outcomes entailed by each of these options are laid out in Table 18 below.

Table 18 outcomes associated with potential responses to Wattle Street severance

Outcome	Crossing location			
	No crossing	North of Fig Street	At Fig Street	South of Fig Street
Crossing Fig Street universally accessible in north-south direction	False	False	True	False
Maximum distance between crossings on Wattle Street	310	240	190	250
Minimum distance between signals on Wattle Street	310	70	120	60

Business as usual is not an acceptable outcome at this location, and providing a crossing south of Fig Street would do the least to remedy the existing poor performance. However, there are trade-offs between the other two options (a crossing either at Fig Street or north of Fig Street) and uncertainty surrounding the exact location of a future east-west link that will be provided through Wentworth Park.

Further investigation of the preferred option should be developed in coordination with the design of Wentworth Park and in collaboration with Transport for NSW.

7.5.3 Install pedestrian crossings on all legs of signalised intersections on Wattle Street

Currently, crossings are not installed on the northern leg of Wattle Street at the intersection with Quarry Street, nor on the leg of Pyrmont Bridge Road at the intersection with Bridge Road and Wattle Street. These layouts increase danger and delay for people walking and are an inappropriate allocation of road space at the access points to major public open space. The missing crossing at the intersection with Quarry Street also has a disability inclusion element: in future, a through-site link will be provided north of Quarry Street as the Quarry Street grade is not universally accessible; for people with restricted mobility using this link, a signalised crossing of the northern leg of Wattle Street at the Quarry Street intersection would provide a similarly direct route to Wentworth Park as enjoyed by more mobile walkers.

We recommend installing pedestrian crossings on all legs of the above signalised intersections. Transport for NSW's *Design of Roads and Streets Manual* identifies this as a desirable treatment for secondary arterial roads like Wattle Street.

7.5.4 Provide a single-stage crossing between Wentworth Park and the new fish market

People walking must currently cross two separate signalised crossings in order to travel between Wentworth Park and the new fish market. The corner island is too small to safely store all people walking to and from the fish market. This intersection design prioritises the throughput of vehicles at the expense of people walking, contrary to the government's vision for a safe, walkable precinct with good access to major public open space and retail and hospitality destinations.

We recommend reconfiguring the intersection to remove the slip lane from Wattle Street onto Bridge Road and allow people walking to cross in one stage. Transport for NSW's *Design of Roads and Streets Manual* identifies single-stage crossings as a desirable treatment for secondary arterial roads like Wattle Street.

7.5.5 Reduce delay for people walking and cycling at signalised crossings to Wentworth Park

Maximum signal cycle durations at signalised intersections adjoining Wentworth Park currently appear to vary between 70 seconds for the mid-block crossing at the Wentworth Park light rail stop to 130 seconds for the new signalised intersection of Bridge Road and Wentworth Park Road.

These cycle durations are extremely long and do not satisfy the Transport for NSW *Traffic Signal Design Standard* objectives to minimise cycle times and minimise active transport delay as a priority over optimising intersection capacity. We recommend that these signal operations are redesigned to satisfy the *Traffic Signal Design Standard* objectives.

7.5.6 Reclassify Wattle Street to match its place context

Pyrmont-Ultimo has an urban place context, but Wattle Street currently functions as a secondary arterial road. Secondary arterial roads have an inappropriate balance of movement and place for an urban place context. This is reflected in the *NSW Speed Zoning Standard*, which does not prescribe speed limits for secondary arterial roads in urban place contexts: this combination of movement and place context is assumed not to exist, or at least to be so undesirable as to warrant omission from the standard. In order to better fit its urban place context, we recommend that Wattle Street is reclassified as a connector street.

7.5.7 Reduce the speed limit to match the place context and movement and place typology

Connector streets in urban place contexts are to have speed limits of 40km/h, according to the *NSW Speed Zoning Standard*, unless certain conditions are met, for example wide traffic lanes and raised safety platforms are present at intersections, which are not present on Wattle Street. As such, we recommend that the speed limit on Wattle Street is reduced to 40km/h.

8. Response validation

The vision and validate framework requires testing that the recommended actions support the desired vision for the study precinct. This section provides a quantitative assessment for the recommended actions using the validation metrics established in § 5.2.

8.1 Vehicle trip generation

Transport for NSW's *Guide to Transport Impact Assessment* sets out methods and data by which to estimate trip generation for new developments. We use the benchmarking method to estimate vehicle trip generation for the proposed rezonings. For the benchmarking below, we make use of the 2012 survey of trip generation rates conducted by GHD for high-density residential developments in areas with high public transport access. Ideally for our purposes, this survey includes a site on Harris Street, Pyrmont, as well as other metropolitan sites in Sydney.

8.1.1 Person trip rate

We believe it is appropriate to benchmark person trip rates against the Pyrmont site in the 2012 survey as we expect the future demographic composition to resemble the surveyed composition. The daily person trip rates for the Pyrmont site in the 2012 survey are 3.05 on a weekday and 4.86 on a weekend.

8.1.2 Mode share

In the 2012 trip generation survey, the Pyrmont site reported relatively low private vehicle mode share (40% on a weekday, compared to 27-68% for other metropolitan sites), but with a middling rank (fifth out of the eight metropolitan sites). Using the benchmarking method, it is important to look for transport conditions that are comparable to the desired future state for the peninsula, not to the state of the survey site in 2012.

Transport conditions have changed substantially since the 2012 survey and will change again in future. The full suite of changes between 2012 and the desired near-future state includes:

- 10+ per cent reduction in walking times along main streets and main roads (recommended in this study)
- Construction of the Union Street cycleway (completed)
- Construction of the Bridge Road cycleway (completed)
- Construction of a Harris Street cycleway (recommended in this study)
- Introduction of a ferry service from Blackwattle Bay (committed by government)
- Massive uplift in light rail service (completed)
- Delivery of the Pyrmont metro station (under construction)

Additionally, substantially less parking will be available in the future state. In the 2012 survey, 1.52 parking spaces were available for every dwelling at the Pyrmont site. For any future development on the sites proposed for rezoning, the maximum parking rate for any apartment type is 1.1 for a three-bedroom apartment in a Category B area; for some types, such as studios in Category A areas, the maximum parking rate is as low as 0.1. As such, there will be at least 33% less parking available in future developments compared to the 2012 survey site, and probably even less.

Together, these changes will result in a precinct where walking, cycling, and public transport offer far greater access to opportunities than they did at the time of the survey in 2012. For this reason, we benchmark private vehicle mode share against the lowest private vehicle mode share reported in the 2012 survey: 27% on weekdays and 31% on weekends.

8.1.3 Trip Generation

Using the person trip rates and mode share benchmarked above, we use a vehicle trip generation rate of 0.82 vehicle trips per unit per weekday and 1.5 vehicle trips per unit per weekend day.

If around 23% of these weekday trips are made during the AM peak, this translates to 0.19 vehicle trips per weekday AM peak per unit.

Given a proposed uplift of around 1,300 dwellings in this planning proposal, this would translate to an extra 247 vehicle trips at most in the AM peak across the peninsula. This is a negligible increase in volume given that the rezoning includes seven different sites spread throughout the Peninsula and unlikely to impact existing network operations.

Given the likelihood that private vehicles generation is minimal and existing networks would perform similarly as before, transport modelling and intersection levels of service have not been completed for this report.

8.2 Street capacity

An assessment of existing and recommended street capacity has been proposed and detailed in Table 19. The recommended configuration reduces private vehicle capacity in line with Transport for NSW's vision to reduce vehicle kilometres travelled in the area but increases total person capacity by providing sufficient space for walking and cycling, which provides an overall increase in capacity of 2,000 people.

Table 19 estimated capacity of Harris Street: existing vs. recommended

Mode	Existing peak capacity (PPH)	Recommended capacity (PPH)
Walking*	140-4,692	4,000-8,832
Cycling^	0	4,000
Private vehicles#	10,575	4,230
Total	10,715-15,267	12,230-17,062

*the lower bound represents Transport for NSW Walking Space Guide footpath volumes at LOS D, and the upper bound represents a maximum capacity estimate of 23 people per minute per metre of width footpath, using a bottleneck width on existing Harris Street footpaths of 1.7 metres

^calculated using a conservative estimate of 2,000 people per hour per direction

#calculated using a capacity of 1,500 vehicles per lane and 1.41 persons per vehicle

8.3 Walking space level of service

Our recommendation to increase walking space on Harris Street and Wattle Street will achieve the minimum standard level of service C on both streets and retain LOS D where outdoor dining is provided. The change in level of service is summarised in Table 20 below.

Table 20 recommended change in walking space level of service

Street	Existing LOS	Recommended LOS
Harris Street	A-F	A-C
Wattle Street	D-F	C

Shared zones do not fit within the framework of assessment provided by Transport for NSW's *Walking Space Guide*. As such, it is difficult to validate the kind of road space allocation to people walking that we recommend for Bulwara Road. This reinforces the desirability of investigating footpath widening on Bulwara Road after the shared zone has been installed and the community and practitioners are able to reflect on its performance.

8.4 Crossing detour and delay level of service

The Austroads LOS rating for pedestrian crossing delay or detour is calculated for existing and recommended conditions in Table 21 below.

Wait time is taken as the average of the wait times at the two nearest crossings: zero in the case of pedestrian crossings (zebra crossings), and half the cycle time in the case of traffic signals where pedestrian green intervals are not automatically introduced.

Future wait time assumes that cycle durations do not exceed 70 seconds. All recommended mid-block crossings are assumed to be pedestrian crossings (zebra/wombat crossings).

The calculations show an improvement of one alphabetic grade (i.e. from E to D, or D to C) at all sites.

Table 21 Austroads LOS rating for pedestrian crossing delay or detour

Current				Future			
Between	Spacing	Wait time	LOS	Between	Spacing	Wait time	LOS
John Street - Miller Street /Union Street	240	21	E-	Jones Street - Mid-block	120	0	D
				Mid-block - Miller Street /Union Street	120	18	D-
Miller Street /Union Street - Pyrmont Bridge Road	175	51	D-	Miller Street /Union Street - Mid-block	87.5	18	C-
				Mid-block - Pyrmont Bridge Road	87.5	18	C-
Quarry Street - William Henry Street	160	50	D-	Quarry Street - Mid-block	80	18	C-
				Mid-block - William Henry Street	80	18	C-
William Henry Street - MacArthur Street	160	50	D-	William Henry Street - Mid-block	80	18	C-
				Mid-block - MacArthur Street	80	18	C-

It is worth noting that the crossings between John Street-Miller Street as well as Quarry Street-William Henry Street will additionally connect to through-site links and will improve east-west connectivity across the peninsula.

8.5 Public transport journey times

Local Planning Direction 5.1 specifically identifies public transport efficiency as one of its objectives, and local and state government visions for the area position public transport as an attractive major transport mode.

The recommendations made in this study will most directly influence the efficiency of bus services, as metro, light rail, and ferry services in the area operate on separate rights of way.

The exact and total impact of our recommended changes on total person travel time for people using bus services would require detailed modelling, and even such modelling may not accurately represent proprietary SCATS algorithms, existing green wave design, and existing PTIPS (bus priority) operation.

Nonetheless, it is possible to identify likely influences in either direction (more travel time or less travel time) and consider whether the trade-offs implied in these influences support the vision for the area. This is set out in Table 22 below.

Table 22 potential impact of recommended actions on bus passenger journey time

Recommendation	Impact on bus	Trade-off	Supports vision
Install four new mid-block wombat crossings	Increased travel time for passengers on the bus. Reduced travel time for passenger access and egress to the bus.	Prioritises walking over public transport	Yes
Reduce signal cycle durations	Impact on bus ambiguous. TfNSW study on reducing CBD signal cycle durations in 2018 from 110 to 90 seconds found a small delay on one corridor, a small saving on another corridor, and large savings on two other corridors. Large travel time savings for passenger access and egress to the bus.	Prioritises walking. Likely to benefit bus passengers.	Yes
Convert all stops to in-lane	Small travel time savings	Prioritises public transport and walking over private vehicles	Yes

8.6 Safe systems alignment

The NSW government has a vision of zero trauma on road and street networks in future. Reducing the danger caused by vehicles not only yields the intrinsic public health benefits of increased safety but also improves place outcomes and makes walking and cycling more attractive.

In Table 23 below, we identify how different recommended actions align with the pillars of the safe systems approach. No recommended actions will decrease road user safety.

Table 23 safe systems alignment of study recommendations

Recommendation	Safe speeds	Safe roads	Safe users
Reduce speed limits	Proposed changes will bring vehicle speeds into the range of human survivability	-	-
Provide sufficient space for walking	Shared zone treatment includes speed reduction. Associated traffic lane narrowing may reduce vehicle speeds.	-	-
Install new wombat crossings at mid-block locations	Vertical deflection on wombat crossings reduces vehicle speeds	Well-lit crossing opportunities with vertical deflection will decrease risk of trauma	-
Install pedestrian crossings on all legs of signalised intersections	-	Facilitate crossing in expected locations	Reduced delay is known to reduce pedestrian crossing during vehicle conflicts

Recommendation	Safe speeds	Safe roads	Safe users
Provide a single-stage pedestrian crossing of all road/street legs at signalised intersections	Building a smaller kerb radius will reduce the speed at which pedestrian-vehicle conflicts occur	-	Reduced delay is known to reduce pedestrian crossing during vehicle conflicts
Redesign signal operations to reduce delay for people walking and cycling	-	-	Reduced delay is known to reduce pedestrian crossing during vehicle conflicts
Install separated cycleways	-	Physical separation protects people cycling from conflicts with vehicles	-
Install slow points	Horizontal deflection and yielding will reduce vehicle speeds	-	-
Provide new signalised crossing of Wattle Street between light rail viaduct and Quarry Street	-	Controlled crossings are safe for all people walking (e.g. children, less mobile adults)	-

9. Action plan

The proposed transport responses to the stage two rezoning have been validated against the key objectives and metrics. Twenty-one responses have been recommended to support the peninsula's overarching vision and objectives and enable the rezoning to provide additional housing, commercial and retail.

This section summarises the proposed responses, including temporal priority, and the relevant road authority for the infrastructure affected. The recommendations proposed are subject to further investigation and investment decisions in subsequent stages of work to determine feasibility and costing. A detailed staging plan is not available, and implementation has been categorised as short, medium and long term.

The action plan aligns with the transport response mapping provided in Figure 29.

Table 24 recommended actions

No.	Action	Road authority	Timing
1	Reduce speed limits on Harris Street to 30-40km/h, on Wattle Street to 40km/h, and on all local streets to 30km/h	Transport for NSW	Immediate
2	Widen footpaths on Harris Street between Allen Street and Broadway	Transport for NSW / City of Sydney	Short term
3	Install mid-block wombat crossings of Harris Street (north of Pyrmont Bridge Road)	City of Sydney	Short term
4	Install mid-block wombat crossings of Harris Street (south of Pyrmont Bridge Road)	Transport for NSW	Short term
5	Install pedestrian crossings on all legs of signalised intersections on Harris Street	Transport for NSW	Short term
6	Provide a single-stage pedestrian crossing of Ultimo Road at Harris Street	Transport for NSW	Medium term
7	Redesign signal operations along Harris Street to minimise delay for people walking and cycling	Transport for NSW	Short term
8	Reallocate road space at intersection of Harris Street and Miller Street	City of Sydney/ Transport for NSW	Medium term
9	Install a separated cycleway on Harris Street between Pyrmont Bridge Road and Mary Ann Street	Transport for NSW	Short term
10	Install category 2 shared zones on one-way sections of Bulwara Road	City of Sydney / Transport for NSW	Short term
11	Install a wombat crossing on Bank Street to align with the easternmost through-site link of the Saunders Street site	City of Sydney	In conjunction with redevelopment of neighbouring sites
12	Install a three-way wombat crossing for people walking and cycling at the intersection of Bank Street and Quarry Master Drive	City of Sydney	In conjunction with redevelopment of neighbouring sites
13	Install slow points on Bank Street	City of Sydney	In conjunction with redevelopment of neighbouring sites
14	Construct footpath on western side of Jones Street	City of Sydney	In conjunction with redevelopment of neighbouring sites

No.	Action	Road authority	Timing
15	Install wombat crossing of Quarry Street at intersection with Jones Street	City of Sydney	Short term
16	Widen footpaths on Wattle Street	Transport for NSW / City of Sydney	Short term
17	Install a separated cycleway on Wattle Street	Transport for NSW	In conjunction with redevelopment of Wentworth Park
18	Provide new signalised crossing of Wattle Street between light rail viaduct and Quarry Street	Transport for NSW	In conjunction with redevelopment of Wentworth Park
19	Install pedestrian crossings on all legs of signalised intersections on Wattle Street	Transport for NSW	Short term
20	Provide a single-stage crossing between Wentworth Park and the new fish market	Transport for NSW	Short term
21	Redesign signal operations along Wattle Street to minimise delay for people walking and cycling	Transport for NSW	Short term

Appendix 1: previous recommendations

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont Peninsula Place Strategy	Walking, cycling, public transport	Investigate the repurposing of Glebe Island Bridge as an active and public transport link to link Pyrmont Peninsula with The Bays; restore/reinstate/interpret the historic Glebe Island Bridge structure to provide active transport access to Bays West	Transport for NSW	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Public transport	Build a Sydney Metro station in the Pyrmont Peninsula as an anchor for new development and connectivity	Sydney Metro	Funded, underway
Pyrmont Peninsula Place Strategy	Private vehicles	Investigate the delivery of multi-utility hubs and integrated models of car parking	Key site owners	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking and cycling	Investigate the ongoing trial of temporary COVID-19 active transport measures beyond current Government guidelines	Transport for NSW	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Public transport	Contra-flow bus lane northbound on Regent Street and Harris Street between Lee Street and Thomas Street	[Transport for NSW]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Widen footpaths on Harris Street	[Transport for NSW, City of Sydney]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Install new pedestrian crossings on Harris Street	[Transport for NSW, City of Sydney]	No new crossings installed
Pyrmont Peninsula Place Strategy	Public transport	Create an intermediate public transport corridor from the Bays Precinct along Harris Street to Tech Central and the Australian Technology Park	[Transport for NSW]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Public transport	Rationalise bus stops on Harris Street	[Transport for NSW]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling	Create active transport connections to Harris Street from surrounding areas	[City of Sydney]	Mary Ann Street cycleway installed

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont Peninsula Place Strategy	Walking, cycling	Increase canopy cover on Harris Street, Jones Street, Bulwara Road, and Quarry Street	?	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling	Investigate the extension of the Goods Line to facilitate an active transport loop around the peninsula		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling, private vehicles	Consider closing Jones Street between Broadway and Mary Ann Street to create a linear park	[City of Sydney]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling, private vehicles, freight	Provide shared accessways around UTS and TAFE NSW Ultimo Campus for pedestrians, cyclists, vehicles and deliveries, potentially through a pilot program on weekends and during events		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Consider how development can create pedestrian connections between Jones and Wattle streets	[City of Sydney]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Cycling	Extend the Jones Street cycleway north to Pyrmont Bridge Road and provide a crossing of Pyrmont Bridge Road	[City of Sydney, Transport for NSW]	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling, public transport, private vehicles	Reprioritise street and traffic flows to promote pedestrian, cycling and public transport and provide improved active transport connections from Blackwattle Bay to other parts of the peninsula	Transport for NSW, City of Sydney	Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Public transport	Investigate a new ferry wharf in Blackwattle Bay	Transport for NSW	planned for; funded
Pyrmont Peninsula Place Strategy	Walking	Improve pedestrian access to Bowman/Bank Street from Distillery Drive and John Street via stairs or a lift		Unknown at time of preparing this report

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont Peninsula Place Strategy	Walking, cycling	Enable streets as shared spaces with capacity for outdoor dining, walking and cycling and safe and accessible spaces for community to gather		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling	Upgrade walking and cycling access, particularly to the Pyrmont Metro station, and investigate a multimodal transport hub		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Private vehicles	Relocate bus and coach parking from streets to on-site at The Star		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Enhance and improve public domain interfaces and site permeability [through the Star site], including wayfinding and new 24-hour publicly accessible connections that are ideally open to the air, through the key site to break up its bulk and maximise permeability at the ground plane		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Connect and activate the public domain through new active transport connections through large sites (i.e. site permeability and wayfinding)		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling	Deliver a new active transport link from Blackwattle Bay master plan area to the Fish Market Light Rail Station		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Improve and enhance east-west connection from Harris Street to the waterfront through large sites [in the Harbourside sub-precinct]		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking	Deliver a safe, activated and inviting streetscape interface on all boundaries, including proposed ‘back of house’ or service areas on		Unknown at time of preparing this report

Document	Domain	Recommendation	Responsible actors	Status
		Darling Drive that promote east-west connectivity from Harris Street to the waterfront [in the Harbourside sub-precinct]		
Pyrmont Peninsula Place Strategy	Walking	Enhance east-west connections across Darling Drive		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling	Promote active transport (cycling and walking) along Pirrama Road between the entrance to The Star's car park and the roundabout on Jones Bay Road, including lower speed limits and prioritisation for pedestrians and cyclists		Unknown at time of preparing this report
Pyrmont Peninsula Place Strategy	Walking, cycling, public transport, private vehicles, freight	Prepare a Complete Streets Strategy using the NSW Government's Movement and Place principles to transition Pirrama road to a shared zone with shared access way for pedestrians, cyclists, buses, private and delivery vehicles; reduced servicing and access functions; reduced street parking with increased on-site provision; relocated tourist bus lay overs away from Pirrama Road and onto site; better integration with Pyrmont Bay Park		Unknown at time of preparing this report
				Unknown at time of preparing this report
Pyrmont-Ultimo Transport Plan	Cycling	Convert Bridge Road temporary cycleway to permanent cycleway	Transport for NSW	Committed and funded
Pyrmont-Ultimo Transport Plan	Cycling	Provide shared path along Bridge Road past the new Sydney Fish Market	Transport for NSW	Delivered
Pyrmont-Ultimo Transport Plan	Cycling	Improve cycling connectivity at Bridge Road / Gottenham Street intersection	Lead: Transport for NSW. Support: City of Sydney	Last was "for investigation"

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont-Ultimo Transport Plan	Cycling	Provide Kelly Street to Mary Ann Street cycle link	City of Sydney	Delivered
Pyrmont-Ultimo Transport Plan	Cycling	Provide cycling link on Darling Drive on approach to Murray Street intersection	Lead: Mirvac. Support: Placemaking NSW, City of Sydney, Transport for NSW	Current? Last was “in planning”.
Pyrmont-Ultimo Transport Plan	Cycling	Provide north-south cycle links between Mary Ann Street and Miller Street	Lead: City of Sydney. Support: Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Cycling	Improve safe cycling access to primary and secondary schools, such as Ultimo Public School, Glebe Public School and Sydney Secondary College Blackwattle Bay Campus	Lead: City of Sydney. Support: Transport for NSW	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Improve safe walking access to primary and secondary schools, such as Ultimo Public School, Glebe Public School and Sydney Secondary College Blackwattle Bay Campus	Lead: City of Sydney. Support: Transport for NSW	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Upgrade non-DDA compliant kerb ramps throughout the Precinct	Lead: City of Sydney. Support: Transport for NSW	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian connectivity and safety by reducing delays at signals, adding missing pedestrian crossing legs at intersections and increasing opportunities to cross in high pedestrian areas	Lead: Transport for NSW and City of Sydney	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian connections to Wentworth Park by upgrading shared paths and increasing crossing opportunities along Wattle Street, Bridge Road and Wentworth Park Road (aligned with Wentworth Park Master Plan)	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian connections for Wentworth Park Light Rail	Transport for NSW	Committed and funded? Last was “for investigation”

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian safety, priority and amenity at Broadway / Wattle Street intersection	Transport for NSW	Current? Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian safety, priority and amenity at City Road/Broadway intersection, including removal or redesign of the slip lane on the City Road approach	Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Support pedestrian safety by increasing pedestrian protection at intersections and investigating opportunities to ban right turns where not necessary for local or regional movements	Lead: Transport for NSW and City of Sydney	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, private vehicles	Reduce speed limit to 40km/h on all roads that meet the Speed Zone Requirements under the NSW Speed Zoning Standard to align with the existing 40km/h speed limit in the majority of the precinct. Review local roads with high pedestrian activity and place function in the precinct to consider implementation of 30km/h speed limit and traffic calming, in line with the NSW Speed Zoning Standard	Lead: Transport for NSW. Support: City of Sydney	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Consider key through-site links through urban design and early development planning, particularly access to waterfront and the Foreshore Link	City of Sydney	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Cycling	Provide cycling link to Glebe Island Bridge via Bank Street	Lead: City of Sydney. Support: Transport for NSW	Current? Last: “for investigation”
Pyrmont-Ultimo Transport Plan	Cycling	Provide cycling link via Glebe Island Bridge	Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Cycling	Provide new regional and local cycle links through Blackwattle Bay development	Lead: Infrastructure NSW. Support: City of Sydney, Transport for NSW	Current? Last was “for investigation”

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont-Ultimo Transport Plan	Walking, cycling	Review shared path operation along Bridge Road after the new Sydney Fish Market opens	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, cycling	Deliver Goods Line extension south to Central Station	Transport for NSW	Current? Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking, cycling	Investigate potential northern extension of the Goods Line and improve permeability for active transport users across the existing light rail line	Lead: Property and Development NSW. Support: transport for NSW, Powerhouse Museum, City of Sydney	Current? Last was “in planning”
Pyrmont-Ultimo Transport Plan	Public transport	Provide ramp/lift to improve station access, including at Glebe light rail stop	Transport for NSW	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Public transport	Address lighting, safety/security and access issues at public transport stops and provide comfortable, accessible waiting spaces that comply with Australian disability access and safety standards	City of Sydney	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Public transport	Determine medium-term bus plan in the Precinct and investigate new bus routes within the Precinct, including services linking to the new Metro station	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Public transport	Investigate locations of new ferry stops, such as Cadi Park, Pirrama Park, Rozelle Bay and new Sydney Fish Market	Lead: Transport for NSW. Support: City of Sydney	Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Public transport	Investigate increase in light rail service frequency	Transport for NSW	Delivered? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, private vehicles	Pedestrianise Bay Street between Broadway and Grose Street	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, private vehicles	Allow dynamic use of eastbound kerbside lane on Broadway and/or footpath widening with buses	Transport for NSW	Current? Last was “in planning”

Document	Domain	Recommendation	Responsible actors	Status
		moved into the second eastbound lane		
Pyrmont-Ultimo Transport Plan	Walking, private vehicles	Pedestrianise Jones Street between Broadway and Thomas Street	Lead: City of Sydney. Support: UTS, TAFE	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, cycling, private vehicles	Develop a program of shared zone projects around UTS and TAFE	Lead: City of Sydney. Support: UTS, TAFE	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Widen footpaths and kerb buildouts [on Harris Street] north of Pyrmont Bridge Road	Lead: City of Sydney. Support: Transport for NSW	Current? Last was “in planning”
Pyrmont-Ultimo Transport Plan	Cycling	Investigate feasibility of cycleway connection along Broadway	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Widen footpaths and kerb buildouts [on Harris Street] between Pyrmont Bridge Road and Allen Street	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, private vehicles	Widen footpaths and transition to four traffic lanes [on Harris Street] in peak periods and two traffic lanes in off-peak periods south of Allen Street	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Private vehicles	Remove Pyrmont Street on-ramp to Western Distributor	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Private vehicles	Support local access by converting Pyrmont Street [south of Pyrmont Bridge Road] to two-way	Lead: City of Sydney. Support: Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Provide priority for pedestrians at intersections along Harris Street and Pyrmont Street	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking, cycling	Increase shading and pedestrian comfort on streets through tree planting	Lead: City of Sydney	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking, cycling, private vehicles	Invest in travel demand management through non-build solutions, such as lower maximum parking rates, higher bike parking rates and higher quality end-of-trip facilities…	City of Sydney	Last was “ongoing”

Document	Domain	Recommendation	Responsible actors	Status
Pyrmont-Ultimo Transport Plan	Freight	Identify suitable locations for integrated freight facilities (including freight bicycle hubs) and sustainable last-mile deliveries and ensure new developments provide adequate delivery, loading and servicing facilities to support increase in future development and demand for delivers and servicing	Lead: City of Sydney. Support: Transport	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Freight	Consider deliveries and servicing requirements at different times of day, and investigate dynamic loading zones (variable kerbside lane use)	Lead: City of Sydney and Transport for NSW	Last was “in planning”
Pyrmont-Ultimo Transport Plan	Walking	Provide a safe and comfortable connection between Pyrmont Bridge and Blackwattle Bay by reallocating at least one lane of traffic to increase footpath width on Pyrmont Bridge Road	Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Improve pedestrian comfort, safety and place amenity outside the Metro entrance by pedestrianising some or all of Union Street	Lead: City of Sydney. Support: Transport for NSW	Current? Last was “for investigation”
Pyrmont-Ultimo Transport Plan	Walking	Improve connection from Metro to foreshore along Edward Street by providing crossing of light rail	Lead: Transport for NSW. Support: City of Sydney	Current? Last was “for investigation”
WSP Walking and Place Study	Walking	Install pedestrian crossings at: intersection of John Street and Harris Street; intersection of MacArthur Street and Wattle Street		
WSP Walking and Place Study	Walking	Install shared zone treatment on Bulwara Road		
WSP Walking and Place Study	Walking	Implement 30km/h speed zone around school		

Document	Domain	Recommendation	Responsible actors	Status
WSP Walking and Place Study	Walking	Increase crossing time and/or reduce cycle time at signalised intersections along William Henry Street		
WSP Walking and Place Study	Walking	Align kerb ramps on Fig Street		
WSP Walking and Place Study	Walking	Introduce flexible uses of kerbside lane on Harris Street		
WSP Walking and Place Study	Walking	Install gateway treatment (kerb build outs) at entrance to Quarry Street from Harris Street		
WSP Walking and Place Study	Walking	Install missing signalised pedestrian crossings on Harris Street		
WSP Walking and Place Study	Walking	Install raised intersections (whole intersection at grade of footpath) at intersection of Bulwara Road and Upper Fig Street, as well as at MacArthur Street and Jones Street		

Appendix 2: further place, land use, and transport analysis

A.1.1 Understanding place

A.1.1.1 Public open space

Public open space is distributed unevenly throughout the area: *en masse* in Wentworth Park and prominently along the northern foreshore. Small pocket parks are distributed elsewhere. A few linear spaces (The Goods Line, Quarry Park, Union Street, and Elizabeth Healy Reserve) provide high-quality place amenity as well as important walking and cycling links. A handful of spaces are both created by and negatively impacted by the motorway network: under Anzac Bridge and between the Western Distributor and Bulwara Road.

Public space through Tumbalong Park and Darling Square, although negatively impacted by motorway overpasses, is generally high quality. Moriarty Walk is possibly unique in Sydney for hosting multiple dancers' groups at all times of day. Tumbalong Park plays an important role in walking access between Quarry Street and the CBD, but closures for events frequently cause significant detours for people walking.

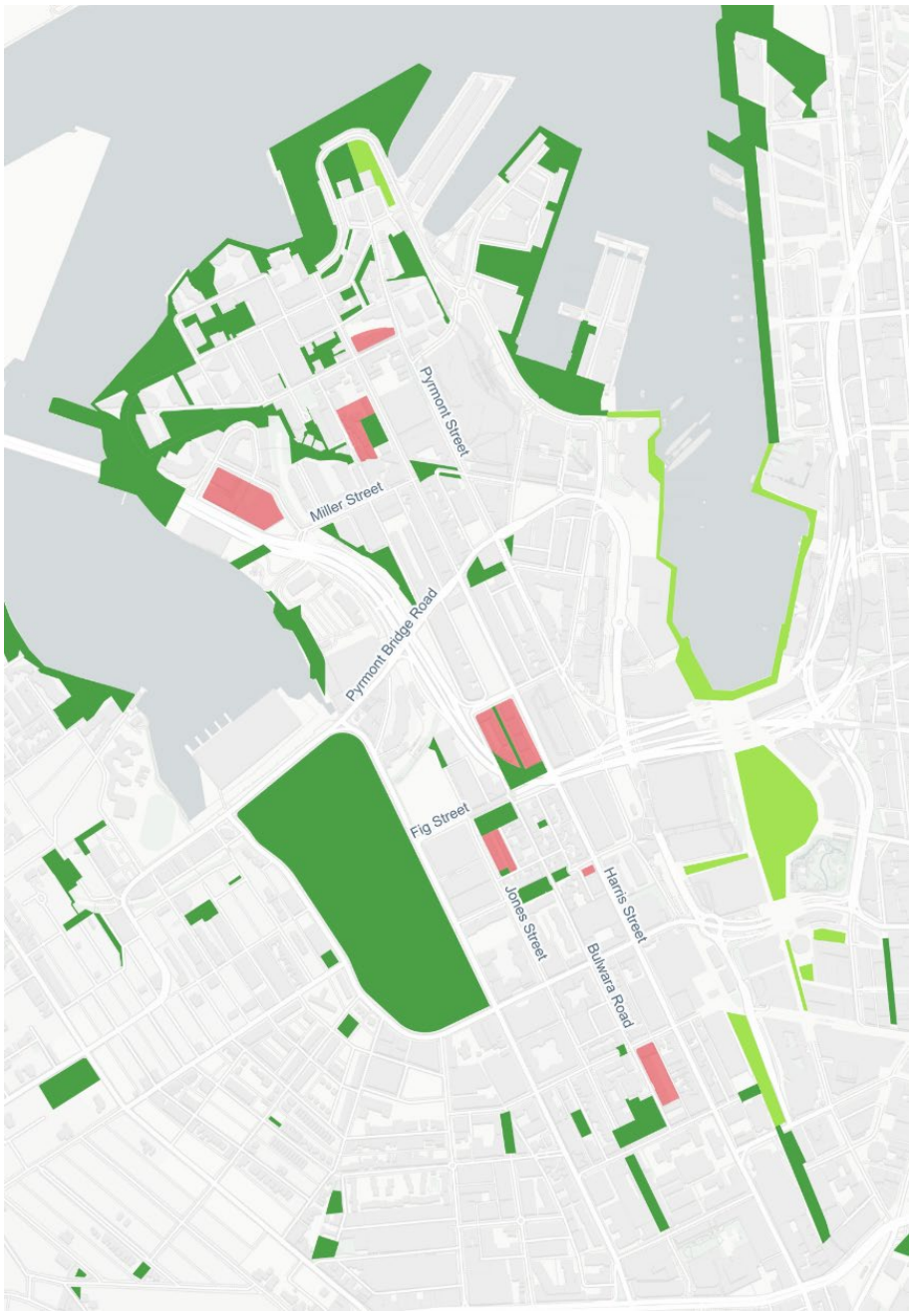


Figure 33 public open space

- Land zoned RE1
- Other important public open space
- Rezoning under this proposal

A.1.2 Understanding land use

Whereas place describes the function that the space between buildings performs in facilitating public life, land use describes the activity that occurs adjacent to public space, and while some activities are strongly influenced by place quality (for example, the businesses mapped above), land use more strongly influences the movement that occurs on roads and streets, because land use determines the location of the origins and destinations that people travel between.

Figure 34 below shows existing land use zoning on the peninsula. Apart from pockets of mostly historical dwellings zoned for residential use only, land is generally zoned for mixed uses, which allows for shorter, more walkable trips.

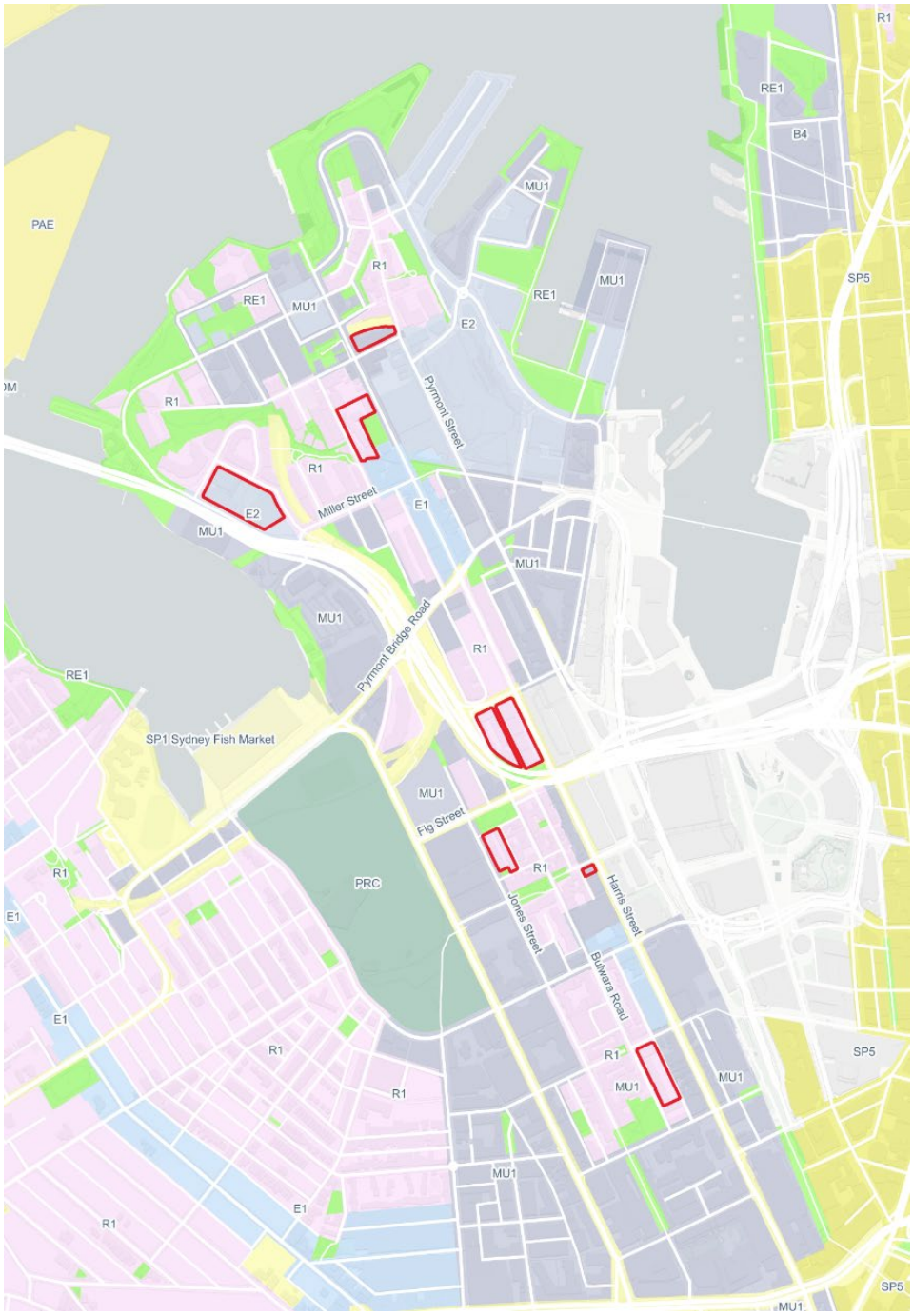


Figure 34 existing land use zoning

A.1.2.1 Population

Figure 35 below shows that residential population varies from block to block but is otherwise distributed fairly evenly throughout the peninsula.

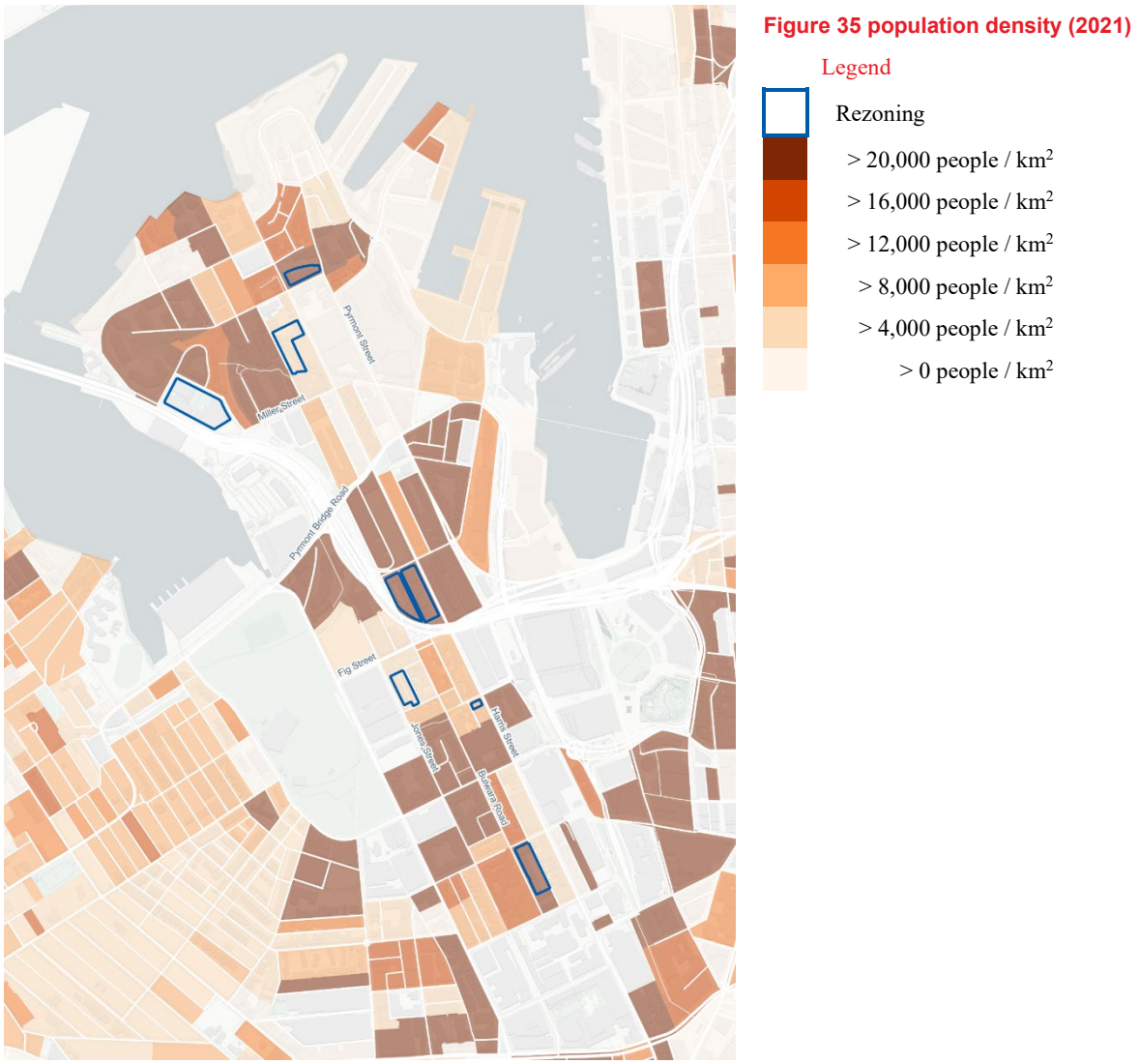
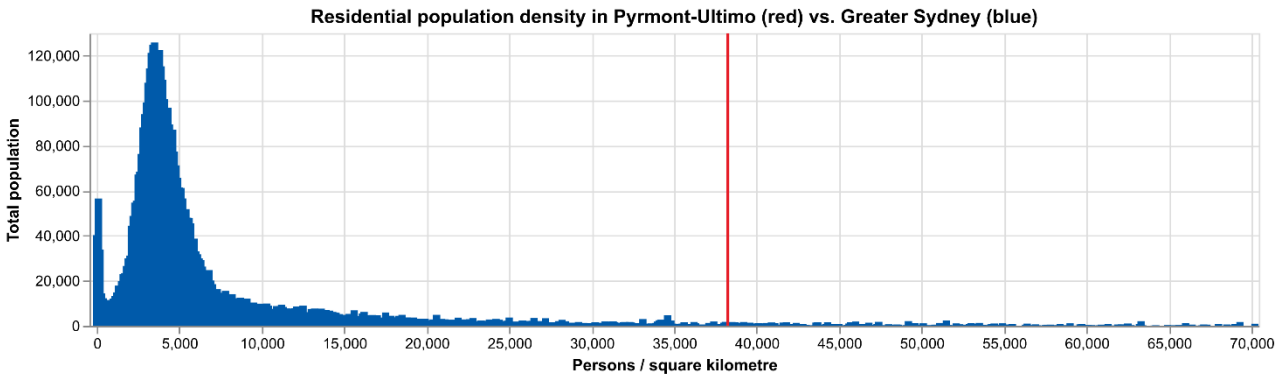


Figure 35 population density (2021)

Figure 36 below compares the mean population density in Pyrmont-Ultimo (weighted by the population of each area for which density is calculated, to reflect what the average resident experiences) against the distribution of population densities found across Greater Sydney and shows that existing residents of Pyrmont-Ultimo are living in much higher residential densities than the rest of Greater Sydney.

Figure 36 population-weighted mean population density in Pyrmont-Ultimo (red) vs. population-weighted distribution of population density in Greater Sydney (blue)



A.1.2.2 Employment

Figure 37 below shows that employment is distributed less evenly in the precinct, primary clustered in the southern end of Ultimo and in the north-eastern corner of the peninsula around the Darling Island sub-precinct. Employment density in the peninsula remains well below levels found in the adjacent CBD.

More localised patterns in the area—for example, existing employment at the Saunders Street site—may be masked in this map by the coarse resolution (destination zones) at which the ABS reports employment data from the census.

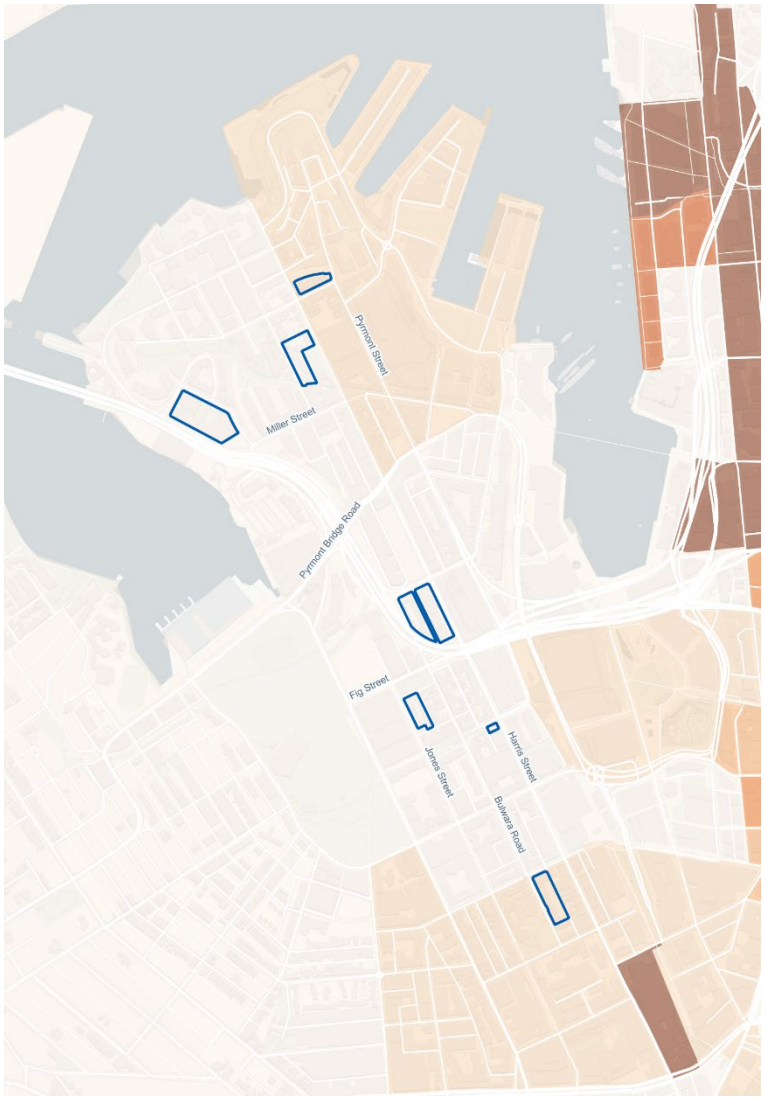


Figure 37 employment density (2016)

Legend

Rezoning

> 125,000 workers / km^2

> 100,000 workers / km^2

> 75,000 workers / km^2

> 50,000 workers / km^2

> 25,000 workers / km^2

> 0 workers / km^2

A.1.3 Land-use transport integration by walking

A.1.3.1 Education

Figure 38 shows that there is effectively no walkable access to public primary education north of Miller Street, if a gravity measure of access is calibrated to average walking distances. Given the constraints on public school supply generally, it may not be possible to plan for a new public school on the northern quarter of the peninsula. This means that safe cycling infrastructure is required in order to provide access to primary education by a sustainable and independent mode of transport.

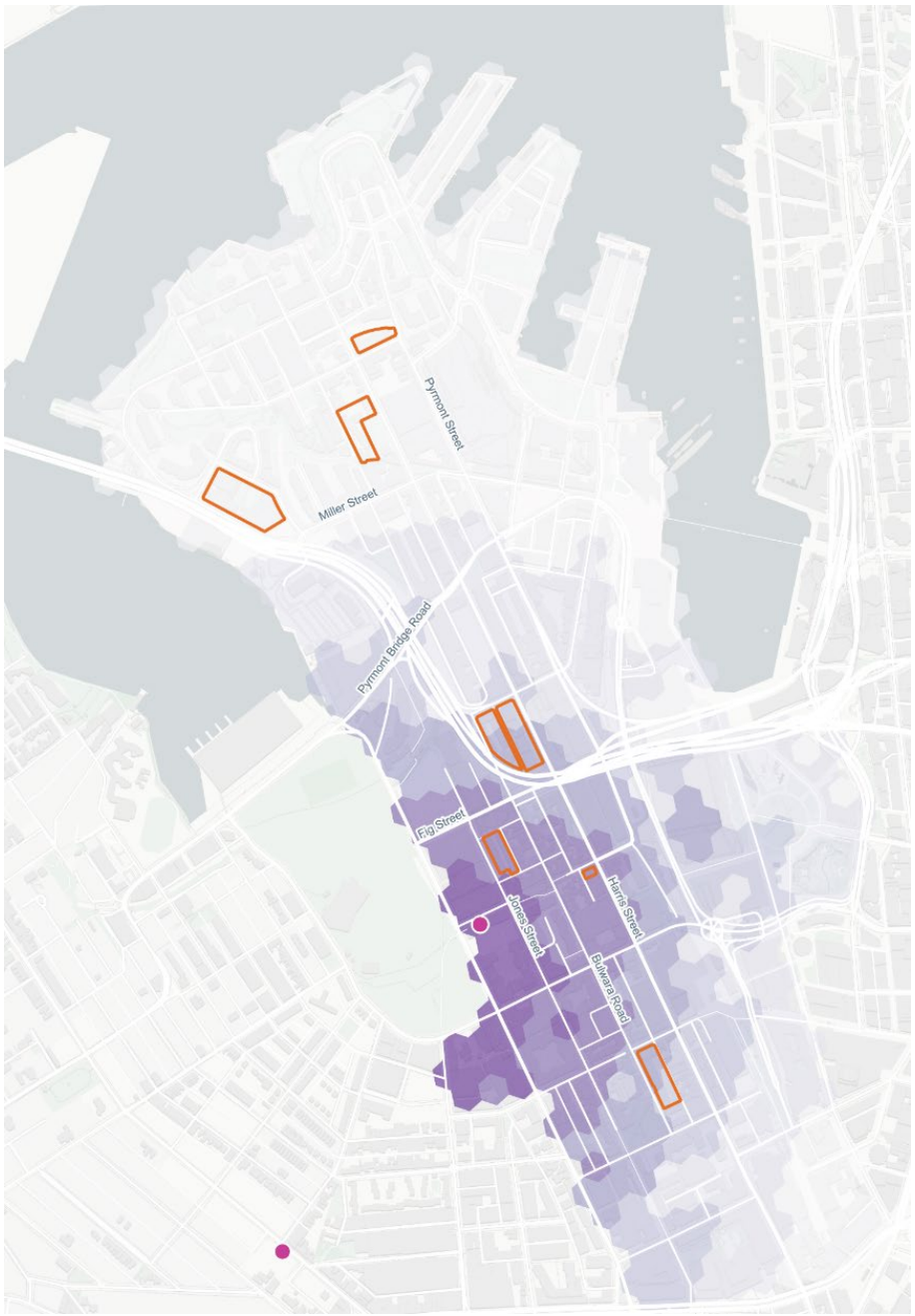


Figure 38 gravity measure of access to public primary schools by walking

Legend

Rezoning

Existing public primary school

Higher access

Lower access

A.1.3.2 Fresh food

Access to supermarkets is high in the southern parts of Ultimo, owing to proximity to both Broadway Shopping Centre and a Woolworths Metro at Haymarket. Access to supermarkets is also good in the northern quarter of the peninsula along the Miller Street-Union Street axis.

Access is relatively low in the middle of the peninsula, with the nadir between Fig Street and Quarry Street. From these locations, the nearest supermarket is more than 850 metres or 12 minutes away. Empirical data from Sydney suggests that less than one in four people are likely to walk that far to go shopping. Given the free car parking available at Broadway Shopping Centre, this land use pattern is likely to be a key driver of short private vehicle trips in the area.

Developing a supermarket within the 313 Harris Street site could significantly reduce private vehicle trips in the area.

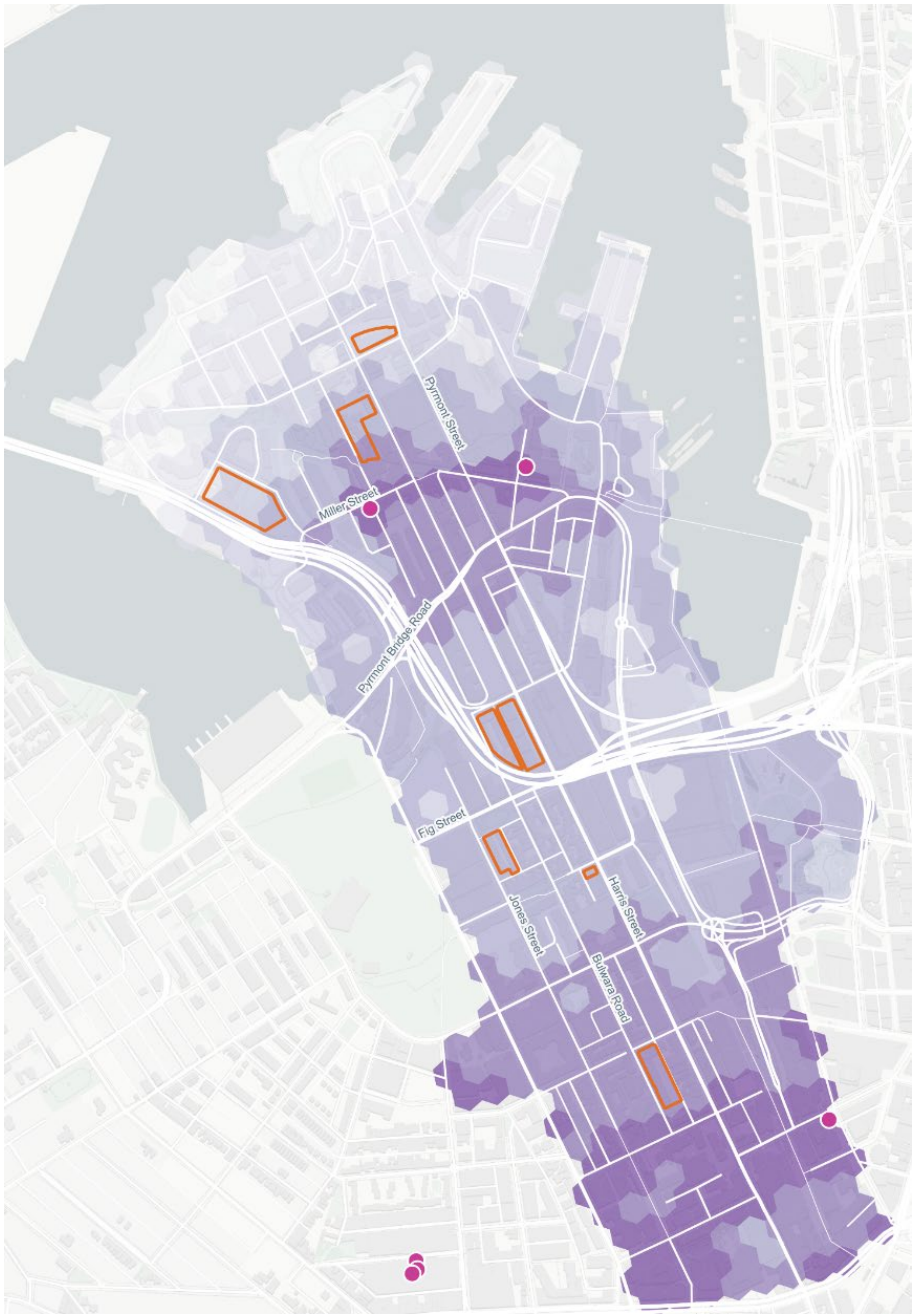


Figure 39 gravity measure of access to supermarkets by walking

A.1.3.3 Exercise and sport

Figure 40 below shows that access to gyms is good throughout the precinct, although more limited in the northern quarter of the peninsula. This may be alleviated by commercial development within the Saunders Street site.

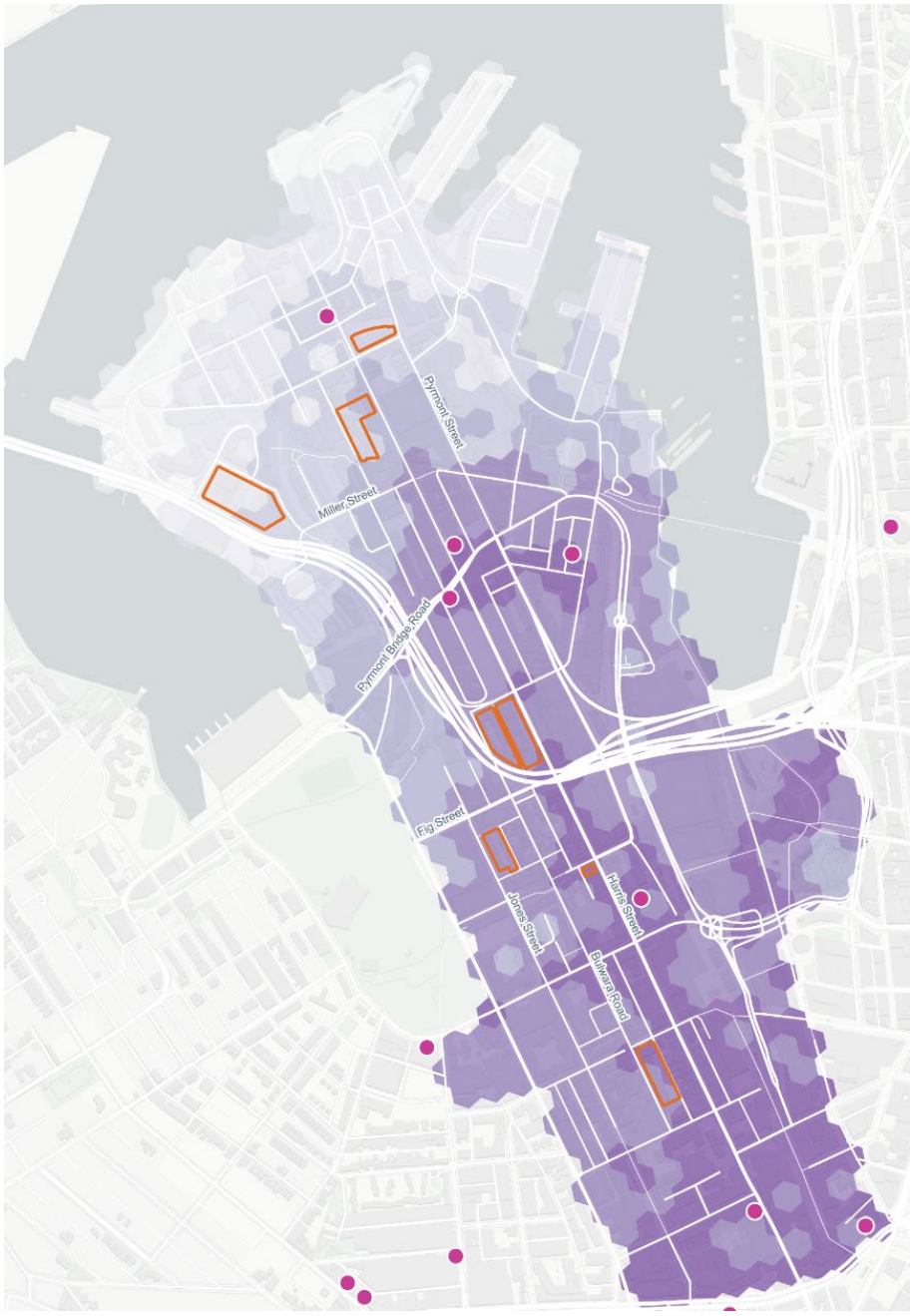


Figure 40 gravity measure of access to gyms by walking

Legend

- Rezoning
- Existing gym
- Higher access
- Lower access

Access to popular exercise opportunities with more limited land uses, such as swimming is more constrained. Figure 41 below shows that there is effectively no access to pools by walking from the northern quarter of the peninsula. This reinforces the need for safe cycling infrastructure to provide independent access to opportunities by sustainable modes of transport.

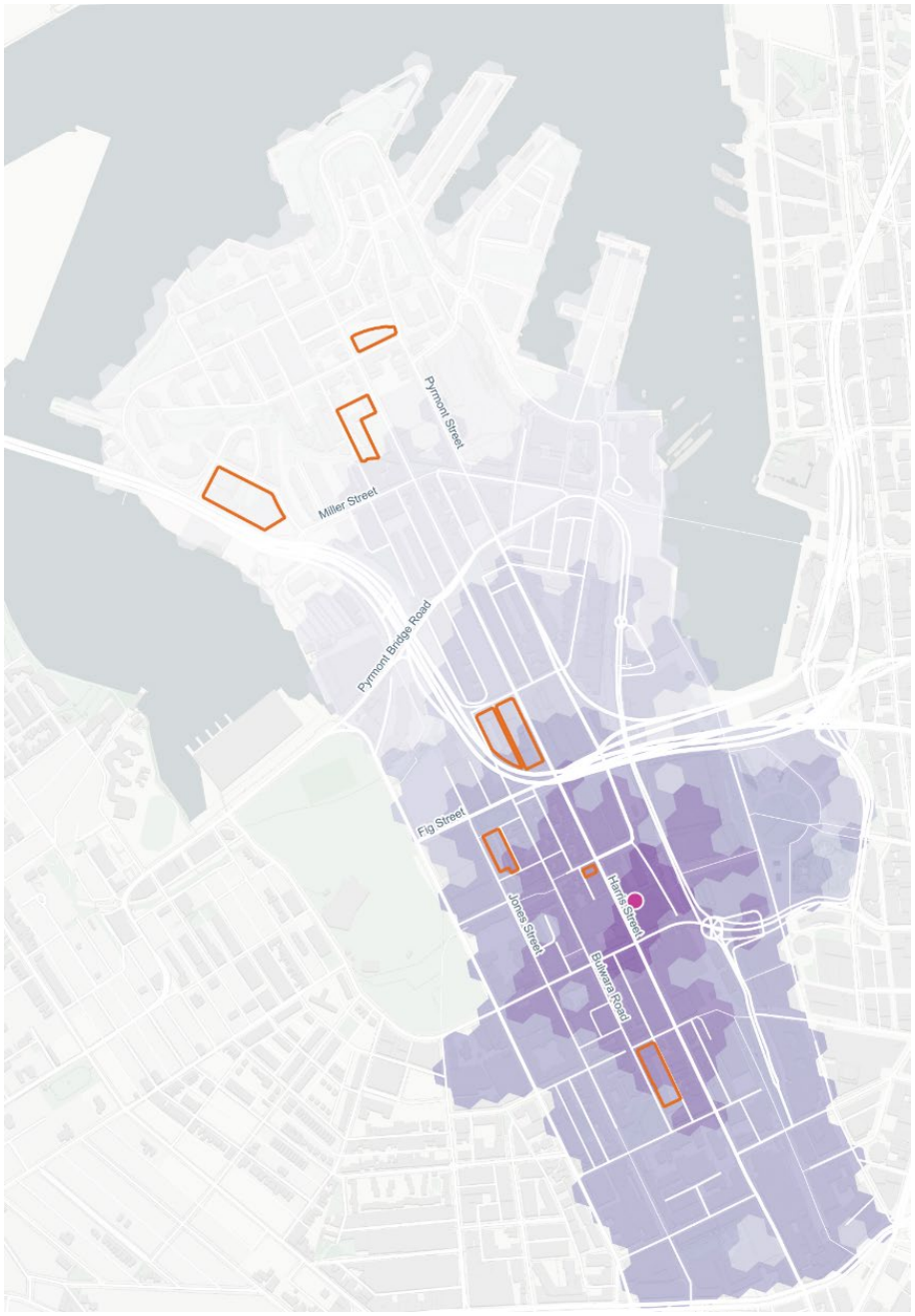


Figure 41 gravity measure of access to swimming pools by walking

Item 4.

Public Exhibition - Planning Proposal - 84-86 and 88-94 Parramatta Road, Camperdown - Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012 Amendment

File No: X104453

Summary

The City of Sydney's Economic Development Strategy 2025-2035 identifies the Tech Central innovation district as representing Australia's deepest and broadest research and technology ecosystem. It is home to 3 world-leading universities and the Royal Prince Alfred Hospital (RPA), industry innovation leaders including Atlassian and Canva, and has a high concentration of privately owned startup companies valued at more than US$1 billion ('unicorns') in Australia. The Tech Central West precinct, including the suburb of Camperdown, has more than half of the City of Sydney's higher education and research jobs. More than 100,000 students progress research and development across critical future industries including quantum, biotech, fintech, cyber security, artificial intelligence, health-sciences, deep tech and green tech.

A planning proposal, consistent with the City's Economic Development Strategy 2025-2035, has been prepared for 84-86 and 88-94 Parramatta Road, Camperdown, following a request by the proponent to amend the planning controls for the site. The site is directly north of the University of Sydney and Royal Prince Alfred Hospital and close to the major educational, healthcare and research institutions of Tech Central West.

The planning proposal seeks to amend the building height and floor space controls to facilitate the development of a biomedical and life sciences research facility, with more than 34,000sqm of floor space for laboratories with ancillary offices, education space and retail. This would be housed within a built form with a maximum height of 80m. The planning controls would also be amended to facilitate an expansion of an adjoining serviced apartment building, with an additional 3 storeys and 1,250sqm of floor space.

A draft site-specific Development Control Plan has been prepared to support the planning proposal and provide guidance on built form, landscaping and sustainability, transport and servicing, design excellence and public art. The proponent has submitted a public benefit offer to enter into a planning agreement to deliver upgrades to surrounding streets and lanes, achieve sustainability targets above requirements and deliver in-kind public art on site.

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. 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) Council approve Planning Proposal - 84-86 and 88-94 Parramatta Road, Camperdown, 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) Council approve Planning Proposal - 84-86 and 88-94 Parramatta Road, Camperdown, 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) 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 - 84-86 and 88-94 Parramatta Road, Camperdown

(D) Council approve the Draft Sydney Development Control Plan 2012 - 84-86 and 88-94 Parramatta Road, Camperdown, as 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 - 84-86 and 88-94 Parramatta Road, Camperdown, 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 - 84-86 and 88-94 Parramatta Road, Camperdown, to correct any drafting errors or ensure it is consistent with the Planning Proposal following the Gateway Determination

(G) Council note the Chief Executive Officer will prepare a draft planning agreement in accordance with the letter of offer dated 9 October 2026 shown 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.

Attachments

Attachment A. Planning proposal - 84-86 and 88-94 Parramatta Road, Camperdown and Attachments

Attachment B. Draft Sydney development control plan 2012 - 84-86 and 88-94 Parramatta Road, Camperdown

Attachment C. Public benefit offer letter dated 9 October 2026

Background

1. In March 2026, a request to prepare a planning proposal was lodged through the NSW Planning Portal on behalf of the landowners, the University of Sydney and Veriu Serviced Apartments, for 84-86 and 88-94 Parramatta Road, Camperdown ('the site'). The site is shown in Figure 1.



Figure 1. Land affected by this planning proposal

2. The multiple lots compromising the site have a total area of 5,361sqm and have frontages to Parramatta Road and Sparkes Street. Existing development on the site consists of 3 buildings:

   (a) 84-86 Parramatta Road, a 6-storey serviced apartment building trading as Veriu Camperdown with 28 apartments

   (b) 88-90 Parramatta Road, a 3-storey warehouse building constructed in 1927 which is currently vacant

   (c) 92-94 Parramatta Road, the University of Sydney Medical Foundation Building, a 3-7 storey research laboratory and office building, constructed in 1988-90 with approximately 11,800sqme of floor space

3. Further details of the site and existing planning controls can be found in sections 1 and 2 of the planning proposal, attached to this report at Attachment A. Photos of the site's Parramatta Road frontage and existing development are at Figures 2 and 3.

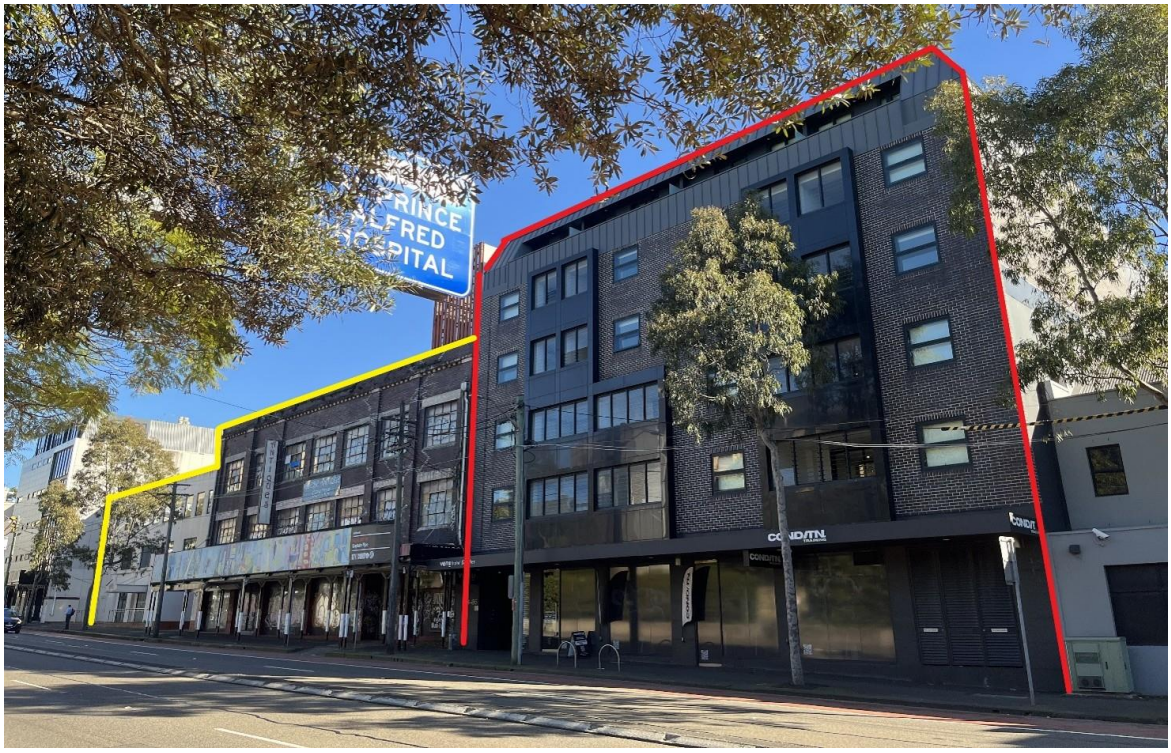


Figure 2. 84-86 Parramatta Road (outlined in red) and 88-94 Parramatta Road (outlined in yellow) looking north west



Figure 3. Medical Foundation building at 92-94 Parramatta Road with interior courtyard

The proponent has requested amendments to planning controls to enable redevelopment for life sciences research facility

4. The proponent requested a planning proposal to facilitate a redevelopment to achieve:

   (a) 34,000sqm of commercial floor space for a mixed-use biomedical and life sciences research facility with ancillary office, education space and retail. This would be located at 88-94 Parramatta Road and be consistent with the Tech Central Economic Development Strategy and City of Sydney Economic Development Strategy 2025-2035

   (b) an additional 1,250sqm of serviced apartment floor space to expand the current serviced apartment operation at 84-86 Parramatta Road

5. Illustrations of the reference design prepared by the proponent are shown at Figures 4 and 5.



Figure 4. Illustration of reference concept massing looking north east



Figure 5. Illustration of reference concept massing looking north west

6. An earlier version of the scheme was presented to the City's Design Advisory Panel on 13 February 2025. Advice received from the Panel emphasised the need to align with the objectives of the Apartment Design Guide with regard to sun access and encouraged retention of the existing warehouse building at 88-90 Parramatta Road. This advice was incorporated into the final scheme lodged in March 2026.

The City has prepared a planning proposal to increase the maximum building height and floor space ratio controls for the site

7. The planning proposal details the proposed amendments to the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) by inserting new site-specific provisions to incentivise productive floor space. For 88-94 Parramatta Road, the provisions are to:

   (a) permit a maximum building height of 80m, an increase from the current control of 18m

   (b) increase the maximum floor space ratio control from 2.5:1 to 6.5:1 inclusive of design excellence

   (c) prevent development consent being granted unless the consent authority is satisfied the resulting building contains health or medical related high technology industry.

(d) prevent development consent being granted unless the consent authority is satisfied the resulting building would not be used for residential or serviced apartments.

8. For 84-86 Parramatta Road, the provisions are to:

(a) permit a maximum building height of 30m, an increase from the current control of 18m

(b) increase the maximum floor space ratio control from 2.5:1 to 4:1

(c) prevent development consent being granted unless the consent authority is satisfied the resulting building would be used for serviced apartments only.

9. Further explanations of the provisions can be found in section 4 of the planning proposal at Attachment A.

A site-specific Development Control Plan will ensure the development demonstrates a high-quality built form and protects the public domain

10. A draft site-specific Development Control Plan (draft DCP) is at Attachment B and provides further guidance for development facilitated by this planning proposal. The draft DCP provisions include:

(a) dimensions of a maximum building envelope as shown at Figures 9 and 10

(b) guidance for partial retention of the warehouse building at 88-90 Parramatta Road

(c) additional requirements regarding sustainability, landscaping, transport and servicing, and public art

(d) a design excellence strategy.

11. The draft DCP fulfills the role of a Stage 1 Concept Development Application and with the inclusion of the Design Excellence Strategy, enables the applicant to proceed to a design competition. However, Schedule 1, section 14 (1)(c) of the State Environmental Planning Policy (Planning Systems) 2021 states that "development that has an estimated development cost of more than $30 million for health, medical or related research facilities" is declared State Significant Development. In these circumstances, the draft DCP will have no statutory weight but may still provide guidance for the future consent authority in its assessment of any future DA.

Key implications

Strategic alignment with Tech Central

12. The Tech Central precinct is the most significant innovation district in New South Wales. The precinct includes an existing technology and innovation community, a growing ecosystem of technology industries, all anchored by a network of premier research and education institutions, namely the University of Sydney (USyd), University of Technology, Sydney (UTS) and Royal Prince Alfred Hospital (RPA). The Tech Central Economic Development Strategy, released by the NSW Government in 2025, provides the state's most recent strategic direction to grow the Tech Central economy, attract and foster leading talent, and create a vibrant and welcoming destination.

13. The City of Sydney's Economic Development Strategy, released in 2025, specifically identifies Tech Central West, centred on Camperdown and the major institutions of USyd and RPA, as a major location for education, innovation, creative-tech and technology. It contains the following visions with particular relevance for the planning proposal:

    (a) boost Sydney's innovation economy and connect it globally to attract and retain businesses, talent and investment

    (b) plan for economically competitive and resilient places, including development of quality workplaces supported by infrastructure

    (c) promote areas with strong sector specialisations and a clustering of complementary economic activities.

14. The planning proposal also aligns with City Plan 2036, the City's Local Strategic Planning Statement, with particular reference to the planning priority to develop innovative and diverse business clusters in the City Fringe.

15. The Camperdown area within Tech Central accommodates an established biotechnology precinct, supporting more than 60 science, technology and research institutions. These include the Charles Perkins Centre, Brain and Mind Centre, and ongoing investment into biochemistry and biomedical engineering facilities. The Sydney Biomedical Accelerator (SBA) is currently under construction and due for completion in 2028. Co-funded by the NSW Government and USyd, it will provide 36,000sqm of life sciences floor space, bringing together clinicians with researchers and industry to accelerate research into commercialisation.

16. This planning proposal will provide an additional 34,000sqm of biomedical and life sciences research floor space with supporting office, education and retail uses. It is responding to existing demand for laboratory space and providing ongoing collaboration opportunities with USyd, RPA and SBA. It will allow students and startups to migrate to the new development on Parramatta Road as they mature and seek private investment. This keeps more of the potential economic value of the research in the City of Sydney rather than seeking support interstate or overseas. The economic impact assessment, at Attachment A9, estimates the economic benefit of the development to result in an annual net increase of:

    (a) $440.9 million in output

(b) $215.1 million in contributions to GRP

(c) $110.5 million in incomes and salaries

(d) 1,225 ongoing full-time employees.

Site context

17. The subject site is located in an area undergoing substantial change with regard to building height and density. Figure 6 below illustrates some of the future developments proposed for USyd and RPA, including the Sydney Biomedical Accelerator (SBA).

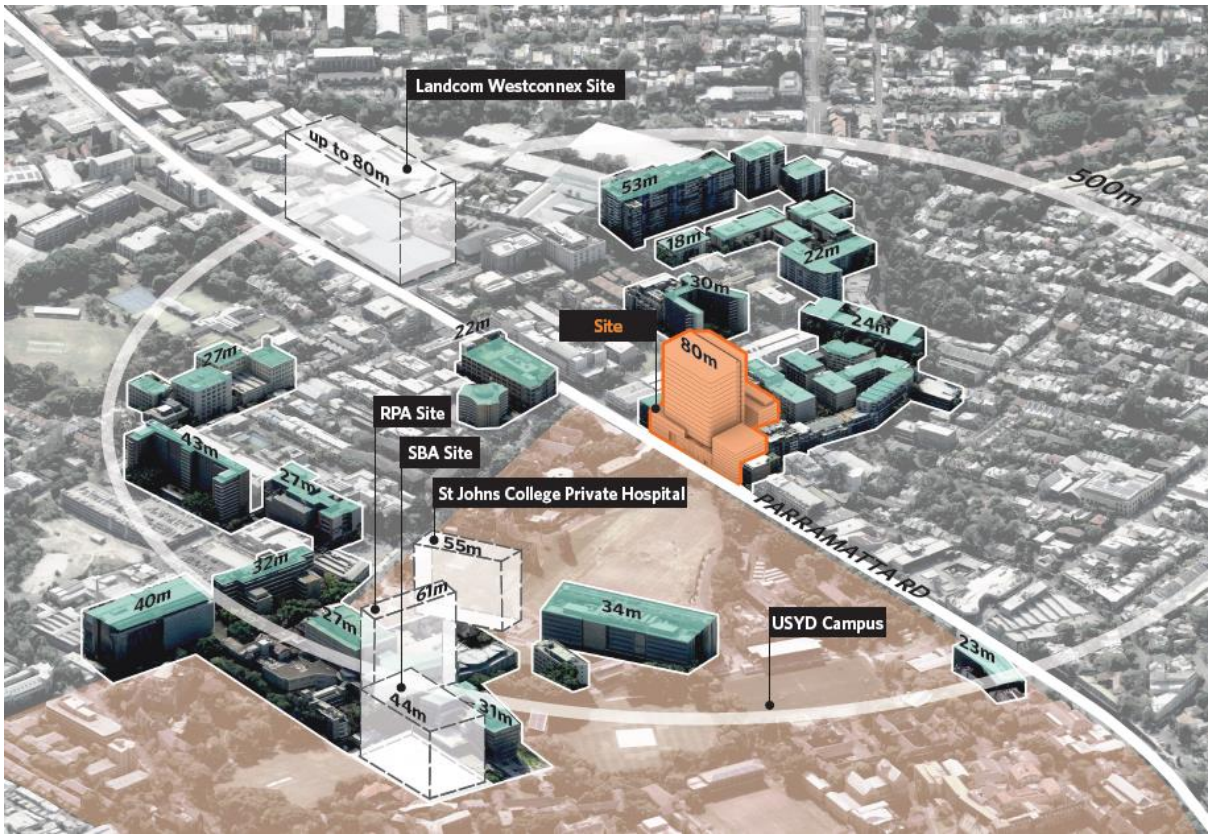


Figure 6. Parramatta Road context at time of lodgement

18. Figure 7 below illustrates some of the future residential development proposed for the area. The planning proposal site is coloured green. Sites coloured in red represent future residential development - either as part of the West Connex dive site with a maximum height of 80m or have had an Expression of Interest accepted by the Housing Delivery Authority for high-density residential between 12 and 22 storeys (approximately 40m to 70m).

19. The purple line represents areas within the Inner West Local Government Area incorporated into the State-led Rezoning for the Parramatta Road Corridor. The area in blue represents sites identified in the City of Sydney's Housing Discussion Paper as an opportunity for renewal. This idea received strong support from the community and the City will proceed with rezoning process in the near future. Therefore, the maximum height proposed for the subject site of 80m will be consistent with the area's future context.



Figure 7. Proposed high density residential along Parramatta Road (planning proposal site in green)

Built form

20. The proposed maximum height of 80m and maximum FSR of 6.5:1 for the life sciences development have been assessed by City staff. The FSR proposed is substantially lower than what could be achieved for a standard commercial office building of 80m. The lower FSR reflects the specific needs of laboratory spaces in the life sciences, including:

    (a) increased floor-to-floor heights of 4.5m to accommodate services and ventilation

    (b) increased plant size

    (c) the delivery of a floor plate to accommodate a typical research group structure with wet labs, dry labs, support labs, core facilities and storage.

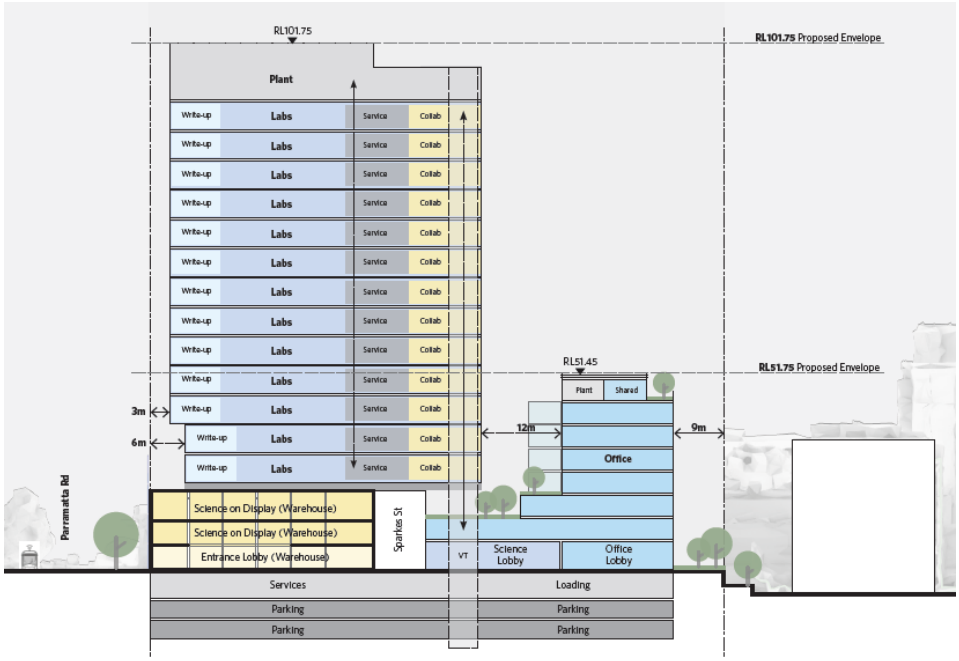


Figure 8. Reference scheme - vertical arrangement looking west

21. The draft DCP at Attachment B contains the dimensions of a maximum building envelope, which has been designed to protect sun access for neighbouring residential properties, provide for building separation and the installation of deep soil and landscaped areas, while delivering a floor plate to accommodate the needs of a life sciences facility.

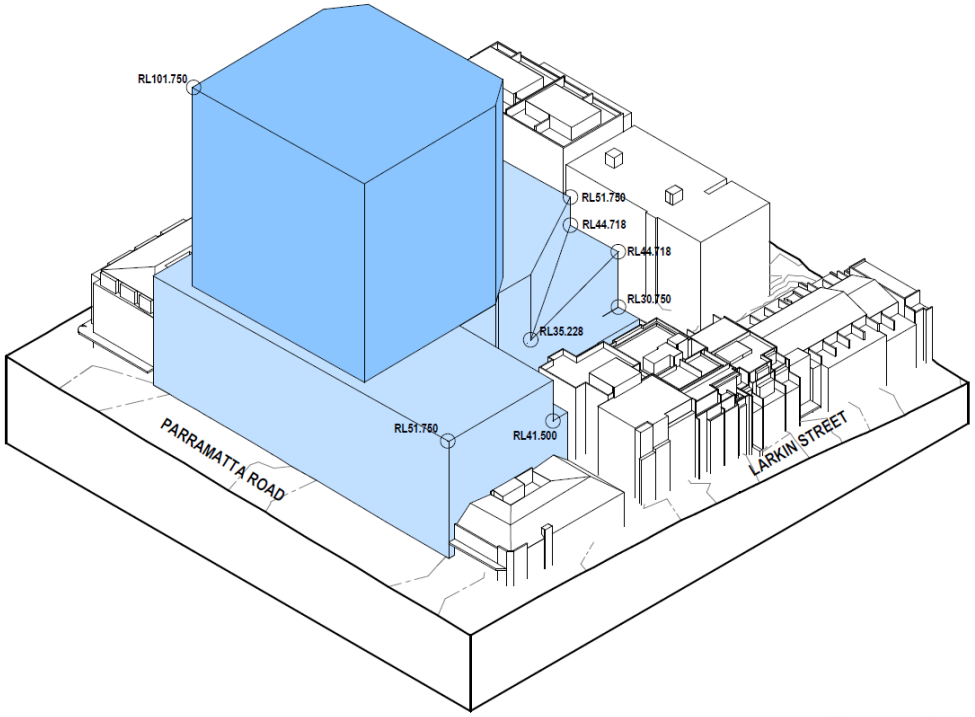


Figure 9. Maximum building envelope - axonometric south east view

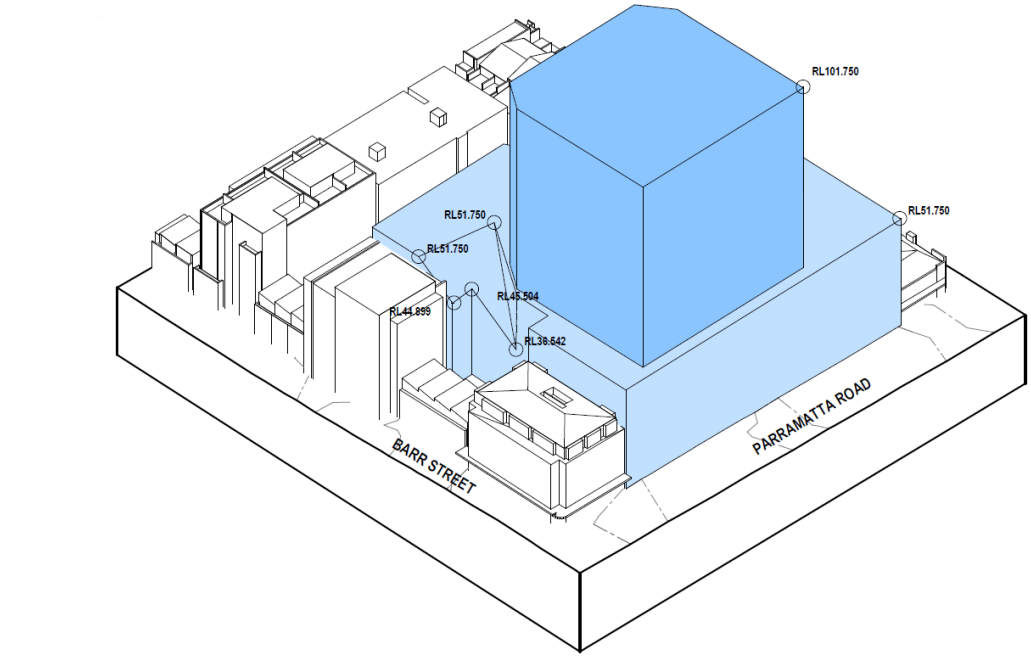


Figure 10. Maximum building envelope - axonometric south west view

Sun access

22. Positioning the tower along the southern boundary maximises building separation with surrounding residential properties and ensures alignment with the sun access objectives of the Apartment Design Guide (ADG). Figure 11 illustrates the properties assessed for sun access impact.

    (a) Some residential properties at 1 Missenden Road will lose some direct sun access between 9am and 10:30am but will still enjoy more than 2 hours throughout the day.

    (b) 32-38 Barr Street have living spaces and courtyards facing east which receive no direct sunlight at midwinter. This planning proposal will not affect their condition.

    (c) 96 Parramatta Road is not compliant with the ADG with regard to sun access, however there are 4 north-facing apartments which currently enjoy at least 2 hours of sun access at midwinter. The maximum building envelope illustrated at Figure 10 ensures these 4 apartments retain 2 hours of direct sun.

    (d) 19-21 and 23-25 Larkin Street are not affected by the proposal with regard to direct sun access at midwinter.

    (e) Non-residential properties on the southern side of Parramatta Road, including St Joseph's Catholic Church, parts of Sancta Sophia College and St John's Oval, will be affected by a loss of sun access. However, all these properties should receive in excess of 5 hours of direct sun at midwinter.

23. More information on sun access is available in section 5.3 of the planning proposal.

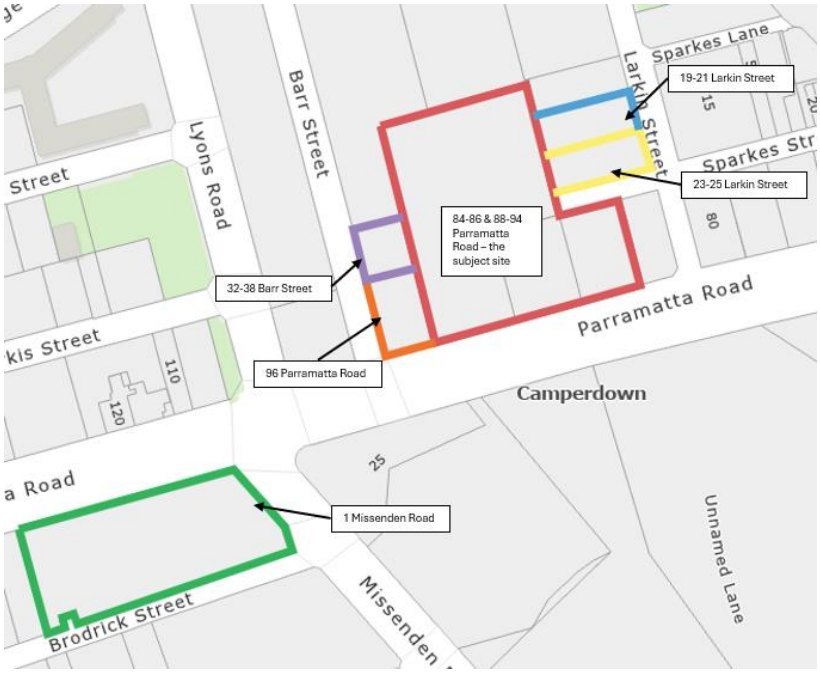


Figure 11. Neighbouring properties assessed for sun access

Visual impact

24. The proponent has undertaken a visual impact analysis which forms part of the Urban Design Report at Attachment A2. This analysis finds that no key view corridors are impacted as a result of the development. In particular, public views of the heritage-listed St John's College and St John's Oval are not affected. Views of the sky are maintained from nearby streets and parks.



Figure 12. View of Parramatta Road with maximum building envelope looking west



Figure 13. View of St John's College and Oval with maximum building envelope looking northwest

Wind

25. A quantitative wind effects report has been prepared, at Attachment A19, which is consistent with the requirements of Sydney DCP 2012. This analysis, based on wind tunnel testing of the building envelope as defined in the draft DCP at Attachment B, finds no exceedances of the Wind Safety Standard in any public place surrounding the site as a result of the development. The analysis also finds acceptable wind comfort conditions in the locations proposed for landscaping and deep soil along the northern and western boundaries of the site.

26. The analysis finds that 2 bus stops on Parramatta Road (one opposite the site on the southern side of Parramatta Road and another located approximately 65m to the east) see their mean wind speed exceed the Wind Comfort Standard for Standing, though remain within the Wind Comfort Standard for Walking. There is no exceedance of Wind Safety Standards, and opportunities remain for further refinement of the proposal to improve wind conditions through the design excellence process and subsequent lodgement of the DA.

Heritage

27. Part of the site is occupied by a 3-storey brick warehouse constructed in the Inter-War period (c. 1927) as a motor-car showroom and possibly a service station. The ground floor has been considerably altered, but the first and second floors retain some original timber flooring, columns, beams and joists.

28. Building on the applicant's intention to retain the historic warehouse and the advice received from the City's Design Advisory Panel, the draft DCP at Attachment B has an objective to “[maximise] opportunities to retain significant portions of the warehouse building at 88-90 Parramatta Road, including façade, columns, roof form and wooden floors, beams and trusses”. This objective is supported by additional guidance with regard to the legibility of the building from Parramatta Road, and the location of any additional structural supports, new building services and access points.

Transport and servicing

29. The Transport Impact Assessment at Attachment A7 concluded that the traffic generated by the proposal would be considered modest compared to existing and future background traffic in the network. The reference design proposes 185 parking spaces, which is below the maximum of 199 spaces allowable under Sydney LEP. The site will also be required to provide end of journey facilities in accordance with the minimum rates for office premises or business premises.

30. The reference design has shown 5 loading bays in the basement loading dock accessed from Sparkes Street: 1 x 9.8m bay suitable for a commercial waste vehicle; 2 x 8.8m medium goods vehicle (MGV); and 2 x 6m light goods vehicle (LGV). Any future detailed DA will need to be accompanied by a Delivery Servicing Plan in accordance with the requirements of Sydney DCP, once a final design for the loading dock has been completed. Swept path diagrams have been provided demonstrating that these vehicles can enter and exit the site via Sparkes and Larkin Streets. More information on transport and servicing issues is available in section 5.3 of the planning proposal.

Public benefit offer

31. The proponent has offered to enter into a Voluntary Planning Agreement (VPA) with Council to deliver public benefits as part of this planning proposal. The Environmental Planning and Assessment Act 1979 (the Act) allows the proponent to enter into a VPA with Council. Voluntary Planning Agreements 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.

32. The letter from the landowner at Attachment C to this report offers to provide upgrades to Sparkes Street and Larkin Street to improve the pedestrian environment, achieve a 5-star Green Star Buildings rating which is stronger than the current requirement for this land use, and an in-kind contribution to public art to be delivered on site. This offer will not offset any applicable infrastructure or affordable housing contributions required under Sydney LEP or the Act.

33. The VPA will be prepared and is intended to be publicly exhibited with the planning proposal.

Serviced apartments at 84-86 Parramatta Road

34. This planning proposal increases the maximum FSR for the serviced apartment building from 2.5:1 to 4:1, for the purposes of serviced apartments only. The reference design provided by the applicant shows a scheme where the existing structure is retained and 3 additional storeys are added. The proposed amendment to Sydney LEP does not require building retention, allowing for full redevelopment of the site in the future.

35. The proposed FSR of 4:1 is lower than the request made by the proponent of 4.5:1. Following assessment of the proposal by City staff, it was not considered possible for any future detailed DA to provide a design that would achieve the higher FSR while demonstrating compliance with ADG with regard to sun access.

36. The lower FSR has been tested to ensure that it can be accommodated with the maximum building height of 30m and the maximum building envelope as defined in the draft DCP. An increased setback to the northern boundary for the 3 additional storeys has been included to ensure sufficient building separation to 23-25 Larkin Street.

37. The Flood Risk Assessment at Attachment A11 assumes retention of the existing structure with no change to existing floor levels. It demonstrates that the site is above the 1% AEP level and all finished floor levels are above the flood planning levels required by section 3.7.1.2 of the Policy and Housekeeping Amendments to Sydney DCP.

38. The site is vulnerable in a PMF event however the assessment concludes that the flood risk to the residential lobby and lift shafts is estimated as a 0.05% AEP event, a level of risk that can be managed through an emergency risk management plan and shelter-in-place plan in alignment with relevant state and City policies.

39. More information on these issues can be found in section 5.3 of the planning proposal.

Strategic alignment - Sustainable Sydney 2030-2050 Continuing the Vision

40. 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 directions and objectives:

    (a) Direction 2 - A leading environmental performer - This proposal requires areas of deep soil and tree planting, contributing to the City's canopy targets. The development will also need to achieve a 5-star Green Star Buildings rating.

    (b) Direction 4 - Design excellence and sustainable development - The proposal is to achieve a high-quality urban outcome which responds to amenity and heritage. Any future development application will need to demonstrate design excellence following the completion of a successful design competition.

    (c) Direction 9 - A transformed and innovative economy - The proposal facilitates the delivery of more than 34,000 square metres of biomedical and life sciences research floor space with complementary commercial and education uses, in a location with an established cluster of education, innovation and technology activities surrounding USyd and RPA.

Risks

41. 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 including City Plan 2036, Economic Development Strategy and Sustainable Sydney 2030-2050 Continuing the Vision. Progressing the planning proposal is within the City's risk tolerance and appetite.

42. 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.

43. 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 Environmental Planning and Assessment (Statement of Expectations) Order 2026.

Relevant legislation

44. Environmental Planning and Assessment Act 1979.

45. Environmental Planning and Assessment Regulation 2021.

Critical dates / Time frames

46. Should Council and the Central Sydney Planning Committee endorse the attached planning proposal for public exhibition, it will be forwarded to the Department of Planning, Housing and Infrastructure in accordance with section 3.34 of the Act for Gateway Determination. The Gateway Determination will provide the required date for the completion of the Local Environmental Plan amendment. Following public exhibition, the outcomes will be reported back to Council and the Central Sydney Planning Committee.

Public consultation

47. The public exhibition process for this planning proposal will be determined by the Department of Planning, Housing and Infrastructure. It is planned for the public exhibition of the planning proposal, draft Development Control Plan and draft VPA to run concurrently. The 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 NSW Community Participation Plan; and

    (d) the City of Sydney's Community Engagement Strategy.

48. It is likely that the public exhibition period for the planning proposal would be a minimum of 28 days.

49. The planning proposal and draft Development Control Plan will be publicly exhibited on the City of Sydney website in accordance with the Environmental Planning and Assessment Regulation 2021.

50. Following public consultation, the planning proposal and draft DCP will be reported back along with details on submissions received for consideration by Council and the Central Sydney Planning Committee.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

James Dirickx-Jones, Planner

Attachment A

Planning proposal – 84-86 and 88-94 Parramatta Road, Camperdown

CITY OF SYDNEY

Planning Proposal: 84-86 & 88-94 Parramatta Road, Camperdown



Planning Proposal
October 2026

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Contents

Executive summary 5

1. Site identification 7

2. Existing planning controls 15

3. Objectives and intended outcomes 19

4. Explanation of provisions 22

5. Justification 24

6. Mapping 57

7. Community consultation 58

8. Project timeline 59

Appendix 1 60

Table of figures

Table 1. List of addresses and lot references comprising the site 7

Figure 1. Land affected by this planning proposal 7

Figure 2. Aerial photo of the site 9

Figure 3. 84-86 Parramatta Road (outlined in red) & 88-94 Parramatta Road (outlined in yellow) looking northwest 10

Figure 4. 84-86 Parramatta Road (outlined in red) & 88-94 Parramatta Road (outlined in yellow) looking northeast 10

Figure 5. 84-86 Parramatta Road looking north 11

Figure 6. 88-90 Parramatta Road looking north 11

Figure 7. 92-94 Parramatta Road looking north 12

Figure 8. 92-94 Parramatta Road tower and interior courtyard 12

Figure 9. Vehicle entrance to 92-94 Parramatta Road off Sparkes Street 13

Figure 10. 84-86 Parramatta Road, Sparkes Street frontage 13

Figure 11. Sparkes Street looking west, 84-86 Parramatta Road outlined in red, 88-94 Parramatta Road outlined in yellow 14

Figure 12. Extract from zoning map in Sydney LEP 2012 15

Figure 13. Extract from Height of Buildings map in Sydney LEP 2012 16

Figure 14. Extract from floor space ratio map in Sydney LEP 2012 17

Figure 15. Extract from heritage map in Sydney LEP 2012 18

Figure 16. Illustration of reference design looking north east 20

Figure 17. Illustration of reference design looking north west 21

Table 2. Alignment with NSW State Land Use Plan 25

Table 3. Alignment with Sydney Plan 26

Table 4. Alignment with local strategic planning statement (City Plan 2036) 28

Table 5. Alignment with Sustainable Sydney 2030-2050: Continuing the vision 29

Table 6. Responses to Ministerial Directions 30

Table 7. Alignment with relevant SEPPs 34

Figure 18. Typical research floorplate size 38

Figure 19. Reference scheme - vertical arrangement looking north 39

Figure 20. Reference scheme - vertical arrangement looking west 40

Figure 21. Building envelope - axonometric south east view 41

Figure 22. Building envelope - axonometric south west view 42

Figure 23. Building envelope - north elevation 42

Figure 24. Building envelope - east elevation 43

Figure 25. Building envelope - south elevation 43

Figure 26. Building envelope - west elevation 44

Figure 27. Building envelope - plan 44

Figure 28. Parramatta Road context at time of lodgement 45

Figure 29. Proposed high density residential along Parramatta Road (planning proposal site in green) 46

Figure 30. Reference design of additional storeys at 84-86 Parramatta Road 47

Figure 31. Neighbouring properties assessed for sun access 48

Figure 32. View of Parramatta Road with building envelope looking west 49

Figure 33. View of Parramatta Road with building envelope looking east 50

Figure 34. View of St John's College & Oval with building envelope looking northwest 50

Figure 35. Revised baseline flood model peak flood depths - 1% AEP event 51

Figure 36. Revised baseline flood model peak flood depths - PMF event 52

Table 8. Flood planning levels for 84-86 Parramatta Road 52

Executive summary

The City of Sydney's Economic Development Strategy 2025-2035 identifies the Tech Central innovation district as representing Australia's deepest and broadest research and technology ecosystem. It is home to 3 world-leading universities and the Royal Prince Alfred Hospital (RPA), industry innovation leaders including Atlassian and Canva, and has the highest concentration of privately owned startup companies valued at more than US$1 billion ('unicorns') in Australia. The Tech Central West precinct, including the suburb of Camperdown, has more than half of the LGA's higher education and research jobs. More than 100,000 students progress research and development across critical future industries including quantum, biotech, fintech, cyber security, artificial intelligence, health-sciences, deep tech and green tech.

The planning proposal for 84-86 & 88-94 Parramatta Road, Camperdown, facilitates the delivery of more than 34,000 square metres of floor space for biomedical and life sciences research, with complementary office, education and retail uses. The planning proposal supports the City's actions to:

- reinforce Sydney as a global capital for education, innovation, creative-tech and technology;
- foster collaboration opportunities between industry, government, education institutes, entrepreneurs and investors; and
- provide opportunities for startups and scaleups to locate and prosper, including access to purpose-built facilities, equipment and digital connectivity.

The site

The site is located in Camperdown, directly north of the University of Sydney. It is 400m north of Royal Prince Alfred Hospital and 2.4km west of Central Station.

It has a total site area of 5,361 square metres with street frontages to Parramatta Road and Sparkes Street.

Existing development on the site consists of a 3-7 storey research and office building (the University of Sydney's Medical Foundation Building), a vacant 3-storey warehouse building, and a 6-storey serviced apartment building.

Existing development controls

The site is zoned MU1 Mixed Use, permitting a broad range of uses including commercial, residential and tourist and visitor accommodation. The site has a maximum floor space ratio of 2.5:1 and a maximum building height of 18m.

The planning proposal – amendments to Sydney Local Environmental Plan 2012

The City has prepared this planning proposal following a detailed review of the proponent's request. The planning proposal seeks to amend the controls for 2 adjoining sites.

To facilitate the development of a biomedical and life sciences research facility for 88-94 Parramatta Road, Camperdown:

- increase the maximum building height from 18 metres to 80 metres;
- increase the maximum floor space ratio from 2.5:1 to 6.5:1 inclusive of design excellence
- prevent development consent being granted unless the consent authority was satisfied that the resulting building would:
  - be used for the purposes of health or medical related high technology industry

– not be used for the purpose of residential or serviced apartments

To allow a 3-storey vertical extension to the existing serviced apartment building at 84-86 Parramatta Road, Camperdown:

– increase the maximum building height from 18 metres to 30 metres;

– increase the maximum floor space ratio from 2.5:1 to 4:1

– prevent development consent being granted unless the consent authority was satisfied that the resulting building would be used for serviced apartments only.

Alternative development on these sites would continue to be permitted under the existing LEP controls.

Draft site-specific Development Control Plan

The City has prepared a draft site-specific amendment to the Sydney Development Control Plan 2012 (draft DCP) to help ensure the objectives and intended outcomes of this planning proposal are achieved. The draft DCP includes controls relating to the built form of the proposed development, maximum building envelope dimensions, sustainability targets and landscaping, servicing management and design excellence.

1. Site identification

1.1 Site identification

The address and lot references affected by this planning proposal are collectively referred to as 'the site'. They are identified in Table 1, and a map of the site, outlined in red, is shown at Figure 1.

Table 1. List of addresses and lot references comprising the site

Address	Lot numbers	Owner
84-86 Parramatta Road, Camperdown	Lot 1 DP 1216911	Veriu Serviced Apartments
88-90 Parramatta Road, Camperdown	Lot 1 DP 178634	University of Sydney
92-94 Parramatta Road, Camperdown	Lot A DP 402925 Lot 1 DP 965792	University of Sydney

Figure 1. Land affected by this planning proposal



1.2 Site location

The site is located in the suburb of Camperdown. Parramatta Road forms the southern boundary of the site and Sparkes Street terminates on the eastern boundary. It shares common boundaries with a series of 3-to-8-storey residential properties along its western, northern and eastern boundaries:

- 2-38 Barr Street, a series of 3-to-8-storey apartment buildings and terraces with 214 apartments
- 5 Pyrmont Bridge Road, a series of 5-to-7-storey apartment buildings with 133 apartments
- 5-13 Larkin Street, a 5-storey apartment building with 44 apartments
- 15-17 Larkin Street, a 5-storey apartment building with 12 apartments
- 19-21 Larkin Street, a 6-storey apartment building with 21 apartments
- 23-25 Larkin Street, a 6-storey apartment building with 21 apartments
- 82 Parramatta Road, a 2-3 storey commercial building.

The site is located directly north of the grounds of the University of Sydney, Sancta Sophia College and the Parramatta Road entrance of St John's College. It is 400m north of Royal Prince Alfred Hospital, 400m west of the Western Avenue entrance to the University of Sydney, and 1km west of Victoria Park.

The site is 2.4km west of Central Station and is within 100m of multiple bus stops on Parramatta Road, with 8 bus routes connecting the site to the CBD, Newtown, Canterbury, Strathfield, Rockdale and Bondi Junction. The site is also located close to identified cycle routes on Bridge Road, St Johns Road and Arundel Street.

An aerial photo of the site and surrounding area is shown in Figure 2.

Figure 2. Aerial photo of the site



1.3 Site characteristics

The multiple lots comprising the site have a total area of 5,361m^2. The Parramatta Road frontage is approximately 60m and the Sparkes Street frontage is approximately 9m, representing the termination of the street. Vehicle access to the site is from Sparkes Street.

Existing development on the site consists of three buildings:

– a 6-storey serviced apartment building at 84-86 Parramatta Road, trading as Veriu Camperdown, constructed in 2015 with 28 apartments and one basement level with car parking.

– a 3-storey warehouse building at 88-90 Parramatta Road, constructed in the 1920s, which is currently vacant.

– The University of Sydney Medical Foundation Building at 92-94 Parramatta Road, constructed in 1988-90, a 3-to-7-storey research laboratory and office building with approximately 11,800 square metres of floor space, and one basement level with 75 parking spaces.

Images of the buildings and their immediate context are shown in Figures 3 to 11.

Figure 3. 84-86 Parramatta Road (outlined in red) & 88-94 Parramatta Road (outlined in yellow) looking northwest



Figure 4. 84-86 Parramatta Road (outlined in red) & 88-94 Parramatta Road (outlined in yellow) looking northeast



Figure 5. 84-86 Parramatta Road looking north



Figure 6. 88-90 Parramatta Road looking north



Figure 7. 92-94 Parramatta Road looking north



Figure 8. 92-94 Parramatta Road tower and interior courtyard



Figure 9. Vehicle entrance to 92-94 Parramatta Road off Sparkes Street



Figure 10. 84-86 Parramatta Road, Sparkes Street frontage



Figure 11. Sparkes Street looking west, 84-86 Parramatta Road outlined in red, 88-94 Parramatta Road outlined in yellow



2. Existing planning controls

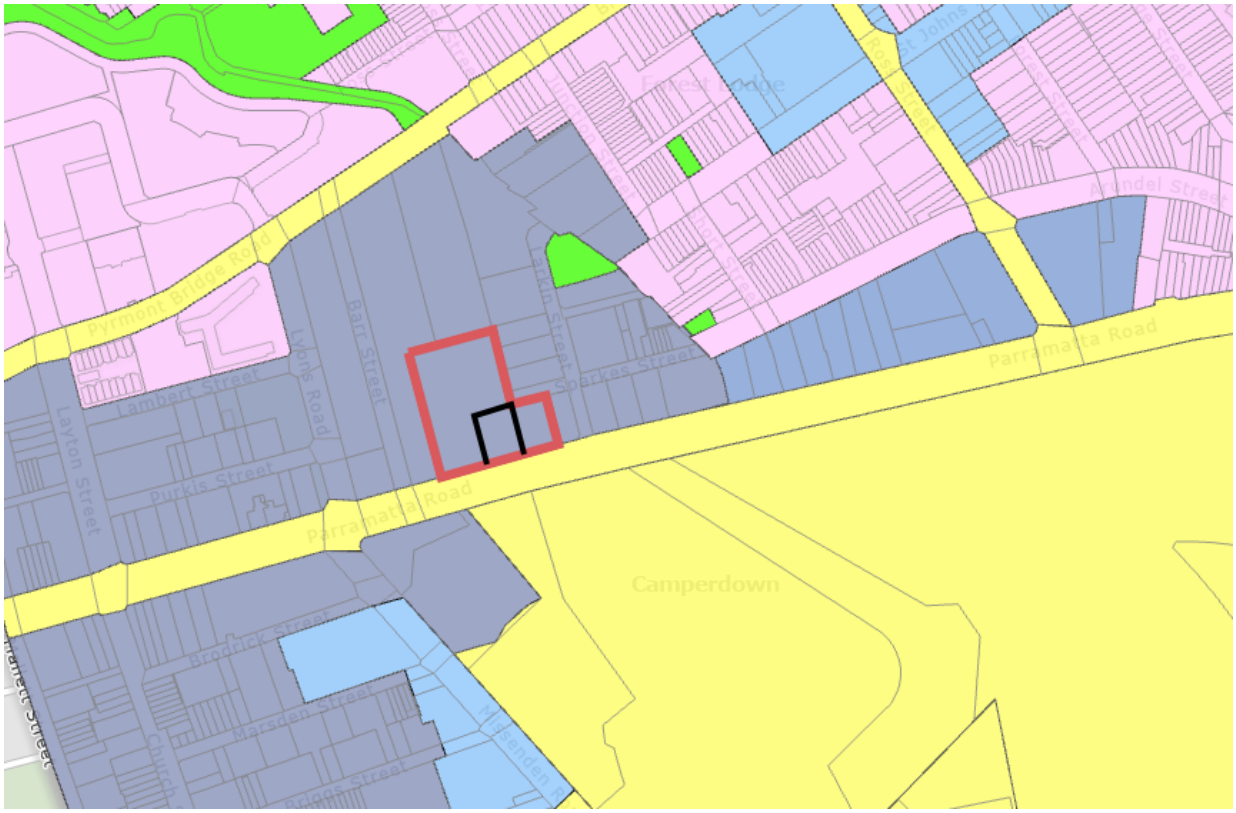
2.1 Zoning

The site is located within the MU1 ‘Mixed Use’ Zone. The objectives of this zone include:

– to encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities

– to ensure land uses support the viability of nearby centres.

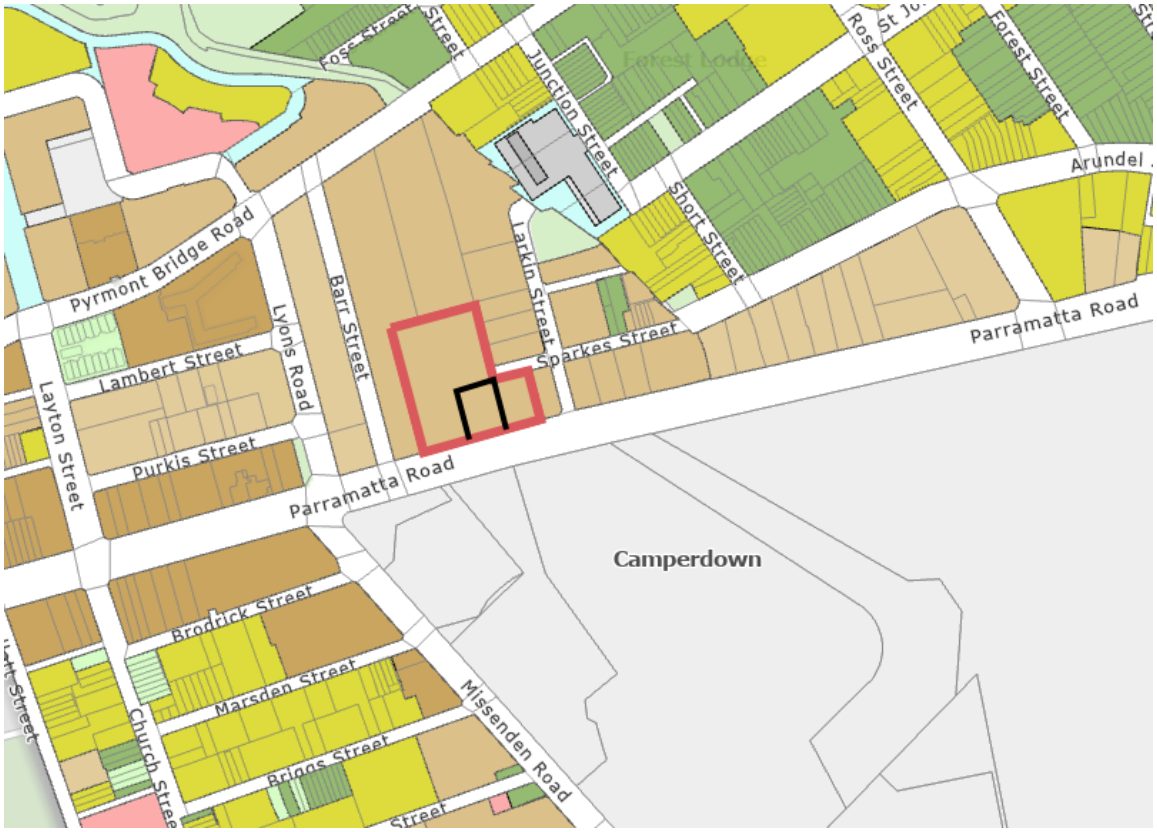
Figure 12. Extract from zoning map in Sydney LEP 2012



2.2 Building height

The maximum building height for the site is 18m in Sydney LEP 2012, as indicated by ‘P’ and the light brown shading in Figure 13.

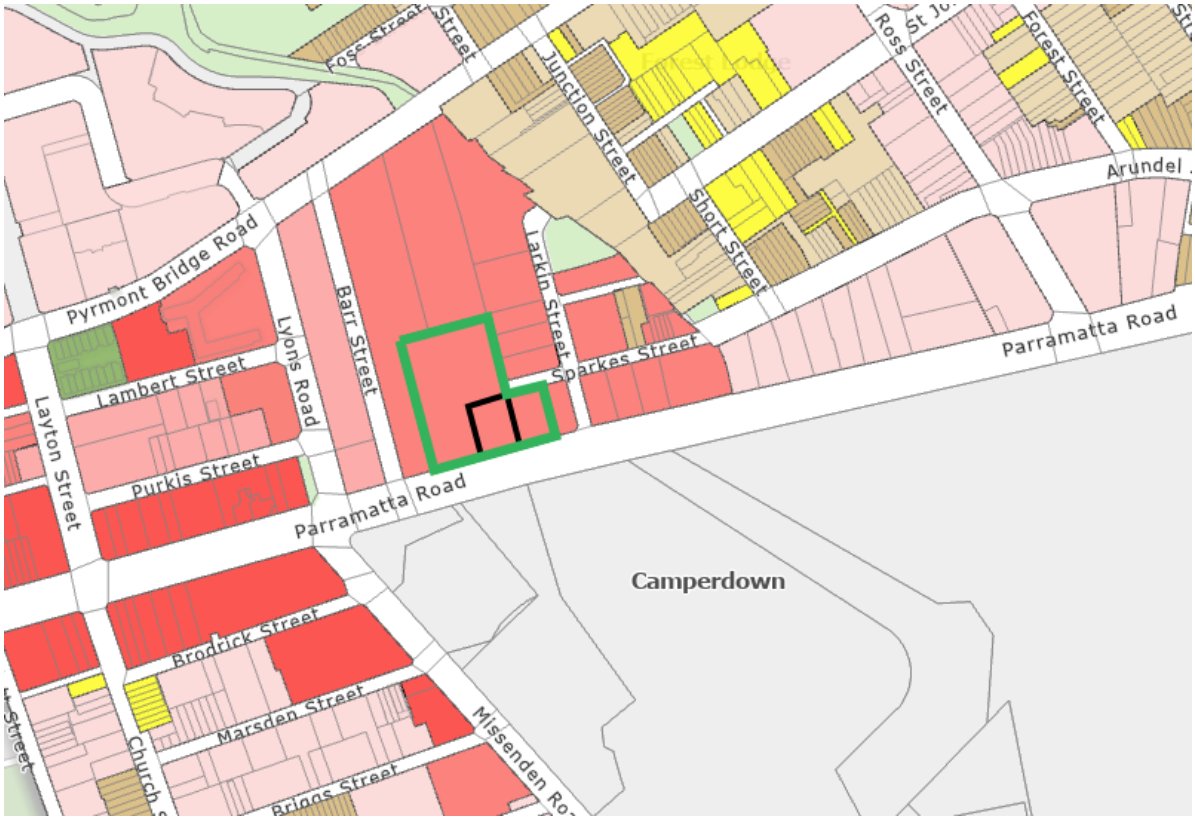
Figure 13. Extract from Height of Buildings map in Sydney LEP 2012



2.3 Floor space ratio

The maximum floor space ratio for the site is 2.5:1, as indicated by ‘U1’ and the dark pink shading in Figure 14. Up to 10 per cent additional floor space may be granted subject to a competitive design process and the demonstration of design excellence.

Figure 14. Extract from floor space ratio map in Sydney LEP 2012

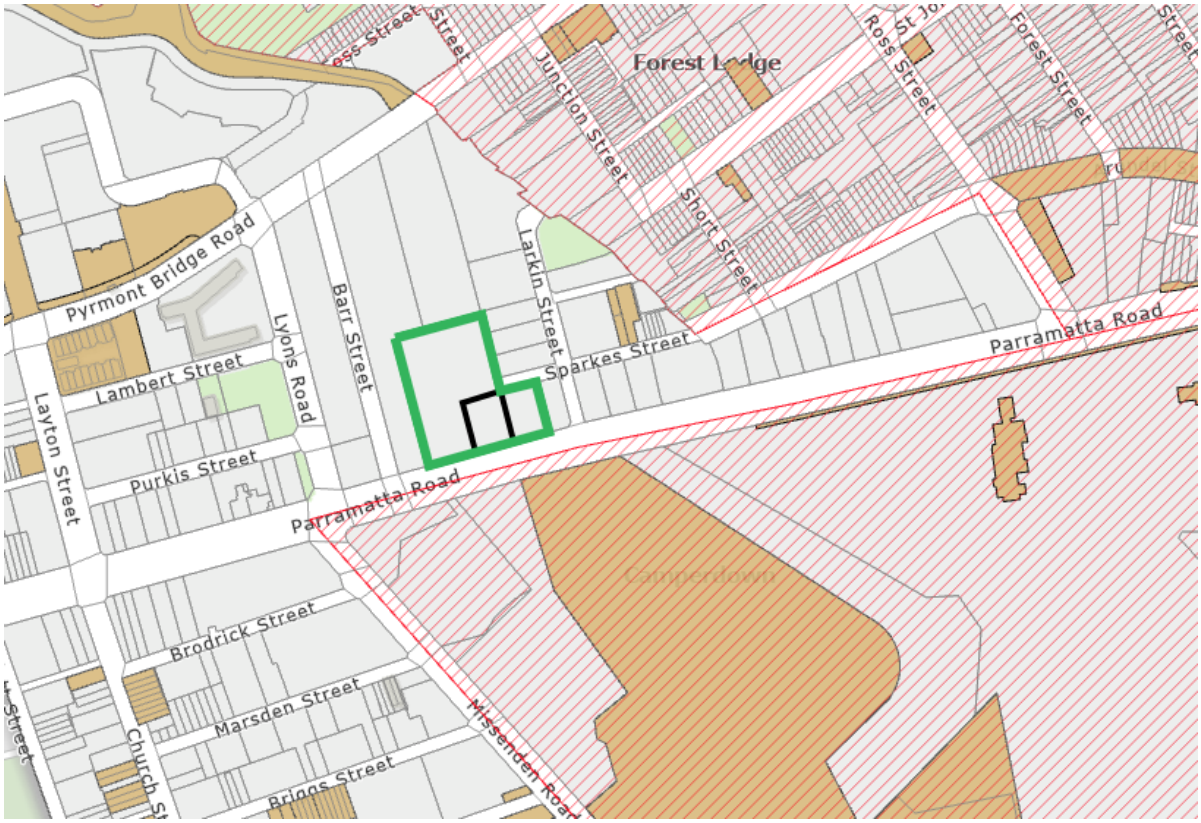


2.4 Heritage

The site is not heritage listed nor located in a Heritage Conservation Area. It is located adjacent to the State Heritage-listed precinct of the University of Sydney, University Colleges and Victoria Park. St John's College is also a locally-listed heritage item (I67).

A map showing the site and the proximity of heritage items and Heritage Conservation Areas can be found at Figure 15.

Figure 15. Extract from heritage map in Sydney LEP 2012



3. Objectives and intended outcomes

This planning proposal will enable the redevelopment of 84-86 & 88-94 Parramatta Road, Camperdown to deliver:

- 34,000 sqm of commercial floor space to facilitate a mixed-use biomedical and life sciences research facility with ancillary offices, education space and retail;
- a future workspace tower of approximately 80m;
- an additional 1,250 sqm of serviced apartment floor space to expand the current provision of serviced apartments on site;
- a built form which protects and enhances the amenity of the public domain and neighbouring residents, particularly sun access and wind conditions;
- a built form capable of achieving design excellence and acceptable sustainability outcomes; and
- upgrades to the public domain including improvements for pedestrians on Sparkes Street and increased activation of Parramatta Road.

A draft DCP accompanies the planning proposal which offers more detailed guidance for the site.

A Voluntary Planning Agreement (VPA) will be exhibited to secure upgrades to Sparkes Street including new street lighting and a pedestrian crossing on Larkin Street, a monetary contribution for public art, and commitments for sustainability targets exceeding Sydney DCP.

Illustrations of the reference design prepared by the proponent are shown in Figures 16 and 17.

Figure 16. Illustration of reference design looking north east



Figure 17. Illustration of reference design looking north west



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 Local Environmental Plan by inserting a new site-specific clause under Division 5 Site Specific Provisions:

- for 84-86 Parramatta Road, Camperdown
  - permit a maximum building height of 30 metres;
  - permit a maximum floor space ratio of 4:1;
  - prevent development consent being granted under this clause unless the consent authority was satisfied that the resulting building would be used for the purposes of serviced apartments only.
- for 88-94 Parramatta Road, Camperdown:
  - permit a maximum building height of 80 metres;
  - permit a maximum floor space ratio of 6.5:1, inclusive of the following:
    - the maximum floor space ratio as shown on the Floor Space Ratio Map (under clause 6.4);
    - additional floor space, of up to 10%, if the building demonstrates design excellence (under clause 6.21D(3)(b)).
  - prevent development consent being granted under this clause unless the consent authority was satisfied that the resulting building would be used for health or medical related high technology industry;
  - prevent development consent being granted under this clause unless the consent authority was satisfied that the resulting building would not be used for the purposes of residential or serviced apartments;
  - the total floor space ratio calculated under the subclauses above must not exceed 6.5:1;
  - Clause 6.21D(3)(a) should not apply to these site specific controls; no additional building height should be available to exceed the maximum set at 80 metres.

Appendix 1 of this planning proposal provides some example clauses of the proposed controls. The final version of the clauses to be inserted into Division 5 would be subject to drafting and agreement by the Parliamentary Counsel's Office.

4.2 Sydney Development Control Plan 2012

To ensure future development is consistent with the objectives of the planning proposal, site-specific provisions for the DCP will be drafted to ensure a high-quality built form and public domain. These provisions include:

- dimensions of a maximum building envelope which protects sun access to neighbouring residents
- guidance regarding retention of portions of the existing building at 88-90 Parramatta Road
- requirements for sustainability, landscaping, transport and public art
- a design excellence strategy.

The draft DCP fulfils the role of a Stage 1 Concept Development Application and with the inclusion of the Design Excellence Strategy, enables the applicant to proceed to a design competition. However, schedule 1, section 14 (1)(c) of the State Environmental Planning Policy (Planning Systems) 2021 states that “development that has an estimated development cost of more than $30 million for health, medical or related research facilities” will be declared State significant development. In these circumstances, the draft DCP will not have statutory weight but may still provide guidance for the future consent authority in its assessment of any future DA.

5. Justification

5.1 – Section A – need for the planning proposal

Is the planning proposal a result of a LSPS, strategic study or report?

The planning proposal is the result of a formal request made by the applicant Wentworth Capital, on behalf of the landowners (University of Sydney and Veriu Serviced Apartments) and supported by Colliers and FDR, to change the planning controls applying to the site. This planning proposal would deliver 34,000 square metres of commercial floor space for a mixed-use biomedical and life sciences research facility, in a location identified as part of the Tech Central district and adjoining the University of Sydney.

The applicant has prepared a Planning Proposal Justification Report and a number of studies in support of the request, including an Urban Design Report prepared by HDR. Together they describe how the proposal is consistent with relevant strategies and demonstrate how the site is capable of accommodating growth in employment generating floor space through amending building height and floor space ratio controls without unacceptable impacts on public domain and amenity.

The supporting documents commissioned by the applicant to support their request are attached as the following Attachments to this planning proposal:

- Attachment A1: Planning Proposal Justification Report – Colliers
- Attachment A2: Urban Design Report – HDR
- Attachment A3: Macroeconomic Market Analysis Report – Biointelect
- Attachment A4: Site survey
- Attachment A5: Site specific Development Control Plan as suggested by proponent – Colliers
- Attachment A6: Design excellence strategy – Colliers
- Attachment A7: Transport impact assessment – life sciences building – ARUP
- Attachment A8: Transport impact assessment – serviced apartment building – ARUP
- Attachment A9: Economic impact assessment – Atlas economics
- Attachment A10: Heritage impact assessment – Curio
- Attachment A11: Flood risk assessment – ARUP
- Attachment A12: Aviation impact assessment report – Avipro
- Attachment A13: Preliminary public art plan – Amanda Sharrad
- Attachment A14: Environmentally sustainable design strategy report – ARUP
- Attachment A15: Preliminary site investigation (contamination) – JBS&G
- Attachment A16: Site remedial concept plan – JBS&G
- Attachment A17: Utility services review – ARUP
- Attachment A18: Water cycle & stormwater management – ARUP
- Attachment A19: Wind tunnel environmental wind assessment – L2T & MEL

5.2 – Section B – relationship to the strategic planning framework

Will the planning proposal give effect to the state land use plan and relevant region plan (including any exhibited draft plans or strategies)?

Table 2. Alignment with NSW State Land Use Plan

Priority	Planning Proposal alignment
Housed	This planning proposal would provide an additional 1,250 square metres of floor space for serviced apartments, in a location well-serviced by public transport and in close proximity to the University of Sydney and Royal Prince Alfred Hospital. This contributes to greater housing diversity near jobs, services and amenities.
Prosperous	This planning proposal would provide more than 34,000 square metres of floor space for biomedical and life sciences research, with supporting commercial, education and retail land uses. The site is located in close proximity to existing public transport infrastructure and is within the boundaries of the Tech Central district, an emerging centre for innovation and tech-based industries. The site is well-positioned to take advantage of the economic and research opportunities provided by the University of Sydney and Royal Prince Alfred Hospital. The additional 1,250 square metres of serviced apartment floor space supports the tourism economy by increasing capacity in a location already serviced by existing infrastructure and responding to the needs of the nearby university and hospital for visitor accommodation.
Connected	This planning proposal concentrates higher-density employment uses along the major transport corridor of Parramatta Road, with at least 8 bus routes stopping within 100 metres of the site providing connections to the CBD, Eastern Suburbs, Inner South and Inner West. The site is also closely located to identified cycle routes providing connections to the CBD via Glebe and the Inner West via Annandale. The site is within walking distance (400 metres) of the University of Sydney and the Royal Prince Alfred Hospital, encouraging active transport between the site and these locations.
Resilient	This planning proposal intensifies employment in a location well-serviced by public transport and in close proximity to the services of the University of Sydney and Royal Prince Alfred Hospital, supporting sustainable travel choices. The planning proposal will be accompanied by a draft development control plan requiring the achievement of a 5-star Green Star Buildings rating and introducing landscaped open space with adequate deep soil to support tree canopy. The draft DCP will also

Priority	Planning Proposal alignment
	encourage the retention of some existing structure on site, reducing the loss of embodied carbon.
Liveable	This planning proposal contributes to building vibrant places by facilitating a mixed-use development with biomedical and life sciences research, office, retail and serviced apartment land uses, improving active frontages to Parramatta Road, and providing opportunities to improve the surrounding public domain on nearby streets and lanes. The site is intensifying land uses in a location with excellent access to jobs, services and transport, and nearby open spaces including St John's Oval and Lyons Road Park.
Coordinated	This planning proposal intensifies land use in a location well-serviced by existing infrastructure, most notably the major transport corridor of Parramatta Road. The proposed land uses are consistent with those currently on site, including education, research and serviced apartments, reducing the cost of new infrastructure and servicing upgrades while substantially increasing employment.

Table 3. Alignment with Sydney Plan

Response	Planning Proposal alignment
Increase housing supply, diversity and choice	This planning proposal would result in an additional 1,250 square metres of floor space for serviced apartments, expanding the existing provision of serviced apartments at 84-86 Parramatta Road. The planning proposal does not prevent a residential development from being lodged for 88-94 Parramatta Road - it provides a development pathway for the biomedical and life sciences research land uses proposed by the applicant.
Equitably grow a range of jobs	This planning proposal would result in more than 34,000 square metres of floor space for biomedical and life sciences research, with supporting office, education and retail floor space. This will encourage jobs growth in key sectors including healthcare and education. The site is located within the Tech Central district close to the University of Sydney and Royal Prince Alfred Hospital, supporting the growth of the technology and innovation cluster.
Grow housing and jobs in well-located centres	This planning proposal intensifies land use in a location close to existing complementary high density residential development, and healthcare and education facilities at the University of Sydney and Royal Prince Alfred Hospital. It will contribute to the emerging technology and innovation cluster of Tech Central, anchored by the university and hospital, and well-connected by public transport to Central Sydney.
Create a more vibrant Sydney	This planning proposal will contribute to a more vibrant Sydney by improving and expanding active frontages along Parramatta Road, and

Response	Planning Proposal alignment
	introducing opportunities for the installation of public art and upgrades to the public domain in surrounding streets and lanes.
Protect and enhance Sydney's natural assets	This planning proposal intensifies land use and facilitates in-fill development with no loss of existing open space or canopy. The planning proposal is accompanied by a draft site-specific development control plan which defines a planning envelope with requirements for deep soil and tree planting to increase canopy cover. The draft DCP also requires the achievement of a 5-star Green Star Buildings rating, contributing to the transition to a net-zero economy.
Align infrastructure to planned growth	This planning proposal intensifies land use in a location already well serviced by infrastructure, including public transport, electricity, water, sewerage, gas and ICT utilities. This minimises the need for additional infrastructure investment while supporting substantial employment growth in important healthcare and educational sectors.

Is the planning proposal consistent with any other applicable State and regional studies, plans, or strategies?

NSW Tech Central Economic Development Strategy

The site is located within the Camperdown Health, Education and Research Precinct within Tech Central. This planning proposal is consistent with the following strategic outcomes of the Tech Central Economic Development Strategy:

– Grow the Tech Central Economy: By facilitating the delivery of more than 34,000 square metres of biomedical and life sciences research floor space with complementary commercial uses, the planning proposal supports the intention to increase the agglomeration of healthcare and education ventures in Camperdown, increasing research and the opportunities for commercialisation.

– Attract and Foster Leading Talent: The development's connections with and proximity to the University of Sydney will assist with the retention of skilled researchers, benefiting the innovation ecosystem in New South Wales.

– Create a Vibrant and Welcoming Destination: The planning proposal will facilitate upgrades to the public domain surrounding the site, introduce active frontages to Parramatta Road, and require sustainability targets beyond standard controls, enhancing amenity, safety and vibrancy in Camperdown.

Is the planning proposal consistent with a council LSPS or local strategy or strategic plan?

Table 4. Alignment with local strategic planning statement (City Plan 2036)

Planning Priority	Response
I1: Movement for walkable neighbourhoods and a connected city	The planning proposal intensifies land use in a location already serviced by public transport along Parramatta Road and identified cycle routes along Bridge Road, St Johns Road and Arundel Street. The site is near complementary services and institutions at the University of Sydney and Royal Prince Alfred Hospital, encouraging walking and the use of active transport.
I2: Align development and growth with supporting infrastructure	The planning proposal intensifies land use in a location already serviced by public transport along Parramatta Road, with 8 bus routes connecting the site to Central Sydney and other locations in the Inner East, West and South.
L2: Creating great places	The planning proposal facilitates improvements to the character and amenity of Parramatta Road, through the introduction of and improvement to active frontages along the road, and upgrades to the public domain in surrounding streets and lanes. Any future development application taking advantage of the proposed planning controls will need to demonstrate design excellence through the successful competition of a design competition.
P2: Developing innovative and diverse business clusters in City Fringe	The site is located within the Camperdown-Ultimo Health and Education Precinct within the City Fringe, and the planning proposal will facilitate an additional 34,000 square metres of biomedical and life sciences research floor space with complementary commercial and education uses. This will support the existing cluster of education, innovation, creative-tech and technology activities taking place in the district.
S2: Creating better buildings and places to reduce emissions and waste and use water efficiently	The planning proposal is supported by a site-specific development control plan that requires areas of deep soil and tree planting, contributing to the City's canopy targets. The development will also need to achieve a 5-star Green Star Buildings rating.

Table 5. Alignment with Sustainable Sydney 2030-2050: Continuing the vision

Strategic direction	Response
A leading environmental performer	The planning proposal is supported by a site-specific development control plan that requires areas of deep soil and tree planting, contributing to the City's canopy targets. The development will also need to achieve a 5-star Green Star Buildings rating.
Design excellence and sustainable development	The planning proposal is supported by a site-specific development control plan that provides guidance to achieve a high-quality urban outcome which responds to amenity and heritage. Any future development application will need to demonstrate design excellence following the completion of a successful design competition.
A transformed and innovative economy	The planning proposal facilitates the delivery of more than 34,000 square metres of biomedical and life sciences research floor space with complementary commercial and education uses, in a location with an established cluster of education, innovation and technology activities surrounding the University of Sydney and Royal Prince Alfred Hospital.

City of Sydney Economic Development Strategy

The City's Economic Development Strategy seeks to connect clusters of economic activity and identifies Tech Central West as a location for education, innovation, creative-tech and technology. By delivering more than 34,000 square metres of biomedical and life sciences research floor space with complementary commercial and education uses in Camperdown, associated with the University of Sydney, the planning proposal is consistent with the following visions:

- 4. Boost Sydney's innovation economy and connect it globally to attract and retain businesses, talent and investment;
- 12. Plan for economically competitive and resilient places, including development of quality workplaces supported by infrastructure;
- 18. Promote areas with strong sector specialisations and a clustering of complementary economic activities.

Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Ministerial Direction – Local Plan Making priorities) or key government priority?

Table 6. Responses to Ministerial Directions

Ministerial Direction	Comment
P1.1 Aboriginal Land Planning	This ministerial direction does not apply as the planning proposal does not affect land owned or managed by an Aboriginal Land Council.
P1.2 Cultural Guidance	This ministerial direction does not apply. No cultural representation, Aboriginal cultural heritage, or strong community association to the subject site has been identified during the preparation of this planning proposal.
P2.1 Housing	The planning proposal is consistent with this ministerial direction. It provides for an increase to the maximum building height and floor space ratio controls applying to the serviced apartment building at 84-86 Parramatta Road. The planning proposal does not prohibit residential development from taking place on 88-94 Parramatta Road, nor does it reduce the permissible residential density of that land. The planning proposal provides an alternative development pathway to incentivise the delivery of development for biomedical and life sciences research land uses proposed by the applicant and the landowner.
P3.1 Employment	The planning proposal is consistent with this ministerial direction. It facilitates the development of more than 34,000 square metres of biomedical and life sciences research floor space with complementary commercial and education uses, in a site zoned MU1. It is in an identified cluster of education, innovation, creative-tech and technology activities anchored by the University of Sydney and Royal Prince Alfred Hospital, within the boundaries of the Tech Central precinct and the Camperdown-Ultimo Health and Education Precinct in the City's LSPS.
P3.2 Rural	This ministerial direction does not apply. This planning proposal does not affect land within an existing or proposed rural or conservation zone.
P3.3 Airport Safeguarding	The planning proposal is consistent with this ministerial direction. The applicant has prepared an Aviation Impact Assessment Report which is attached to this planning proposal at Attachment A12. This report demonstrates that the proposed maximum height of the building at RL 101.75m will exceed the Sydney Airport OLS control of approximately 93m AHD. As a result this planning proposal will be referred to Sydney Airport, Airservices Australia and other relevant aviation authorities during the public exhibition period to ensure the development will not compromise the operation of the airport. The maximum height of the development as well as any construction cranes will remain below the PANS-OPS and RTCC surfaces at approximately 152m AHD.

Ministerial Direction	Comment
P3.4 Mining and Petroleum Production	This ministerial direction does not apply. This planning proposal has no impact on these land uses.
P3.5 Oyster Aquaculture	This ministerial direction does not apply. This planning proposal has no impact on these land uses.
P3.6 Mine Subsidence and Unstable Land	This ministerial direction does not apply. There is no land within a declared mine subsidence district in the City of Sydney, and no land has been identified as unstable during the preparation of this planning proposal.
P4.1 Integrating Land Use and Infrastructure	The planning proposal is consistent with this ministerial direction. It intensifies land use in a location already serviced by utilities including electricity, gas, water, sewerage and ICT. It does not compromise any identified future infrastructure in the vicinity. The location is well serviced by public transport, is in close proximity to identified cycle paths, and is within walking distance of the University of Sydney and Royal Prince Alfred Hospital.
P5.1 Strategic Conservation Planning	This ministerial direction does not apply. There is no land identified as avoided land, strategic conservation area or certified urban capable land as defined by SEPP (Biodiversity and Conservation) within the City of Sydney.
P5.2 Conservation	This ministerial direction does not apply. The planning proposal does not affect land containing environmentally sensitive areas, is not within an existing or proposed conservation zone, and has not been identified for conservation or protection purposes in Sydney LEP.
P5.3 Foreshores and Water Catchment Areas	The planning proposal is consistent with this ministerial direction, which applies as the site is located within a regulated catchment (Sydney Harbour Catchment). The site is located in an already highly modified and urbanised environment and the redevelopment of the site in the manner facilitated by this planning proposal is not expected to have downstream impacts on Johnstons Creek, Rozelle Bay or Sydney Harbour. As the existing site consists almost entirely of impervious area, it is anticipated there will not be any increased runoff from the proposed development compared with existing conditions. The applicant has prepared a Water Cycle & Stormwater Management Technical Memo which is attached to this planning proposal at Attachment A18, which assesses existing stormwater infrastructure and flood behaviour. This document includes a post-development stormwater management concept plan which contains a proposed site stormwater draining network identifying the locations of retained and new discharge points, and a summary of potential stormwater quality management strategies. This concept plan will be refined following the design excellence process as part of a future detailed DA. The memo also includes records of correspondence with Sydney Water confirming, at this stage, no need to provide On-Site Detention if the stormwater drains to

Ministerial Direction	Comment
	Johnstons Creek. This matter will also be subject to further discussion as part of the future detailed DA.
P5.4 Contaminated Lands	The planning proposal is consistent with this ministerial direction. There will be no excavation of the site currently occupied by the Veriu Serviced Apartments at 84-86 Parramatta Road as the existing structure and basement are to be retained. 88-94 Parramatta Road is currently being used for research and education purposes and this land use is to continue with any new development facilitated by this planning proposal. The applicant has prepared a Preliminary Site Investigation, available at Attachment A15, which identifies potential sources of historical contamination; most notably former industrial land uses associated with the motor industry. The assessment did not find the potential for gross or widespread contamination. It expects that any contamination encountered can be addressed with commonly-used methods and should not represent a significant barrier to the future development of the site. A detailed site investigation will be required as part of any future detailed DA, and a remediation action plan prepared based on those findings.
P5.5 Acid Sulfate Soils	This ministerial direction does not apply. The site is not located on land that has been identified as having a probability of containing acid sulfate soils as shown in the Acid Sulfate Soils Map in Sydney LEP.
P5.6 Threatened species, threatened ecological communities and their habitat	This ministerial direction does not apply. This planning proposal does not impact on an area mapped on the Biodiversity Values Map nor exceeds the area clearing threshold.
P5.7 Flooding	The planning proposal is consistent with this ministerial direction. The applicant has prepared a Flood Risk Assessment, at Attachment A11, which has assessed the existing and future conditions, and relevant state flooding policies, and has made recommendations for future responses and flood emergency management. This assessment also finds that all finished floor levels are above the applicable flood planning levels for the proposed uses. The site would be vulnerable during a PMF event, as demonstrated in Figure 34. Regarding the serviced apartment building at 84-86 Parramatta Road, the existing residential lobby for the serviced apartments is well above the 1% AEP level + 50cm as required for the land use (as demonstrated in Table 8), but 12cm below the PMF. The Flood Risk Assessment has assessed a range of different flooding scenarios, including climate change scenarios, and has concluded that given the low probability of flooding affecting the raised ground floor areas of the serviced apartment building (flood immunity of greater than 0.05% AEP event), it is anticipated that the

Ministerial Direction	Comment
	flood risk to the existing building can be addressed through operation and emergency risk management plans for the building. In particular, a shelter-in-place strategy consistent with the Shelter in Place Guideline for Flash Flooding, would be prepared and reviewed as part of any future detailed DA. All pedestrian entrances to the proposed life sciences building at 88-94 Parramatta Road achieve the flood planning levels required by Sydney DCP, and during a PMF event there remain pathways unaffected by floodwater to evacuate from the building to an off-site location. The vehicle entrance to the basement is 1 metre above the PMF level. All lift shafts connecting the ground floor with the basement levels will be located above the PMF level. None of the proposed land uses for this site are considered sensitive uses. Any future detailed DA facilitated by this planning proposal must consider appropriate design measures consistent with the requirements of Sydney DCP, including flood-compatible materials, to address the risk of flooding along the Parramatta Road frontage.
P5.8 Coastal Management	This ministerial direction does not apply. This planning proposal does not affect land located within the coastal zone.
P5.9 Planning for Bush Fire Protection	This ministerial direction does not apply. This planning proposal does not affect land mapped as bush fire prone land nor is the City of Sydney required to prepare such a map for this planning proposal.
P6.1 Reserving Land for Public Purposes	This ministerial direction does not apply. This planning proposal does not affect land reserved or proposed to be reserved for public purposes.
P6.2 Willandra Lakes Region	This ministerial direction does not apply to the City of Sydney.
P7.1 High Pressure Dangerous Goods Pipeline	This ministerial direction does not apply. The planning proposal does not affect land within the application area of relevant pipelines.

Is the planning proposal consistent with applicable SEPPs?

Table 7. Alignment with relevant SEPPs

SEPP	Comment
Biodiversity and Conservation	The planning proposal is consistent with the SEPP. The site is located in an already highly modified and urbanised environment and the redevelopment of the site in the manner facilitated by this planning proposal is not expected to have downstream impacts on Johnstons Creek, Rozelle Bay or Sydney Harbour. As the site is located with a regulated catchment (Sydney Harbour Catchment), it must respond to relevant sections in Part 6.2 Development in regulated catchments. • **section 6.6 Water quality and quantity –** the applicant has prepared a Water Cycle & Stormwater Management Technical Memo, at Attachment A18, which assesses existing stormwater infrastructure and flood behaviour. This document includes a post-development stormwater management concept plan which contains a proposed site stormwater draining network identifying the locations of retained and new discharge points, and a summary of potential stormwater quality management strategies. This concept plan will be refined following the design excellence process as part of a future detailed DA. The memo also includes records of correspondence with Sydney Water confirming, at this stage, no need to provide On-Site Detention if the stormwater drains to Johnstons Creek. This matter will also be subject to further discussion as part of the future detailed DA. • **section 6.7 Aquatic ecology –** the development is not expected to cause adverse impacts on animals, vegetation, wetlands or aquatic reserves, nor cause erosion of land abutting a natural waterbody, nor sedimentation of a natural waterbody. • **section 6.8 Flooding –** the development is not expected to have any impact on any periodic flooding experienced in the Johnstons Creek catchment. The Water Cycle & Stormwater Management Technical Memo discusses potential stormwater quality management strategies, and any future development will need to satisfy the requirements of Sydney DCP with regard to the quality of stormwater and runoff. • **section 6.9 Recreation and public access** – the development will have no impact on recreational land uses or public access to waterbodies in the catchment.
Exempt and Complying Codes	The planning proposal is consistent with this SEPP.
Housing	The planning proposal is consistent with this SEPP.
Industry and Employment	The planning proposal is consistent with this SEPP.

SEPP	Comment
Planning Systems	The planning proposal is consistent with this SEPP. Any future DA for 88-94 Parramatta Road which seeks to apply the maximum height of buildings and floor space ratio controls established by this planning proposal will be State significant development, consistent with Schedule 1, Section 14(1)(c) of the SEPP, as it would be considered a "health, medical or related research facility". • **section 4.5 Airspace operations –** The planning proposal would facilitate a maximum building height that would penetrate the OLS for Sydney Airport. The planning proposal will be referred to Sydney Airport and other relevant aviation authorities as part of the public exhibition process. • **section 4.30 Traffic generating development –** The planning proposal will be referred to the Development Coordination Authority for comment, as it is commercial premises with access to a classified road with more than 2,500 square metres in gross floor area.
Precincts – Eastern Harbour City	The planning proposal is consistent with this SEPP.
Resilience and Hazards	The planning proposal is consistent with this SEPP. The site is not located within the coastal zone and does not propose land uses associated with hazardous or offensive development. • **section 4.6 Contamination and remediation to be considered in determining development application –** The applicant has prepared a Preliminary Site Investigation, available at Attachment A15, which identifies potential sources of historical contamination; most notably former industrial land uses associated with the motor industry. The assessment did not find the potential for gross or widespread contamination. It expects that any contamination encountered can be addressed with commonly-used methods and should not represent a significant barrier to the future development of the site. A detailed site investigation will be required as part of any future detailed DA, and a remediation action plan prepared based on those findings.
Resources and Energy	This planning proposal is consistent with this SEPP.
Sustainable Buildings	The planning proposal is consistent with this SEPP. The proposed amendments to Sydney LEP do not conflict with the standards for non-residential development required by the SEPP.
Transport and Infrastructure	The planning proposal is consistent with this SEPP. • **section 2.119 Development with frontage to classified road –** Vehicular access to the site is obtained via Sparkes Street, there are no vehicle entrances onto Parramatta Road. The applicant has prepared a Transport Impact Assessment, at Attachment A7, which assess that the

SEPP	Comment
	proposal is expected to generate a net increase of 105 vehicle trips in the AM peak and 90 vehicle trips in the PM peak, which is considered modest compared to the existing and future background traffic in the network. The traffic generated by the development is not expected to affect the safety, efficiency and ongoing operation of Parramatta Road. • **section 2.120 Impact of road noise or vibration on non-road development –** Parramatta Road is a road with an annual average daily traffic volume exceeding 20,000 vehicles, but the planning proposal does not facilitate any of the sensitive land uses described in this section. • **section 2.122 Traffic-generating development –** The planning proposal will be referred to the Development Coordination Authority for comment, as it is commercial premises with access to a classified road with more than 2,500 square metres in gross floor area.

5.3 – Section C – 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?

The planning proposal applies to a site in inner Sydney, currently occupied by 3-to-7-storey buildings with full site coverage and minimal vegetation within its boundaries. Any redevelopment would be an intensification of existing uses and consistent with the context of Parramatta Road. It is highly unlikely for any adverse impact on a critical habitat or threatened species, population or ecological community to take place as a result of this proposal.

Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?

Floor Space Ratio

This planning proposal will insert site-specific floor space ratio (FSR) controls in the LEP for 2 properties on this site, 84-86 & 88-94 Parramatta Road.

84-86 Parramatta Road

The planning proposal increases the maximum FSR on the site from 2.5:1 to 4:1, for the purposes of serviced apartments only. This floor space ratio has been tested to ensure that it can be accommodated within the maximum building height of 30m and the building envelope as defined in the draft DCP, at Attachment B, and illustrated in Figures 20-26. This envelope features an increased setback to the northern boundary for the additional storeys, to ensure sufficient separation (18m) to the residential building at 23-25 Larkin Street. This FSR is lower than the request made by the applicant of 4.5:1. Following assessment by City staff, it was not considered possible for any future detailed DA to provide a design that would achieve the higher FSR while demonstrating compliance with the requirements of the Apartment Design Guide regarding sun access. According to section 7.28 of Sydney LEP, “development for the purpose of serviced apartments [must provide] the same level of amenity as that provided by development for the purpose of residential flat buildings.”

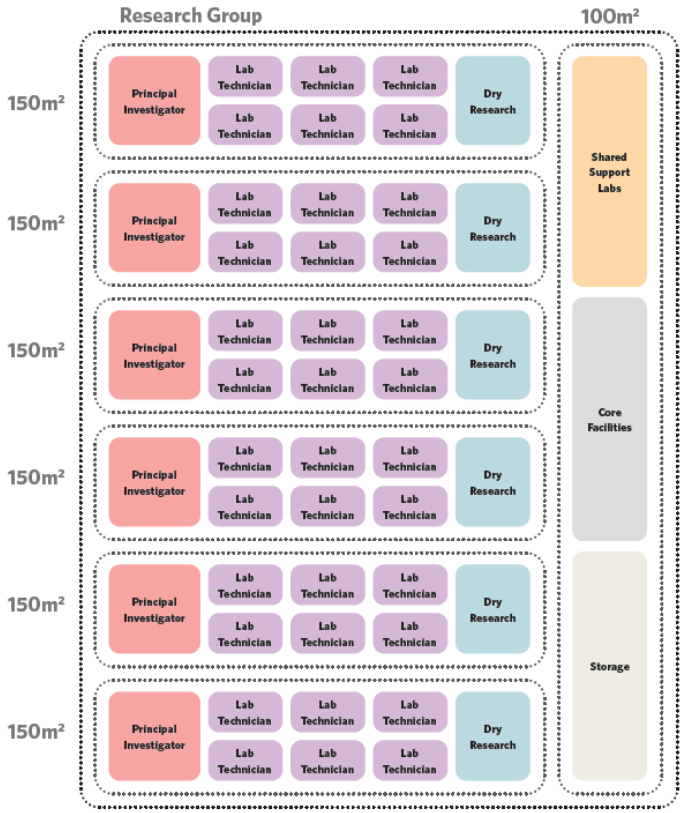
88-94 Parramatta Road

The planning proposal increases the maximum FSR on the site from 2.5:1 to 6.5:1, inclusive of end of journey floor space or floor space awarded for achieving design excellence. A Planning Proposal Justification Report and Urban Design Report, prepared by Colliers and HDR respectively on behalf of the proponent, are at Attachment A1 and A2. They detail how the amount of floor space to be delivered on the site is consistent with the emerging context for Parramatta Road and Camperdown, and will result in additional floor space for research and commercial purposes while minimising adverse impacts to surrounding residents and public places.

An FSR of 6.5:1 is substantially lower than what could be achieved on the site for a standard commercial office building of 80m. The lower FSR reflects the specific needs of laboratory spaces in the life sciences, including:

– increased floor-to-floor heights of 4.5 metres to accommodate extensive mechanical services, specialised ventilation systems and large ductwork. Additional height also allows for structural vibration control, flexible service distribution, and the integration of specialised equipment. The City’s standard requirements for floor-to-floor heights in commercial buildings is 3.6m.
– the floorplate size is based off the typical research group structure requiring 120m^2 plus 30m^2 of dry research space, with 6 research groups per floor, including shared support labs, core facilities and storage. This results in a 1000m2 floorplate that can accommodate up to 42 researchers inclusive of 6 primary investigators and 36 laboratory technicians.

Figure 18. Typical research floorplate size



– the reference design prepared by HDR features an average efficiency rate in the proposed tower of 20% which is substantially higher than standard commercial buildings of similar height, reflecting the increased servicing and plant needs of the life sciences land use.

The reference design prepared by HDR and available for review in the Urban Design Report at Attachment A2, proposes a total Gross Floor Area (GFA) for the site of 34,332m^2, split between 27,685m^2 for life sciences uses and 6,647m^2 for supporting commercial uses (offices, education and retail). The ratio of life science floor space to general commercial floor space will be confirmed as part of the future Development Application, however the FSR control established as part of the planning proposal is consistent with a development where a majority of the floor space is inhabited by life sciences and research uses.

Figure 19. Reference scheme - vertical arrangement looking north

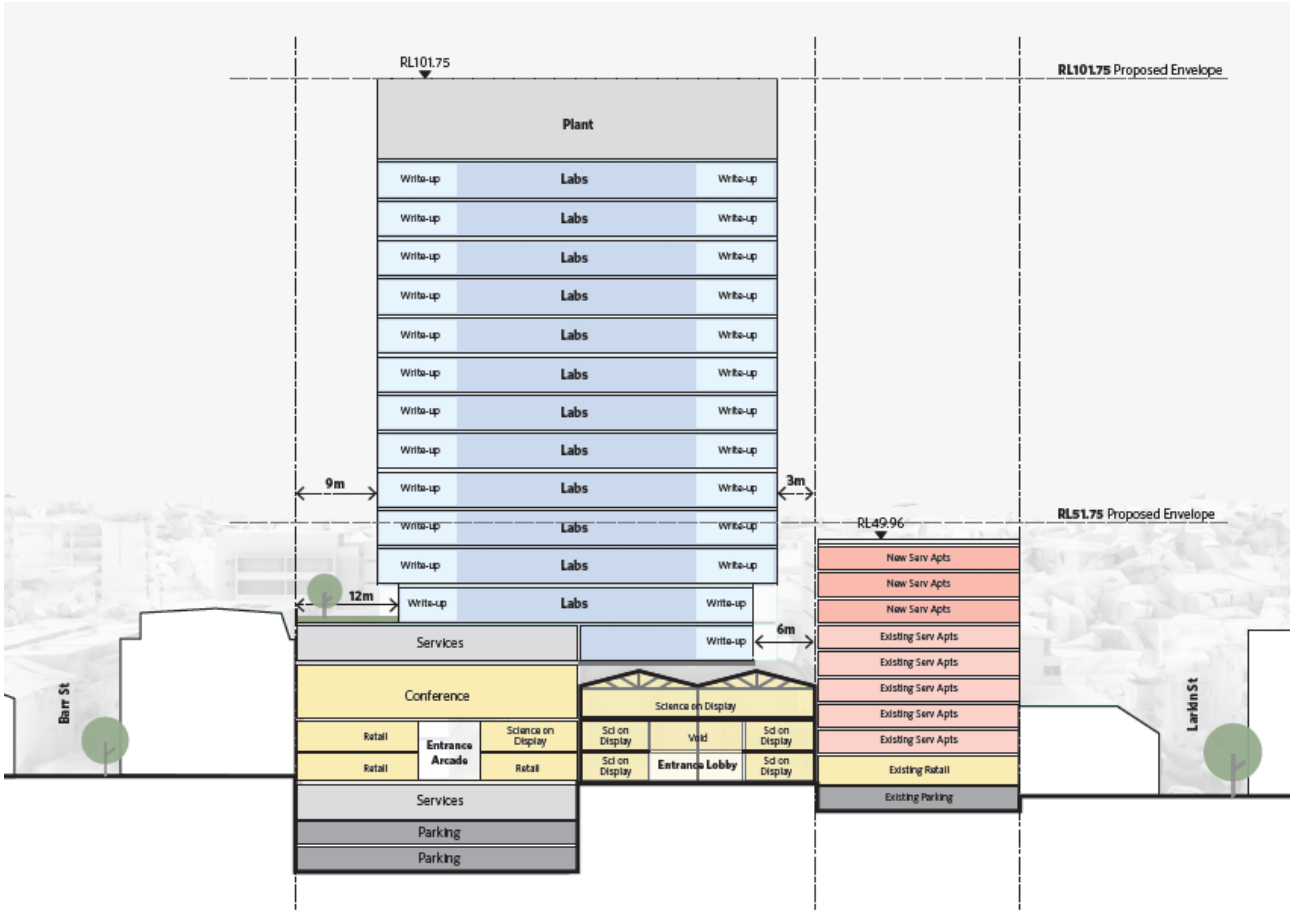
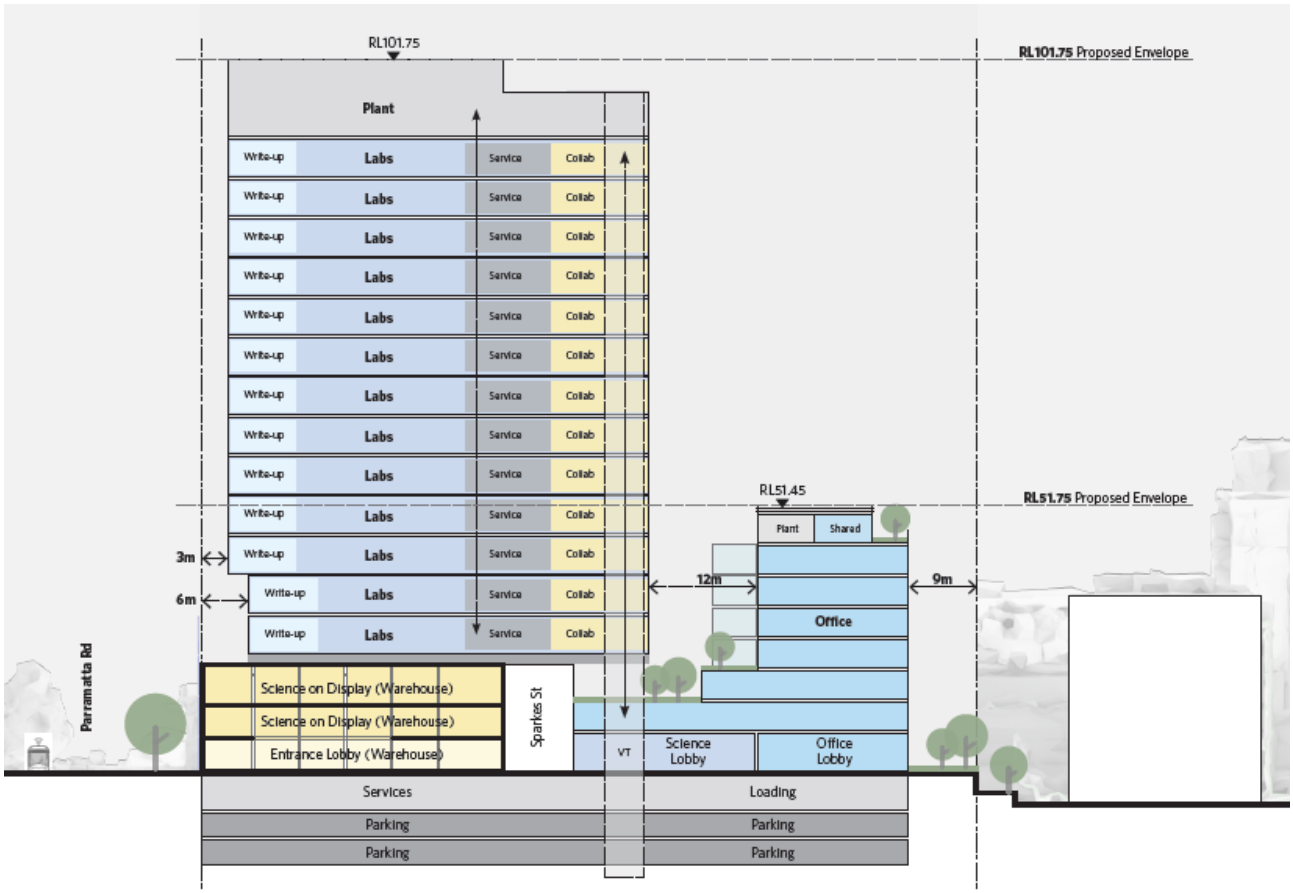


Figure 20. Reference scheme - vertical arrangement looking west



Urban design

The reference design demonstrates how the development at 88-94 Parramatta Road, with an FSR of 6.5:1 and maximum height of 80m, can be achieved while minimising impacts to neighbouring residents and nearby public places. The draft DCP, at Attachment B, defines a maximum building envelope, providing guidance to the future consent authority.

Figure 21. Building envelope - axonometric south east view

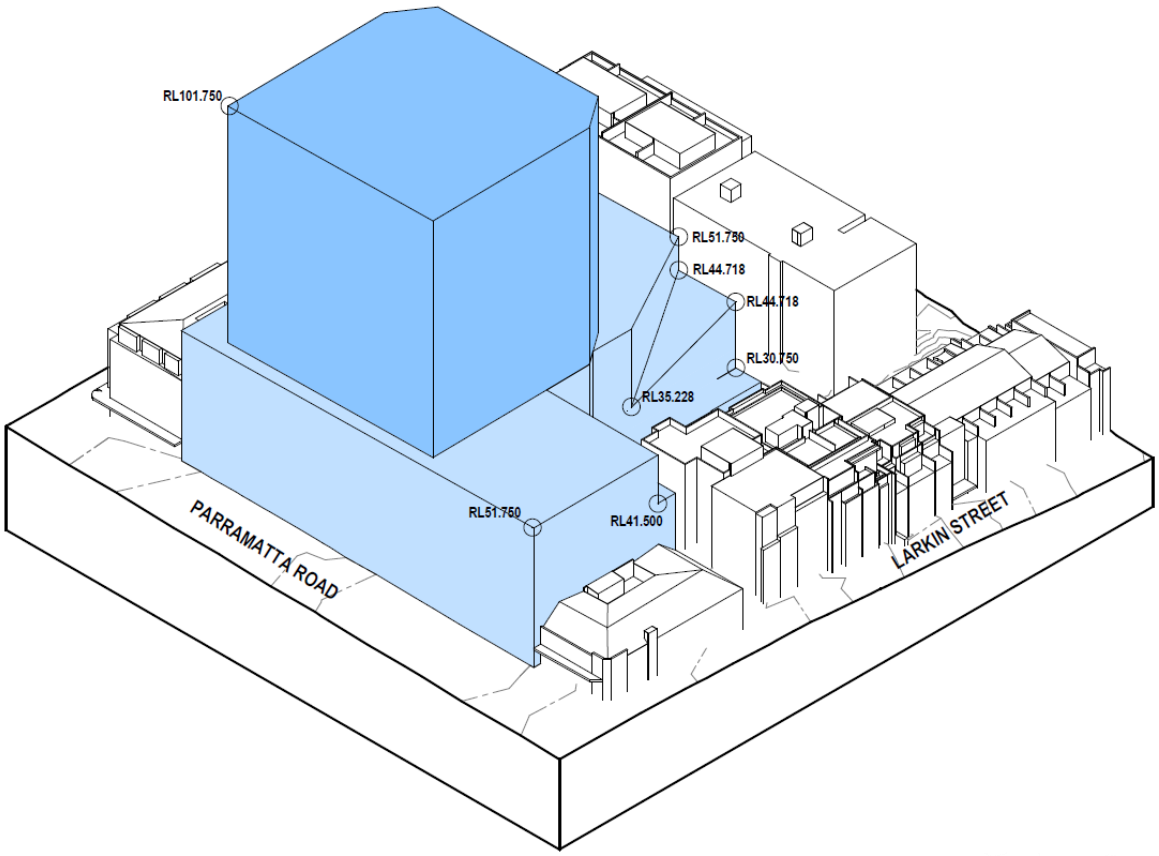


Figure 22. Building envelope - axonometric south west view

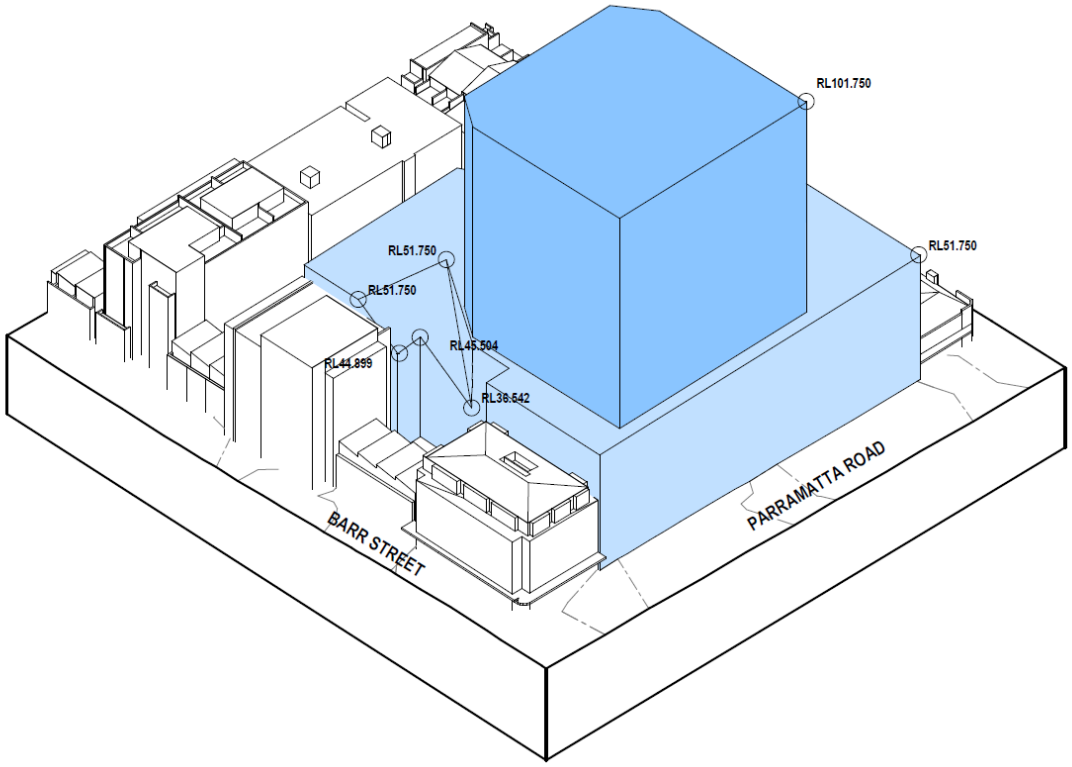


Figure 23. Building envelope - north elevation

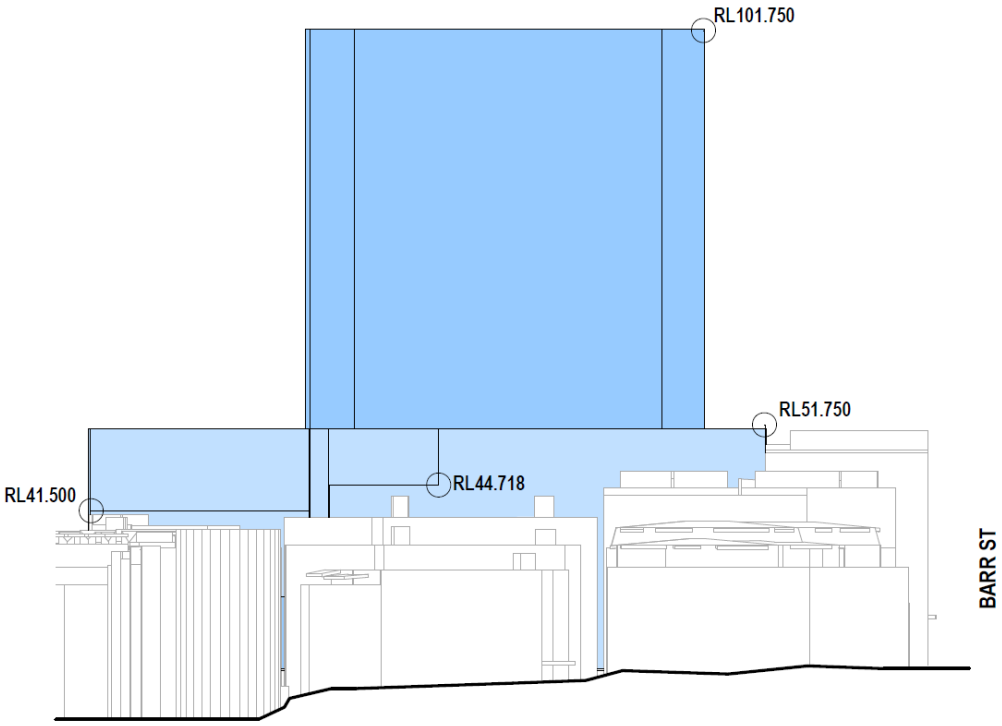


Figure 24. Building envelope - east elevation

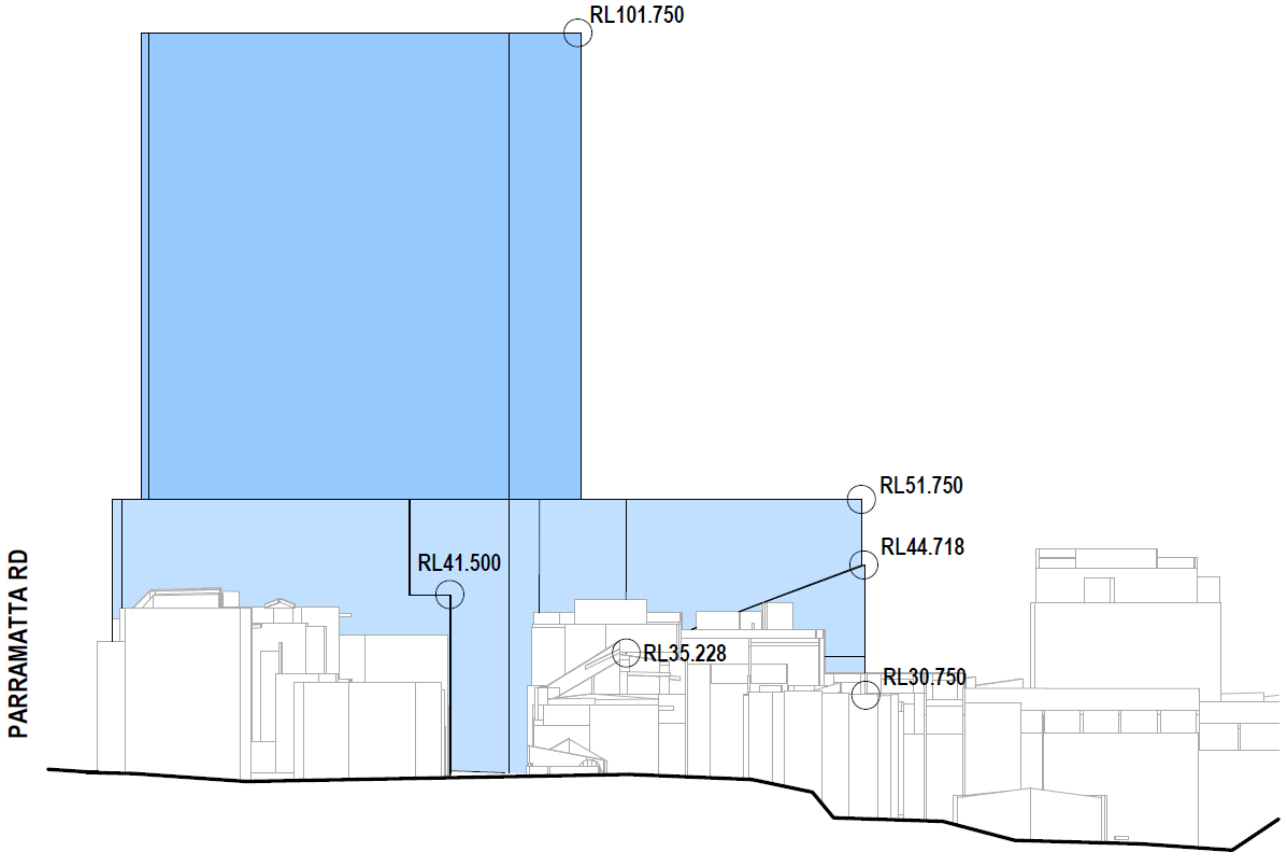


Figure 25. Building envelope - south elevation

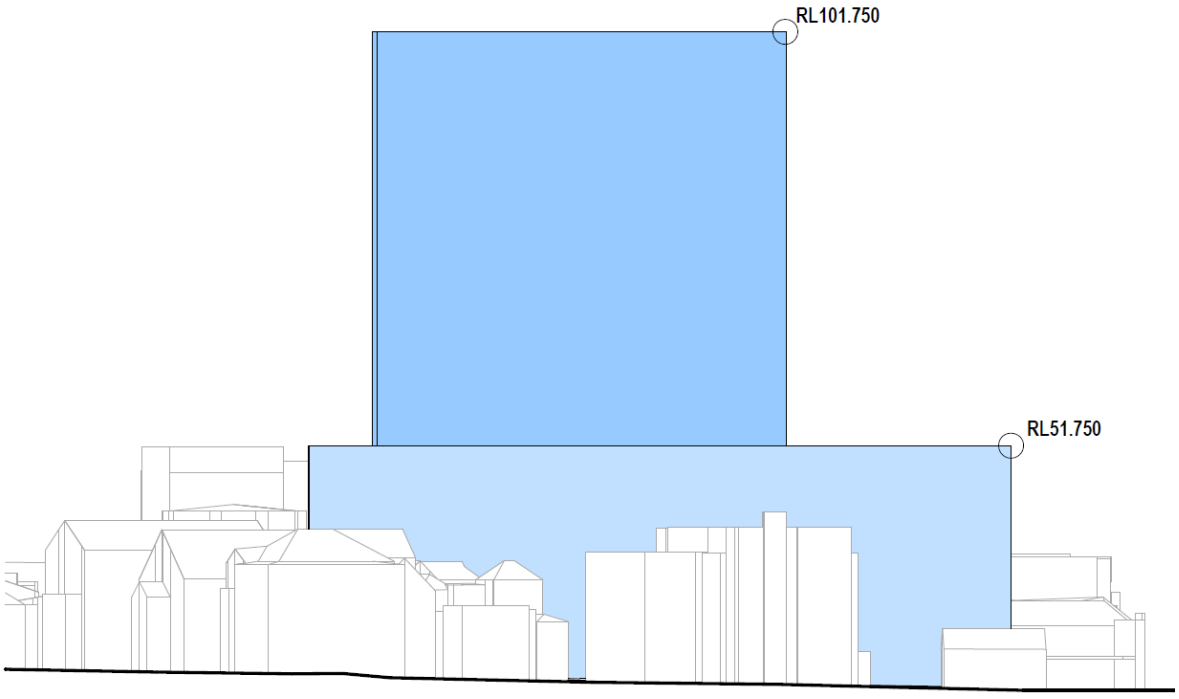


Figure 26. Building envelope - west elevation

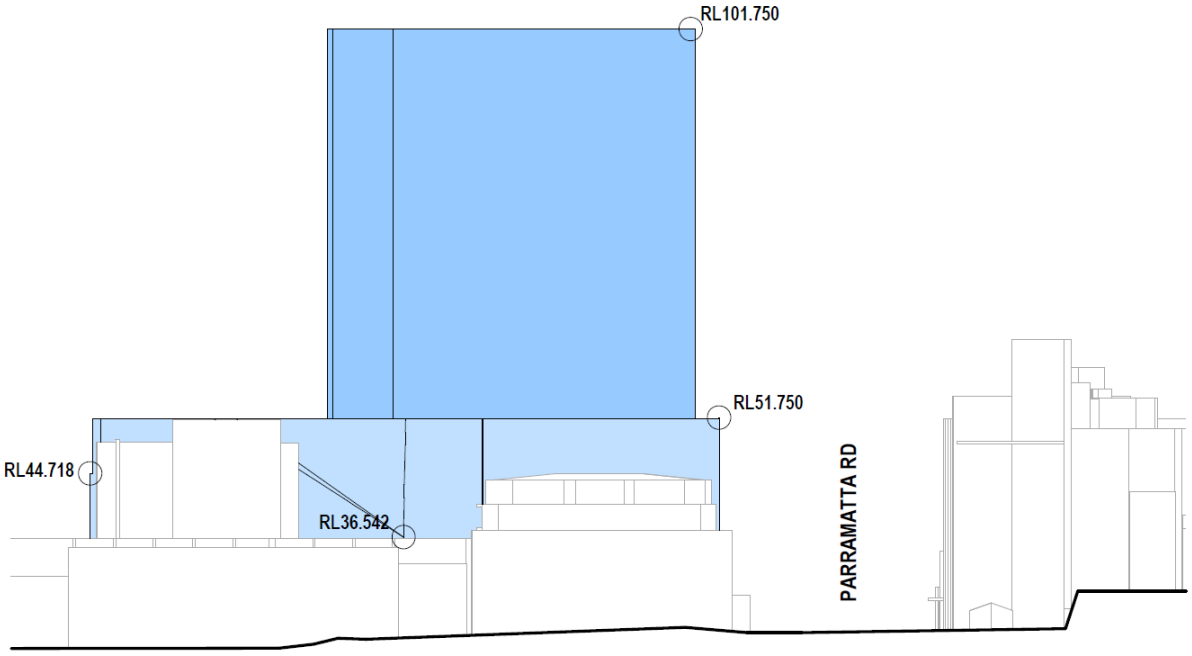
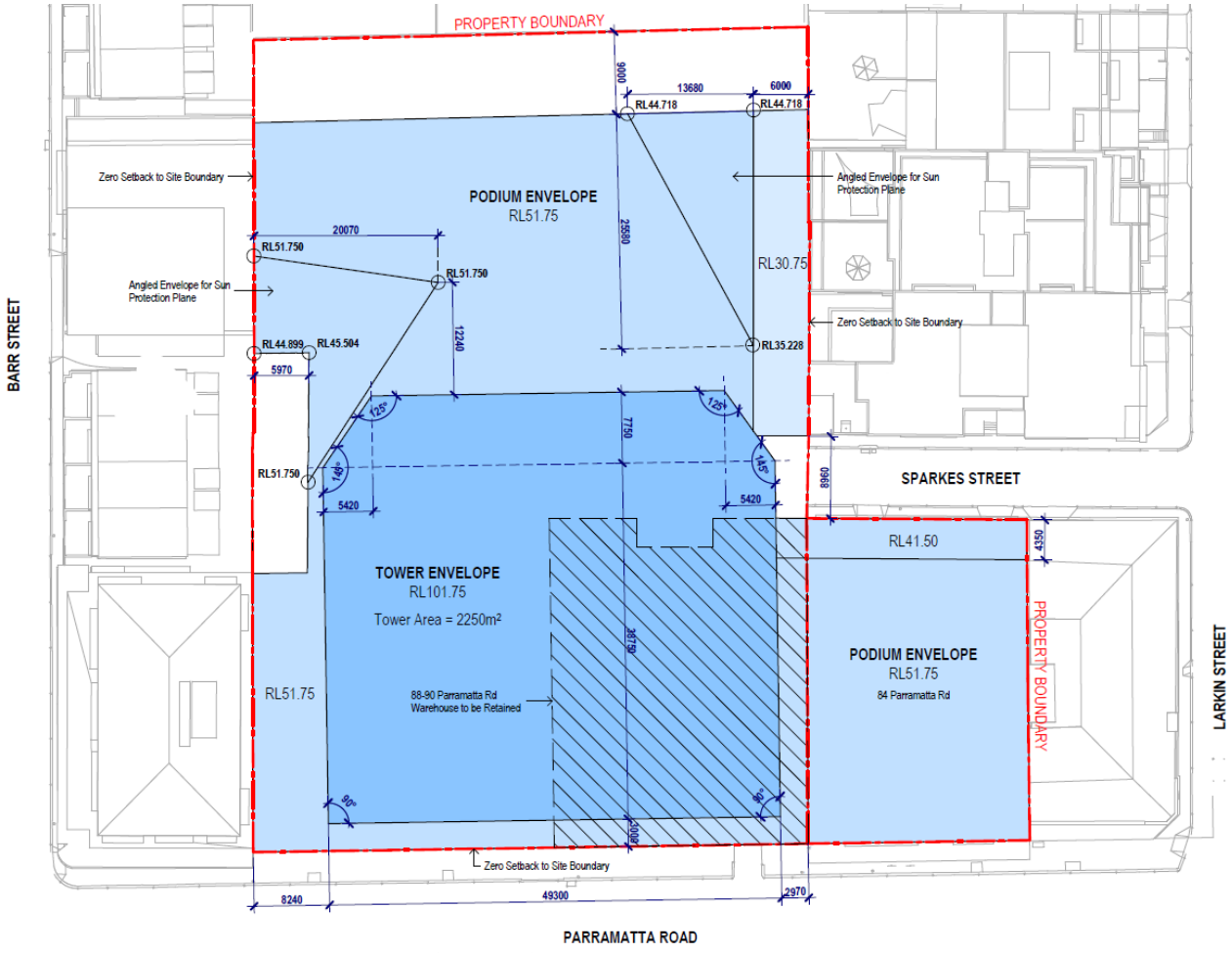


Figure 27. Building envelope - plan



The existing building has zero setback to its western, northern and eastern boundaries. The building envelope and reference design requires a 9m setback to the northern boundary and a partial 6m setback to the western boundary, increasing building separation and introducing opportunities for deep soil and landscaping.

The tower form has been placed close to the southern boundary of site to increase separation to residential properties on Barr Street, Pyrmont Bridge Road and Larkin Street.

Site context

The site is located in an area undergoing substantial change with regard to building heights and densities. Figure 28 illustrates some of the developments proposed for the University of Sydney campus and Royal Prince Alfred Hospital, including the Sydney Biomedical Accelerator. Figure 29 illustrates the immediate vicinity along Parramatta Road, with the subject site in green. Sites coloured in red represent future residential development – either as part of the West Connex dive site with a maximum height of 80m or have had an Expression of Interest accepted by the Housing Delivery Authority for high-density residential between 12 and 22 storeys (approximately 40m to 70m). The purple line refers to land in the Inner West LGA incorporated into the State-led Rezoning for the Parramatta Road corridor. Sites in blue represent an area identified in the City's Housing Discussion Paper as an opportunity for renewal. This idea received strong support from the community and the City will proceed with rezoning in the near future.

Figure 28. Parramatta Road context at time of lodgement

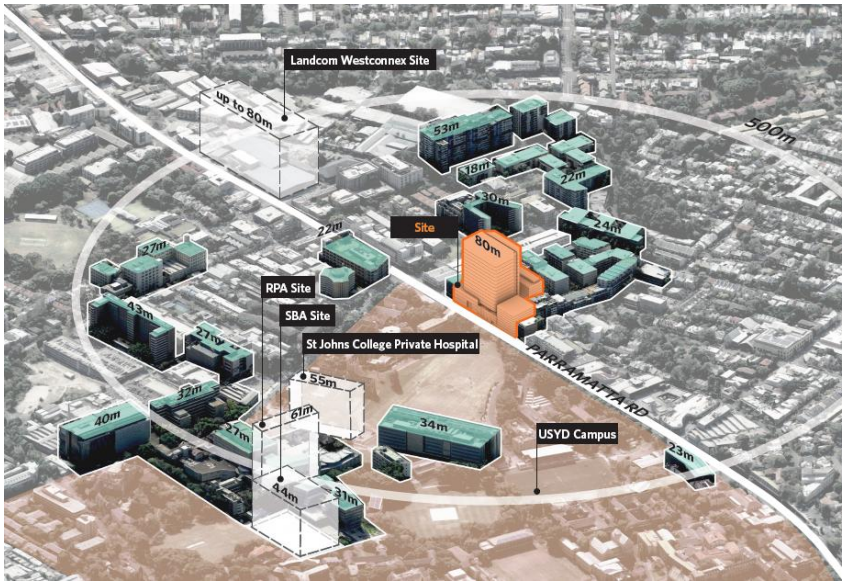


Figure 29. Proposed high density residential along Parramatta Road (planning proposal site in green)

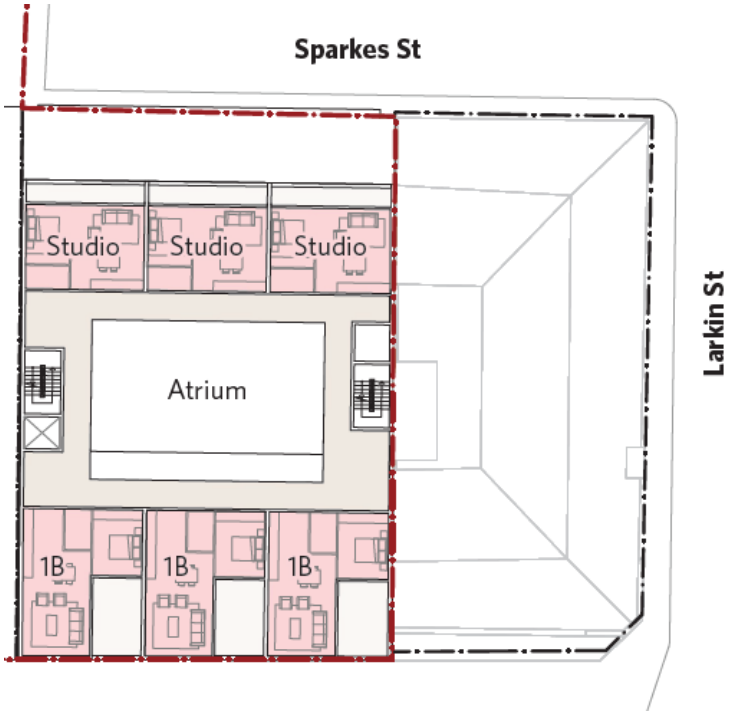


Residential amenity

As required by section 7.28 of Sydney LEP, serviced apartment buildings are required to provide the same level of amenity as that provided by development for the purpose of residential flat buildings. The existing serviced apartment building at 84-86 Parramatta Road is consistent with the Apartment Design Guide with regard to natural ventilation, but only half of the apartments are consistent with the requirement to enjoy a minimum of 2 hours direct sun access to living spaces at the winter solstice.

The reference design provided by the applicant as part of the Urban Design Report at Attachment A2 and illustrated at Figure 30, showed 3-level extensions to both the northern and southern wings of the existing building, retaining the central courtyard providing light and air. However, it was not demonstrated that the vertical extrusion of the northern wing would not worsen amenity for existing apartments on the southern wing with regard to sun access. As a result, the increase in FSR proposed for the site has been capped at 4:1, which would allow for the vertical extrusion of the southern wing only. Continued protection of solar access to existing apartments as well as all the new apartments being consistent with the Apartment Design Guide with regard to sun access, would increase the overall level of compliance in the building.

Figure 30. Reference design of additional storeys at 84-86 Parramatta Road

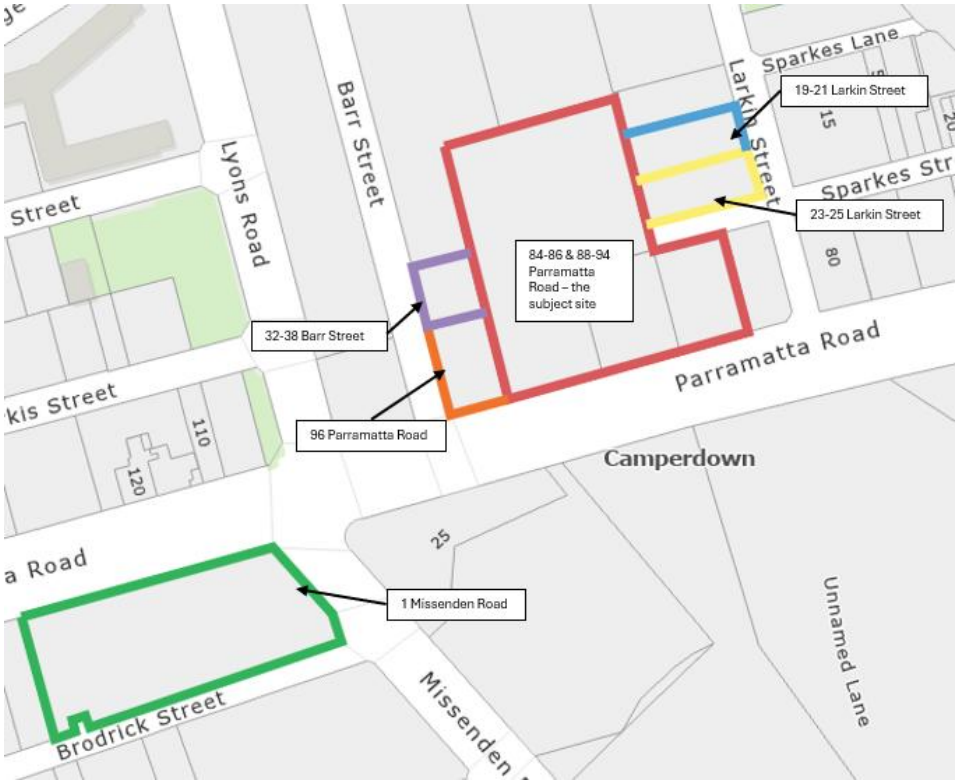


The building envelope for the development, in the draft DCP at Attachment B, requires a minimum 4.35m setback to the northern boundary, creating a minimum 18m separation to 23-25 Larkin Street which is consistent with Apartment Design Guide requirements for building separation.

Sun access

Positioning the tower at 88-94 Parramatta Road along the southern boundary minimises the potential number of residential properties affected by a loss of sun access. The properties identified in Figure 31 were assessed for impact on sun access; other residential properties on Barr Street, Pyrmont Bridge Road and Larkin Street are in line with or located to the north of the subject site and will not have their sun access affected.

Figure 31. Neighbouring properties assessed for sun access



The residential properties at 1 Missenden Road will lose direct sun access between the hours of 9-10:30am at midwinter but will still enjoy more than 2 hours of sun access which is consistent with the requirements of the Apartment Design Guide (ADG).

32-38 Barr Street are a row of 3-storey terraces with ground floor living spaces opening onto a rear courtyard facing east. These courtyards currently receive no direct sunlight at midwinter. The proposal will not change their condition. The existing building currently has no setback along the boundary with 32-38 Barr Street. The reference design proposes a 6m setback along this portion of the western boundary of the site, increasing building separation and introducing opportunities for landscaping and deep soil.

96 Parramatta Road is a residential building with 26 apartments, which is currently ADG non-compliant with less than 70% of apartments receiving 2 hours of direct sun access at midwinter. However there are 4 north-facing apartments on Levels 2-5 that currently enjoy at least 2 hours of direct sun at midwinter to their living spaces and balconies. The building envelope, defined in the draft DCP at Attachment B, requires the northwestern corner of the tower to be chamfered and the maximum height of the podium along the western boundary to be reduced. This is illustrated in Figure 19. This ensures that these 4 apartments retain 2 hours of direct sun access at midwinter.

19-21 & 23-25 Larkin Street are 2 residential buildings where west-facing apartments face the subject site. Under current conditions, none of the west-facing apartments at 23-25 Larkin Street receive direct sun access to living spaces at midwinter. 2 of the west-facing apartments at 19-21 Larkin Street receive less than 1 hour of direct sun access at midwinter. These 2 apartments will not be affected by the proposal. Any setback to the eastern boundary of the site will improve

current conditions regarding sun access for 19-21 & 23-25 Larkin Street, and this issue can be explored as part of the future design competition.

Non-residential properties on the southern side of Parramatta Road will be affected by a loss of sun access at midwinter, including Saint Joseph's Catholic Church, parts of Sancta Sophia College and St John's Oval. However, in all cases these properties should receive in excess of 5 hours of direct sun access at midwinter, and it should be noted that in the case of Sancta Sophia College and St John's Oval, these properties share the same landowner as the subject site (the University of Sydney).

Views

The proponent has undertaken a visual impact analysis which forms part of the Urban Design Report at Attachment A2. This analysis finds that no key view corridors are impacted as a result of the development. In particular, public views of the heritage-listed St John's College and St John's Oval are not affected. Views of the sky are maintained from nearby streets and parks.

Figure 32. View of Parramatta Road with building envelope looking west



Figure 33. View of Parramatta Road with building envelope looking east





Figure 34. View of St John's College & Oval with building envelope looking northwest





Wind

A quantitative wind effects report has been prepared, at Attachment A19, which is consistent with the requirements of Sydney DCP 2012. This analysis, based on wind tunnel testing of the building envelope as defined in the draft DCP at Attachment B, finds no exceedances of the Wind Safety Standard in any public place surrounding the site as a result of the development.

The analysis finds that the locations of two bus stops on Parramatta Road (one opposite the site on the southern side of Parramatta Road and another located approximately 65m to the east) see their mean wind speed exceed the Wind Comfort Standard for Standing though remain within the Wind Comfort Standard for Walking. There is no exceedance of Wind Safety Standards and opportunities remain for further refinement of the proposal to improve wind conditions through the design excellence process and subsequent lodgement of a development application. This planning proposal will be referred to the Development Coordination Authority with regard to transport issues and feedback will be sought on this question.

The analysis finds acceptable wind comfort conditions in the locations proposed for landscaping and deep soil along the northern and western boundaries of the site. There is the potential for wind safety exceedances in any proposed upper level balcony or terrace in the development along the southern boundary and Parramatta Road frontage. These conditions could be improved following the design excellence process and the final design can ensure no public access to areas that may experience unsafe wind conditions.

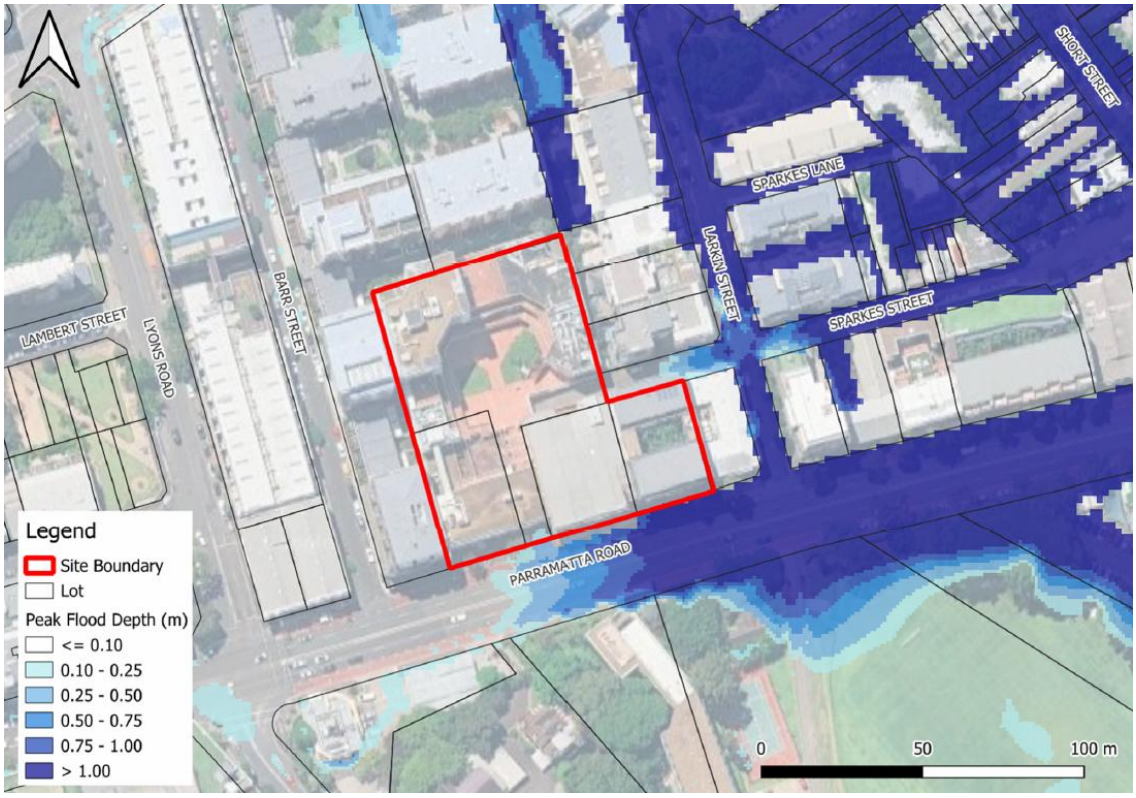
Flooding

The Flood Risk Assessment, at Attachment A11, provides an updated baseline flood model which demonstrates that the site is above the 1% AEP level but vulnerable in a PMF event.

Figure 35. Revised baseline flood model peak flood depths - 1% AEP event



Figure 36. Revised baseline flood model peak flood depths - PMF event



The flood model shows that the serviced apartment building at 84-86 Parramatta Road is vulnerable to flooding from Parramatta Road in a PMF event. The table below shows that the finished floor levels at ground are above the required flood planning levels for the site as stated in section 3.7.1.2 of the Policy and Housekeeping Amendments to Sydney DCP.

Table 8. Flood planning levels for 84-86 Parramatta Road

Location	Finished floor level	Flood planning level
Parramatta Road frontage and retail floor level	20.66m	20.30m (1% AEP level)
Raised residential lobby and lift shaft floor level	21.60m	20.80m (1% AEP + 50cm)

Under the baseline PMF scenario, the peak flood level is approximately 12cm above the raised residential lobby (21.72m). Given the low probability of flooding affecting the raised residential lobby (estimated as a 0.05% AEP event), the flood risk assessment prepared by the applicant concludes that flood risk to the serviced apartment building can be managed through an emergency risk management plan and shelter-in-place plan aligned with shelter-in-place guidelines released by DPHI.

The flood risk assessment also contains additional modelling to take into consideration future climate change scenarios. Under the most severe climate change scenario simulated for this

assessment (SSP3 7.0 Year 2100), the 1% AEP flood level is 20.55m AHD, still below all finished floor levels for the building.

Vehicle entrance points to the basement of 84-86 Parramatta Road remain above the PMF level.

The flood model shows that the life sciences development at 88-94 Parramatta Road, while vulnerable to flooding from Parramatta Road in a PMF event, still has street frontage unaffected in such an event, allowing for evacuation off site. The reference design for the proposal shows all entrances exceed the relevant flood planning level as required by Sydney DCP. The proposed internal walkway level of 21.75m AHD is above the PMF level from Parramatta Road of 21.72m AHD, which would facilitate evacuation off site. All lift shafts connecting the ground floor to the basement can be located above the PMF level. The vehicle entrance to the basement off Sparkes Street is 1.07m higher than the PMF level, preventing water ingress. These design points will be confirmed as part of any future detailed DA, however the reference design provided as part of the planning proposal confirms that a design consistent with State Government and City of Sydney flooding controls and guidance can be achieved at 88-94 Parramatta Road.

Heritage

Part of the site is currently occupied by a 3-storey brick warehouse constructed in the Inter-War period (c. 1927) as a motor-car showroom and possibly a service station (see Figure 6. 88-90 Parramatta Road looking north). In more recent years the site has been used as a warehouse and as retail space. The ground floor has been considerably altered, but the first and second floors retain some original timber flooring, columns, beams and joists. A Heritage Impact Statement has been prepared by the applicant and is at Attachment A10.

In line with material provided by the applicant to retain the warehouse building, the draft DCP accompanying this planning proposal, at Attachment B, has an objective to “[maximise] opportunities to retain significant portions of the warehouse building at 88-90 Parramatta Road, including façade, columns, roof form and wooden floors, beams and trusses”. This objective is supported by additional guidance with regard to the legibility of the building from Parramatta Road, and the location of any additional structural supports, new building services and access points.

Sustainability

The draft DCP accompanying this planning proposal, at Attachment B, has guidance requiring development at 88-94 Parramatta Road to achieve a 5-star Green Star Buildings rating. A public benefit offer prepared by the applicant, accompanying this planning proposal at Attachment C, states their intention to enter into a planning agreement with the City of Sydney to make the achievement of this award a requirement for any future DA.

The draft DCP also has guidance for landscaped open space with adequate deep soil to be provided along the northern boundary of the site. The building envelope as defined in the draft DCP features a 9m setback from the northern boundary and a partial 6m setback from the western boundary, which would facilitate the installation of deep soil while improving the site’s relationship with neighbouring residential properties. This is demonstrated in Figure 25.

Has the planning proposal adequately addressed any social and economic effects?

Traffic generation

A Transport Impact Assessment for the serviced apartment building at 84-86 Parramatta Road, at Attachment A8, found that the site would generate an additional 7 vehicle trips during the PM peak and no trips during the AM peak. These additional trips represent approximately 0.17-0.29% of traffic at each of the three nearby signalised intersections, all of which operate with excess capacity. The additional traffic caused by any development at 84-86 Parramatta Road facilitated by this planning proposal is not expected to materially affect the operation of the network.

The Transport Impact Assessment for the life sciences development at 88-94 Parramatta Road, at Attachment A7, found that the site would generate an additional 105 vehicle trips in the AM peak and 90 trips in the PM peak. The assessment concludes that these impacts are considered modest compared to existing and future background traffic in the network. The surrounding road network is

expected to accommodate the additional traffic generated by the proposal, with all assessed intersections continuing to operate at acceptable levels of service.

Parking

The serviced apartment building at 84-86 Parramatta Road currently has 17 car parking spaces at ground floor and a basement level, which is above the maximum of 10 spaces currently allowable under Sydney LEP. The current proposal assumes the retention of the existing structure with no change to ground floor or basement layout. Following lodgement of a detailed DA, car parking spaces can be converted to provide additional service vehicle parking, bicycle parking and waste storage to accommodate the increase in serviced apartment floor space and inherent waste generation.

The reference design for the life sciences development at 88-94 Parramatta Road proposes 185 parking spaces, which is less than the maximum of 199 parking spaces for industrial land use, which is the relevant parking category for a 'health, medical or related research facility'. The reference design demonstrates that the site has the capacity for car share, EV, motorcycle and accessible parking in compliance with Sydney DCP, and the final design will be confirmed as part of any future detailed DA.

End of journey facilities

End of journey facilities and bicycle parking in the serviced apartment building at 84-86 Parramatta Road are currently below the rates established in Sydney DCP. However, this issue can be revisited as part of any future detailed DA noting that there is capacity in the basement for excess parking spaces to be converted.

For the purposes of bike parking spaces, the life sciences development at 88-94 Parramatta Road is considered to be subject to the industry category of the Sydney DCP and provide 28 employee and no visitor bike parking spaces. However, the development is expected to have a higher employment density than traditional industrial uses, reflecting office, laboratory and research-based activities rather than low-intensity manufacturing, for example. As a result, the draft DCP accompanying the planning proposal at Attachment B requires any new development on this site facilitated by this planning proposal to provide bike parking in accordance with the minimum rates for office premises or business premises. The reference design has demonstrated that the site has the capacity to accommodate these facilities, and this will be confirmed as part of the future detailed DA.

Servicing and waste collection

<u>84-86 Parramatta Road</u>

The serviced apartment building currently has a private waste collection arrangement, collected on street from Sparkes Street once a week. The Transport Impact Assessment at Attachment A8 has concluded that the waste generated by the additional serviced apartments facilitated by this planning proposal would require two collections per week rather than one, which can be accommodated through existing on-street servicing provisions. This collection can be managed to occur outside of peak traffic periods, and the future detailed DA will be required to be accompanied by a waste management plan in accordance with the requirements of Sydney DCP. Transport modelling has also established that the increased number of serviced apartments will result in increased demand for B99 parking for non-waste servicing and deliveries. As there are currently more private parking spaces on site than allowable under Sydney LEP, these can be converted to accommodate the increased servicing demand.

<u>88-94 Parramatta Road</u>

The life sciences development reference design has proposed 5 loading bays in the basement loading dock accessed from Sparkes Street – 1x9.8m bay suitable for a commercial waste vehicle, 2x8.8m medium goods vehicle (MGV) and 2x6m light goods vehicle (LGV). Additional servicing trip generation modelling has been prepared and submitted as part of the Transport Impact Assessment at Attachment A7 to support this approach. Swept path analysis demonstrates that

servicing vehicles are able to enter and exit the site via Sparkes and Larkin Streets. Any future detailed DA will need to be accompanied by a Delivery Servicing Plan in accordance with the requirements of Sydney DCP, once a final design for the loading dock has been completed.

Due to the size of the vehicles and the space constraints on Sparkes Street, vehicle access to the serviced apartments at 84-86 Parramatta Road may also be impacted and any future Delivery Servicing Plan will need to respond to these impacts. Additional guidance for the Delivery Servicing Plan regarding these matters has been included in the draft site-specific DCP at Attachment B.

Economic impact

The applicant has prepared an economic impact assessment, available at Attachment A9, which concludes that the planning proposal will deliver significant and positive economic impacts to the City of Sydney.

During construction, the short-term increase to economic activity has been estimated at:

– $455.5 million in output
– $104.8 million in contributions to GRP
– $83.4 million in incomes and salaries paid to households
– 688 full-time employees.

When operational, the life sciences development is estimated to result in an annual net increase of:

– $440.9 million in additional output
– $215.1 million in additional contributions to GRP
– $110.5 million in additional incomes and salaries paid to households
– 1,225 additional ongoing full-time employees.

In addition to these impacts, the planning proposal (together with the Sydney Biomedical Accelerator, due for completion in 2028) would result in the Camperdown Health, Education and Research Precinct expanding to accommodate more than 190,000 square metres of life sciences floor space. This will reinforce Camperdown as the largest life sciences precinct in New South Wales. It responds to existing demand for life sciences floor space, and provides collaboration opportunities with the University of Sydney and Sydney Biomedical Accelerator – allowing students and startups to begin operations at the University and Accelerator, then migrate to the development at 88-94 Parramatta Road as they mature and seek private investment. This helps to keep more of the potential economic value of the research in Camperdown and the City of Sydney, rather than seek further support for expansion interstate or overseas.

Public benefit offer

The planning proposal is accompanied by a public benefit offer at Attachment C, on behalf of the applicant and the landowner, stating their willingness to enter into a planning agreement with the City to deliver:

– upgrades to Sparkes and Larkin Streets to improve pedestrian amenity with new street lighting and a painted crossing;
– a commitment to achieve a 5-star Green Star Buildings rating; and
– a 0.5% contribution to public art, to be delivered on site.

5.4 – Section D – Infrastructure (Local, State and Commonwealth)

Is there adequate infrastructure (physical and social) for the planning proposal?

The site is located in an area with pre-existing medium and high density development, already well serviced by public transport and utilities. There are 8 bus routes connecting the site with Central Sydney and the Inner West, East and South. There are cycle paths on Bridge Road, St Johns Road and Arundel Street nearby, and the site is within walking distance of major complementary services at the University of Sydney and Royal Prince Alfred Hospital.

The Transport Impact Assessment prepared by the applicant at Attachment A7, assessed that the development is expected to generate a net increase of 105 vehicle trips in the AM peak and 90 vehicle trips in the PM peak, which is considered modest compared to the existing and future background traffic in the network. The traffic generated by the development is not expected to affect the safety, efficiency and ongoing operation of Parramatta Road.

The applicant has prepared a Utility Services Review at Attachment A17, which seeks to identify any potential supply constraints or utility interventions required. There are existing ICT, water and sewerage connections to the site, and no major reconfigurations or upgrades are expected. Preliminary consultation with Sydney Water regarding on-site retention of stormwater has already been conducted. The review anticipates the installation of 3 1500kVA triplex transformer chamber substations to be installed to supply the proposed development, as well as the relocation of an existing Ground Sub transmission panel, which can only occur in consultation with Ausgrid.

As the proposed building is to be designed as a full electric building to meet its sustainability requirements, we do not anticipate any new gas connections. There are existing gas connections to the serviced apartment building at 84-86 Parramatta Road, but the uplift facilitated by this planning proposal is not expected to require substantial upgrades to these connections.

It is not expected that substantial infrastructure investment by the City or the State will be required to service the site. All relevant utilities and government agencies will be contacted during the public exhibition period for feedback.

6. Mapping

This planning proposal does not include any amendments to maps.

Additional building height and floor space ratio is proposed to be included through new site-specific provisions under Division 5 as discussed earlier in this planning proposal.

7. Community consultation

This planning proposal will be exhibited in accordance with a Gateway Determination issued by the Department of Planning, Housing and Infrastructure.

It is anticipated that the Gateway Determination will require public exhibition for a period of no less than 28 days, in accordance with the Environmental Planning and Assessment Act 1979, the Local Environmental Plan Making Guideline and the NSW Community Participation Plan.

Notification of the public exhibition will be consistent with the Gateway Determination and the City of Sydney Community Engagement Strategy.

The proponent has undertaken early consultation with Sydney Water with regard to on-site stormwater retention. Consultation with the Development Coordination Authority and other government agencies will be undertaken in accordance with the Gateway Determination.

8. Project timeline

The anticipated timeline for the completion of the planning proposal is as follows:

Stage	Timeframe
Commencement / Gateway Determination	December 2026
Government agency consultation	January to February 2027
Public exhibition	January to February 2027
Consideration of submissions	March to April 2027
Post exhibition reporting to Council	May to June 2027
Draft and finalise LEP	July 2027
LEP made and forwarded to Department of Planning, Housing & Infrastructure	August - September 2027

Appendix 1

Example clauses

The final version of the clauses to be inserted into Division 5 would be subject to drafting and agreement by the Parliamentary Counsel's Office, but may be written as follows:

Part 6 Local provisions – height and floor space

Division 5 Site specific provisions

6.XX 84-86 & 88-94 Parramatta Road, Camperdown

(1) The provisions of this clause are to provide additional building height and floor space to encourage:

(a) health, medical or related research facilities and complementary and supportive land uses at 88-94 Parramatta Road, Camperdown

(b) serviced apartment land use at 84-86 Parramatta Road, Camperdown.

(2) This clause applies to 84-86 Parramatta Road, Camperdown, being Lot 1 DP 1216911, and 88-94 Parramatta Road, Camperdown, being Lot 1 DP 178634, Lot A DP 402925 and Lot 1 DP 965792.

(3) The maximum height for a building on the land at 84-86 Parramatta Road, Camperdown, to which this clause applies is 30 metres.

(4) The maximum floor space ratio for a building on the land at 84-86 Parramatta Road, Camperdown, to which this clause applies is 4:1.

(5) Subclauses (3) and (4) do not apply unless the consent authority is satisfied that the development will result in a building being used for the purposes of serviced apartments only.

(6) The maximum height for a building on the land at 88-94 Parramatta Road, Camperdown, to which this clause applies is 80 metres.

(7) A building on the land at 88-94 Parramatta Road, Camperdown, to which this clause applies may have a floor space ratio of up to the ratio of the sum of the following to the site area—

(a) the gross floor area permitted as a result of applying the floor space ratio shown for the land on the Floor Space Ratio Map;

(b) the gross floor area resulting from applying a floor space ratio of 3.4:1;

(c) if the building is a building demonstrating design excellence – the gross floor area, determined by the consent authority, of up to 10% of the sum of the amounts specified in paragraphs (a) – (b).

(8) The total floor space ratio under subclause (7) must not exceed 6.5:1.

(9) Subclauses (6), (7) and (8) do not apply unless the consent authority is satisfied—

(a) the development will result in a building, or part of a building, used for the purposes of health or medical related high technology industry, and

(b) the development will not result in a building used for the purposes of residential accommodation or serviced apartments.

(10) Clause 6.21D(3)(a) does not apply in relation to development carried out under this clause.

Attachment A1

Planning proposal justification report

Planning Proposal

84-94 Parramatta Road, Camperdown

Amendment to Sydney Local Environmental Plan 2012

Submitted to City of Sydney
on behalf of Wentworth Capital

Prepared by Colliers Urban Planning

4 March 2026 | 2240137



'Gura Bulga'

Liz Belanjee Cameron

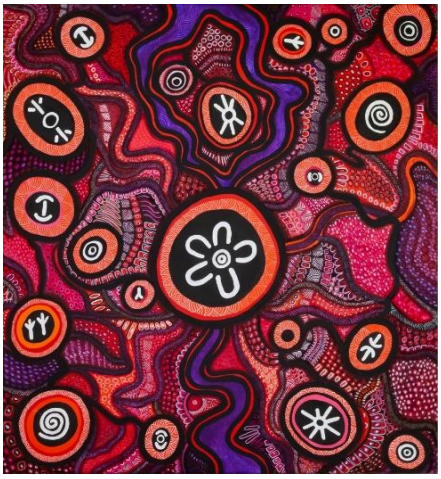
'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.



'Dagura Buumarri'

Liz Belanjee Cameron

'Dagura Buumarri' – translates to Cold Brown Country. Representing Victoria.



'Gadalung Djarri'

Liz Belanjee Cameron

'Gadalung Djarri' – translates to Hot Red Country. Representing Queensland.

Colliers Urban Planning acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We pay our respects to their Elders past and present.

In supporting the Uluru Statement from the Heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

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Noa Galapo, Jack Storch	4 March 2026	Ella Coleman, Andrew Duggan	4 March 2026

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Contents

Executive Summary 2

1.0 Introduction 4

1.1 The Proponent 6

1.2 Life Sciences Need 6

2.0 Pre-Lodgement Consultation 8

3.0 The Site 10

3.1 Site Location and Context 10

3.2 Site Description 11

3.3 Existing Development 12

3.4 Access and Transport 13

3.5 Surrounding Development 13

4.0 Existing Planning Framework 18

4.1 Sydney Local Environmental Plan 2012 18

4.2 Sydney Development Control Plan 2012 24

5.0 Proposed Development Opportunity 26

5.1 Site Considerations 26

5.2 Proposed Planning Envelope 27

5.3 Indicative Reference Design 28

5.4 Design Excellence 43

5.5 Public Benefit and Contributions 44

6.0 Proposed Amendments to the Planning Framework 45

6.1 Objectives and Intended Outcomes 45

6.2 Explanation of Provisions 46

6.3 Proposed DCP Framework 48

6.4 Design Excellence 48

6.5 Community Consultation 49

6.6 Project Timeline 49

7.0 Justification of strategic and site-specific merit 50

7.1 Strategic merit 50

7.2 Site-specific merit 73

8.0 Environmental Assessment 74
8.1 Built Form and Urban Design 74
8.2 Design Excellence Strategy 79
8.3 Heritage Impact 79
8.4 Overshadowing 81
8.5 Residential Amenity 84
8.6 Flooding and Stormwater 84
8.7 Traffic and Transport 87
8.8 Economic Impacts 88
8.9 Services and Utilities 89
8.10 Sustainability impacts 90
8.11 Contamination 90
8.12 Wind 91
8.13 Airspace Operations 91
8.14 Public Art 92
9.0 Conclusion 93

Figures

Figure 1 Locational Context 10
Figure 2 Site context and aerial map, with indicative lot boundaries shown in white 11
Figure 3 Site as viewed from Parramatta Road Frontage 12
Figure 4 Sparkes Street entrance to the Medical Foundation Buildings car parking 13
Figure 5 Sparkes Street entrance to the Veriu serviced apartments car parking 13
Figure 6 View facing intersection of Larkin Street and Sparkes Street 14
Figure 7 View facing south towards the University of Sydney 14
Figure 8 South-facing view from the site frontage along Parramatta Road 14
Figure 9 View facing built form at western boundary, from south-west along Parramatta Road 14
Figure 10 View to the north-west at Barr Street 14
Figure 11 View to the west at Barr Street 14
Figure 12 SSD-55388456 USYD & RPA Sydney Biomedical Accelerator Project 17
Figure 13 SSD-79888213 Private Hospital Camperdown 17
Figure 14 SSD-57838709 Ross Street Teaching and Learning Hub 17
Figure 15 D/2022/1334 Mixed use co-living 17

Figure 16 Emerging built form context 17
Figure 17 Land Use Zoning Map extract from Sydney LEP 2012 18
Figure 18 Height of Buildings Map extract from Sydney LEP 2012 18
Figure 19 Floor Space Ratio Map extract from Sydney LEP 2012 19
Figure 20 Heritage Map extract from Sydney LEP 2012 19
Figure 21 1% AEP Design Flood Event 20
Figure 22 PMF Event Design Flood Event 20
Figure 23 Key considerations for defining the envelope 26
Figure 24 Building Envelope – Podium and Tower Plan 27
Figure 25 Building Envelope - Elevations 28
Figure 26 Render of the indicative reference scheme 30
Figure 27 Key design principles informing the proposed envelope 31
Figure 28 Proposed basement 1 design layout 32
Figure 29 Proposed basement 2 design layout 32
Figure 30 Proposed basement 3 design layout 32
Figure 31 Existing buildings to be retained 33
Figure 32 Heritage design principles 34
Figure 33 Reference Design Site Permeability Plan 35
Figure 34 The varying nature of the street wall along Parramatta Road 36
Figure 35 Reference Design Northern Building Form 37
Figure 36 Serviced Apartments Extension 38
Figure 37 Reference Design Tower Massing Plan 39
Figure 38 Reference Design Proposal Vertical Arrangement Plan east-west cross section 40
Figure 39 Reference Design Proposal Vertical Arrangement Plan north-south cross section of life sciences portion 40
Figure 40 Reference Design Solar Access Plan 41
Figure 41 Proposed serviced apartments design layout 42
Figure 42 Proposed amendments to height of buildings map 47
Figure 43 Proposed amendment to FSR map 47
Figure 44 Extract from Eastern City District – Structure Plan 54
Figure 45 Tech Central Map with site location 58
Figure 46 Building envelope – massing 75
Figure 47 Typical Life Sciences floorplate 76
Figure 48 Parramatta Road view looking west 77
Figure 49 Parramatta Road view looking east 77
Figure 50 View from University of Sydney campus 77

Figure 51 View from Barr Street looking south 77
Figure 52 View from Lambert Street looking east 77
Figure 53 Future development surrounding the site 78
Figure 54 96 Parramatta Road, and 32-38 Parr Street solar analysis 81
Figure 55 Sun protection planes required 82
Figure 56 84 Parramatta Road solar analysis 83
Figure 57 Sun protection planes required 83
Figure 58 Revised baseline flood model peak depths - 1% AEP event 84
Figure 59 Revised baseline flood model peak flood depths - PMF event 85

Tables

Table 1 Applicant Details 6
Table 2 Summary of responses to scoping proposal feedback 8
Table 3 Lot details 11
Table 4 Future Surrounding Context 15
Table 5 Sydney LEP 2012 Key Controls 18
Table 6 Key Sydney DCP 2012 controls 24
Table 7 Apartment yield 42
Table 8 Existing and Proposed Sydney LEP 2012 Controls 46
Table 9 Anticipated Project Timeline 49
Table 10 Consistency with GSRP directions and objectives 51
Table 11 Consistency with Eastern City District Plan directions 54
Table 12 Consistency with City Plan 2036 Local Strategic Planning Statement 56
Table 13 Community Strategic Plan - Delivering Sustainable Sydney 2030-2050 59
Table 14 Sustainable Sydney 2030 – 2050: Continuing the Vision 61
Table 15 Consistency with City of Sydney Housing Strategy 62
Table 16 Consistency with the Camperdown-Ultimo Place Strategy 63
Table 17 Consistency with PRCUTS Vision, Principles and Objectives 64
Table 18 Consistency with the Objectives of GANSW's Better Places 66
Table 19 Consistency with State Environmental Planning Policies 67
Table 20 Assessment of Section 9.1 Directions 69
Table 21 First principles approach – total trip generation 88

Appendices

Appendix		Author
A.	Urban Design Report	*HDR Architects and Matthew Pullinger Architect*
B.	Macroeconomic Market Analysis Report	*BioIntellect*
C.	Site Survey	*HDR Architects and Matthew Pullinger Architect*
D.	Site Specific Development Control Plan	*Colliers Urban Planning*
E.	Design Excellence Strategy	*Colliers Urban Planning*
F.	Public Benefit Offer	*Wentworth Capital*
G.	Transport Impact Assessment – Life Sciences	*Arup*
H.	Transport Impact Assessment – Serviced Apartments	*Arup*
I.	Economic Impact Assessment	*Atlas Economics*
J.	Heritage Impact Statement	*Curio*
K.	Flood Risk Assessment	*Arup*
L.	Aviation Impact Assessment Report	*AviPro*
M.	Preliminary Public Art Plan	*Amanda Sharrard*
N.	Environmentally Sustainable Design Strategy Report	*Arup*
O.	Site Remedial Concept Plan	*JBS&G*
P.	Utility Services Review	*Arup*
Q.	Water Cycle and Stormwater Management Report	*Arup*
R.	Wind Tunnel Environmental Wind Assessment	*L2T*

Executive Summary

This Planning Proposal requests amendments to the *Sydney Local Environmental Plan 2012* (Sydney LEP 2012) relating to 84-94 Parramatta Road, Camperdown. Colliers Urban Planning has prepared this Planning Proposal on behalf of Wentworth Capital for the site under a long-term ground lease from the University of Sydney.

This Planning Proposal applies to three individual lots, being:

- 84 Parramatta Road (currently containing Veriu Hotels containing serviced apartments).
- 88 – 90 Parramatta Road (currently containing an historic warehouse).
- 92 – 94 Parramatta Road (currently occupied by University of Sydney uses).

The broad intent of this Planning Proposal is to facilitate the redevelopment of the site for the purposes of a new life sciences research facility, supporting a mixture of ancillary uses, such as retail and education uses. This Planning Proposal intends to facilitate uplift at 84 Parramatta Road for additional serviced apartments for the health and education precinct locality. This will be achieved via amendments to the Sydney LEP 2012, as well as accompanying amendments to the *Sydney Development Control Plan 2012 (*Sydney DCP 2012).

This Planning Proposal seeks Council's support for a site-specific amendment to the Sydney LEP 2012 for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site-specific provision for 88-94 Parramatta Road that enables up to 6.5:1 floor space ratio for non-residential uses only.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the *Sydney Development Control Plan 2012* (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1 floor space ratio (retaining the existing MU1 Mixed Use zone.
- Amendments to the *Sydney Development Control Plan 2012* (Sydney DCP 2012) to address site specific outcomes.

The indicative reference scheme totals 38,317m^2 of gross floor area (GFA) comprising 27,685m^2 of life sciences specific uses and 6,647m^2 of ancillary life sciences support uses, such as office and lab write up spaces on 88-94 Parramatta Road (the University of Sydney owned site), and approximately 1,350m^2 of uplift to the existing 2,635m^2 of serviced apartments floorspace as part of an extension to the existing Veriu Hotel building at 84 Parramatta Road. The reference scheme includes basement parking for 185 car parking spaces over two basement levels for life sciences purposes, in accordance with the applicable maximum parking rates for the mix of land uses considered in the reference scheme.

The Proponent intends to deliver a range of public benefits as part of this Planning Proposal, including site-specific sustainability measures and local infrastructure works-in-kind by way of a Voluntary Planning Agreement (VPA) to be entered into with Council at a future development stage.

Regarding the relevant strategic context, the site sits within the Camperdown Health, Education and Research Precinct in the Tech Central Strategy document. Camperdown Precinct is home to global tech businesses, venture capital funds, research institutes, two universities (University of Sydney and University of Technology Sydney), and a leading research hospital (Royal Prince Alfred Hospital). The key objective of the Camperdown Precinct within the Tech Central document is to build on existing health, education and research strengths to create a region that is internationally significant in these fields. The development considered as part of this Planning Proposal directly aligns with this objective, by facilitating uplift for the purposes of life sciences and biotechnology research. Furthermore, by providing for uplift at 84 Parramatta Road for serviced apartments, this Planning Proposal aligns with objectives within the applicable strategic documentation that identify the importance of increasing housing affordability and diversity within the locality.

The site is identified within the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS), a strategy aiming to provide a long-term vision and framework to support co-ordinated employment and housing growth in the Parramatta Road Corridor in response to significant transport and infrastructure investment, economic and demographic shifts, and industrial and technological advances. The development aligns with the PRCUTS as it facilitates significant employment floorspace uplift along the Parramatta Road corridor.

This Planning Proposal responds to the above and is justified for the following reasons:

- The proposal is directly aligned with the strategic planning framework, identifying and underpinning the appropriate emergence of a life science research facility at a key location in proximity to the University of Sydney and the Royal Prince Alfred Hospital.
- The site is located within the Camperdown-Ultimo Health and Education precinct, co-located with similar land uses to create a specialised precinct accessible by active and public transport. The site is well-positioned, adjacent to two well serviced bus stops providing connectivity in the eastern and western direction of the site, and notably to Central Train Station (2.5km east of site). Central Station provides extensive connectivity across Greater Sydney through bus, light rail, heavy rail, and newly unveiled metro services.
- The future built form will exhibit design excellence through the requirement for a competitive design process and demonstrate a high-quality urban design outcome that will enhance the site and surrounding urban area.
- The developed built form envelope has been sympathetically designed to minimise overshadowing to neighbouring residential dwellings and does not result in overshadowing that impacts the capability of adjoining residential dwellings to comply with Apartment Design Guide (ADG) requirements.
- The built form envelope for the uplift of Veriu Hotel serviced apartments (84 Parramatta Road) has considered the standards of the ADG in alignment with Council feedback, the Sydney LEP 2012, and the *State Environmental Planning Policy (Housing) 2021*. The built form envelope of the life sciences portion has been carefully designed to ensure ADG future compliance for the serviced apartments can be achieved. Confirmation that the proposed serviced apartments comply with the ADG will be provided at a future detailed design stage.
- The proposal requires the future development to include a variety of sustainability features and will deliver beyond its required targets for sustainability, energy efficiency and water and waste management.
- The proposal is consistent with the objects of the *Environmental Planning and Assessment Act 1979*, as it promotes the orderly and economic use and development of land.
- The proposal is consistent with the applicable State Environmental Planning Policies and Ministerial Directions.
- Traffic modelling undertaken indicates that the uplift will not result in unacceptable traffic impacts on the surrounding road network.
- The proposal will deliver significant economic benefits to the locality, including:
  - An estimated 1,217 ongoing FTE jobs associated with the construction of the development.
  - An estimated 1,940 ongoing FTE jobs (direct and indirect) associated with the operation of the development, resulting in $195.8 million in incomes and salaries paid to households.

Accordingly, considering the proposal and the overall strategic nature of the site and justification provided in addressing planning issues, the Planning Proposal is considered to have sufficient strategic merit to support a purpose-built life sciences facility with ancillary uses in line with the Camperdown-Ultimo Health and Education precinct. This Planning Proposal demonstrates that the proposed land uses and density sought can be appropriately accommodated on the site in an attractive urban form, maximises activity and improves social and economic outcomes, whilst minimising amenity impacts of surrounding residential receivers. This supports the site-specific merit of the Planning Proposal.

Notwithstanding the proposed amendments to the Sydney LEP 2012 to facilitate uplift at 84 Parramatta Road and 88-94 Parramatta Road, future development at the respective sites will proceed independently. To confirm, the delivery of the serviced apartments uplift at 84 Parramatta Road is not contingent upon nor linked to development of 88-94 Parramatta Road development for life sciences uses.

For these reasons, we have no hesitation in recommending this Planning Proposal for Gateway Determination.

1.0 Introduction

This request for a Planning Proposal is submitted to the Council of the City of Sydney (Council) for amendments to the *Sydney Local Environmental Plan 2012 (*Sydney LEP 2012) relating to 84-94 Parramatta Road, Camperdown (the site). Colliers Urban Planning has prepared this Planning Proposal report on behalf of Wentworth Capital (the Proponent) under a long-term ground lease from the University of Sydney, and Veriu (landowners of the site).

This Planning Proposal applies to three individual lots, being:

- 84 Parramatta Road (currently Veriu Hotels containing serviced apartments).
- 88 – 90 Parramatta Road (currently containing an historic warehouse).
- 92 – 94 Parramatta Road (currently occupied by University of Sydney uses).

The purpose of this request for a Planning Proposal is to introduce a new Floor Space Ratio (FSR) and Height of Buildings development standard for the site. Collectively, these amendments will unlock additional floor space that will be used to enable the development of a purpose-built life sciences research facility and a mixture of supporting uses, including retail and educational uses, consistent with the vision of the Camperdown Health, Education and Research Precinct as outlined within the City of Sydney Local Strategic Planning Statement. The amendments to the Sydney LEP 2012 will enable the redevelopment of the site into a vibrant, mixed-use development that will co-locate education, research and other mixed uses in a purpose-built precinct.

Additionally, the Planning Proposal facilitates uplift at 84 Parramatta Road for additional serviced apartments, strengthening the diversity and affordability of accommodation within the locality. Increasing the supply of short-term accommodation will support the capacity of the locality to attract specialist workers, host collaborative research programs, deliver tertiary health services, and participate in innovation networks. Furthermore, short-term accommodation in the locality is often tenanted by patients or families of patients of the Royal Prince Alfred Hospital due to a lack of available accommodation on campus. This uplift will provide additional capacity, particularly prudent given the ongoing expansion of Royal Prince Alfred Hospital, supported by the provision of new life sciences development.

The Planning Proposal will deliver significant public and city building benefits through activation and embellishment of the public domain fronting Parramatta Road, while protecting the amenity of the surrounding residential developments regarding solar access and wind conditions. The Planning Proposal recommends that the warehouse on 88-90 Parramatta Road is substantially retained as it demonstrates historical significance, with opportunities for future integration into the design of the development.

The Planning Proposal will accommodate a life sciences research facility (defined as a "high technology industry" under the *Standard Instrument – Principal Local Environmental Plan 2006*) as well as a mix of other uses that are permissible within the site's existing MU1 Mixed Use zoning. To facilitate this, the following controls will be amended:

- A new maximum building height of part 80 metres, part 30 metres.
- A new mapped maximum FSR for the 84 Parramatta Road site of 4.8:1.
- A new site-specific provision for 88-94 Parramatta Road that enables up to 6.5:1 of floorspace for non-residential uses.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the *Sydney Development Control Plan 2012* (Sydney DCP 2012) to address site specific outcomes, including design excellence development outcomes with provisions relating to the future built form, heritage conservation, solar impacts, design excellence, and sustainability.

It is noted that no changes are proposed to the site's existing MU1 Mixed Use land use zone.

As required by Section 3.33 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), and in reference to the Local Environmental Plan Making Guideline, this Planning Proposal report includes:

- A description of the site, local context and the proposed development.

- A statement of the objectives or intended outcomes of the proposed instrument.
- An explanation of the provisions that are to be included in the proposed instrument.
- The justification for those objectives, outcomes and provisions and the process for their implementation (including whether the proposed instrument will comply with relevant directions under Section 9.1 of the EP&A Act).
- Maps containing sufficient detail to indicate the substantive effect of the proposed amendments.
- Details of community consultation.

This Planning Proposal report describes the site, the proposed amendments to the *Sydney Local Environmental Plan 2012*, and provides an environmental assessment of the proposed reference scheme design. The report should be read in conjunction with the Urban Design Report prepared by HDR Architects and Matthew Pullinger Architect (**Appendix A**) and specialist consultant reports appended to this Planning Proposal (refer to Table of Appendices).

1.1 The Proponent

Wentworth Capital is a real estate private equity company, with over $2.5 billion of assets under management. In 2023, it established a $1.5 billion life science real estate fund in Australia in partnership with BlackRock (one of the world's largest real estate asset managers) and seeks to provide purpose-built science and innovation infrastructure within key locational clusters.

Wentworth Capital, under a long-term ground lease from the University of Sydney, envision creating a world-class life science and mixed-use campus on the site. The proposal aims to establish Camperdown as Sydney's premier biomedical hub, centred around top-tier life science facilities.

Wentworth Capital has an agreement in place with Sydney University to develop the site at 88-94 Parramatta Road, Camperdown with a vision to deliver a thriving life science campus.

The Applicant's details are presented in **Table 1** below.

Table 1 Applicant Details

Applicant	Details
Applicant	Spark Sub Trust Pty Ltd (subsidiary of Wentworth Capital)
Address	Level 5 99 Macquarie Street, Sydney NSW 2000
ABN	30 662 770 283

1.2 Life Sciences Need

Life sciences refer to a broad range of scientific and research operations that includes medical research, regenerative medicine, medical technology, advanced technology and computing, digital health and a variety of other biomedical research fields.

Detailed research undertaken by Biointellect for Wentworth Capital (refer to **Appendix B**) identifies that Australia's life sciences sector is experiencing rapid growth, driven by advancements in biotech, Medtech, digital health, and clinical services. With over 2,900 organisations and a market value of $255 billion, the sector is supported by strong government investment, world-class research institutions, and a skilled workforce. NSW leads nationally, hosting the highest concentration of life sciences companies, particularly in MedTech and digital health. However, access to specialised infrastructure—such as technical labs, cleanrooms, and prototyping spaces, and lack of private sector investment—remains a critical bottleneck in Sydney and Australia more broadly, especially for early-stage companies seeking affordable, scalable facilities.

The proposed life sciences precinct in Camperdown, adjacent to Tech Central, presents a strategic opportunity to address this infrastructure gap. Anchored by the Camperdown-Ultimo Health and Education precinct, University of Sydney and the Sydney Biomedical Accelerator, the opportunity to deliver 34,332m² of floorspace tailored to the needs of life sciences tenants, supporting research, commercialisation, and job creation is substantial. The location offers proximity to hospitals, research institutes, and transport, ideal for attracting domestic and international companies. By enabling co-location, collaboration, and access to talent, the site is positioned to strengthen NSW's innovation ecosystem and enhance Australia's global competitiveness in life sciences.

Additionally, the Planning Proposal facilitates uplift at 84 Parramatta Road for additional serviced apartments, strengthening the diversity and affordability of accommodation within the locality. Increasing the supply of short-term accommodation will support the capacity of the locality to attract specialist workers, host collaborative research programs, deliver tertiary health services, and participate in innovation networks. Furthermore, short-term accommodation in the locality is often tenanted by patients or families of patients of the Royal Prince Alfred Hospital due to a lack of available accommodation on campus. This uplift will provide additional capacity, particularly prudent given the ongoing expansion of Royal Prince Alfred Hospital, supported by the provision of new life sciences development.

The Life Sciences Need

Life sciences organisations in Australia (2024)

2,905

Value of ASX-listed life sciences industry (2024)

$252B

Share of Australia's life sciences companies based in NSW

36%

NSW Government investment in Tech Central

$48.2M

Projected STEM and life sciences jobs in Tech Central by 2036

25,000



The Proposal 84-94 Parramatta Road, Camperdown

Total Life Sciences gross floor area

34,332m²

Life Sciences Tower (15 storeys)

27,685m²

Life Science Office Block (8 storeys)

6,647m²

Estimated full-time equivalent jobs created

1,940

World class, state of the art and fit for purpose life sciences building, located in the heart of the Camperdown-Ultimo Health and Education precinct

2.0 Pre-Lodgement Consultation

The Proponent has met with the City of Sydney (Council) on several occasions prior to lodgement of this Planning Proposal, including:

- 9 April 2024 – Meeting with City of Sydney Strategic Planning Team.
- 29 October 2024 – Follow up meeting with City of Sydney Strategic Planning Team.
- 13 February 2025 – Design Advisory Panel Review.
- 14 May 2025 – Follow up meeting with City of Sydney Strategic Planning Team.
- 26 November 2025 – Meeting with City of Sydney Strategic Planning Team regarding serviced apartments.

A preliminary proposal was provided to the City of Sydney and presented to the City's Design Advisory Panel (DAP) on the 13 February 2025. Subsequently a letter and lodgement checklist have been provided to the Proponent. **Table 2** summarises Council's written feedback on the preliminary proposal and where comments have been addressed within this report.

Table 2 Summary of responses to scoping proposal feedback

Focus	Council comment	Response
Matters to be addressed		
ADG Compliance	The Apartment Design Guide (ADG) objectives for solar and daylight access (4A) and minimising overshadowing to neighbouring properties in mid-winter (3B-2) must be observed, with an assessment carried out in line with Council's Draft policy on *Minimising Overshadowing of Neighbouring Apartments*.	Minimising overshadowing of neighbouring residences has been a key consideration in defining the envelope proposed as part of this Planning Proposal. Refer to **Section 8.4**.
Bulk and scale	It is recommended that the massing be refined to reduce the bulkiness of the building.	Following the presentation to the DAP, the scheme was reconsidered and the bulk and scale reviewed. This consideration has been addressed at **Section 5.3**.
Overshadowing	To address issues of overshadowing and bulk you please explore relocation of floor space (potentially to the Parramatta Road frontage) to avoid chamfering the building which will reduce its functionality for the proposed use.	Refer to discussion at **Section 5.3** and **Section 8.4**.
Floor to ceiling height	The proposed floor-to-floor height of 4.5m is considered a minimum to support the proposed use.	This has been addressed. Refer to **Appendix D**.
FSR	Further detail on the calculation and testing of the proposed FSR is to be provided at lodgement, and any increased FSR and height will be conditional on the proposed use.	This is discussed at **Section 8.1**, as well as by HDR Architects and Matthew Pullinger Architect in **Appendix A**.
Heritage	It is noted that your heritage assessment identified 88-90 Parramatta Road as being potentially locally significant. It is recommended that the building be retained and adapted and that future detailed design should seek to retain the whole structure. A facade only approach to adaptation would not be supported.	This Planning Proposal is seeking to require retention of the warehouse at 88-90 Parramatta Road through a provision in the site specific DCP. This is discussed further at **Section 8.3**.

Focus	Council comment	Response
Retention of buildings	The retention of the 88-90 Parramatta Road building is an opportunity to accommodate the proposed exchange, conference or 'science on display' spaces.	This has been incorporated into the site-specific DCP, as discussed at **Section 8.3**.
Economic	Additional detail should be provided with respect to the market demand for life sciences research uses to support 800 research staff (and support staff) and the expected economic benefits of the proposal.	A Macroeconomic Market Analysis Report has been prepared by Biointellect and is available at **Appendix B**, supplemented by a detailed Economic Impact Assessment prepared by Atlas Economics at **Appendix I**.
Affordable Housing – for consideration		
Affordable housing contributions	Consider opportunity for affordable housing contribution, recognising the need for well-located housing close to employment centres, such as Camperdown-Ultimo Health and Education precinct. Council recognises that it may not be appropriate to provide affordable housing on site because of the proposed life sciences use.	The Public Benefit Offer (**Appendix F**) prepared for the proposal outlines the monetary affordable housing contribution to be made to Council as per Clause 7.13 of the Sydney LEP 2012.

3.0 The Site

3.1 Site Location and Context

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is located on the western edge of the LGA, 500 metres east of where the LGA boundary intersects the Inner West LGA at Booth Street. It is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney (88-94 Parramatta Road) and Veriu (84-86 Parramatta Road) and is located to the north-west of the main University of Sydney Camperdown/Darlington campus located adjacent to the site at the southern boundary of Parramatta Road. The site fronts Parramatta Road to the southern boundary and is bounded by mixed uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station.

As identified within the Greater Sydney Regional Plan (GSRP), the site is located in the Eastern Economic Corridor, a cluster of employment centres from Macquarie Park in the north to Sydney Airport in the south, with Camperdown described as a Health, Education and Research Precinct within Tech Central. In addition, the site is identified within the Camperdown Precinct of the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS).

The site's locational context is shown at **Figure 1.**

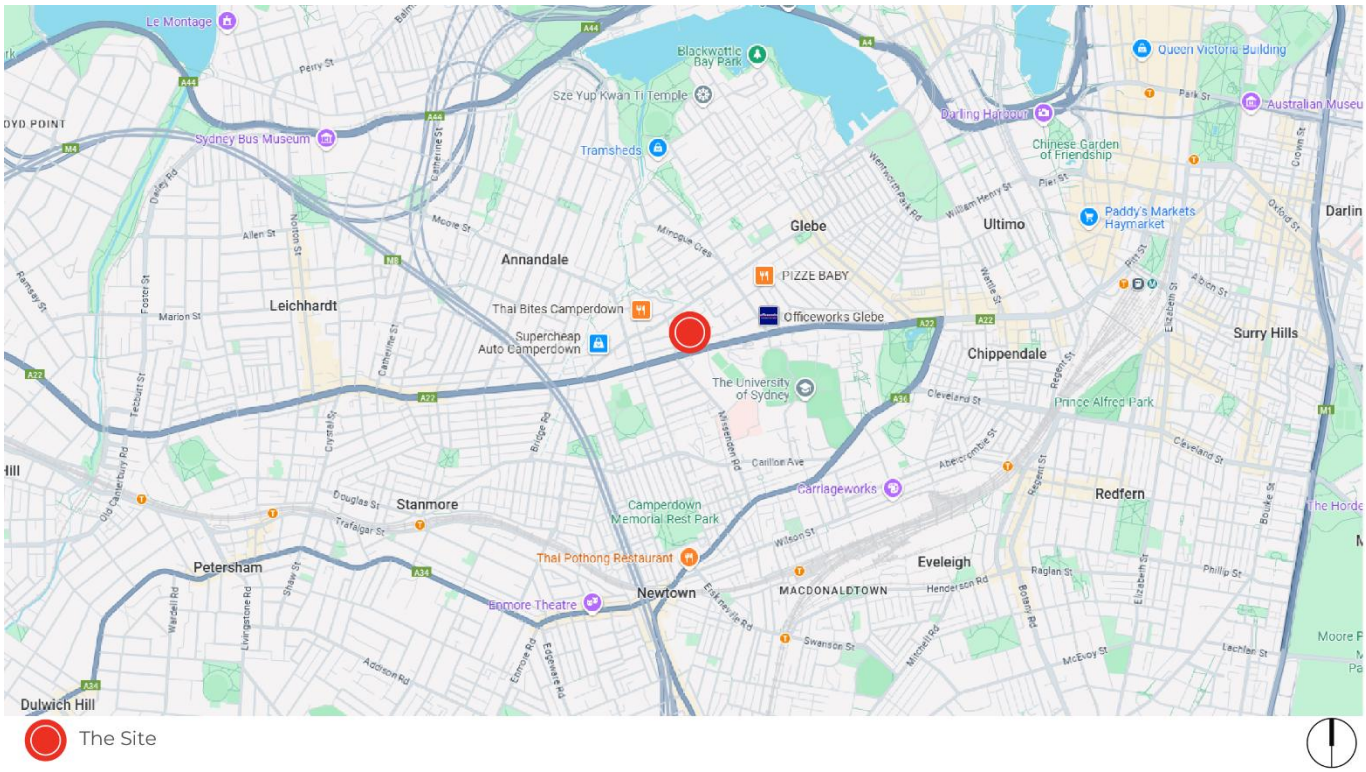


Figure 1 Locational Context

Source: Google Maps, edits by Colliers Urban Planning

3.2 Site Description

The site consists of four lots and is legally described as detailed in **Table 3** below.

Table 3 Lot details

Address	Legal description	Site area	Current Development	Owner
84 Parramatta Road	Lot 1 DP 1216911	839m^2	Veriu Hotel (Serviced Apartments)	Veriu Group Holdings Pty Ltd
88 – 90 Parramatta Road	Lot 1 DP 178634	977m^2	Historical Warehouse	University of Sydney
92 – 94 Parramatta Road	Lot A DP 402925	3,320m^2	University of Sydney Medical Foundation Building	
	Lot 1 DP 965792	1,064m^2		

The site's area is 6,200m^2 and is irregular in shape. The site has an 85-metre street frontage to Parramatta Road and is accessible to pedestrians from this frontage. The Medical Foundation Building at 92-94 Parramatta Road is accessible to vehicles from the Sparkes Street rear entrance to the car park, and the residential apartments at 84 Parramatta Road are accessible to vehicles from a separate rear car park entrance along Sparkes Street. The topography of the subject site is generally flat at 22RL across the ground plane. For further details, refer to the Site Survey at **Appendix C**.

An aerial context map of the site is provided at **Figure 2**.



Figure 2 Site context and aerial map, with indicative lot boundaries shown in white

Source: Nearmap, edits by Colliers Urban Planning

3.3 Existing Development

The site is inclusive of three built forms, which are largely consistent with the adjoining character and building forms on Parramatta Road. 84 Parramatta Road includes a block of serviced apartments operated by Veriu Hotels. 88 Parramatta Road contains a historic warehouse, containing approximately 2,514m^2 of gross floor area (GFA), previously utilised as retail premises. The building is currently vacant and requires structural upgrades. 92-94 Parramatta Road contains the University of Sydney Medical Foundation Building, a three (3) to seven (7) storey research laboratory and office building, with an area of approximately 11,876m^2, including one basement level that accommodates 75 car parking spaces.



Figure 3 Site as viewed from Parramatta Road Frontage

Source: Google Maps

The Heritage Impact Statement prepared by Curio Heritage (**Appendix J**) identifies that the warehouse located at 88-90 Parramatta Road is of local historical significance. The warehouse is a historic, Inter-war warehouse structure that was likely previously used as a showroom to house vehicles in the 1940s, and then as a shop and office space with various tenancies until 2017. The warehouse has been vacant since 2017 and remains vacant at the time of writing.

As part of preliminary engagement, Council has reviewed some of the early heritage assessments undertaken by Curio and have also recommended that the building be retained and adapted and that future detailed design should seek to retain this structure (noting existing condition and structural limitations) due to its historical significance to the local area. This is discussed further at **Section 8.3**.

3.4 Access and Transport

All three built forms on the site are accessible to pedestrians from the northern frontage of the site on Parramatta Road. The Medical Foundation Building is accessible to vehicles through the Sparkes Street entrance to the associated car park, and the Veriu serviced apartments at 84 Parramatta Road are accessible to vehicles via the Sparkes Street entrance to the separate associated car park.



Figure 4 Sparkes Street entrance to the Medical Foundation Buildings car parking

Source: HDR Architects



Figure 5 Sparkes Street entrance to the Veriu serviced apartments car parking

Source: HDR Architects

The site fronts Parramatta Road, also referred to as the Great Western Highway or A22. Parramatta Road offers east-west connections across metropolitan Sydney, connecting the Sydney CBD with Parramatta. The 23km arterial road is subject to PRCUTS, a strategy that aims to improve the current traffic, and noise conditions, as well as improve commercial and business outcomes of tenancies along the corridor.

A bus stop is located 50 metres to the east of the subject site, in the eastern direction of traffic at Parramatta Road at Larkin Street. This bus stop is serviced by eight bus routes inclusive of two-night services, providing the site with connectivity to the Sydney CBD, Central Station, and Bondi Junction. The bus stop opposite the site, at the southern boundary of Parramatta Road at Parramatta Road at Missenden Road, is serviced by eighteen (18) bus routes, traveling west. The bus stop is inclusively serviced by nine (9) night services, two express services and one school service. These bus routes provide accessibility to Burwood Station, Campsie Station, Rozelle, Kogarah Station, Stratfield Station, Dulwich Hill Station, and Tempe.

The site is located 2.5km west of Central Station, the main railway station in Sydney and is serviced by a range of public transport options inclusive of heavy rail train lines, metro, buses, coaches and light rail services. These services offer connectivity across greater Sydney, with regional train lines providing connectivity inter- and intrastate.

3.5 Surrounding Development

The site is located within the Parramatta Road Corridor and the Camperdown-Ultimo Health and Education precinct. The site context is characterised by the adjacent University of Sydney campus, and adjoining mixed use, commercial and residential context.

- **North:** To the north of the site are a diverse range of residential dwellings, inclusive of medium density apartments, serviced apartments, and mixed-use apartments with ground floor retail uses.
- **East:** To the immediate east of the site is a sex service premises at the eastern boundary of the services apartments at 84-86 Parramatta Road. Further east the context is dominated by a range of residential apartments, mixed use apartments, and commercial buildings (refer to **Figure 6**).
- **South:** To the south of the site at the southern boundary of Parramatta Road is the University of Sydney main Camperdown campus (refer to **Figure 7**), inclusive of associated open spaces, private colleges and the Saint Joseph's Catholic Church. To the south-west, at the boundary of Parramatta Road and Missenden Road, there is a petrol station and adjoining food premises (refer to **Figure 8**).

- **West:** To the immediate west the site is bound by a residential apartment block (refer to **Figure 9**), with the western context inclusive of a range of residential uses, ranging from low density terraces to medium density apartments, and mixed use apartments (refer to **Figure 10** and **Figure 11**).



Figure 6 View facing intersection of Larkin Street and Sparkes Street

Source: HDR Architects



Figure 7 View facing south towards the University of Sydney

Source: Google Maps



Figure 8 South-facing view from the site frontage along Parramatta Road

Source: Google Maps



Figure 9 View facing built form at western boundary, from south-west along Parramatta Road

Source: HDR Architects



Figure 10 View to the north-west at Barr Street

Source: HDR Architects



Figure 11 View to the west at Barr Street

Source: HDR Architects

3.5.1 Future Context

There are a variety of proposed developments surrounding the site. **Table 4** includes a summary of future surrounding context as proposed through current development applications.

Table 4 Future Surrounding Context

Ref	Address	DA Number	Description	Status
1	Sydney Biomedical Accelerator - Corner of Western Avenue and Cadigal Lane in Camperdown, 2050. Within University of Sydney and Royal Prince Alfred (RPA) Hospital sites	SSD-55388456	Construction and operation of a biomedical research building and associated infrastructure and public domain works. The Sydney Biomedical Accelerator project will consist of two wings within one complex. The complex will be an 8-storey building inclusive of wet laboratory research spaces, dry research support spaces, a mortuary and advanced anatomy teaching, clinical research facilities, core research facilities and workspaces.	Approved 19/11/2024
2	10 Missenden Road, Camperdown	SSD-79888213	Concept development application for a Private Hospital, comprising a concept proposal for a new private hospital building with ancillary uses, car parking and landscaping works.	Scoping report lodged; SEARs issued 05/03/2025
3	University of Sydney. Corner of Ross Street and Parramatta Road, Camperdown	SSD-57838709	Construction of a new five level multi-disciplinary General Teaching Space building (Ross Street Teaching and Learning Hub) capable of accommodating up to 1,500 students and 30 staff. Works include public domain improvements including plaza, outdoor furniture, pedestrian footpaths, and landscaping.	Approved 17/12/2025
4	Westconnex Dive Site – 160-168 Parramatta Road and 79-95 Pyrmont Bridge Road, Camperdown	SSD-82714716	Concurrent State Significant Development Application and concurrent Planning Proposal to enable a 21-storey mixed-use build-to-rent development that will consist of residential apartments, ground level retail and the delivery of a new public park.	Approved 23/12/2025
5	73-79 Parramatta Road, Camperdown	D/2022/1334	Demolition of two existing commercial buildings and construction of a 7 and 5 storey mixed use development with 2 basement levels for car park. Buildings will include one ground level retail tenancy, and co-living housing for 108 rooms. Lodged with the City of Sydney, with two required contributions.	Approved 30/08/2024
6	122-128 Pyrmont Bridge Road, 130 Pyrmont Bridge Road, 206 Parramatta Road, Annandale	HDA EOI	Concurrent rezoning and SSD for 18-storey mixed use building with 162 dwellings, inclusion of 15% allocation of affordable apartments	Nominated for SSDA declaration
7	99-101 Pyrmont Bridge Road and 190-196 Parramatta Road, Annandale	HDA EOI	Concurrent rezoning and SSD for mixed use building with 99 dwellings in a part 6 storey and part 15 storey building. Inclusion of the provision for affordable housing and serviced apartments	Nominated for SSDA declaration
8	63-77 Pyrmont Bridge Road, Pyrmont	HDA EOI	Concurrent rezoning and SSD for 2 to 3 18-storey mixed use buildings with a total of 180 dwellings. 15% of the provided dwelling stock be allocated as affordable housing	Nominated for SSDA declaration

Renders and images of the future surrounding context are shown in **Figure 12** to **Figure 15** overpage. A visual indication of the uplift near the subject site is provided for the emerging built context at **Figure 16**.



Figure 12 SSD-55388456 USYD & RPA Sydney Biomedical Accelerator Project

Source: Denton Corker Marshall



Figure 13 SSD-79888213 Private Hospital Camperdown

Source: Architectus



Figure 14 SSD-57838709 Ross Street Teaching and Learning Hub

Source: BVN Architecture



Figure 15 D/2022/1334 Mixed use co-living

Source: Mostaghim Architects

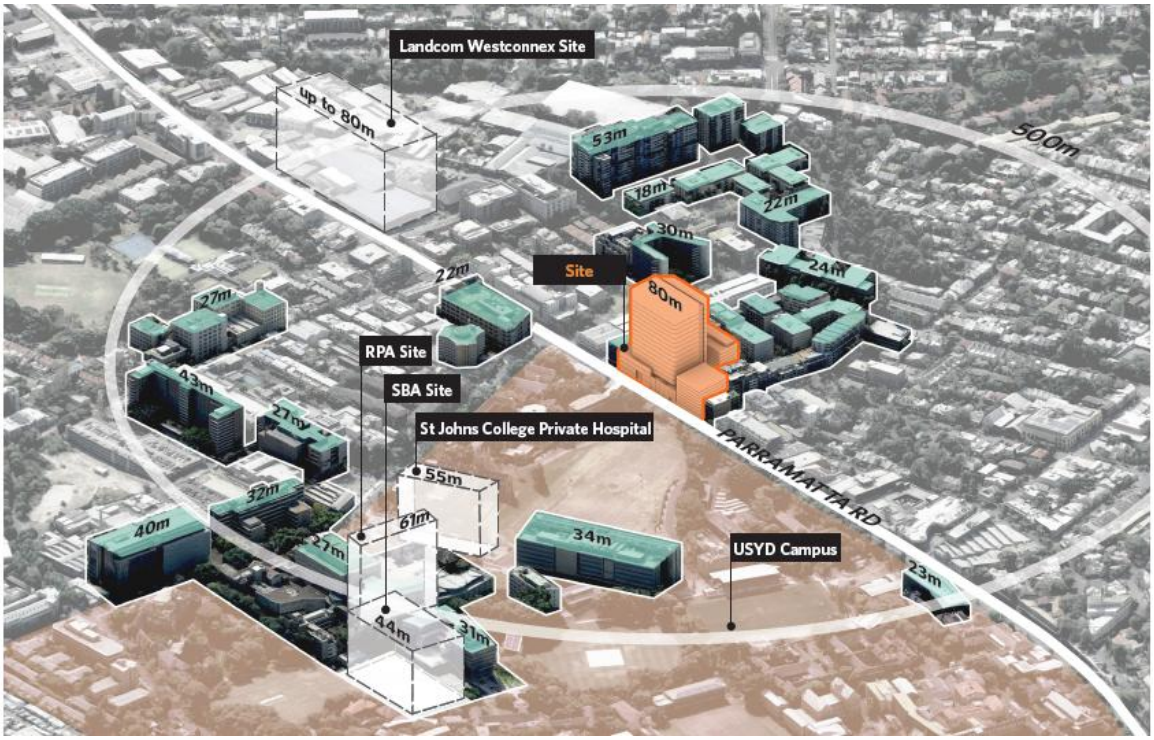


Figure 16 Emerging built form context

Source: HDR Architects and Matthew Pullinger Architect

4.0 Existing Planning Framework

This section outlines the key statutory documentation that apply to the subject site.

4.1 Sydney Local Environmental Plan 2012

The Sydney LEP 2012 is the principal environmental planning instrument applying to the site, providing guidance on a range of environmental planning issues. Key controls are included at **Table 5** below.

Table 5 Sydney LEP 2012 Key Controls

Clause	Provision / Standard	Comment
Principal Planning Controls		
Clause 2.1 – Land use zones	The site is zoned **MU1 Mixed Use**	The MU1 Mixed Use Zone is a largely open zone, permitting a diverse range of uses. Specific to this Planning Proposal, development for the purposes of high technology industry (such as life sciences) are permissible. A range of other ancillary uses are also permissible, such as retail and other commercial premises and a variety of residential typologies, inclusive of serviced apartments.
Clause 4.3 – Height of Buildings	The site is currently subject to a maximum height of buildings of **18m**	

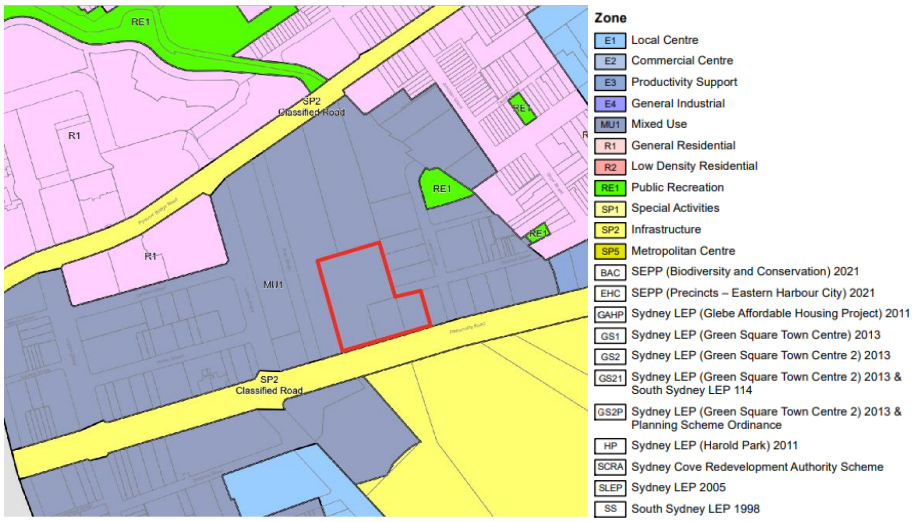


Figure 17 Land Use Zoning Map extract from Sydney LEP 2012

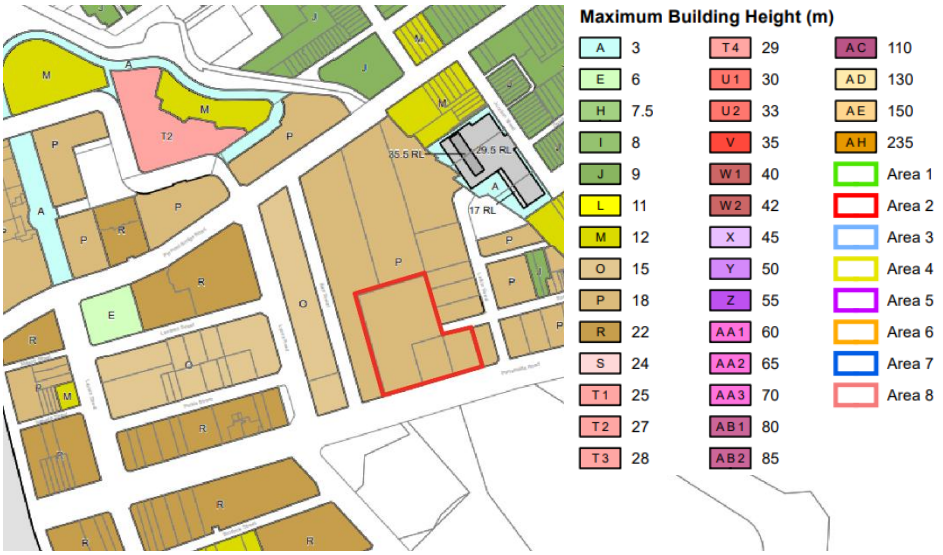
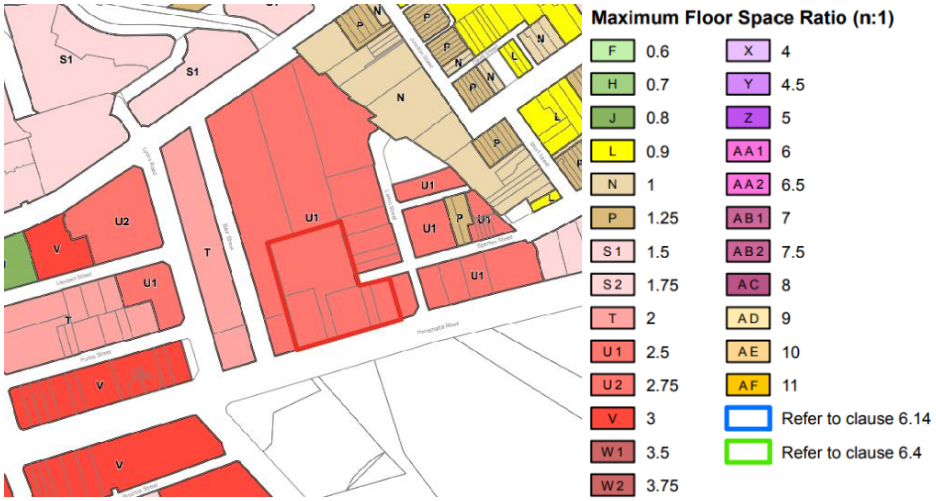
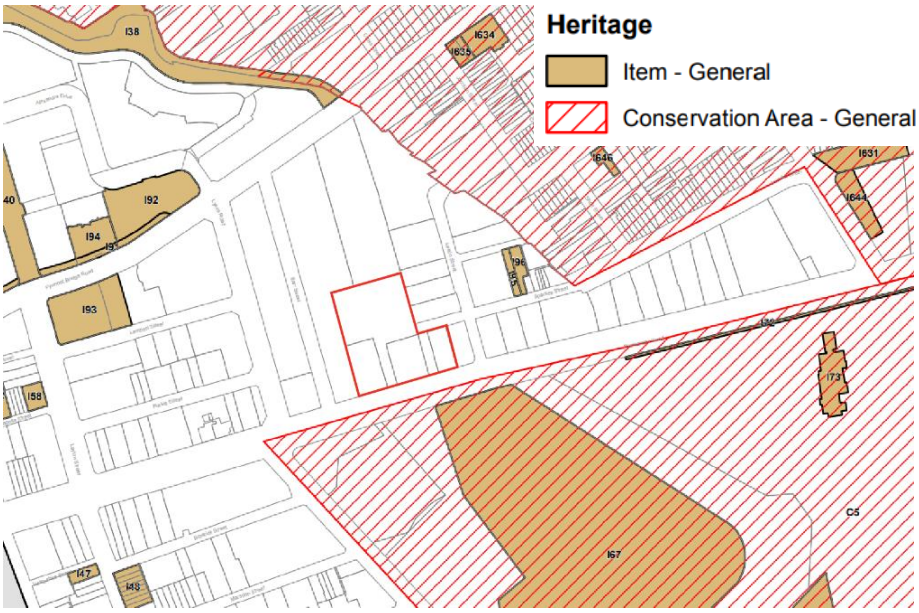


Figure 18 Height of Buildings Map extract from Sydney LEP 2012

Clause	Provision / Standard	Comment
Clause 4.4 – Floor Space Ratio	The site is currently subject to a maximum FSR of **2.5:1**	 *Figure 19 Floor Space Ratio Map extract from Sydney LEP 2012*
Clause 5.10 – Heritage conservation	The site does not contain any heritage items. The site is within the vicinity of land on which a heritage item is located and heritage conservation areas including: • I95 – Terrace house including interior at 12 Sparkes Street • I96 – Terrace house including interior at 14 Sparkes Street • C5 University of Sydney • C33 Hereford and Forest Lodge	Nearby heritage items to the site include Item I95 – Terrace house including interior at 12 Sparkes Street and Item I96 – Terrace house including interior at 14 Sparkes Street. These two houses are located to the east of the subject site. Significant heritage conservation areas near the subject site include C33 Hereford and Forest Lodge to the north-east of the subject site and C5 University of Sydney at the southern boundary of Parramatta Road.  *Figure 20 Heritage Map extract from Sydney LEP 2012*
Clause 5.21 – Flood Planning	Various detailed flood planning provisions which require the consent authority to be satisfied prior to granting	The site is located within the Johnstons Creek Catchment Floodplain Risk Management Plan, as per the City of Sydney website.

Clause	Provision / Standard	Comment
	development consent.	 *Figure 21 1% AEP Design Flood Event* Source: Arup  *Figure 22 PMF Event Design Flood Event* Source: Arup As identified in **Figure 22**, part of the site's street frontage to Parramatta Road and the existing Sparkes Street vehicular entrance is currently likely to be inundated during the PMF event and the built form at 88 Parramatta Road is likely to be partially flood affected. The consent authority will be required to assess if the potential development will be compatible with the flood function and behaviour and not adversely impact flood behaviour or the safe occupation and evacuation of people in the event of a flood. This is discussed further in **Section 8.6.2** and the Flood Risk Assessment (**Appendix K)**.
Part 6 Local Provisions – height and floor space		
Clause 6.13 – End of	Buildings outside of Central Sydney	The intended land use from this Planning Proposal is not commercial premises and as such would be unable to utilise the additional floor space provided by this clause. However,

Clause	Provision / Standard	Comment
Journey Floor Space	for the use of commercial premises is eligible for an amount of additional FSR of 0.3:1 if end of journey facilities are provided.	should any future development on the site be purely commercial in nature, then this clause would be available.
Clause 6.21 – Design excellence	Buildings that are taller than 25m, have an EDC of greater than $100 million, or are required to develop a site specific DCP must demonstrate design excellence.	Development consent must not be granted unless the consent authority considers that the development exhibits design excellence. This provision applies to developments with a height greater than 25m, that have an investment value of greater than $100m or require the preparation of a site specific DCP (Clause 7.20). It is noted that this clause is proposed to be amended as part of Council's *Planning Proposal – Sydney Local Environmental Plans – Policy and Housekeeping Amendments 2023* (Housekeeping PP) to increase this threshold to 35 metres. Development demonstrating design excellence may have up to 10% additional floorspace (including FSR mapped and community infrastructure floorspace). As such, development at the site is required to exhibit design excellence. A Design Excellence Strategy has been prepared by Colliers Urban Planning to support the Planning Proposal and is available at **Appendix E**.
Part 7 Local Provisions – general		
Division 1 Car parking ancillary to other development		
Clause 7.6 – Office premises and business premises Clause 7.7 – Retail premises		The site is located on category D on the Public Transport Accessibility Level Map, and development consent will not be granted to developments that provide beyond the permitted parking maximum indicated. The prescribed parking rate for retail, office, and business land uses in the development will be determined at a future detailed DA stage, as the development does not include a detailed distribution of GFA and FSR for the retail or office and business premises land uses at this Planning Proposal stage. It is noted that parking rates have been calculated at industrial land use rates as per Clause 7.8, see **Section 8.7**, the Traffic Impact Assessment – Life Sciences at **Appendix G**, and the Traffic Impact Assessment – Serviced Apartments at **Appendix H**.
Clause 7.8 – Industry and warehouse or distribution centres	(1) The maximum number of car parking spaces for a building used for the purposes of industry is as follows— **(a) if the building is on land in category D—1 space for each 150 square metres of gross floor**	The site is identified as category D on the Public Transport Accessibility Level Map, and as a result the applicable car parking rate is one space for each 150 square meters of GFA used for the purposes of industry. It is noted that under Clause 7.3 Car parking spaces not to exceed maximum set out in this Division, the required parking provided is a parking maximum. Development consent will not be granted to developments that provide beyond the permitted parking maximum indicated. This has been considered in the calculation of the parking rates, discussed at **Section 8.7**, and **Appendix G**.

Clause	Provision / Standard	Comment
	area of the building used for those purposes	
Clause 7.9 – Other land uses	The maximum number of car parking spaces for serviced apartments is: a) 1 space for every 4 bedrooms up to 100 bedrooms, and b) 1 space for every 5 bedrooms more than 100 bedrooms	The existing car park at 84 Parramatta Road for the serviced apartments contains 28 car parking spaces for the 72 existing bedrooms from 36 x two-bedroom units at the hotel site. Development consent will not be granted to developments that provide beyond the permitted parking maximum indicated, calculated to a maximum of 31 car parking spaces for the serviced apartments. The proposed uplift enables the future development of additional bedrooms; however the clause dictates a parking maximum, which the development continues to comply with as the proposal does not seek to increase the car parking rates for the serviced apartments at 84 Parramatta Road. The parking rates are discussed at further detail at **Section 8.7** and **Appendix H**.
Division 3 Affordable housing		
Clause 7.13 – Contribution for purpose of affordable housing	Applicable to a new building with a GFA greater than 200sqm on residual land. The consent requires an affordable housing levy contribution for 3% of the total FSR of the development for residential purposes, and 1% of the total FSR for non-residential purposes. This contribution may be either development or monetary.	This clause requires the Proponent to make an affordable housing levy contribution at the equivalence of 1% of the total floor area of any future non-residential development, and 3% of any future residential development. This contribution will be made by way of a monetary contribution to Council, as agreed upon. For further detail see the Public Benefit Offer at **Appendix F**. As advised by Council, for the purposes of development contributions, the serviced apartments on the site are classified as non-residential land uses as 'tourist and visitor accommodation'.
Division 3 Miscellaneous		
Clause 7.14 – Acid Sulfate Soils	Under the Acid Sulfate Soils Map the site is	Noted. This will be considered in greater detail as part of any future detailed development on the site.

Clause	Provision / Standard	Comment
	classified as **Class 5**.	
Clause 7.16 – Airspace operations	Developments that penetrate the Limitation or Operations Surface Map must consult with the relevant Commonwealth body	The site is identified within the 90-100 RL contour in the Sydney Airport Prescribed Airspace Obstacle Limitation Surfaces (OLS) Map. As per the Site Survey provided at **Appendix C** the RL of the ground plane across the site is approximately 22m RL. A discussion of the proposed maximum height as part of this Planning Proposal and the potential implication for the OLS is provided at **Section 8.13**.
Clause 7.17 – Development in areas subject to aircraft noise	Development within the ANEF 20 contour line must consider the impacts of aircraft noise.	Noted. The site is located outside of the ANEF 20 boundary.
Clause 7.20 – Development requiring or authorising preparation of a development control plan	A DCP or Concept DA that provides for the relevant matters is required to be prepared.	A site specific DCP has been prepared concurrently with this Planning Proposal and is made available at **Appendix D**. A discussion of the proposed controls is provided at **Section 6.3**.
Clause 7.28 – Serviced apartments	Serviced apartments must provide the same level of amenity as residential flat buildings and must follow the design principles of residential apartment development within the *State Environmental Planning Policy (Housing) 2021,* and the Apartment Design Guide	The proposed uplift for additional serviced apartments at 84 Parramatta Road must demonstrate that compliance with the ADG, to ensure a high standard of amenity should the apartments be converted to non-serviced apartments residential accommodation in the future. The impacts required to be considered include impacts of the proposed tower massing for life sciences purposes on the proposed additional serviced apartments, most notably overshadowing concerns. ADG requirements have been generally considered in the development of the building envelope, as discussed at **Section 5.3.5.** The envelope of the development across the site has been specifically designed to minimise overshadowing to future serviced apartments uplift. Detailed compliance of the proposed uplifted serviced apartments with the ADG will be addressed at a future detailed design stage. For additional details see the Urban Design Report at **Appendix A**.

4.2 Sydney Development Control Plan 2012

The Sydney DCP 2012 provides additional detailed design guidance which builds upon the provisions of the Sydney LEP 2012. The following Clauses have been identified within the Planning Proposal Lodgement Checklist provided to the proponent by Council and are discussed in **Table 6** below.

Table 6 Key Sydney DCP 2012 controls

Provision	Planning Control
Section 2: Locality Statements	
2.3.4 Camperdown locality	Camperdown is to continue its transformation from industrial uses to a vibrant high density mixed–use neighbourhood. Missenden Road is encouraged to support the centre emerging near Parramatta Road and further retail activity along Missenden Road. East–west links are encouraged through the hospital site and University to create a route between Camperdown Park and Victoria Park. Development must achieve and satisfy the outcomes expressed in the character statement and supporting principles outlined below: a) Development must achieve and satisfy the outcomes expressed in the character statement and supporting principles. b) Encourage through-site links with the development of the Royal Prince Alfred Hospital campus, the Department of Housing site on Bridge Road and the University Nursing Faculty on Mallett Street. c) Development of industrial uses north of Parramatta Road are to provide public benefit such as open space, pedestrian and bike connections and adequate on–site parking for new development. d) Ensure high quality design on gateway sites at the corner of Parramatta Road and Missenden Road. e) Encourage active uses on the ground floor of buildings facing Parramatta Road. f) Require active uses on the ground floor of buildings and diverse uses above the ground floor of buildings on Parramatta Road. The proposed development considered as part of this Planning Proposal has taken into consideration the intended desired future character of Camperdown and has incorporated this into the proposal.
Section 3: General Provisions	
3.1 Public Domain Elements	Provisions to ensure that development makes a positive contribution to the public domain. The proposal considered in this Planning Proposal has considered this control, as discussed at **Section 5.33** and **Section 8.1,** and incorporated into the indicative design scheme in the Urban Design Report, available at **Appendix A**
3.1.5 Public art	Outlines conceptual public art strategy considerations to guide the future design excellence provisions and detailed design of sites. Refer to Preliminary Public Art Plan at **Appendix M**.
3.2 Defining the Public Domain	This provision provides controls relating to the improvement of the public domain through private development, including protection of sunlight to public spaces, public views, active frontages and ensuring buildings suitably address and engage with the public domain. This Planning Proposal has been prepared with consideration of its address to the public domain. This is discussed further at **Section 5.3.6** and **Appendix F**.
3.3. Design Excellence and Competitive Design Processes	Details objectives and provisions to guide design excellence and fine grain urban form in significant development.

Provision	Planning Control
	A Design Excellence Strategy has been prepared to support the Planning Proposal available at **Appendix E**.
3.3.7 Public art	Requirement for the preparation of a public art strategy that accords with Council's Guidelines for Public Art in Private Development to inform the competitive design process, at a future stage. Refer to Preliminary Public Art Plan at **Appendix M**.
3.6 Ecologically Sustainable Development	ESD and sustainability provisions apply to the Planning Proposal as these controls relate to all new developments. Conceptual ESD considerations are presented at **Section 8.10** of this Planning Proposal
3.7 Water and Flood Management	Details objectives and provisions to manage adherence with water and flood management practices. Water and flood management requirements are assessed at the Flood Risk Assessment (**Appendix K**) and Water Cycle and Stormwater Management (**Appendix Q**).
3.9 Heritage	Development affecting a heritage item must be designed and sited to protect the heritage significance of the item with minimising the extent of change to significant fabric, elements or spaces. New development should enhance the heritage item, and any alterations or additions must be designed to respect and complement the heritage items. See Heritage Impact Statement at **Appendix J** for further detail.
3.11 Transport and Parking	Parking provided on site is required to comply with the relevant clauses within the Sydney LEP 2012, as well as further detailed requirements in this chapter of the Sydney DCP 2012 relating to loading, and bicycle parking and end of trip facilities. The parking rates and requirements apply to the proposed life sciences development and the proposed uplift for 84 Parramatta Road serviced apartments. Refer to **Section 8.7** of this report for further consideration, and the Traffic Impact Assessment – Life Sciences at **Appendix G**, and the Traffic Impact Assessment – Serviced Apartments at **Appendix H**.
Section 4 Development Types	
4.2 Residential Flat, Non-Residential and Mixed Use Developments	Residential development inclusive of serviced apartments, are required to have a level of amenity considering solar access, acoustic privacy, and waste and recycling management. Refer to **Section 8.5** of this report for further detail of amenity levels at the serviced apartments uplift.
4.4.8 Visitor accommodation	The section provides objectives and provisions as relevant to additions and alterations to existing visitor accommodation, inclusive of serviced apartments. The section details the requirements for health and amenity of the serviced apartments to meet a high standard to ensure that any future conversion to residential flats is not comprised by poor amenity. Refer to **Section 8.5** of this report for further detail of amenity levels at the serviced apartments uplift.
Schedules	
7.8 Required parking spaces and design	The section details the rates and design requirements for parking at residential accommodation inclusive of serviced apartments. Refer to **Section 8.7** of this report for further consideration, and the Traffic Impact Assessment – Life Sciences at **Appendix G**, and the Traffic Impact Assessment – Serviced Apartments at **Appendix H**.

It is noted that a Site Specific DCP has been developed for the Planning Proposal and is accessible at **Appendix D**.

5.0 Proposed Development Opportunity

The site provides a latent opportunity to provide additional research space and significant public benefits within Central Sydney. This section outlines the proposed planning envelope and describes an indicative reference scheme that can deliver a life sciences research tower within the proposed envelope. This section additionally outlines the proposed uplift at 84 Parramatta Road (Veriu serviced apartments site), outlining that design considerations such as compliance with the ADG can be achieved within the proposed building envelope. Included within this section is a discussion of the background analysis completed by the design team to identify the proposed envelope, including consideration of the planning framework as set out in **Section 4.0** above.

5.1 Site Considerations

In undertaking a review of the site's development potential, key site opportunities and considerations have been identified that shape the proposed redevelopment. These opportunities and considerations have contributed to shaping a building envelope, and ultimately the proposed amendments to both the Sydney LEP 2012 and Sydney DCP 2012, which will guide the future redevelopment outcome.

The proposed planning envelope embeds fundamental urban design considerations identified by HDR Architects and Matthew Pullinger Architect as part of the Urban Design Report (**Appendix A**) to ensure that future development is bound by considered massing limitations. Key issues of sensitive placement of building mass, minimising overshadowing of neighbouring properties, and appropriate boundary setbacks are embedded into the proposed envelope.

The proposed building envelope design has generally considered potential amenity impacts on the serviced apartments uplift at 84 Parramatta Road (Veriu Hotels). This has been developed noting that the Sydney LEP 2012 and Sydney DCP 2012 require a high level of amenity to ensure that any future conversion to residential accommodation is not compromised and that all serviced apartments are required to comply with the ADG. Furthermore, the impacts of the proposed uplifted building envelope at 84 Parramatta Road on the ability of neighbouring residential apartments to comply with the ADG have been considered. In doing so, the Planning Proposal facilitates a built form that provides research generating floorspace and ensures the delivery of a quality-built form outcome. These key considerations identified by HDR Architects and Matthew Pullinger Architect are shown in **Figure 23**.

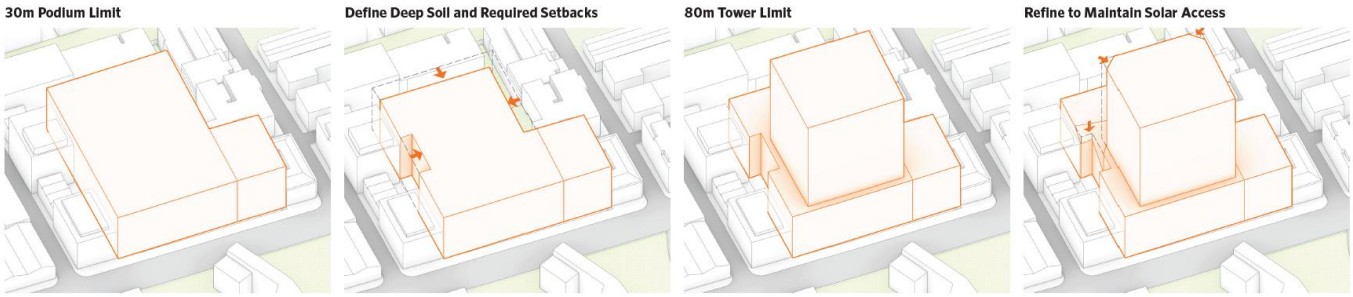


Figure 23 Key considerations for defining the envelope

Source: HDR Architects and Matthew Pullinger Architect

5.2 Proposed Planning Envelope

The proposed envelope strikes a balance between preserving the amenity of the surrounding precinct and maximising the opportunity to deliver significant life sciences and ancillary floor space in the heart of the Tech Central precinct. The envelope will enable the future building to make a positive contribution to the evolving urban nature of Camperdown, whilst respecting the historical character of Parramatta Road and surrounds.

The proposed envelope is outlined below and set out in the Urban Design Report at **Appendix A**.

The proposed envelope will be facilitated by amendments to the Sydney LEP 2012 (floor space and height), providing a new podium and tower form with considered setbacks and chamfering for adjoining residential amenity, both within, and surrounding the site. The envelope will ensure the feasible construction of a tower with an overall height of 80 metres (RL 101.750) and a stepped podium height of RL 30.750 to RL 51.750 to align with adjoining buildings on Larkin Street.

5.2.1 Podium Envelope

The podium envelope has been informed by the site's surrounding built form context which offers a variety of cues for a contextual design outcome. The building envelope adopts a traditional podium design with setback conditions that allow for appropriate building separation to buildings to the east, west and north.

The podium envelope extends to a maximum height of 30 metres (RL 51.750), largely across the site. The podium steps down to 9 metres (RL 30.750) on the northeastern edge of the site. The proposed podium is inclusive of the serviced apartments uplift at 84 Parramatta Road to ensure consistency of built form across the site and to the neighbouring western properties. This stepped podium height is designed to integrate an appropriately scaled podium that aligns with the existing urban condition surrounding the site and limiting amenity impacts (particularly solar access) for neighbouring residential development and for the serviced apartments at 84 Parramatta Road.

A large sloping notch is proposed to the western side of the podium, defined by a solar access cut that is identified as being required to be complied with to protect solar access to adjoining residential apartments.

This podium extends across the majority of the site; however, it is noted that the maximum FSR control proposed (discussed at **Section 6.0**) will not enable this podium envelope to be built in its entirety. Instead, this broad podium envelope is designed to enable a range of design outcomes through future design excellence processes.

An axonometric of the envelope is provided at **Figure 24.** The podium extent is shown in lighter blue.

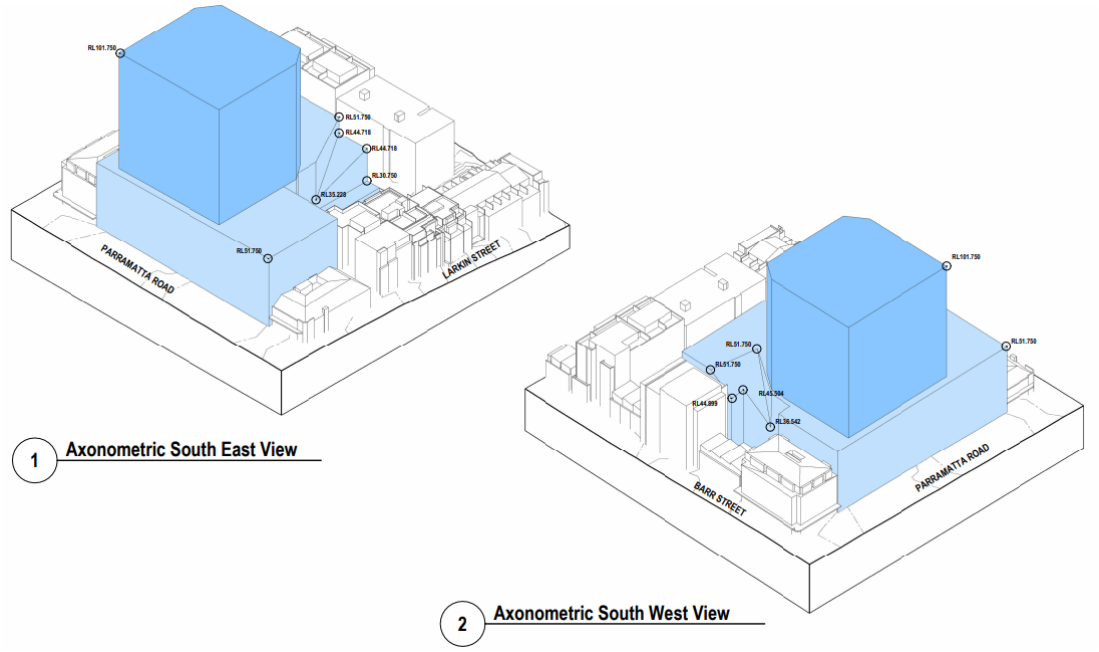


Figure 24 Building Envelope – Podium and Tower Plan

Source: HDR Architects and Matthew Pullinger Architect

5.2.2 Tower Envelope

The proposed tower envelope was developed following consultation with the DAP and Council, as outlined in **Section 1.0**. The proposed tower envelope reflects a regular and flexible form extending to a maximum height of 80m (RL 101.750).

The tower has been setback to maintain legibility and conserve the roof form of the Inter-war warehouse building from Parramatta Road. The northwestern and eastern corners of the tower have been chamfered to protect solar access to the existing adjoining residential development to the east and west of the site. The impact of the tower envelope on the proposed serviced apartments uplift at 84 Parramatta Road has been considered, see **Section 5.3.5** for further details. The tower envelope has been purposely designed to ensure maximum flexibility and the indicative reference scheme outlined in **Section 5.3** that demonstrates one development outcome of an appropriate scale.

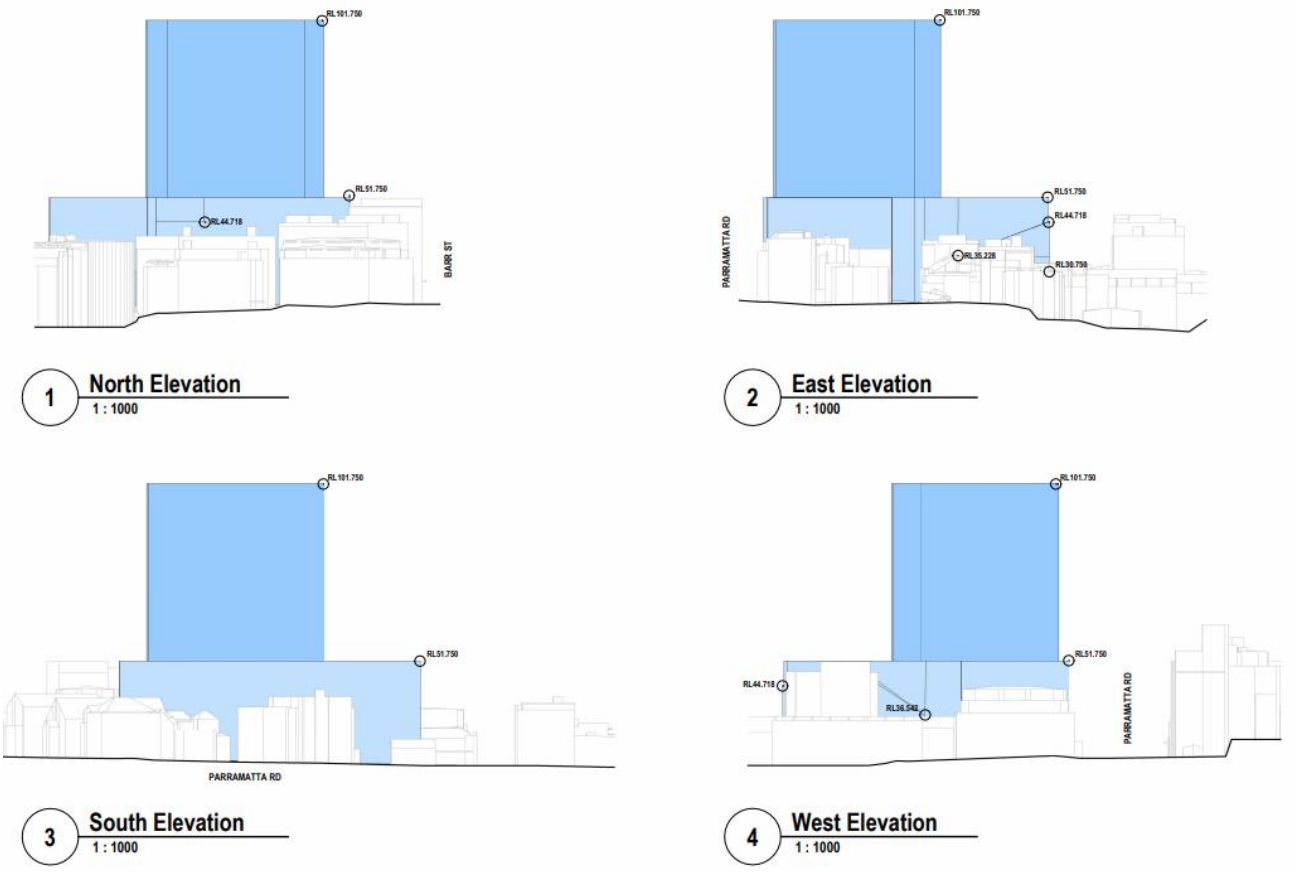


Figure 25 Building Envelope - Elevations

Source: HDR Architects and Matthew Pullinger Architect

5.3 Indicative Reference Design

HDR Architects and Matthew Pullinger Architect have developed an indicative reference design, demonstrating a 'proof of concept' for the site to support the proposed envelope, and the new amendments to the Sydney LEP 2012 and Sydney DCP 2012. The indicative reference design that has been designed to be fully compliant with the proposed planning envelope is illustrated in **Figure 26**.

Further details regarding the development outcome capable of being supported through the proposed amendments is provided within **Appendix A**, including select architectural drawings of reference design, an area schedule and rendered montages of the one potential design outcome within the planning envelope.

This is a reference design only, as the detailed design will be subject to a competitive design process and a subsequent detailed development consent process.

Broadly, the reference design illustrates that the amendments to the Sydney LEP 2012 and Sydney DCP 2012 are capable of supporting the delivery of a 14-storey mixed use life sciences building and uplift at 84 Parramatta Road serviced apartments accommodating:

- 88-90, 92-94 Parramatta Road:
  - Three basement levels, comprising 185 car parking spaces (maximum Sydney LEP 2012 rate), end-of-trip facilities and loading facilities.
  - Ground level retail tenancies, science on display and new pedestrian-only through-site link through to the tower lobby and northern block.
  - Approximately 34,332m^2 of life sciences and ancillary GFA, inclusive of 27,685m^2 of Life Science GFA in the tower block and 6,647m^2 of Life Science GFA in the office block.
  - Podium landscaped rooftops for use by future tenants.
- 84 Parramatta Road:
  - Three (3) additional serviced apartment storeys to the existing six (6) storey building.
  - Approximately of 1,350m^2 additional serviced apartments GFA to add to the existing 2,635m^2 for a total of 3,985m^2 GFA of serviced apartments.



Figure 26 Render of the indicative reference scheme

Source: Doug and Wolf, HDR Architects and Matthew Pullinger Architecture

5.3.1 Key Design Principles

Several planning and design principles were established for the site taking into consideration the site-specific opportunities and constraints, including but not limited to, locational attributes, surrounding built form context, strategic planning policy context, and assessment/ key matters raised. These principles were then used to guide and inform how the site may be redeveloped in the future under the proposed planning controls. The key design principles and opportunities that have informed the Planning Proposal and reference scheme include (see **Figure 27**):

- **Positively Address Parramatta Road:** Respond to grain and scale of Parramatta Rd street-wall; acknowledge, adapt and reuse existing warehouse; and present science and learning to wider public.
- **Create Open Spaces, New Arcade and Laneway Network:** Improve site porosity, provide deep soil and building separation to northern boundary, introduce planting and landscape and support the transformation of Parramatta Rd boulevard.
- **Diversity of Use:** Introduce activating uses, support a mix of site users and extend hours of utilisation and activation.
- **Be a responsible Neighbour:** Minimise shadowing impacts upon neighbouring apartments, provide improved building separations to the north and provide deep soil along northern boundary.
- **Foster Innovation & Collaboration:** Create vertical and horizontal integration and efficiencies to support the life sciences use, and spaces for the exchange of ideas and learning.
- **Strategies for Connecting with Country:** Celebrate the site as a place of knowledge and learning, interpret the original walking track between Sydney and Parramatta and improve ecological function, deep soil, tree canopy and water cycle management.

The key public benefits of the reference scheme are outlined below:

- New public laneway connecting Sparkes Street and Paramatta Road.
- New landscaped zone to the northern boundary which provides a setback to the northern neighbours.
- New public connection through the ground plane of existing warehouse, integrating with the internal laneway network.

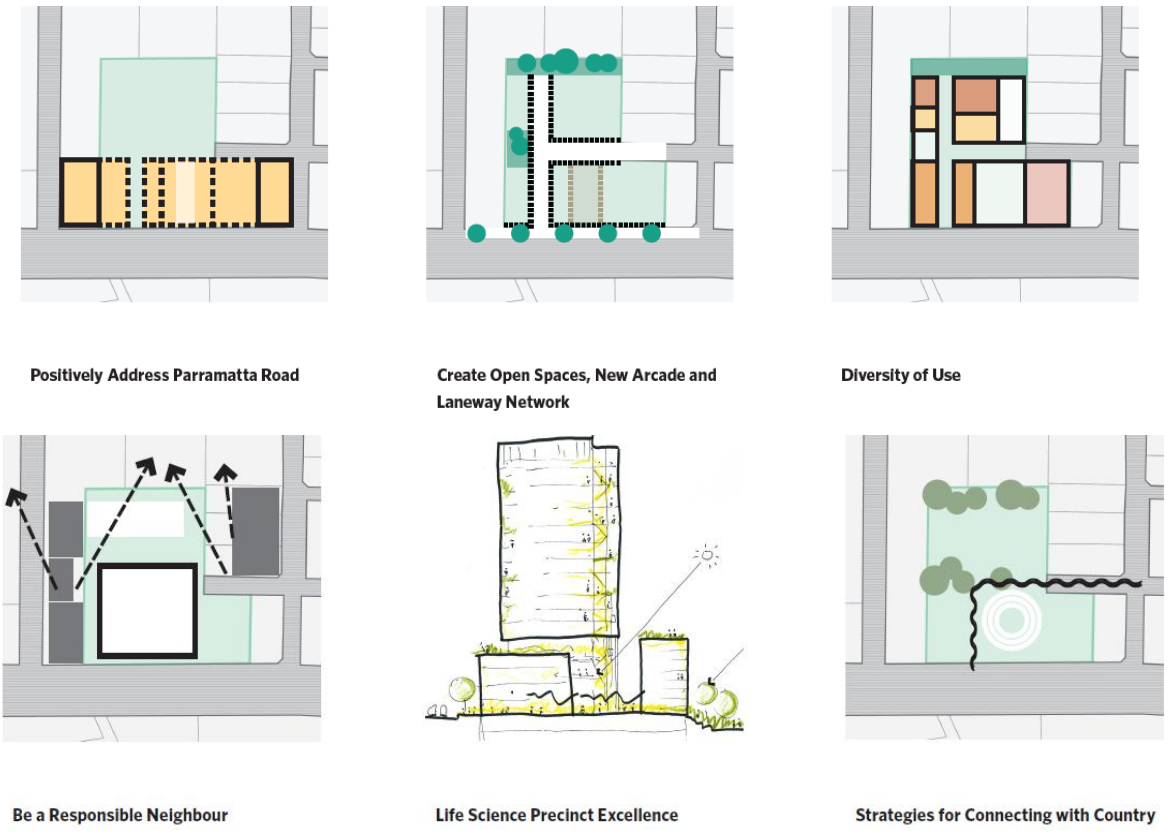


Figure 27 Key design principles informing the proposed envelope

Source: HDR Architects and Matthew Pullinger Architecture

5.3.2 Basement Design

The reference design provides for three levels of basement, containing the following:

- Basement entry provided from Sparkes Street.
- Loading dock on Basement Level 1, containing five loading bays suitable for vehicles consistent with life sciences uses.
- 185 parking spaces spread across Basement Level 2 and 3, consistent with the maximum amount of carparking permissible for the variety of uses considered in the reference scheme.
- Bicycle parking and end of trip facilities, compliant with the amount considered under the Sydney DCP 2012.
- Provision for 10 electric vehicle charging stations.
- Retention of existing serviced apartment basement, with minor reconfiguration to incorporate additional waste capacity

Figure 28 to **Figure 30** below show the proposed basement layout under the indicative reference scheme.

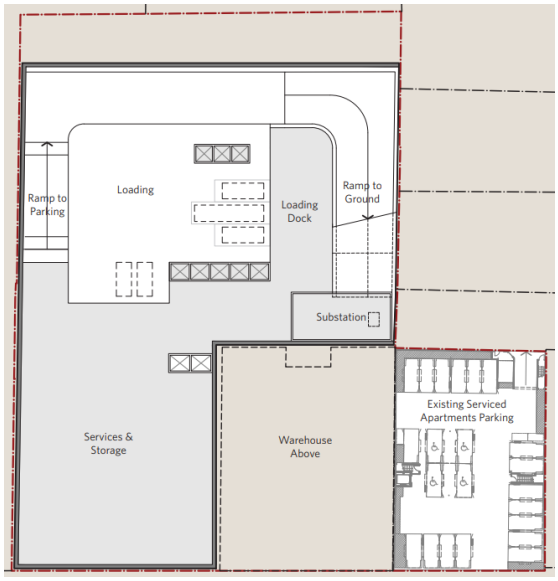


Figure 28 Proposed basement 1 design layout

Source: HDR Architects and Matthew Pullinger Architect

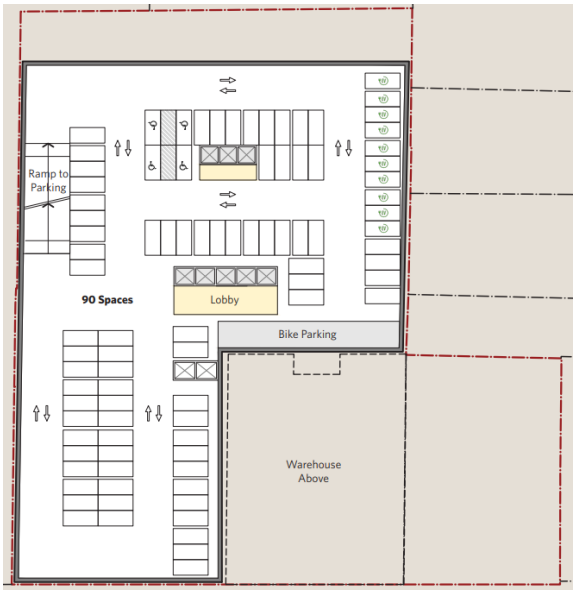


Figure 29 Proposed basement 2 design layout

Source: HDR Architects and Matthew Pullinger Architect

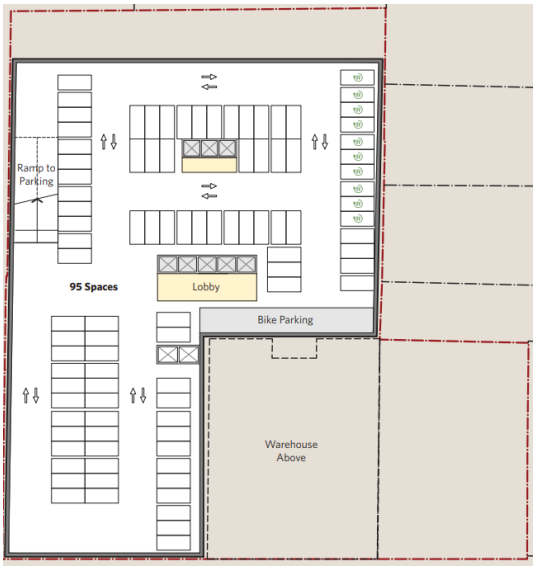


Figure 30 Proposed basement 3 design layout

Source: HDR Architects and Matthew Pullinger Architect

5.3.3 Ground Plane and Podium

The podium of the reference scheme is between three and nine storeys in height along Parramatta Road, including the retained warehouse building at 88-90 Parramatta Road. The reference then proposes another podium level building in the northern portion of the site with a height of eight storeys.

The ground plane and podium design of the reference scheme is described in the following section in more detail.

Retention of Existing Buildings

As part of the reference scheme, the warehouse building at 88-90 Parramatta Road is proposed to be retained due to its historical significance as a rare surviving example of an Interwar motor-car showroom, a building type once common along Parramatta Road but now largely lost or altered. The Planning Proposal will seek to require the adaptive re-use (subject to structural limitations) and sympathetic integration of the warehouse within the wider development.

The reference scheme therefore retains the warehouse form, façade and structural grid, and proposes to open the floorplates to act as an entrance lobby for the life science tower. In this space, 'science on display' will provide visible and interactive research that the public can engage in. See **Figure 31** below for location of existing building to be retained.

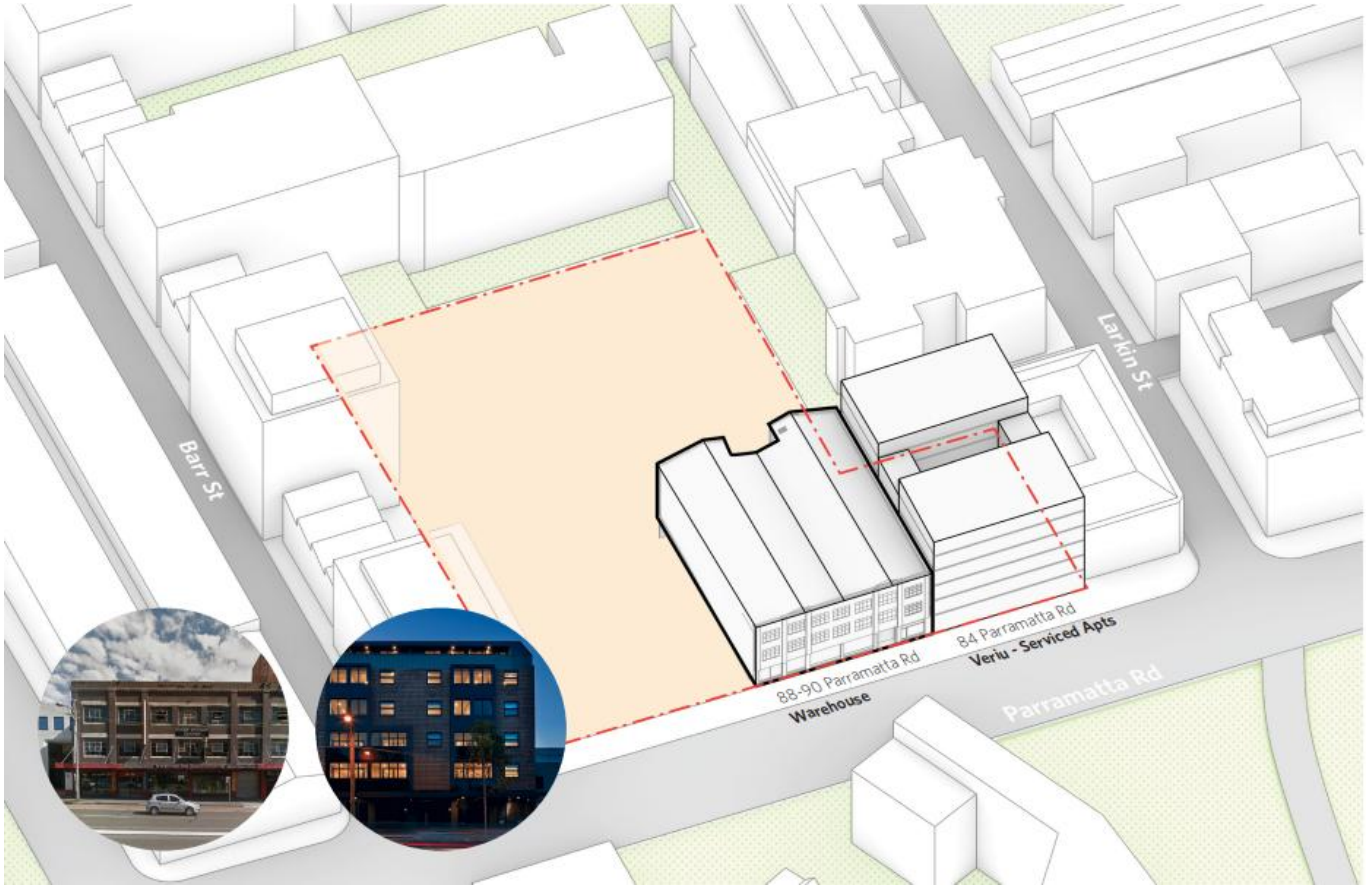


Figure 31 Existing buildings to be retained

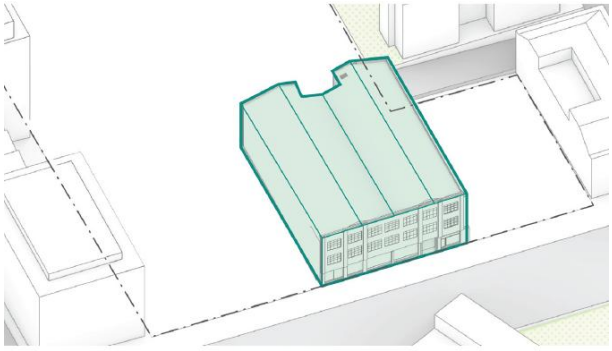
Source: HDR Architects and Matthew Pullinger Architecture

The retention of the warehouse building and design of the new proposal for the warehouse scheme was based upon the following principles (see **Figure 32**):

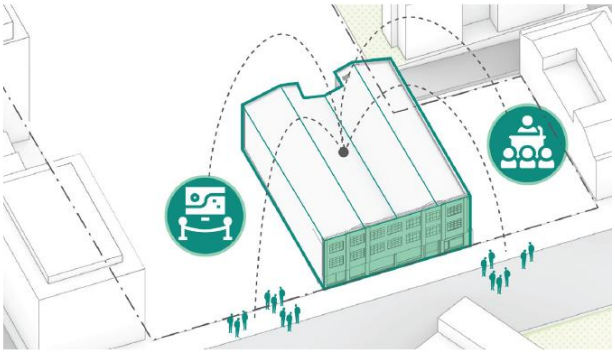
- **Retain and Adapt** - Preserve the building's overall volume, street-facing façade, and internal spatial character, adapting it for contemporary use within the life sciences precinct.
- **Prioritise Heritage Interpretation** - Utilise the building for public-facing uses - such as exhibitions or conferences- to celebrate and interpret its historical architectural significance.
- **Respect Visual Curtilage** - Set back any new tower elements to conserve the roof form and maintain legibility of the Inter-war building from Parramatta Road and key view corridors, where possible.

- **Minimise Physical Intervention** - Locate structural supports in the eastern and western zones to avoid impact to significant interiors, and concrete demolition/adaptive reuse in key existing modified areas for services and access, where possible.
- **Enhance Natural Light and Ventilation** - Retain original northern and southern windows at upper levels to support both heritage values and environmental performance objectives.
- **Activate the Ground Plane** - Reconfigure the altered ground floor to provide a pedestrian link and a welcoming public interface while allowing for adaptive reuse of original circulation elements.

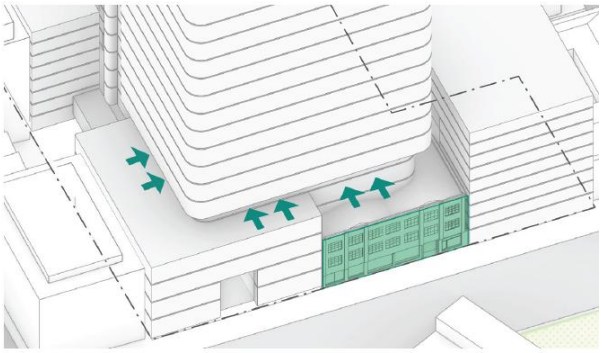
In addition to the warehouse at 88-90 Parramatta Road, the Veriu building at 84 Parramatta Road is proposed to be retained within the indicative reference scheme, with an additional three levels added on top. The existing structure has been designed with capacity for future additional levels. Extending the existing building helps reduce embodied carbon by avoiding demolition and making use of existing structures and services. This approach supports more sustainable development, whilst including much needed residential accommodation to support the precinct, whilst facilitating uplift that supports the life sciences and other health uses in the Camperdown-Ultimo Health and Education precinct.



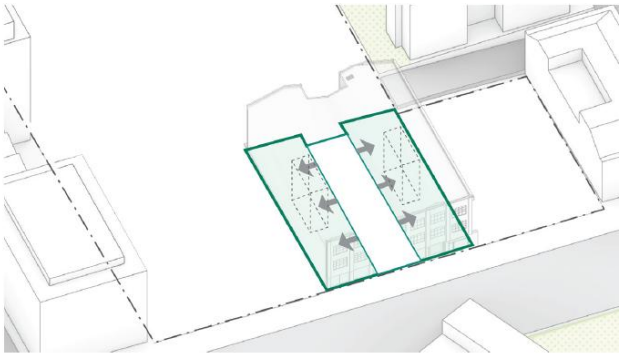
Retain and Adapt



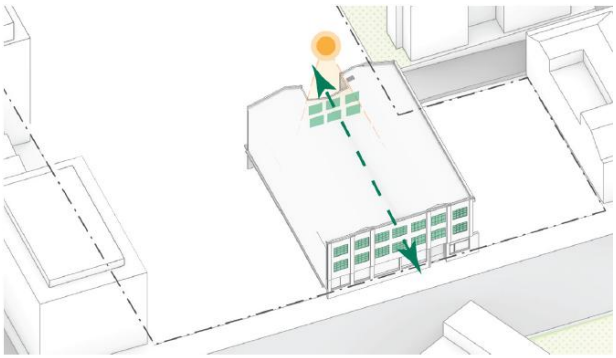
Prioritise Heritage Interpretation



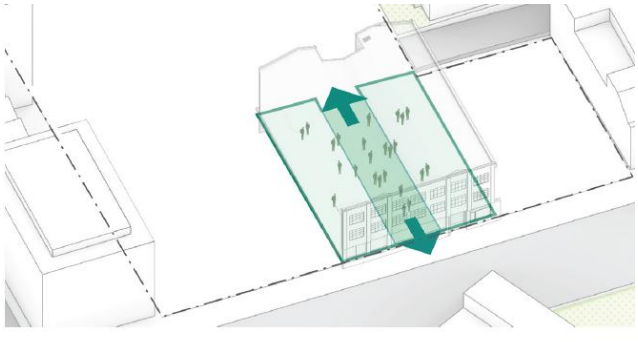
Respect Visual Curtilage



Minimise Physical Intervention



Enhance Natural Light and Ventilation



Activate the Ground Plane

Figure 32 Heritage design principles

Source: HDR Architects and Matthew Pullinger Architecture

Public Domain & Site Permeability

Street frontages to the site consist of the primary frontage to Parramatta Rd and a secondary connection where Sparkes Street terminates at the eastern boundary. The indicative reference scheme seeks a continuation of the public domain of Sparkes Street with a new laneway proposed to provide site permeability connecting Sparkes Street through to Parramatta Road. Sparkes Street is also proposed to provide service and vehicular access to the basement levels.

Along the northern boundary, a zone of deep soil landscaping is proposed, facilitated by the northern podium setback proposed as part of the building envelope that is greater than the current arrangement. This deep soil zone provides an opportunity to provide a deeper landscape buffer to the residents to the north, as well as a breakout space for future tenants. This landscaped area also provides a terminus to an additional north south laneway from Parramatta Road through to the heart of the site and tower lobby.

Stitched into the public domain will be a public connection through the ground plane of the existing warehouse, integrating this with the internal laneway network. A diagram of the laneways and access points to the site is shown in **Figure 33**.

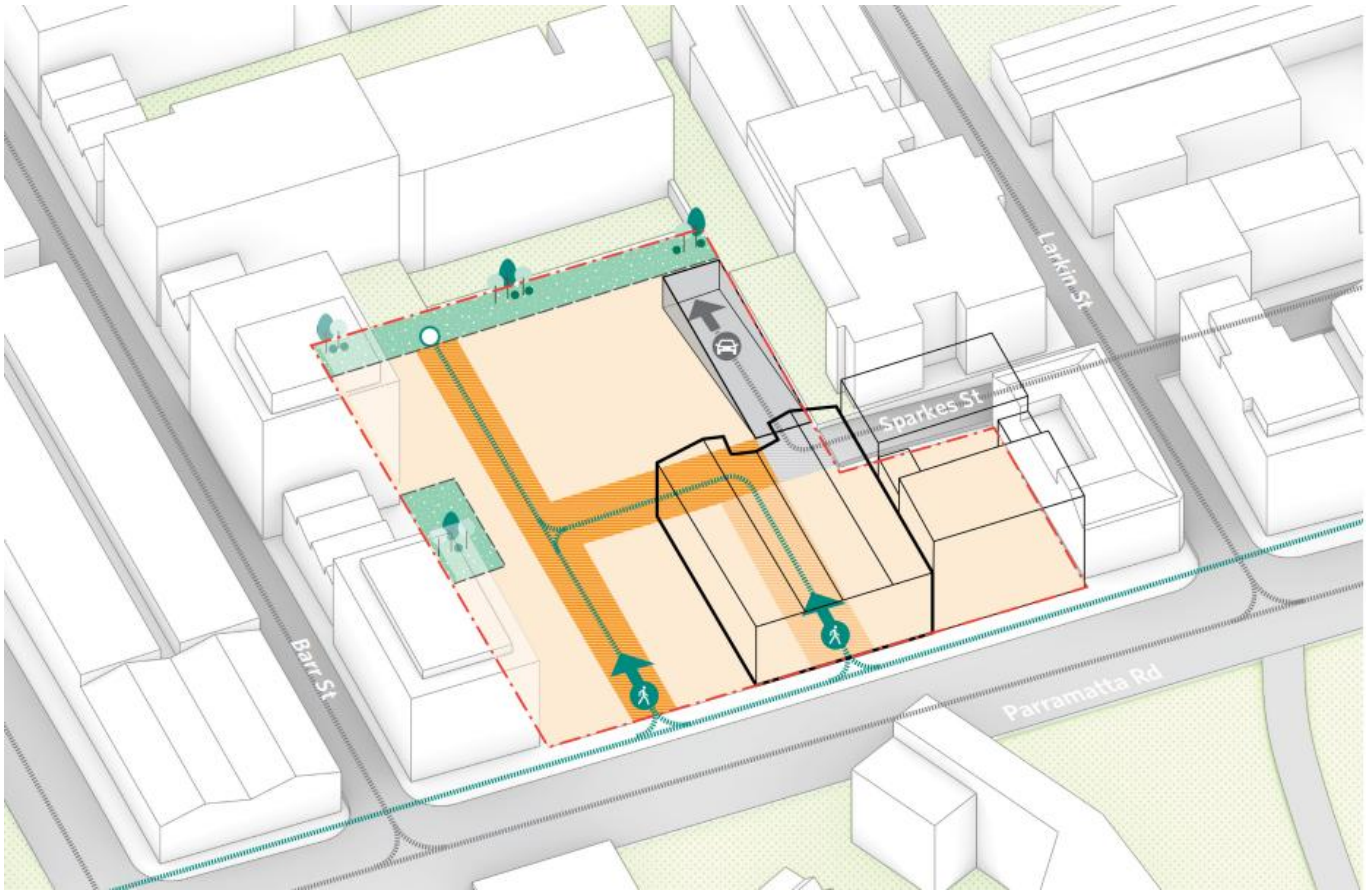


Figure 33 Reference Design Site Permeability Plan

Source: HDR Architects and Matthew Pullinger Architect

Street Wall Form

The podium form along the main street frontage of the site, Parramatta Road, varies between four and nine storeys in height. Taking reference from the existing street character to the east and west of the site, the reference scheme seeks to continue the rhythm of the street wall grain, expressing the frontage as a series of three distinct forms, each with varying heights. Specifically, the western most portion of the Parramatta Road fronting podium matches the height of the adjacent residential building to the west. The middle portion retains the existing form and scale of the existing warehouse, whilst the Veriu building at 84 Parramatta Road is the tallest part of the podium, providing a distinct variety in height that is consistent with the varying topology across Parramatta Road.

The proposed street wall form is shown at **Figure 34**.

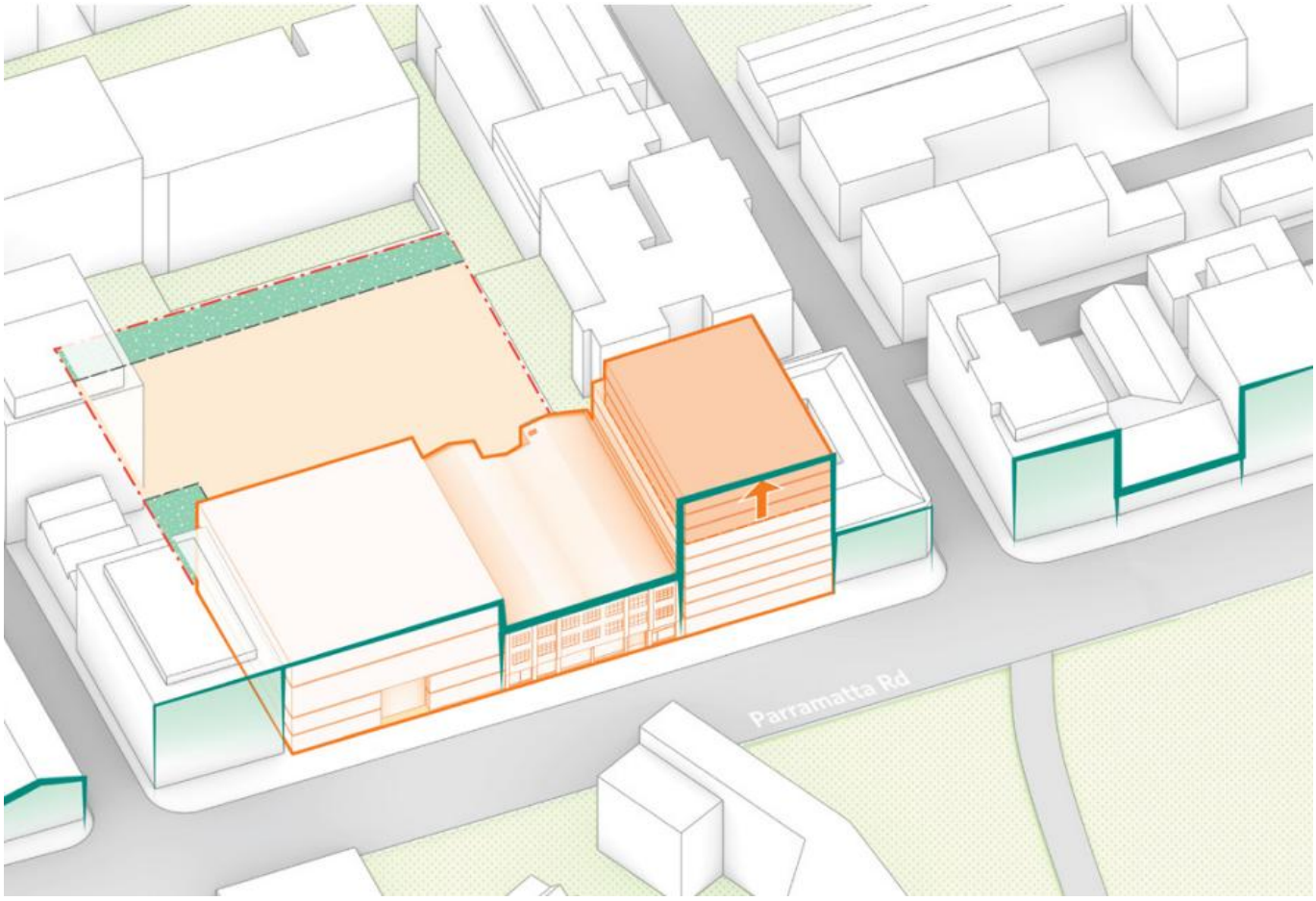


Figure 34 The varying nature of the street wall along Parramatta Road

Source: HDR Architects and Matthew Pullinger Architect

Office Northern Built Form

The reference scheme proposes a separate block in the northern part of the site, containing ancillary office facilities to support the life science uses. The reference scheme built form is smaller in scale in this location, creating a compatible setting for the three neighbouring residential apartment buildings.

The building's alignment responds to the configuration of adjacent properties, with the northern massing constructed to the western boundary where it abuts the party wall (consistent with the current condition), with building separation distances compliant with the *Apartment Design Guide* (ADG) provided to buildings to the north and east.

The proposed north-south laneway is proposed to bisect the northern building, providing relief to the elongated building forms and providing a public domain link through to the building's lobby and landscaped area to the north. A row of low scale existing terrace houses to the west are respected through the dedication of a landscape pocket adjoining their rear courtyard and alignment of low scale building forms adjacent to them. This lower scale through the centre of the site also protects these lower scale terraces from overshadowing.

The height of the proposed northern building is seven storeys, which matches the abutting building to the west and is consistent with character of neighbouring properties. The uppermost level provides setback from the building edges, minimising bulk and allowing opportunity for rooftop outdoor spaces for future tenants. The northern built form is shown in **Figure 35**.

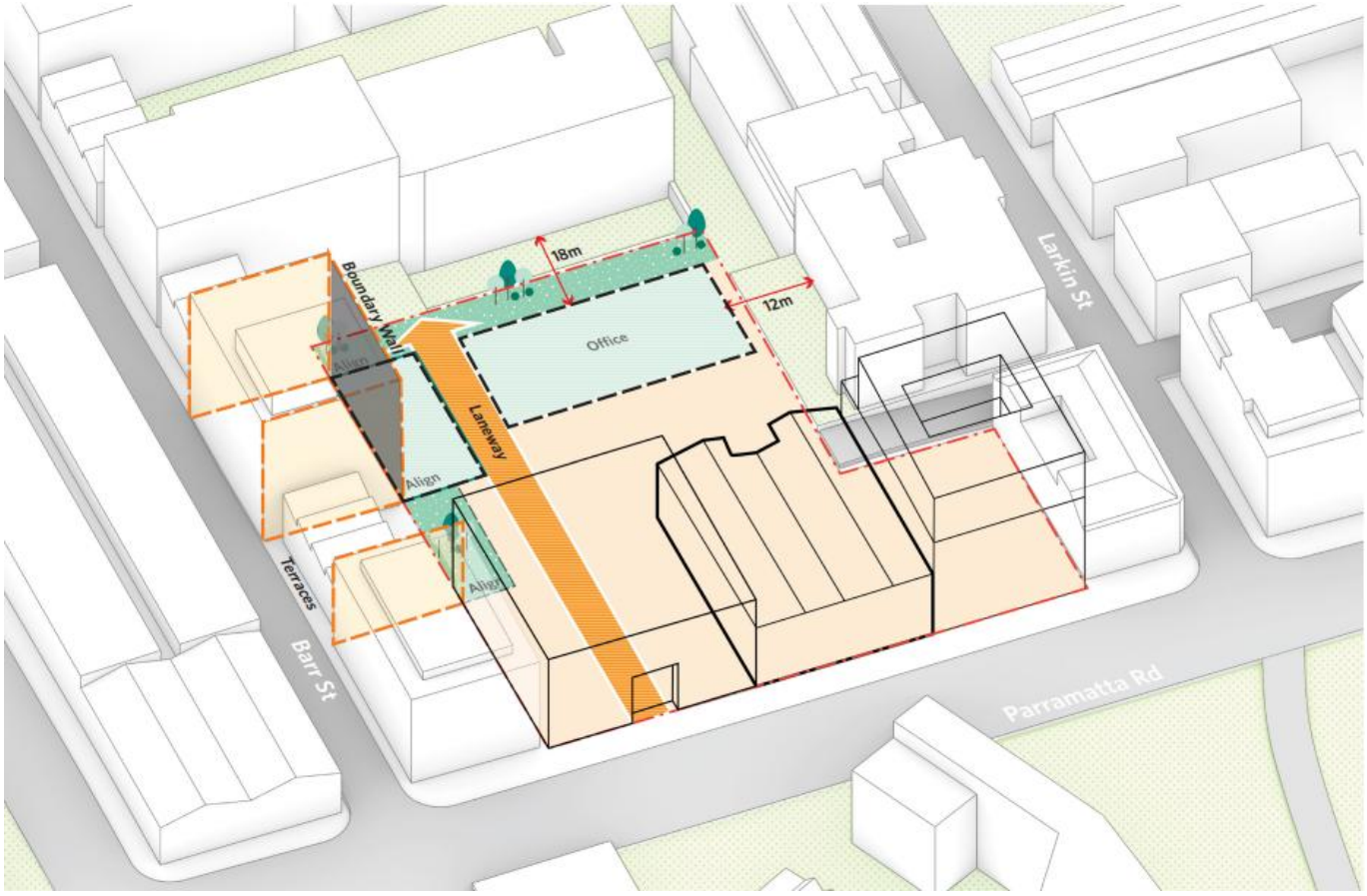


Figure 35 Reference Design Northern Building Form

Source: HDR Architects and Matthew Pullinger Architect

Serviced Apartments Extension

The reference scheme proposes a three (3) storey extension above the existing six (6) storeys at 84 Parramatta Road, for serviced apartments. The design of the proposed extension will respond to the configuration of the existing building, continuing the central atrium design to the upper levels.

The design incorporates a setback to the northern façade of the extension to provide a suitable 18m building separate to the neighbouring apartments to ensure amenity outcomes are maintained for the proposed uplift and adjoining residential apartments. The proposed building height of nine (9) storeys will assist the composition and scale of the street frontage in relation to the life sciences tower form proposed. The serviced apartments extension is shown in **Figure 36**.

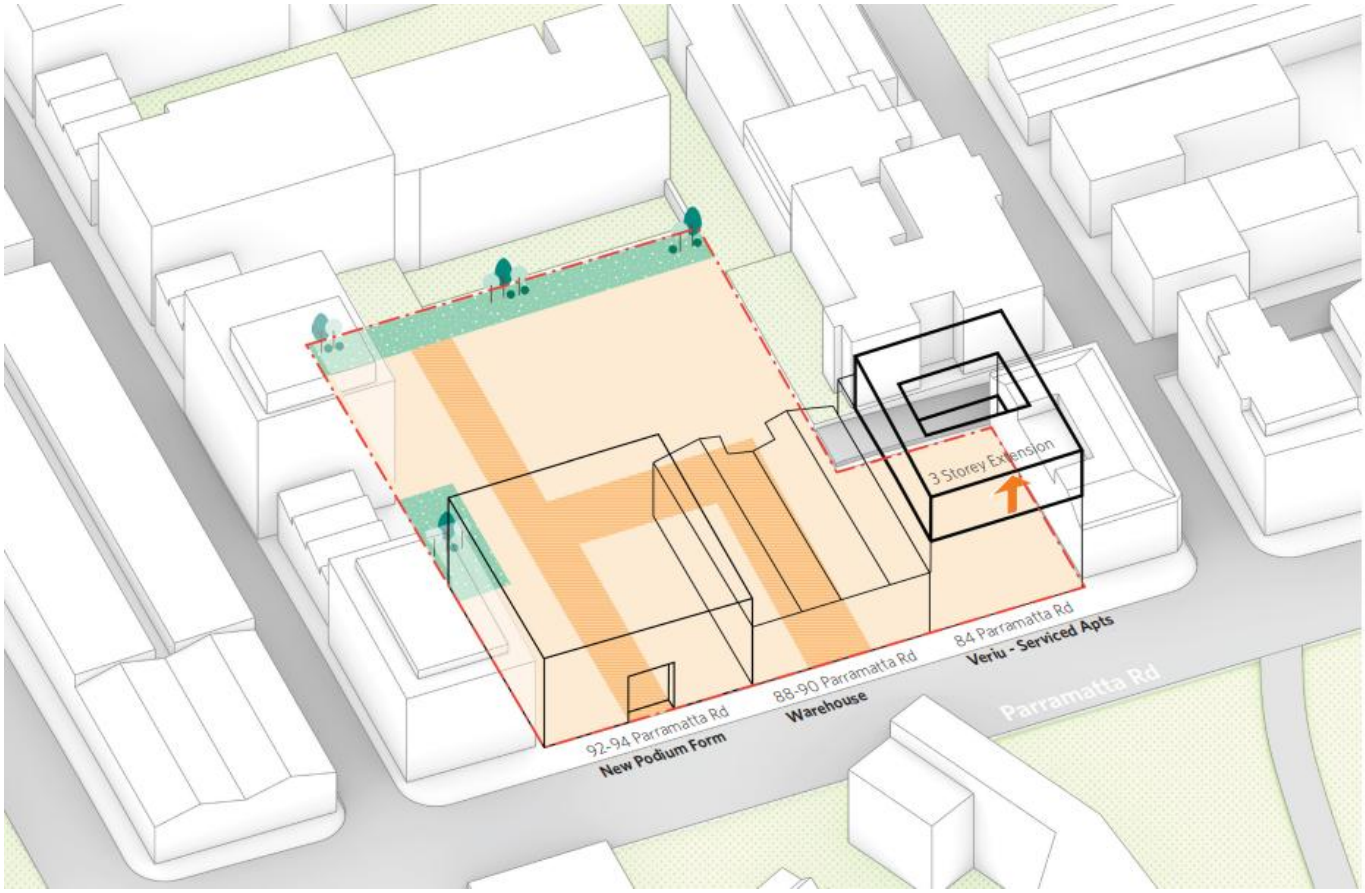


Figure 36 Serviced Apartments Extension

Source: HDR Architects and Matthew Pullinger Architect

5.3.4 Tower Design

The reference scheme proposes an 80-metre tower form, located in the southern portion of the site along the Parramatta Road frontage. The reference scheme nominates this tower for life science and research uses.

The form and placement of the tower are guided by a considered understanding of the site conditions and the specific requirements of the building typology, as well as feedback from the DAP, as outlined in **Section 1.0**.

As a dedicated life sciences building, the tower incorporates 4.5-metre floor-to-floor heights at the laboratory spaces to meet the servicing demands of laboratory functions. This requirement, along with the need for a regular and efficient floor plate of 1,800m², informs the overall height and massing of the building. The tower form and layout of the tower is shown in **Figure 37**, **Figure 38,** and **Figure 39**.

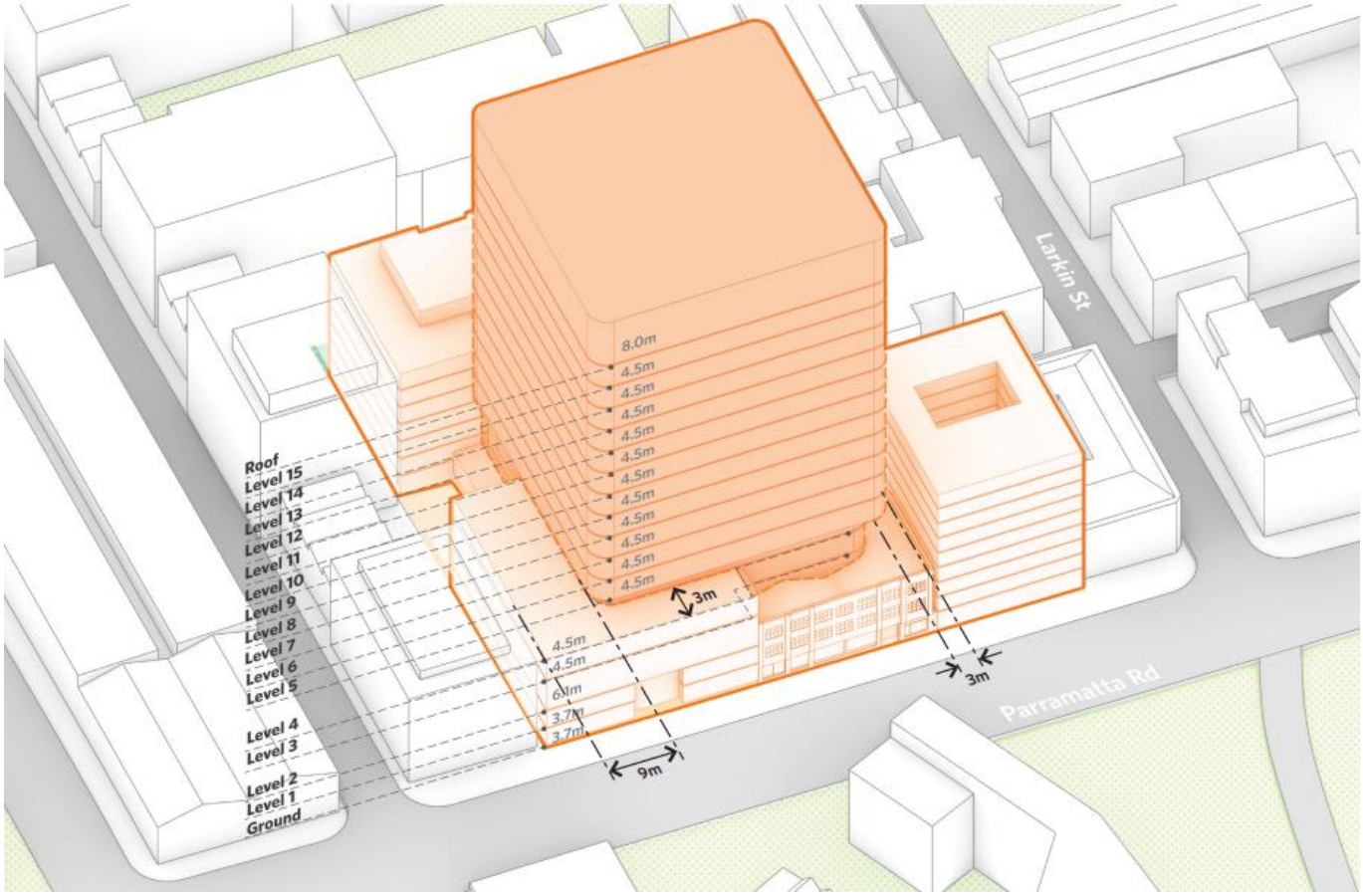


Figure 37 Reference Design Tower Massing Plan

Source: HDR Architects and Matthew Pullinger Architect

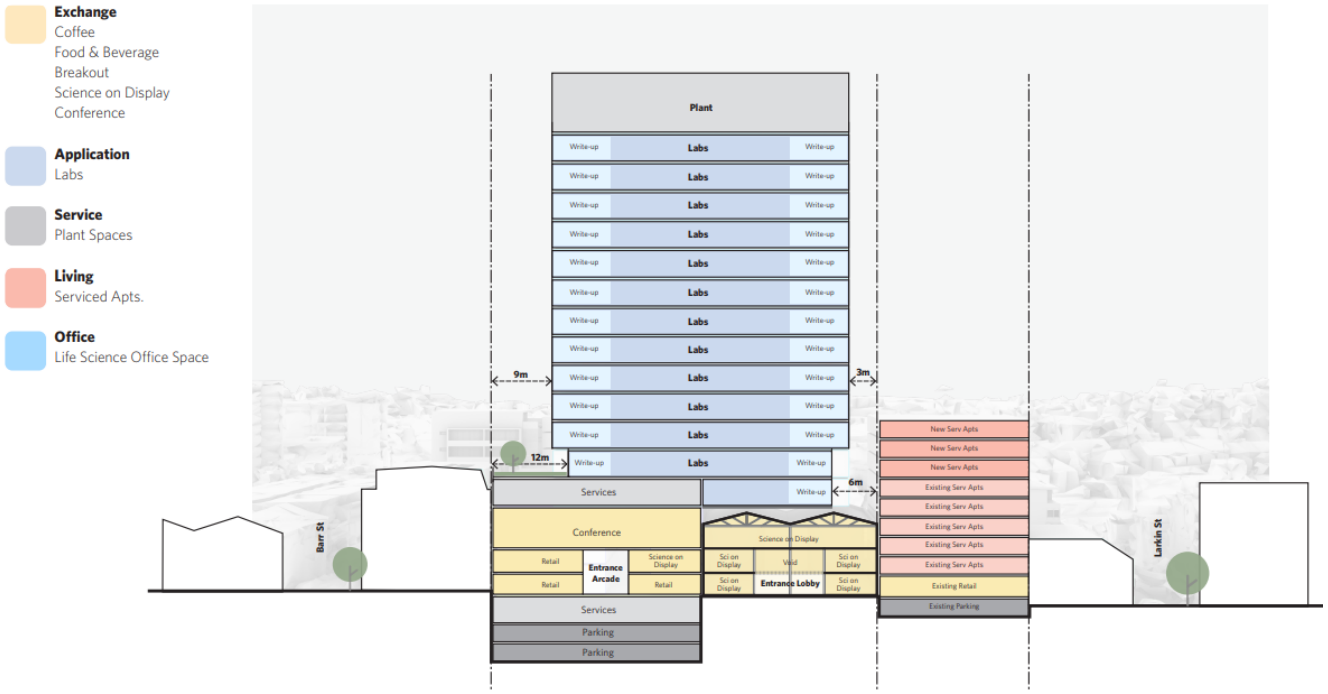


Figure 38 Reference Design Proposal Vertical Arrangement Plan east-west cross section

Source: HDR Architects and Matthew Pullinger Architect



Figure 39 Reference Design Proposal Vertical Arrangement Plan north-south cross section of life sciences portion

Source: HDR Architects and Matthew Pullinger Architect

To mitigate impacts on the residential character to the north of the site, the tower has been positioned closer to Parramatta Road, aligning with the denser urban frontage. Setbacks of three metres are provided to the south and east, providing a curtilage to the street wall of Parramatta Road and the existing warehouse at 88-90 Parramatta Road. To mitigate overshadowing of the western neighbour, a larger nine metre setback is provided to the western boundary.

Detailed solar access planes have been identified to maintain sunlight to impacted neighbouring properties following Council's '*Minimising Overshadowing of Neighbouring Apartments*' guidelines.

Applying these planes to our tower mass determines the need to chamfer the northwestern corner of the tower to maintain sun access. This chamfer is proposed to be applied symmetrically to the northeastern corner of the tower providing an additional separation of the tower from the eastern residential neighbours.

The tower design has additionally considered solar amenity impacts for the proposed uplift at 84 Parramatta Road, to ensure that the proposed serviced apartments comply with amenity requirements as detailed in the Apartment Design Guide.

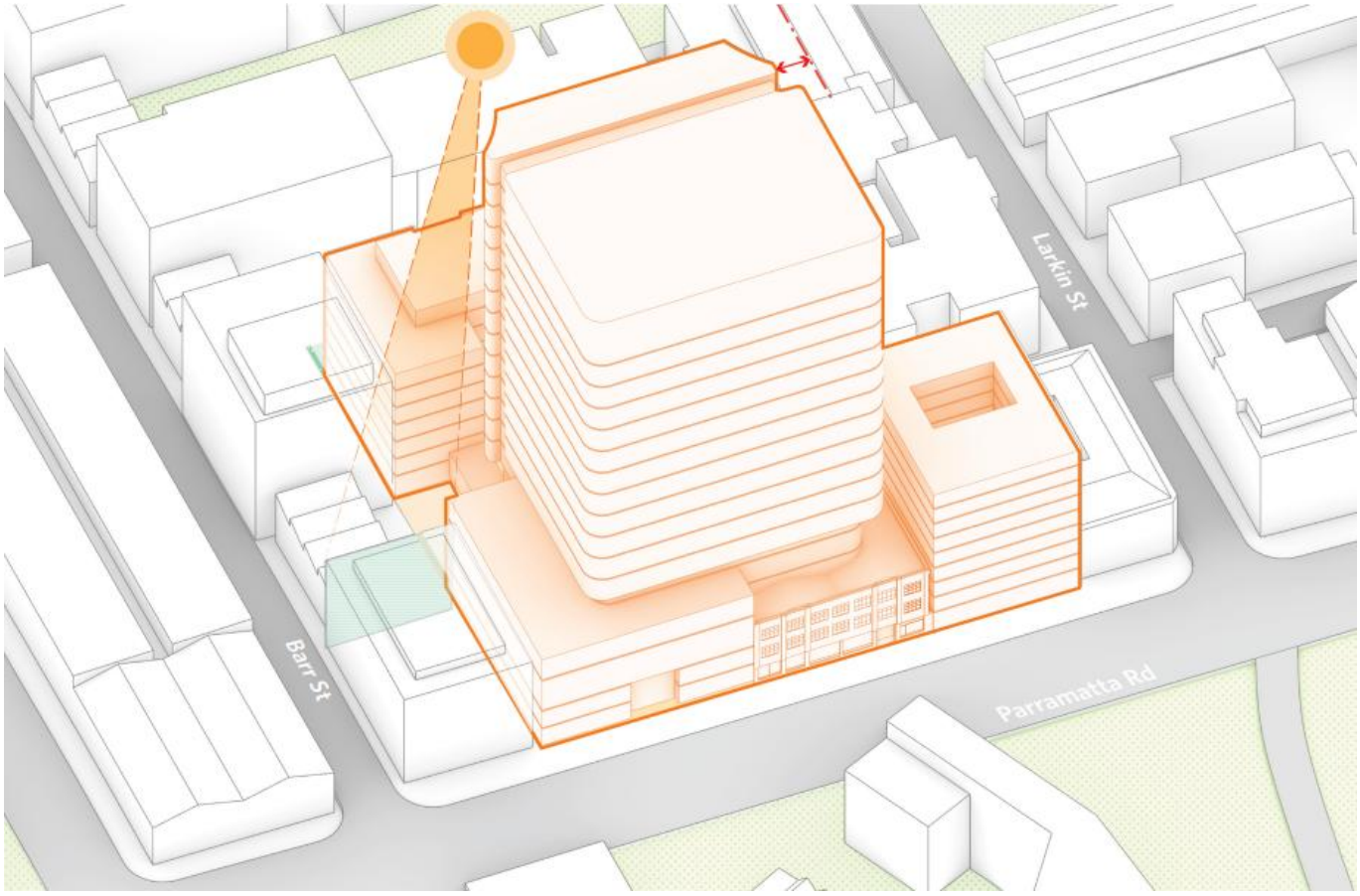


Figure 40 Reference Design Solar Access Plan

Source: HDR Architects and Matthew Pullinger Architect

5.3.5 Serviced Apartments Amenity

For 84 Parramatta Road, the reference scheme proposes three new levels of serviced apartment uses, in addition to the existing serviced apartment uses within the building. The reference scheme results in six 2-bedroom units proposed on each additional level, resulting in a total of 18 additional 2-bedroom serviced apartments. The resulting apartment yield at 84 Parramatta Road is described at **Table 7** below.

Table 7 Apartment yield

Serviced apartment type	Existing	Proposed	Total
1-bedroom apartment	8	-	8
2-bedroom apartment	12	18	30
3-bedroom apartment	8	-	8
Total apartments	28	18	46

The proposed serviced apartments at each uplift level are proposed at the following orientation, see **Figure 41** below.

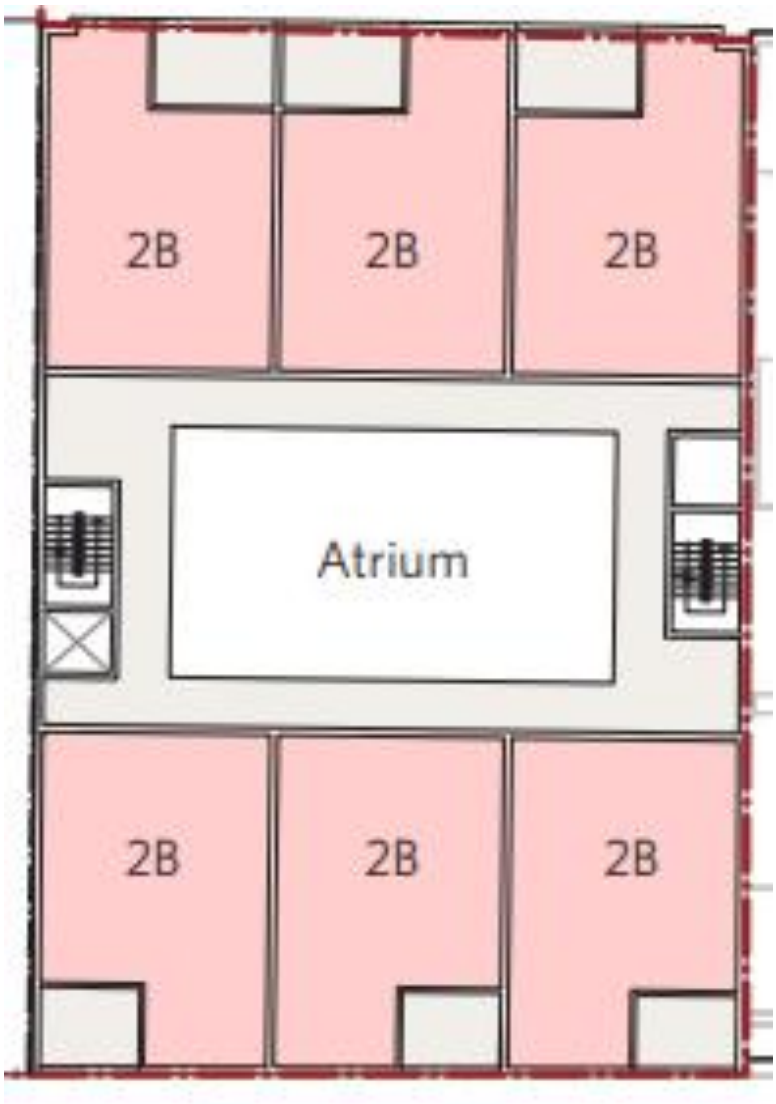


Figure 41 Proposed serviced apartments design layout

Source: HDR Architects and Matthew Pullinger Architect

For further detail and assessment of the amenity impacts, refer to **Section 8.5**.

5.3.6 Landscape and Amenity

As part of the overall urban design response and indicative reference scheme, Paddock Landscape Architects have prepared a number of key design principles to guide landscape design and inclusion as part of any future development on the site, as well as an indicative landscape design to accompany the reference scheme (see **Appendix A**). The key design principles are:

- **Connection to place**: Integrate Aboriginal and Torres Strait Islander cultures, narratives, and practices into the landscape spaces, guided by the Walanga Design Principles.
- **Educational landscapes**: Utilise a species mix of environmentally and culturally significant plants that reflect the surrounding wetlands, grasslands, scrub, and forests. Any landscaping on the site is to support the precinct's educational and science focus by raising awareness among employees, students, and future tenants of culturally significant edible and medicinal plants used by Indigenous Australians, and their relevance to contemporary practices in education, food, and medicine.
- **Clear and legible access**: Establish a clear and legible pedestrian network throughout the campus and to building entries.
- **Vibrant landscape spaces**: Create landscape spaces that facilitate collaboration, educational engagement and meaningful social interaction.

The above design principles are to inform any future development on the site and have been incorporated into the Site Specific DCP at **Appendix D**.

Paddock Landscape Architects have provided additional detail regarding where landscaping could be incorporated as part of the indicative reference scheme, including opportunities for deep soil, rooftop gardens and terraces from the main tower. Further discussion is provided as part of the Urban Design Report at **Appendix A**.

5.4 Design Excellence

The indicative scheme has been prepared with the knowledge that an invited architectural design competition will be undertaken as per the Design Excellence Strategy (refer to **Appendix E**). The Proponent supports the requirement for a future competitive design process, with an overall aim to achieve the highest architectural standard for the site.

The design competition will be pursuing up to 10% additional height and/or floor space following the gazettal of this Planning Proposal. The Planning Proposal and proposed Sydney DCP amendments support a planning envelope that can accommodate the maximum site specific permissible FSR and height (inclusive of the 10% additional floor space available under the proposed site-specific clause). Taking this approach ensures that all environmental impacts of the maximum permissible envelope and maximum FSR are assessed as part of the Planning Proposal.

5.5 Public Benefit and Contributions

The proposed life sciences hub will be a catalyst for the regeneration of Parramatta Road and designed to meet the specific needs of the science and innovation industry, leading to the creation of new life science jobs and wider economic benefits for the city.

A Public Benefit Offer (PBO) has been prepared and is available at **Appendix F**. The PBO details that the Proponent aims to deliver, as part of this Planning Proposal, affordable housing contributions, site specific sustainability measures and potential for local infrastructure works-in-kind by way of a Voluntary Planning Agreement (VPA) to be entered into with Council at a future development stage.

6.0 Proposed Amendments to the Planning Framework

This Planning Proposal report has been prepared in accordance with Section 3.33 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and the 'Local Environmental Plan Making Guideline' prepared by the NSW Department of Planning and Environment, which requires the following matters to be addressed:

- Part 1 – A statement of the objectives and intended outcomes of the proposed instrument.
- Part 2 – An explanation of the provisions that are to be included in the proposed instrument.
- Part 3 – The justification for those objectives, outcomes and the process for their implementation.
- Part 4 – Maps, where relevant, to identify the intent of the Planning Proposal and the area to which it applies.
- Part 5 – Details of the community consultation that is to be undertaken on the Planning Proposal.
- Part 6 – A project timeline outlining the key steps and timeframes of implementing the changes.

The following section outlines the objectives and intended outcomes of this rezoning request and an explanation of provisions to achieve those outcomes, including relevant mapping. The justification and evaluation of impacts is set out in **Section 7.0** of this report.

To achieve the strategic vision and indicative reference scheme, this Planning Proposal seeks the following amendments to the Sydney LEP 2012:

- In relation to building height, provide new mapping to reflect an increase from 18m to 80m within the site to allow for the development to proceed with compliant floor to ceiling heights for the proposed development
- In relation to FSR, provide new mapping to reflect an increase from 2.5:1 to 4.8:1 for the 84 Parramatta Road site and a new site-specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses, to allow for the development to proceed as per the indicative design scheme

Accompanying amendments to the Sydney DCP 2012 will be required to support this outcome. The amendments will be made to Section 6: Specific sites, where an additional chapter will be added to Chapter 6.3 Specific site controls prepared as part of a Planning Proposal. The amendments will address key design and development outcomes including site-specific provisions related to the future built form, setbacks, heritage, access, vegetation, design excellence, local infrastructure and sustainability.

6.1 Objectives and Intended Outcomes

6.1.1 Objective

The primary objective of the Planning Proposal is to establish appropriate planning provisions by amending the Sydney LEP 2012 height and FSR applicable to the site to enable the development of a life science precinct. This research hub will be consistent with the site's strategic objectives, as outlined with the site's land zoning, Council's Local Strategic Planning Statement (LSPS) Camperdown-Ultimo Health and Education precinct, and the broader strategic objectives of the State government to deliver a world-class research facility designed to meet the needs of the science and innovation industry.

6.1.2 Intended Outcomes

The intended outcomes of the proposed amendments to Sydney LEP 2012 are as follows:

- Deliver a mixed-use biomedical and life sciences research facility within the Camperdown-Ultimo Health and Education precinct.
- Support the delivery of a wide range of future ancillary uses consistent with the mixed use zone.
- Provide a planning envelope with setbacks to respect the local context that is capable of achieving acceptable levels of solar access, wind comfort and daylight for the neighbouring residential apartments.

- Provide a podium and tower design resulting in a unique and visually interesting massing and height plane.
- Contribute to the revitalisation of Parramatta Road by supporting development activity.
- Ensure a high-quality design informed by the Design Excellence Strategy.
- Enable the development of a high-performance building in terms of amenity and sustainability.
- Enable additional serviced apartments through up-lift at 84 Parramatta Road.

6.2 Explanation of Provisions

The key purpose of this Planning Proposal is to facilitate the redevelopment of the site for life sciences research facility and associated uses. The redevelopment is to be an appropriate form, exhibiting high quality architecture, provide a reinvigorated pedestrian ground plane and deliver strategically important employment and research floorspace near existing health and research networks. The amendments to the Sydney LEP 2012 are summarised in the following table:

Table 8 Existing and Proposed Sydney LEP 2012 Controls

Control	Existing Sydney LEP 2012 Control	Proposed Sydney LEP 2012 Control
Clause 4.3 - Height of buildings	30m	80m
Clause 4.4 - Floor Space Ratio	2.5:1	Mapped maximum FSR for site at 84 Parramatta Road (Veriu Hotel) of 4.8:1
New Site Specific Clause 6.43#	N/A	Development at 88-90 Parramatta Road, and 92-94 Parramatta Road may exceed the maximum FSR set out in Clause 4.4, up to 6.5:1, for development for the purposes of non-residential uses. Requirement for any a future consent authority to consider whether the warehouse building at 88-90 Parramatta Road is substantially retained with consideration of the structural limitations.

6.2.1 Amendments to the Sydney LEP 2012

Height of buildings

In relation to building height, it is proposed to amend Height of Buildings Map- Sheet HOB_002 to reflect an increase of the permissible height of buildings from the existing 18 metres to 80 metres. This increased height will enable the development of a Life Science building with adequate floor plates and floor to ceiling height for the increased servicing demands of laboratory space, where a 4.5m floor to ceiling height is typical.

The proposed mapping is shown in **Figure 42**.

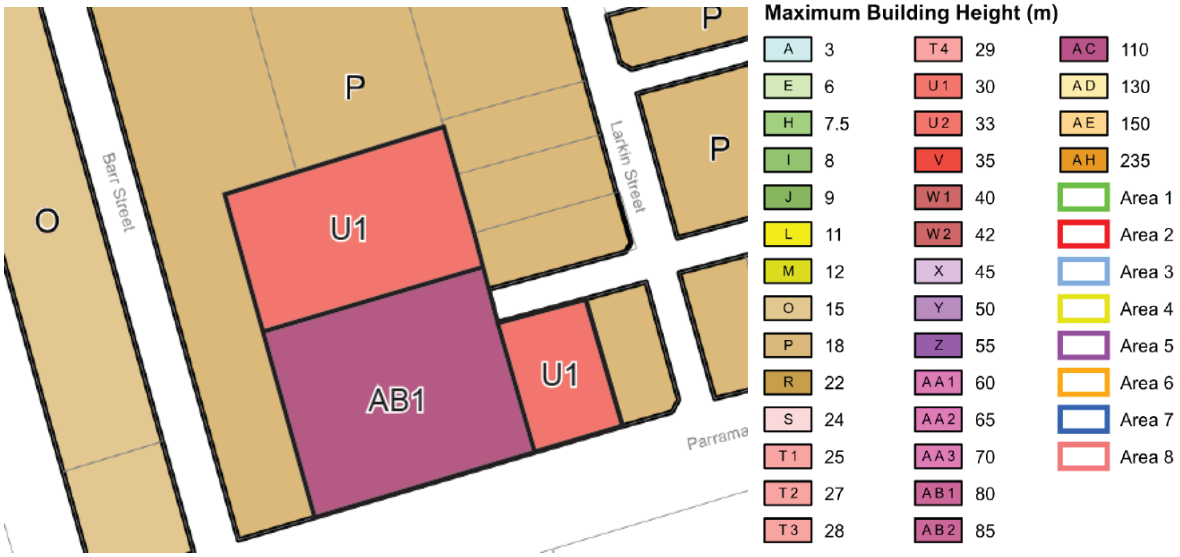


Figure 42 Proposed amendments to height of buildings map

Source: HDR Architects and Matthew Pullinger Architect

Floor Space Ratio

In relation to floor space ratio (FSR), the proposal seeks to amend Floor Space Ratio Map – Sheet 002 to reflect an increase of the permissible FSR from 2.5:1 to 4.8:1 to enable the development of an extension at 84 Parramatta Road (Veriu Hotel). This is shown in **Figure 43**.

Additionally, a site-specific provision for 88-94 Parramatta Road is proposed that will enable a FSR of 6.5:1 for non-residential uses. This increased FSR will enable the development of a Life Science building, reflecting the required GFA and design requirements for the proposal. This is discussed further in the following sections.

The proposed amendments to FSR specifically separate the building at 84 Parramatta Road from the remainder of the site. The Veriu Hotel at 84 Parramatta Road represents very recent development, with construction completed in 2016. The remaining existing buildings on the site are older and are in a different development cycle to 84 Parramatta Road. Therefore, the FSR controls for the site are specifically separated between the building at 84 Parramatta Road and remainder of the site. This enables the redevelopment to potentially occur at a separate point in time, whilst ensuring the outcome is sufficiently related to the life sciences precinct, facilitating consistency with the overall intent of this Planning Proposal.

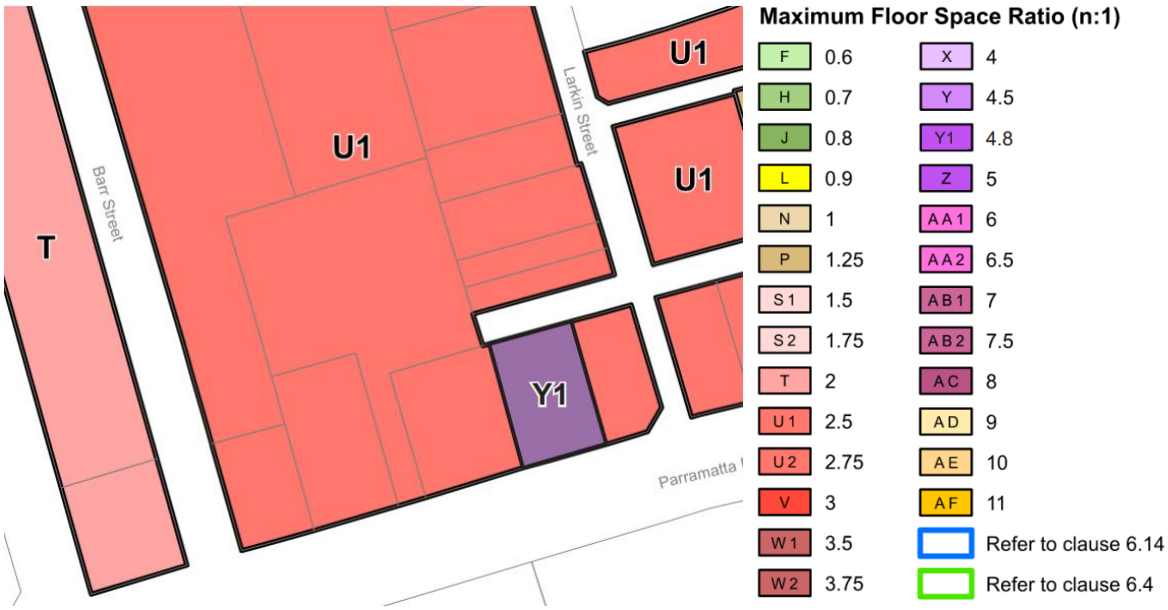


Figure 43 Proposed amendment to FSR map

Source: HDR Architects and Matthew Pullinger Architect

Site Specific Controls

Additional amendments to the Sydney LEP 2012 are proposed in the form of a new site-specific clause in Division 5 of the Sydney LEP 2012. The proposed new site-specific clause will be required to nominate:

- That the site of the proposal is as follows:
  - 84-86 Parramatta Road, being Lot 1, DP 1216911
  - 88-90 Parramatta Road, being Lot 1, DP 178643
  - 92-94 Parramatta Road, being Lot A, DP 402925 and Lot 1, DP 965792
- That development on the site must be consistent with the maximum FSR under Clause 4.4 of the Sydney LEP 2012.
- That despite the above, development at 88-90 Parramatta Road, and 92-94 Parramatta Road may exceed the maximum FSR set out in Clause 4.4, up to 6.5:1, for development for the purposes of non-residential uses (to ensure that the majority portion of the uplift on the site is for life sciences and ancillary non-residential uses, rather than residential).
- That an invited architectural design competition is required to be undertaken to achieve the nominated height and FSR.
- That any future consent authority must consider whether the warehouse building at 88-90 Parramatta Road has been substantially retained, subject to structural limitations.

6.3 Proposed DCP Framework

To provide greater certainty of the built form and design outcomes presented in the indicative design scheme, a draft Site Specific DCP has been prepared to accompany this Planning Proposal (**Appendix D**). The site specific DCP will satisfy Clause 7.20 of the Sydney LEP 2012, which requires a site specific DCP to be prepared for development for the purpose of a new building. The draft DCP contains site-specific provisions relating to key principles listed below, which have been embellished in conjunction with input from Council during the initial assessment of the Planning Proposal:

- Uses and layout
- Access and parking
- Built form
- Design excellence
- Public art
- Heritage
- Sustainability

6.4 Design Excellence

The indicative reference scheme has been prepared with the expectation that an invited architectural design competition will be undertaken as per the Design Excellence Strategy (refer to **Appendix E**). The Proponent supports the requirement for a future competitive design process, with an overall aim to achieve the highest architectural standard for the precinct.

While the detailed design process is inclusive of an invited architectural design competition, the indicative reference scheme demonstrates that a highly articulate and quality life science precinct can be delivered on the site, respecting the surrounding context and providing strong design outcomes for the locality.

A design excellence strategy is required as per the following controls:

- City of Sydney Competitive Design Policy.
- Clause 6.21 of the Sydney Local Environmental Plan 2012.
- Clause 3.3 of the Sydney Development Control Plan 2012.

6.5 Community Consultation

With reference to the relevant considerations set out within the NSW Department of Planning & Environment's Local Environmental Plan Making Guideline, it is noted that:

- The LEP making process does not require formal community consultation prior to a proponent submitting a rezoning request to council.
- The most appropriate time for community consultation for Planning Proposals is after a Gateway determination is issued and all relevant studies and reports have been completed. This ensures the community has clear and evidence-based information available to help them make informed comments on the proposal.

As such, formal public consultation will take place in accordance with Sections 3.34 and 3.35 of the EP&A Act at a later date. Any future DA for the site would also be exhibited in accordance with Council requirements, at which point the public and any authorities would have the opportunity to make further comment on the proposal.

6.6 Project Timeline

Table 9 provides the project timeline anticipated for the subject Planning Proposal which is predicated on the nature and scale of the Planning Proposal.

Table 9 Anticipated Project Timeline

Action	Timeframe
Stage 1 – Pre-lodgement	Complete
Lodgement	March 2026
Stage 2 – Planning Proposal	April 2026
Stage 3 – Gateway Determination	June 2026
Stage 4 – Post-Gateway	August 2026
Stage 5 – Public exhibition & Assessment	October 2026
Stage 6 – Finalisation	January 2027

7.0 Justification of strategic and site-specific merit

7.1 Strategic merit

7.1.1 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?

This Planning Proposal is the culmination of several local strategic planning exercises to identify the future of technology, research and health within Tech Central and surrounds, including the Camperdown-Ultimo Health and Education precinct, and more specifically how Sydney and NSW can retain and support the growing field of biotechnology and life sciences. These important strategic planning documents, and how the Planning Proposal addresses their objectives and actions, are discussed below.

Q2. Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

This Planning Proposal is the best means of achieving the objectives and intended outcomes. To achieve renewal of the site and the delivery of the proposed public benefits, the controls under the *Sydney Local Environmental Plan 2012* must be amended to facilitate approval of future development at the site.

This Planning Proposal achieves the intended outcomes for the site and has been in prepared response to the key development criteria required to facilitate the proposed works. The development is fit for purpose and site specific, which requires the proposed planning controls to facilitate the works.

In preparing this Planning Proposal, four options were considered to facilitate the intended outcomes as set out in **Section 5.1**. These are listed and discussed below:

- Option 1: do nothing
- Option 2: redevelop the site under the existing planning controls;
- Option 3: redevelop the site without providing uplift for additional serviced apartments; or
- Option 4: submit a Planning Proposal to demonstrate the site's capability for additional uplift value.

Option 1: Do Nothing

Under the 'Do Nothing' scenario, the site would remain as a range of mixed uses, with the Medical Foundation building ageing amidst an emerging medical, research and innovation context, and the locally significant warehouse remaining vacant and further dilapidating. Over time the site will be at odds with the surrounding Parramatta Road corridor-built form upgrades and the Tech Central vision for the Camperdown-Ultimo Health and Education precinct, inclusive of the Sydney Biomedical Accelerator, currently under construction. Doing nothing is not considered an appropriate outcome for the site.

Option 2: Redevelop the site under the existing planning controls

Redeveloping the site under the existing planning controls will not allow for the delivery of a life science precinct to provide the critical space for biomedical and life sciences research. The current controls do not provide sufficient floorspace necessary for the site to achieve its potential as an innovative life sciences medical research facility, designed to meet the specific needs of the growing and changing science and innovation industry in NSW and Australia. Furthermore, the current controls do not provide a sufficient height of building maximum to allow for the delivery of a research facility, as a 4.5m floor to ceiling height is required to accommodate the increased servicing demand of laboratory space. Redevelopment of the site under current controls will be a missed opportunity to contribute to the University of Sydney life science and innovation research facilities, as delivered under Option 3 and Option 4.

Option 3 – Redevelop the site without providing uplift for additional serviced apartments

Option 3 comprises submitting a Planning Proposal to facilitate redevelopment of 88-90 and 92-94 Parramatta Road for the purposes of a life sciences building. Under this scenario no uplift will be provided at 84 Parramatta Road (Veriu serviced apartments). Redeveloping the site without providing uplift for additional serviced apartments misses the opportunity to deliver much needed diversity and affordability of rental accommodation in the area. Furthermore, this will create an inconsistent built form structure, as the building podium for the life sciences building will be inconsistent with the building height of the existing building at 84 Parramatta Road.

Option 4 – Submit a Planning Proposal to demonstrate the site's capability for additional uplift value

Option 4 comprises submitting a Planning Proposal to facilitate redevelopment of the site in accordance with the provisions presented in this report and the accompanying indicative design scheme. The additional serviced apartments will contribute to the short-term rental stock, providing diversity in the availability of rental accommodation for varying lengths of time. Redevelopment with provided uplift at 84 Parramatta Road will contribute to the short-term accommodation that houses visitors to patients of the Royal Prince Alfred Hospital and supports the capacity of the locality to attract specialist workers, host collaborative research programs, deliver tertiary health services, and participate in innovation networks.

This is the preferred option as it represents the best combined outcome for the applicant, the Council, and the future of tenants and employees within the area. This option is the strongest in that it best meets the strategic priorities and vision of the relevant regional and local strategic documents, alongside meeting economic needs.

7.1.2 Section B – relationship to the 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)?

The Planning Proposal is generally consistent with the following documents:

- Greater Sydney Region Plan – A Metropolis of Three Cities (2018); and
- Eastern City District Plan (2018).

Greater Sydney Region Plan – A Metropolis of Three Cities

The Greater Sydney Region Plan (GSRP) is the overarching strategy for growing and shaping the Greater Sydney Area. It 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. The plan was adopted in March 2018 and seeks to reposition Sydney as a metropolis of three cities – the western parkland city, central river city, and the eastern harbour city. GRSP provides 10 high level policy directions supported by 40 objectives that inform the District Plans, Local Plans and Planning Proposals which follow in the planning hierarchy.

The proposal is consistent with the following directions under the Plan, which govern growth and development in Sydney (refer to **Table 10**).

Table 10 Consistency with GSRP directions and objectives

Directions and Objectives	Consistency of the proposal with the Direction
Direction 1 – A city supported by infrastructure	
Objective 2: Infrastructure aligns with forecast growth	The site is well-positioned with access to pedestrian infrastructure and adjacent to multiple bus stops serviced by a range of bus routes, providing connectivity to the in the eastern and western direction of the site, and most notably to Central Station, 2.5km east of the site. Central Station provides extensive connectivity across Greater Sydney through bus routes, light rail, heavy rail, and the newly unveiled metro station.
Direction 2 – A collaborative city	

Directions and Objectives	Consistency of the proposal with the Direction
Objective 5: Benefits of growth realised by collaboration of governments, community and businesses	The Camperdown-Ultimo Health and Education precinct is identified as a Collaboration Area for place-making and enabling infrastructure, and hospitals, universities and business interactions. The proposal contributes to the collaboration across industry, providing opportunity for integration between the private research institutes and tech companies within the Camperdown-Ultimo Health and Education precinct and universities.
Direction 4 – Housing the city	
Objective 10: Greater housing supply	The proposal will facilitate additional serviced apartments within the existing building at 84 Parramatta Road. Any residential delivered on the site will contribute to the housing supply, providing housing diversity and choice in a well-located area in proximity to local jobs and services, and located in the Camperdown-Ultimo Health and Education precinct where students and employees can benefit from the proximity.
Objective 11: Housing is more diverse and affordable	This Planning Proposal enables additional floorspace on top of the building at 84 Parramatta Road. Any housing provided on the site will provide additional housing, diversity and choice in an area of high housing demand, within the Camperdown-Ultimo Health and Education precinct and close to a broad range of employers, such as Royal Prince Alfred Hospital. The additional short-term rentals will provide diversity to existing rental stock in the area through varied rental accommodation terms.
Direction 5 – A city of great places	
Objective 13: Environmental heritage is identified, conserved and enhanced	The vacant warehouse at 88-90 Parramatta Road has been identified within a preliminary heritage assessment as having local heritage significant. The building is a historic, Inter-war warehouse structure that was likely previously used as a showroom to house vehicles in the 1940s, and then as a shop and office space with various tenancies until 2017. The warehouse is identified for retention, through a site specific requirement in the Sydney LEP 2012. An example of this retention is shown in the indicative reference scheme shown in the Urban Design Report at **Appendix A**.
Direction 6 – A well-connected city	
Objective 14: *A Metropolis of Three Cities* – integrated land use and transport creates walkable and 30-minute cities	The site is located within the Camperdown-Ultimo Health and Education precinct, co-located with other similar land uses to create a specialised precinct accessible by active transport. The site is well-positioned adjacent to two well serviced bus stops providing connectivity to the east and western direction of the site and most notably Central Train Station (2.5km east of site). Central Station provides extensive connectivity across Greater Sydney through bus routes, light rail, heavy rail, and the newly unveiled metro station.
Objective 15: The Eastern, GPOP and Western Economic Corridors are better connected and more competitive	The Planning Proposal represents the establishment of a life science facility along the Eastern Economic Corridor that is well connected through public transport links to Greater Sydney, will serve to support improved economic outputs. This is entirely consistent with Objective 15 of the GSRP.
Direction 7 – Jobs and skills for the city	
Objective 18: Harbour CBD is stronger and more competitive	Action 8 of the objective is to *Support the growth of the Camperdown-Ultimo Collaboration Area.* The action highlights that a multi-stakeholder approach will support and leverage existing infrastructure to improve urban amenity to grow jobs and business opportunities. The site provides the opportunity to deliver a biomedical and life science research facility, complimentary to adjoining existing infrastructure such as the University of Sydney and the Royal Prince Alfred Hospital. The proposal will further align with nearby proposals such as the Sydney Biomedical Accelerator project, and upgrades to the Royal Prince Alfred Hospital.
Objective 21: Internationally competitive health, education,	The proposal provides an opportunity to drive and support international competitiveness within the Camperdown-Ultimo Health and Education precinct collaboration area, identified

Directions and Objectives	Consistency of the proposal with the Direction
research and innovation precincts	within the objective. The medical and life science research facility will allow for the health and education cluster to mature into an innovation district, where economic productivity is created by the agglomeration benefits flowing from an active innovation ecosystem. The colocation of short-term accommodation within the Camperdown-Ultimo Health and Education precinct supports collaboration, innovation and accessibility outcomes through providing diversity and affordability of housing available. This supports a 30-minute city as tenants of the serviced apartments are located in close proximity to amenity within a health, education and employment centre.
Objective 22: Investment and business activity in centres	The proposal involves investment into an innovative medical and life science research facility, representing significant investment in health and education at a site well connected to Sydney's public transport network, reinforcing a 30-minute city. The proposal will contribute to the Camperdown-Ultimo Health and Education precinct through providing major employment opportunities to attract employees.
Objective 24: Economic sectors are targeted for success	Life sciences are identified as one of the 11 segments to be targeted within the *Jobs for NSW Fund* to create 1 million new jobs within NSW by 2036. The proposal aims to deliver a world-class life science hub to provide critical research space for the translation and commercialisation of biomedical and life sciences research.
Direction 9 – An efficient city	
Objective 33: A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change	The future built form presents the opportunity to incorporate sustainable design initiatives and work towards mitigating climate change by 2050. For further detail refer to **Section 8.10** and the Ecologically Sustainable Design Strategy Report at **Appendix N**.

Eastern City District Plan

The Eastern City District Plan (District Plan) contains the planning priorities and actions for implementing the GSRP at a district level. The GSRP sets the 20-year vision for the District through 22 'Planning Priorities' that are linked to the Region Plan. The purpose of the District Plan is to support councils in planning for growth and to align the Local Strategic Planning Statements with place-based outcomes. The strategic intent of the District Plan is to provide for services, shops, cultural infrastructure, education and transport within close reach of residents. The District Plan acknowledges that the area is growing and changing and that infrastructure and services need to adapt to meet people's changing needs.

The District Structure Plan is shown in **Figure 44**, and key priorities of the District Plan which this Planning Proposal would give effect to are elaborated in **Table 11**.

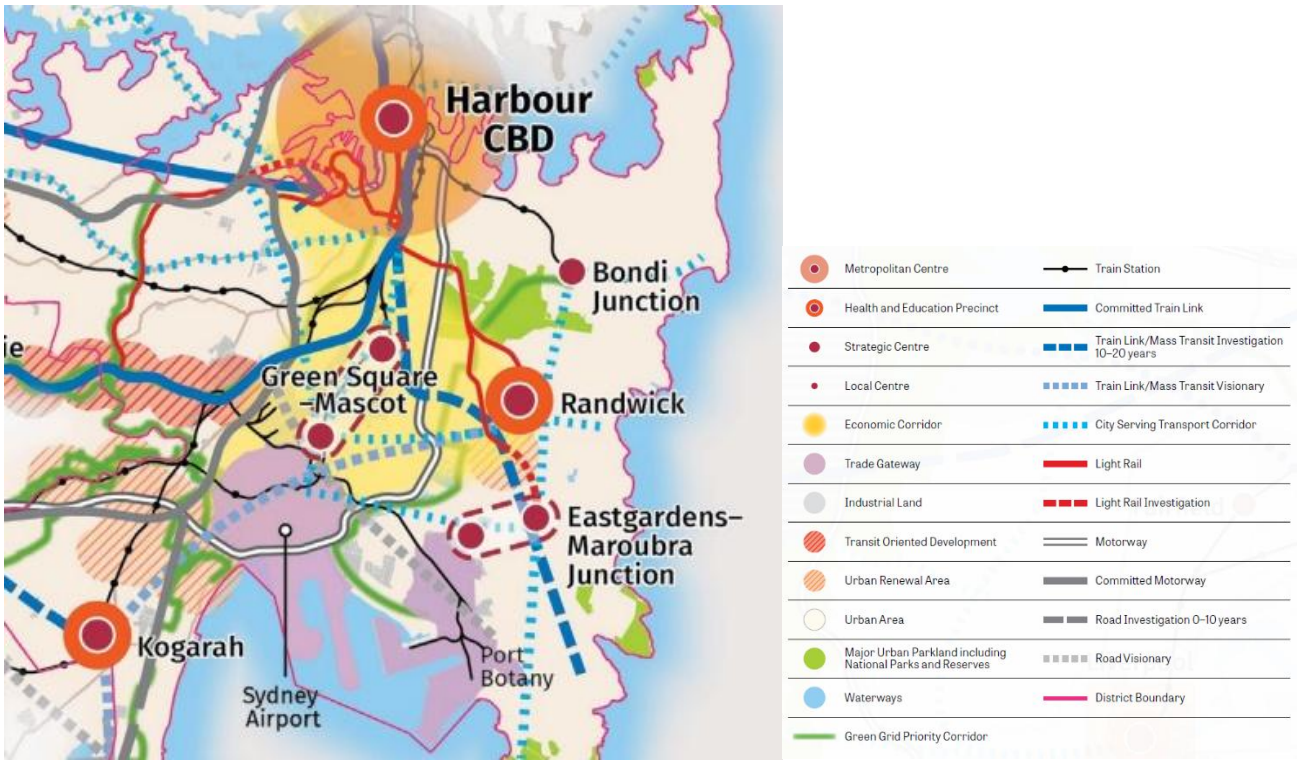


Figure 44 Extract from Eastern City District – Structure Plan

Source: Greater Sydney Commission 2018

Table 11 Consistency with Eastern City District Plan directions

Direction	Consistency of the proposal with the Direction
Direction 1 – A city supported by infrastructure	
E1. Planning for a city supported by infrastructure	The future built form will deliver life science research, providing for the co-location of education and employment generating uses within the established Camperdown-Ultimo Health and Education precinct. The site is well-connected adjacent to well-serviced bus stops offering connectivity to Central Station, and greater Sydney.
Direction 2 – A collaborative city	
E2: Working through collaboration	The proposed development has been developed between Wentworth Capital and the University of Sydney, to augment the University's position as a key anchor institution in the Tech Central innovation precinct to deliver a life sciences research facility. The proposal is located within the Camperdown-Ultimo Health and Education precinct a hub for collaboration and innovation between the health, education and research institutions within the precinct (for example University of Sydney, Royal Prince Alfred Hospital).
Direction 4 – Housing the city	
E5: Providing housing supply, choice, and affordability with access to jobs, services, and public transport	The proposal will include additional serviced apartments at 84 Parramatta Road. Any residential accommodation on the site will contribute to the housing supply, providing housing diversity and choice in a well-located area in proximity to local jobs and services, and located in the Camperdown-Ultimo Health and Education precinct where students and employees can benefit from the proximity. The additional short-term rentals will provide diversity to existing rental stock in the area through varied rental accommodation terms.
Direction 5 – A city of great places	

Direction	Consistency of the proposal with the Direction
E6: Creating and renewing great places and local centres, and respecting the District's heritage	This priority focuses on place-based planning and design excellence to enhance local character and heritage. It supports the revitalisation of areas to improve liveability, making them more attractive for residential development. The proposal is required to undertake a design competition process for the final design of the built form, and as such a design excellence strategy has been created to inform the design principles of the facility (refer to **Appendix E**). The proposal matches the existing celebrated character of the Camperdown-Ultimo Health and Education precinct that provides for medical and research needs, and employment and economy generating land uses.
Direction 6 – A well-connected city	
E10: Delivering integrated land use and transport planning, and a 30-minute city	This priority ensures that residents have easy access to jobs, services, and amenities within a 30-minute trip, improving quality of life and reducing congestion. The site is well located to support the idea of the 30-minute city, connected to a well-integrated transport network, including metro, train, bus, and active transport options which supports a higher-density residential development by making it easier for people to move around efficiently. The site is located within the existing Camperdown-Ultimo health and education precinct, providing connectivity between key medical, education and research facilities.
Direction 7 – Jobs and skills for the city	
E7: Growing a stronger and more competitive Harbour CBD	This priority identifies the Camperdown-Ultimo health and education precinct as part of the Innovation Corridor, a precinct containing knowledge-intensive, creative and start-up industries along with health, education and research services. The proposal aims to deliver a medical and life science research facility within this precinct, delivering innovative research laboratory in the heart of the hub.
E8: Growing and investing in health and education precincts and the Innovation Corridor	The site is located within the Camperdown-Ultimo health and education precinct, identified as having the potential to become Innovation District. A need is identified to accommodate ancillary and complementary uses such as health and medical research activities, which this proposal will provide for the by developing a biomedical and life sciences research facility. This will allow for the precinct to becoming progressively more complex by growing innovation and creating opportunities for a new generation of workers. The proposal seeks to provide additional serviced apartments through uplift to 84 Parramatta Road, increasing the diversity and affordability of housing available for key demographics within the precinct.
E11: Growing investment, business opportunities and jobs in strategic centres	The proposal facilitates a medical and life science research facility, drawing innovation and employment towards the precinct, resulting economic benefits for the wider community in terms of employment and innovation. These impacts are presented as part of the site's Economic Impact Assessment. A projected total of over 800 researchers and 200 support staff are expected to be employed within the site.
A city in its landscape	
E17: Increasing urban tree canopy cover and delivering Green Grid connections	This priority focuses on enhancing green infrastructure, such as parks and street trees, to improve urban amenity and environmental outcomes. The Urban Design Report (**Appendix A**) shows that deep soil and building separation is provided to the norther boundary for the provision of landscaped open space.
An efficient city	
E19: Reducing carbon emissions and managing energy, water and waste efficiency	The proposal delivers an innovative and sustainable building with high water, energy and waste efficiencies that will reduce emissions over time and work towards mitigating climate change. The development will also support transport demand initiatives by improving walkability and cycling opportunities to achieve the NSW Government's goal of net zero emissions by 2050.

Q4. 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?

The Planning Proposal is generally consistent with the following documents:

City of Sydney:

- City Plan 2036 Local Strategic Planning Statement (2020)
- Tech Central Innovation District
- Draft Minimising Overshadowing of Neighbouring Apartments (2020)
- Community Strategic Plan – Delivering Sustainable Sydney 2030–2050 (2025)
- Sustainable Sydney 2030—2050: Continuing the Vision (2023)
- Economic Development Strategy 2025-2035 (2025)
- Housing for All: City of Sydney Local Housing Strategy (2020)

Greater Cities Commission:

- Camperdown-Ultimo Place Strategy (2019)

University of Sydney:

- Walanga Wingara Mura Design Principles (2020)

NSW Government:

- Parramatta Road Corridor Urban Transformation Strategy (2021)
- NSW 20-Year Research and Development Roadmap (2022)
- NSW 2040 Economic Blueprint (2019)

City Plan 2036 Local Strategic Planning Statement

Council's Local Strategic Planning Statement (LSPS) contains planning priorities and actions of which this Planning Proposal aligns with. The LSPS, which represents Council's 20-year vision and strategy for the LGA's future direction, and contains directions about infrastructure, liveability, productivity and sustainability. The LSPS draws from the Greater Sydney Commission's GSRP and Eastern City District Plan and implements the planning priorities identified from these larger strategic documents at a local level.

The LSPS identifies the need to encourage investment within health and education precincts, within the identified Innovation Corridor, inclusive of the Camperdown-Ultimo Health and Education precinct, which the site is located within. The LSPS identifies this precinct as an area to be developed into a mature 'Innovation District', recognised by the strategy as one of the largest and most comprehensive health and education precincts in Greater Sydney, accommodating more than 97,000 workers. The development of the site for a biomed campus is consistent with the priorities of developing innovative and diverse business clusters in the City Fringe. The key planning priorities are identified in **Table 12** below.

Table 12 Consistency with City Plan 2036 Local Strategic Planning Statement

Priority	Consistency of the proposal with the Priority
Infrastructure	
I2: Align development and growth with existing infrastructure	The proposal includes a Public Benefit Offer (PBO) that outlines the contributions to be made via Voluntary Planning Agreement (VPA) with Council. The PBO outlines that the Proponent intends to deliver site specific sustainability measures and local infrastructure works-in-kind.
I3: Supporting community wellbeing with social infrastructure	
Liveability	
L3: New homes for a diverse community	As the site is located adjacent to the University of Sydney, 600m north of the Royal Prince Alfred Hospital, and 2.5km west of Central Station it is an ideal location for increasing housing density. The proposed additional serviced apartments to be

Priority	Consistency of the proposal with the Priority
	provided on the site will provide housing diversity and choice within the health and education precinct, at a location in proximity to jobs and local services. This will provide further housing availability the diverse range of peoples who enjoy, are employed by, and are students of the adjoining health and education precinct. Critically, the provision of formal short-term letting will not impact on the supply of rental accommodation as it is purpose built and does not involve the conversion of residential accommodation to short-term rental letting for tourism purposes.
Productivity	
P2: Developing innovative and diverse business clusters in City Fringe	It is recognised that the City Fringe features knowledge-based and creative clusters such as the specialised research, health and education cluster anchored around major institutions in Camperdown, and the Innovation Corridor. The site is located within Camperdown, and the Innovation Corridor, with the C Camperdown Health, Education and Research Precinct identified as one of the largest and most comprehensive health and education precincts in Greater Sydney, accommodating more than 97,000 workers in the specialised health and life sciences, education and research services, creative industries and information media sectors. The proposal of a medical and life science research hub will allow for this labour force to grow and further contribute to the dense economic activity and co-location of industries.
Sustainability	
S2: Creating better buildings and places to reduce emissions and waste and use water efficiently	The future built form presents an opportunity to deliver innovative sustainable product that reduces carbon emissions, manages energy, water and waste, working towards the goal of carbon neutral 2050. See the ESD report for further details on the proposals' commitment to sustainability.

Tech Central Innovation District (Tech Central)

In December of 2024, the NSW Government announced a new plan to unlock the potential of Australia's largest technology and innovation hub. Tech Central is a 6-square-kilometre area, previously called Camperdown-Ultimo Collaboration Area, and is inclusive of three precincts, each with a unique function:

- Eveleigh – deep technology
- Haymarket – digital and creative technology
- Camperdown – health, education, technology and innovation

The location of the site within the Tech Central Camperdown Precinct is shown in **Figure 45**.

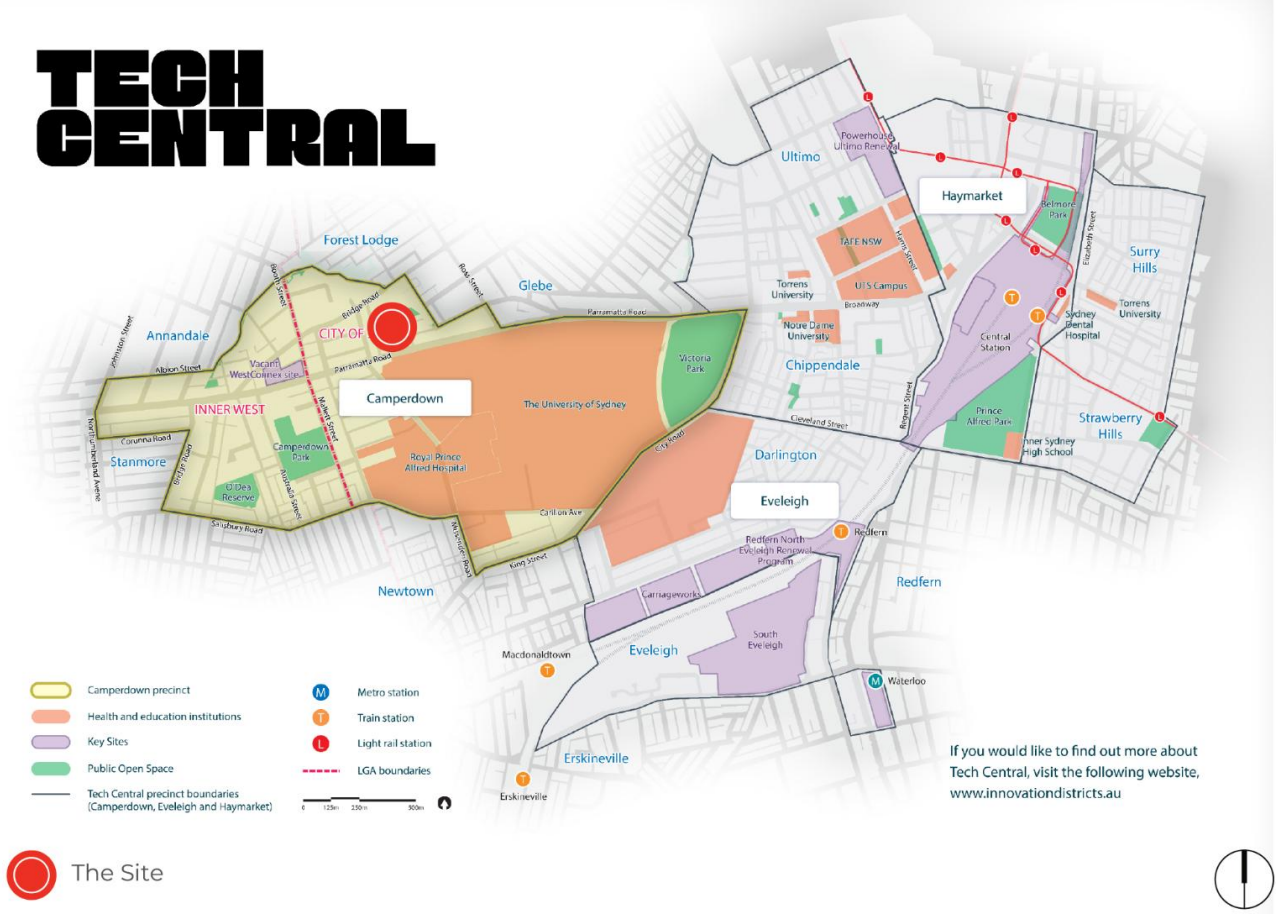


Figure 45 Tech Central Map with site location

Source: Tech Central, edits by Colliers Urban Planning

The NSW Government have committed to the development of a Tech Central Strategy, the transition of the Sydney Startup Hub to Tech central, and specialist support to driver investment and activity. Tech Central is home to global tech business, major venture capital funds, research institutes, two universities (University of Sydney and University of Technology Sydney), and a leading research hospital (Royal Prince Alfred Hospital). Investment NSW are developing a strategy to establish the district with focuses on housing, healthcare, nightlife and transport.

The site is located within the Camperdown Health, Education and Research Precinct within Tech Central. The key objective of the precinct is to build on existing health, education and research strengths to create a region that is internationally significant. The proposal aligns with the objectives of the Tech Central Strategy,

Draft Minimising Overshadowing of Neighbouring Apartments

The guide was prepared by Council to describe the documentation required to be provided to meet the requirements of the Apartment Design Guide (ADG) and associated regulations. The document identifies the four ADG steps to be followed to ensure overshadowing compliance of neighbouring apartments:

- Measure existing and proposed compliance with the solar criteria.
- Maintain compliance with the solar criteria (which allows some reductions.
- Make other allowable reductions.
- Minimise overshadowing and document options where the above criteria are not met.

A solar analysis has been undertaken by HDR Architects and Matthew Pullinger Architect to demonstrate the compliance capability of the proposed built form envelope with the ADG solar requirements for neighbouring apartments. The built form envelope achieves compliance at the following neighbouring apartments:

- 19-21 and 23-25 Larkin Street.
- 96 Parramatta Road and 32-38 Barr Street.

The built form achieves these outcomes due to the chamfering of the built form envelope to the sun protection plane, as well as through the introduction of appropriate setbacks, to ensure solar amenity is maintained for neighbouring residential dwellings. For further compliance details see **Section 8.4**.

ADG compliance matters were generally considered for the proposed serviced apartments uplift at 84 Parramatta Road, however confirmation of compliance will be provided at a future detailed design stage.

Community Strategic Plan – Delivering Sustainable Sydney 2030–2050

Delivering Sustainable Sydney 2030–2050 is Council's long-term plan for a more sustainable, equitable and resilient city. The plan builds on three key themes of Green, Global and Connected and includes ten specific targets to achieve a sustainable Sydney, as well as 10 strategic directions to guide the future of the city. The proposal will facilitate the implementation of the Community Strategic Plan as identified in **Table 13.**

Table 13 Community Strategic Plan - Delivering Sustainable Sydney 2030-2050

Priority	Consistency of the proposal with the Priority
A leading environmental performer	
2.1 The city reaches net zero emissions by 2035 with embodied carbon significantly reduced	The development will reduce greenhouse gas emissions through improved energy efficiency and low carbon energy production for net zero emissions. The site is well-positioned with access to pedestrian infrastructure and adjacent to multiple bus stops serviced by a range of bus routes, providing connectivity to the in the eastern and western direction of the site, and most notably to Central Station, 2.5km east of the site. Central Station provides extensive connectivity across Greater Sydney through bus routes, light rail, heavy rail, and the newly unveiled metro station.
2.2 Greening has increased to create a cool, calm, and resilient city	The future detailed development on the site will investigate the opportunity to provide street trees along Parramatta Road, and the provision of deep soil and adequate building separation at the norther boundary of the development to deliver open space for planting and landscaping. Specification in landscaping details will be required at a future detailed DA stage.
2.3 Water is managed to support a resilient, sustainable, and liveable city	The future built form will utilise efficient stormwater management systems designed to Council's requirements.
2.5 All city residents and businesses have the capacity to reduce emissions, adapt to a changing climate and share sustainable solutions	Ecologically Sustainable Development (ESD) provisions are relevant to new development. Conceptual ESD considerations are presented at **Section 8.10** of this Planning Proposal.
Public places for all	
3.1 Aboriginal people, their history and cultures of this place are evident in the public realm	The future design of the built form elements will be informed by the Walanga Wingara Mura Design Principles guidelines prepared by the University of Sydney, which could further inform any public art or public open space designs.
Design excellence and sustainable development	
4.1 The city's liveability will be enhanced through well planned and designed development	The site is well-located near the University of Sydney, Royal Prince Alfred Hospital, and key transport links. The design of the development will be required to be decided through a design competition process and informed by a design excellence strategy.
4.2 Productivity will be supported by planning for jobs, innovation, and enterprise activities	The development will enable a Life Sciences building that will establish a biomedical hub in a key located in proximity to the University of Sydney, Camperdown Tech Central precinct, Royal Prince Alfred Hospital and the new Sydney Biomedical Accelerator.

Priority	Consistency of the proposal with the Priority
	The specialised nature of the development will ensure it is designed to meet the needs of the science and innovation industry, resulting in the creation of life science jobs, and economic benefits for the city. The development will provide much needed research laboratory floor space for the purposes of life sciences research and innovation.
4.4 Good design leads to buildings and public spaces that are high performing, well designed, inviting and inclusive	The future built form will demonstrate design excellence and is designed to provide architectural interest; this will be achieved through the facilitation of a Design Competition at a future stage. The site will provide a comfortable, safe and inclusive environment.
4.5 Well planned and designed development reduces environmental impacts and improves resilience, health and sustainability	The proposed development is resilient and will respond to the changing needs of the community. The proposal has considered impacts on health and sustainability by creating a walkable and active precinct that is energy efficient and embodies low carbon energy. The ESD Report (**Appendix N**) demonstrates that the development will target a 5-star Green Star rating and retain and adapt the existing warehouse resulting in reduced embodied carbon.
A city for walking, cycling and public transport	
5.2 Most people use the high-capacity rapid and frequent public transport network that connects the city and the metropolitan area.	The site is adjacent to a well serviced bus stop connecting commuters to Central station and the heavy rail, light rail, and metro links from there.
5.3 More people walk more, because walking is the most attractive and convenient choice for short trips in the local area	The site is located directly adjacent to the University of Sydney, and just 600m from the Royal Prince Alfred Hospital, promoting walking between key research and medical significant buildings. The site is located in an MU1 Mixed Use zone, surrounded by a range of businesses including food and beverages, retailers, gyms, and green open spaces, promoting walkability at the site surrounds.
5.4 More people ride more, because it is an attractive, convenient and safe option for everyday transport	The development will provide bike racks to promote active lifestyle, as required by the Sydney DCP 2012.
Resilient and diverse communities	
7.4 The city economy is diversified to strengthen its resilience	The proposal will provide biomedical and life science research laboratory space, which will enable Sydney to accommodate future growth within the sector. Sydney's biotech sector has significant room for growth, and the proposal will enable the life sciences sector to be globally competitive.
A transformed and innovative economy	
9.1 An expanding innovation economy will support Sydney's future prosperity	The future development will contribute to the Tech Central innovation precinct to develop a workplace equipped with skills to leverage new technologies through the biomedical and life sciences research labs.
Housing for all	
10.4 Every neighbourhood has a mix of housing accommodating diverse and growing communities	An extension is proposed to the existing 84 Parramatta Road building with the potential to accommodate for three additional storeys of apartments. These living accommodations will support the needs of future apartment dwellers who choose to live in the Camperdown-Ultimo Health and Education precinct for employment, health, education, or proximity to services reasons. The additional short-term rentals will provide diversity to existing rental stock in the area through varied rental accommodation terms.

Sustainable Sydney 2030—2050: Continuing the Vision

Sustainable Sydney 2030—2050 is the vision for a sustainable future of the City of Sydney to 2050. The vision includes strategic directions to guide future development outcomes centred around a 'green', 'global' and 'connected' city. It sets out directions, actions and project ideas to achieve this vision. The key Strategic Directions under the Plan include the following as identified in **Table 14** below.

Table 14 Sustainable Sydney 2030 – 2050: Continuing the Vision

Strategic Directions	Consistency of the proposal with the Directions
Direction 2 – A leading environmental performer	The future built form presents the opportunity to incorporate sustainable design initiatives that reduces carbon emissions, manages energy, water and waste, and work towards mitigating climate change by 2050. For further detail see the ESD at **Appendix N**.
Direction 4 – Design excellence and sustainable development	The development is required to exhibit design excellence as described within Clause 6.21C of the Sydney LEP 2012. The proponent is required to undertake a design competition to achieve design excellence in accordance with the provisions outlined. This is a process to be undertaken at a future development stage. A Design Excellence Strategy has been prepared to support the Planning Proposal and is found in **Appendix E**. While the detailed design process is inclusive of an invited architectural design competition, the indicative reference scheme demonstrates that a highly articulate and quality Life Science Building can be delivered on the site, respecting the surrounding context and providing strong design outcomes for the locality.
Direction 5 – A city for walking, cycling and public transport	The site is well-positioned with access to pedestrian infrastructure and adjacent to multiple bus stops serviced by a range of bus routes, providing connectivity to the in the eastern and western direction of the site, and most notably to Central Station, 2.5km east of the site. Central Station provides extensive connectivity across Greater Sydney through bus routes, light rail, heavy rail, and the newly unveiled metro station.
Direction 9 – A transformed and innovative economy	The future development will contribute to the Tech Central innovation precinct to develop a workplace equipped with skills to leverage new technologies through the biomedical and life sciences research labs.

Housing for All: City of Sydney Local Housing Strategy (2020)

The City of Sydney Local Housing Strategy was published in June 2020 and provides a framework of housing related priorities to meet District targets. The strategy sets series of objectives and actions to guide future housing delivery for the LGA and identifies a target of 56,000 additional dwellings by 2036.

The site may accommodate up to 4.8:1 FSR for residential uses at the 84 Parramatta Road part of the site. This allows for housing to be provided within the proposed building envelope, with further land use allocation details to be identified at a future design stage. **Table 15** outlines consistency of the Planning Proposal with the relevant priorities of the City of Sydney's Housing Strategy.

Table 15 Consistency with City of Sydney Housing Strategy

Priority	Comment
Priority H1 – Facilitating more homes in the right locations	The importance of actively supporting and investing in established and emerging centres is recognised by Council and is supported by the proposal. The site will contribute to delivering housing within the Camperdown Health, Education and Research Precinct, within walking distance of the University of Sydney and the Royal Prince Alfred Hospital. The site is also well serviced by bus routes providing connectivity across Sydney and to nearby Central Station. The proposal seeks additional height to facilitate the provision of additional serviced apartments to complement the life sciences facility proposed.
Priority H2 – Coordinating housing growth with the delivery of infrastructure	The site is well serviced bus routes providing connectivity across Sydney and to nearby Central Station that provides connectivity across Sydney and regionally. The proposed additional serviced apartments are also co-located in proximity to key education and health infrastructure such as Prince Alfred Hospital and the University of Sydney.
Priority H3 – Increasing diversity and choice in housing	The proposed additional serviced apartments to be provided on the site will provide housing diversity and choice within the health and education precinct, at a location in proximity to jobs and local services. This will provide further housing availability the diverse range of peoples who enjoy, are employed by, and are students of the adjoining health and education precinct. Critically, the provision of formal short-term letting will not impact on the supply of rental accommodation as it is purpose built and does not involve the conversion of residential accommodation to short-term rental letting for tourism purposes.
Priority H7 – Increasing liveability, sustainability and accessibility through high-quality residential design	The future built form will exhibit design excellence and demonstrate high quality urban design to enhance the enjoyment of homes and public places. The indicative reference scheme includes generous planted terraces and greened rooftops. This will contribute enhancing people's health and wellbeing. The proposal is designed to accommodate a variety of sustainability features and deliver beyond its required targets for sustainability, energy efficiency and water and waste management.

City of Sydney Economic Development Strategy 2025-2035

The City of Sydney's economic development strategy focuses on strengthening the city's economy and supporting businesses for the next 10 years. The strategy focuses on championing a global economy that unlocks innovation, targeting that 70% of the 200,000 projected new jobs by 2036 will be in the knowledge and innovation intensive industries. The strategy identifies that Council is committed to extend light rail from Broadway to the Tech Central innovation district.

The Tech Central West economic precinct, which the site is located within, is host to 48,500 jobs, inclusive of 15,200 higher education jobs, 4,700 health jobs, and 5,500 creative industries jobs. The importance of the Tech Central innovation district is also emphasised within the strategy for its collaborative nature to bring together innovation, ideas and talent development.

Camperdown-Ultimo Place Strategy

As released by the Greater Sydney Commission in 2019, the Camperdown-Ultimo Place Strategy identified a vision and shared objectives with priorities and actions. The study includes the following key priorities:

Table 16 Consistency with the Camperdown-Ultimo Place Strategy

Priority	Consistency of the proposal with the Priority
Connectivity	
Priority 3: Promote smart technology, drive innovation and connect locally and globally.	237,400 people have access to Camperdown activity node within 30 minutes by public transport. The site's proximity to key bus stops that are well serviced will allow for connectivity of people to research and employment opportunities available at the proposed development, increasing connectivity within the precinct.
Liveability	
Priority 4: Provide housing supply, choice and affordability in great places for people	The proposal will deliver an extension to the existing serviced apartments provided at 84 Parramatta Road. The proposed housing supply will provide housing choice and diversity within the Camperdown Health, Education and Research Precinct that will service the local area.
Productivity	
Priority 7: Cultivate an internationally competitive health, education, research and innovation area	Action 27 specifies that a biotechnology hub is planned along Pyrmont Bridge Road in Camperdown activity node, located 250m north of the site. This hub will connect the existing research cluster and biomedical innovation institutions. This hub will be globally significant, and the proposal will contribute to the biomedical research capabilities and provide additional opportunities for collaboration.
Sustainability	
Priority 10: Create a resilient place	The future built form presents the opportunity to incorporate sustainable design initiatives that reduces carbon emissions, manages energy, water and waste, and work towards mitigating climate change by 2050. For further detail see the ESD Report at **Appendix N**.

Walanga Wingara Mura Design Principles University of Sydney

The Walanga Wingara Mura Design Principles was launched by the University of Sydney in 2016 and provides guidance on how to weave Aboriginal and Torres Strait Islander cultures, world views and practices into the physical design of university buildings. The proponent is required to undertake a design competition to achieve design excellence, in accordance with the Design Excellence Strategy (**Appendix E**). This later stage of the project provides the opportunity for the design of the development to demonstrate alignment with the developed principles under the Walanga Wingara Mura Design Principles document.

Under Clause 3.3.7 of the DCP a public art strategy is required to be prepared in accordance with Council's Guidelines for Public Art in Private Development, to inform the competitive design process at a future stage. The Preliminary Public Art Plan (**Appendix M**) suggests that the artwork could draw connections between the site, Country and sustainable First Nations practices. This will be developed in alignment with the Walanga Wingara Mura design principles at a future design stage.

Parramatta Road Corridor Urban Transformation Strategy

The Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) is the NSW Government's 30-year plan for the renewal of the Parramatta Road Corridor. The PRCUTS provides a long-term vision and framework to support co-ordinated employment and housing growth in the Parramatta Road Corridor in response to significant transport and infrastructure investment, economic and demographic shifts, and industrial and technological advances.

A Ministerial Direction gives statutory weight to the PRCUTS, thereby requiring proposals to demonstrate consistency with them and enabling Councils to consider Planning Proposals prepared by landowners or developers in a clear strategic context. Changes in line with the PRCUTS were intended by government to generally occur though Planning Proposals, comprehensive local environmental plan reviews by Councils, or through the Department of Planning and Environment's Priority Precincts program.

The site is identified within the Camperdown Precinct Frame Area, more specifically the 'Camperdown Triangle', land bound by Parramatta Road, Mallet Street, and Pyrmont Bridge Road as a biomedical hub. Key actions for the Camperdown Precinct include the prioritisation of Camperdown Precinct for biotechnology and employment uses that support the growth of the nearby institutions.

The PRCUTS applies to land along the length of Parramatta Road from Granville to Camperdown. The subject site at 84-98 Parramatta Road, Camperdown is covered by the PRCUTS. The PRCUTS does not specifically recommend updates to the FSR, or maximum building heights as indicated within the Sydney LEP 2012.

For completeness and to address the requirements for the Local Planning Direction 1.5 Parramatta Road urban Transformation Strategy, the following table (**Table 17**) demonstrates that the Planning Proposal is consistent with the vision, principles and objectives of the PRCUTS.

Table 17 Consistency with PRCUTS Vision, Principles and Objectives

Vision/Principles/Objectives
1. Housing choice and affordability
The proposal will enable the delivery of housing diversity and affordability through 84 Parramatta Road with an extension to the serviced apartments for a potential FSR maximum of 4.8:1.
2. Diverse and resilient economy
The proposal will enable the delivery of an employment generating medical and life science research hub, aligning with the recognition of Camperdown as a specialist precinct with world class research associated with the University of Sydney and Royal Prince Alfred Hospital.
6. Sustainability and resilience
The future built form presents the opportunity to incorporate sustainable design initiatives that reduces carbon emissions, manages energy, water and waste, and work towards mitigating climate change by 2050. For further detail see the ESD Report at **Appendix N**.

NSW 20-Year Research and Development Roadmap

The NSW 20-year R&D Roadmap sets out a 20-year vision for NSW to produce innovative technologies, products, services, and develop and sustain globally competitive advantages and future industries that improve productivity, standards of living, quality of life, and the natural environment. The report sets out the future of NSW in science and technology, inclusive of biotechnology as a key technology theme. The report notes that biotechnology has existing and potential applications in a range of sectors, with NSW contributing substantially to the Australian life sciences industry. This proposal represents a significant infrastructure investment into NSW's biotechnology research capabilities and will significantly contribute to the sector's excellence.

NSW 2040 Economic Blueprint

Government of New South Wales publication 'NSW 2040 Economic Blueprint- *Investing in the state's future*', outlines the economic blueprint for the state until the year 2040. As part of the vision for New South Wales to become Australia's first two trillion-dollar state, the publication recommends that, in the longer term, **research**, development and commercialisation facilities in the Innovation Precincts must be established.

The Planning Proposal at hand will make a significant contribution to the above-mentioned recommendation of the New South Wales Government, in that it will establish a world-class research facility in a prominent part of the Tech Central Precinct.

Q5. Is the planning proposal consistent with any other applicable State and regional studies or strategies?

Future Transport Strategy 2056

The Future Transport Strategy 2056 sets the vision and direction for NSW transport investment by providing a comprehensive plan that emphasises the creation of connected 30-minute cities and convenient 15-minute neighbourhoods. It includes a movement and place framework to ensure that transport supports the increased accessibility and reduced travel time for residents whilst enhancing the character of the places and communities. The key guiding principles for future transport that are relevant to the site, include:

- C2 Multimodal mobility supports end-to-end journeys: The proposal will include the provision of bicycle racks for end of trip storage.
- E2 Existing infrastructure is optimised: The site is located in proximity to well serviced bus stops offering connectivity to nearby train stations serviced by heavy rail, light rail, and metro services.

The proposal will create a life sciences building that will generate employment for researchers and staff in close proximity to bus stops providing connectivity to key public transport at Central Station, reinforcing the creation of the 30-minute city and 15-minute neighbourhood as described within the Future Transport Strategy.

Active Transport Strategy 2056 (2022)

The Active Transport Strategy supports the NSW Government's Future Transport Strategy 2056 by providing a framework that supports additional walking, bike riding and personal mobility. The Active Transport Strategy's vision aims to double the number of walking and bike riding trips in NSW in 20 years, from 1.5 billion to 3 billion. The Strategy aims to support population growth, improve equity of access, and help stabilise traffic in Greater Sydney. The key focus areas that are applicable to the site include:

- **Promote walking and riding and encourage behaviour change:** The development will provide bike racks to promote active lifestyles, to the rates required by Clause 3.11 Transport and Parking of the Sydney DCP 2012.

State Infrastructure Strategy 2022-2042 (2022)

The State Infrastructure Strategy 2022-2042 sets the vision of Infrastructure NSW in delivering infrastructure throughout the State over the next 20 years, focussing on aligning investment with sustainable growth. The strategy sets out 9 long-term objectives underpinning the Strategy, including the following as relevant to the site:

- **Boost economy-wide productivity and competitiveness:** Support emerging knowledge industries in dedicated precincts with high-quality infrastructure.
- **Integrate infrastructure, land use and service planning:** Coordinate infrastructure, land use and service planning to meet future housing, employment, industry and community needs.

The site will utilise existing transport infrastructure to integrate an employment generating land use with transport. This will enable future planning for Sydney to meet community needs.

Better Placed (2017)

The Government of NSW has established seven distinct objectives to inform better design across new development in NSW. Achievement of these objectives from this early stage of the project, through to the detailed design and construction stage will ensure the development will be healthy, responsive, integrated, equitable, and resilient. **Table 18** below demonstrates how the proposal is consistent with the objectives of the policy.

Table 18 Consistency with the Objectives of GANSW's Better Places

Objective	Response
Objective 1: Better fit	**Of its Place:** The commitment to design excellence has devised the optimal urban design arrangement which relates to its surrounds. The proposed massing has limited its impacts to surrounding buildings in terms of privacy and amenity considerations.
	Local / Contextual: The proposal matches the local context of the University and of the Royal Prince Alfred Hospital and the nearby proposed emerging context.
Objective 2: Better performance	**Sustainable:** The proposals sustainability strategy addresses proposed targets established in the ESD Report (**Appendix N**) that commit the development to targeting a 5-star Green Star rating to ensure the future development is Net Zero ready.
	Durable and adaptable: The technical investigations to form a flood strategy have been designed to appropriately respond to major rainfall events.
Objective 3: Better for community	**Connected:** The site is located adjacent to well services bus stops providing connectivity a range of nearby train stations.
Objective 4: Better for people	**Safe, comfortable and liveable:** The public interface of the development will be carefully considered within the streetscape to ensure a comfortable and safe pedestrian experience. The Preliminary Public Art Plan (**Appendix M**) identifies the Parramatta Road façade as an opportunity for the location of public art to activate the streetscape and celebrate the Life science innovation at the site.
Objective 5: Better working	**Functional:** Access points are well defined and convenient.
	Efficient / Functional: The development is efficient in its arrangement and seeks a high energy efficient and environmental performance.
Objective 6: Better value	**Creating and adding value:** The provision of a new employment generating land use in medical and life science research co-located within the Camperdown Health, Education and Research Precinct to serve the local economy and innovation district.
Objective 7: Better look and feel	**Engaging, inviting and attractive:** The future design of the built form will be developed in alignment with the Design Excellence Strategy (**Appendix E**), and will be required to undertake a design competition process.

Connecting with Country Framework (2023)

The Connecting with Country Framework aims to protect Country, community and sacred sites in the planning and design of places. The Urban Design Report (**Appendix A**) has identified potential strategies for a Connecting with Country approach at the site. Approaches include celebrating the site as a place of knowledge and learning, interpreting the original walking track between Sydney and Parramatta, and improving ecological function, deep soil, tree canopy and water management.

The University of Sydney's Walanga Wingara Mura Design Principles is a guiding document that informs the integration of Aboriginal and Torres Strait Islander cultures, world views and practices into the physical design of university buildings. At a future detailed design stage, the proponent will demonstrate alignment with the principles in the document, and

further with the guidance from the Connecting with Country Framework with opportunities for integration in the physical built form and in the public art commissioned for the development.

Q6. Is the Planning Proposal consistent with applicable State Environment Planning Policies?

The State Environmental Planning Policies directly applicable to the Planning Proposal are identified in **Table 19**

Table 19 Consistency with State Environmental Planning Policies

SEPP	Consistent		N/A	Comment
	Yes	No		
State Environmental Planning Policy (Biodiversity and Conservation) 2021			-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008			-	Not directly relevant to the propped LEP amendment. May apply to future development on the Site.
State Environmental Planning Policy (Housing) 2021	✓			As per clause 7.28 Serviced Apartments of the Sydney LEP 2012, development consent for the purpose of serviced apartments must not be granted unless the design principles for residential apartment development within the Housing SEPP have been considered. As such, the Apartment Design Guide has been generally considered in the design of the building envelope to ensure that the proposed uplift at 84 Parramatta Road continues to have a high standard of amenity despite the uplift and adjoining life sciences proposed building envelope. The development is capable of complying with the ADG, with compliance details to be outlined at a future detailed design stage.
State Environmental Planning Policy (Industry and Employment) 2021			-	Not relevant to proposed LEP amendment, future DAs will be assessed under Chapter 3 of the SEPP, where any signage is proposed.
State Environmental Planning Policy (Planning Systems) 2021			-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Precincts—Central River City) 2021			-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Precincts—Eastern Harbour City) 2021			-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Precincts—Regional) 2021			-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Precincts—Western Parkland City) 2021			-	Not relevant to proposed LEP amendment.

SEPP	Consistent	N/A	Comment
State Environmental Planning Policy (Primary Production) 2021		-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Resilience and Hazards) 2021	✓		Chapter 4 of the Resilience and Hazards SEPP aims to promote the remediation of contaminated land prior to development, to reduce health hazards or potential harm resulting from contamination. A Site Remedial Concept Plan (**Appendix O**) has been prepared and concludes that the site has been occupied by commercial and industrial uses since approximately the 1920s and has a low probability of having contaminated land to the degree that it would prevent redevelopment of the site for the proposed land use. The requirements of the SEPP will be addressed accordingly during the detailed DA process.
State Environmental Planning Policy (Resources and Energy) 2021		-	Not relevant to proposed LEP amendment.
State Environmental Planning Policy (Sustainable Buildings) 2022	✓		Any future development will be required to satisfy the provision of the State Environmental Planning Policy (Sustainable Buildings) 2022 as part of a future detailed Development Application. A range of measures aimed at ESD, are to be further resolved as part of the future detailed design and DA process.
State Environmental Planning Policy (Transport and Infrastructure) 2021	✓		Under Section 2.122 of the Transport and Infrastructure SEPP, the future DA under the proposed planning controls may be considered traffic generating development requiring referral to TfNSW. This may be a requirement as the site is accessible via Parramatta Road, a classified road and has a site area above 5,000m2 for the purpose of industrial development. Under pre- and post-Gateway consultation however, TfNSW will be consulted with respect to the proposal and the intended access, traffic and parking measures to ensure an appropriate outcome.

Q7. Is the Planning Proposal consistent with the applicable Ministerial Directions (Section 9.1 Directions) or key government priority?

The proposal's consistency with applicable Section 9.1 Directions is assessed in **Table 20**.

Table 20 Assessment of Section 9.1 Directions

Ministerial Direction	Consistent			Comment
	Yes	No	N/A	
Focus area 1: Planning Systems				
1.1 Implementation of Regional Plans	✓			The Planning Proposal is consistent with the GSRP as discussed in **Section 7.0**.
1.2 Development of Aboriginal Land Council land			-	Not applicable.
1.3 Approval and Referral Requirements	✓			This direction aims to ensure that LEP provisions encourage the efficient and appropriate assessment of development. The proposed amendments to the Sydney LEP 2012 do not contain requirements for additional approvals and referrals beyond what is required for the Planning Proposal process.
1.4 Site Specific Provisions	✓			A particular development scenario is envisaged for the site as described within the Urban Design Report at **Appendix A**. The proposed provisions will allow for the envisaged development to be carried out on the site. The Planning Proposal demonstrates the built form envelope on the site under the proposed planning controls, with any details of the proposed development resolved during DA stage.
1.4A Exclusion of Development Standards from Variation	✓			The proposed LEP amendment does not propose to exclude any development standards from variation.
Focus area 1: Planning Systems – Place-based				
1.5 Parramatta Road Corridor Urban Transformation Strategy	✓			This Ministerial Direction applies to Planning Proposals for land in the City of Parramatta, Cumberland, Strathfield, Burwood, Canada Bay and Inner West local government areas (LGAs). This Proposal is within the Sydney LGA, and as such this Direction does not apply. However, it does fall within a 'transformation area' within the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS). The site is also noted to be within the Camperdown Precinct. An assessment of the proposal against PRCUTS is found in Q4 of this Planning Justification. While not required, the proposal gives effect to the objectives of this direction by providing for a diversity of jobs and housing, consistent with the 'Mixed Use Zone' established for the site within PRCUTS. The site is also highly serviced by existing infrastructure.

Ministerial Direction	Consistent	Comment
1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	-	Not applicable.
1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	-	Not applicable.
1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	-	Not applicable.
1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor	-	Not applicable.
1.10 Implementation of Western Sydney Aerotropolis Plan	-	Not applicable.
1.11 Implementation of Bayside West Precincts 2036 Plan	-	Not applicable.
1.12 Implementation of Planning Principles for the Cooks Cove Precinct	-	Not applicable.
1.13 Implementation of St Leonards and Crows Nest 2036 Plan	-	Not applicable.
1.14 Implementation of Greater Macarthur 2040	-	Not applicable.
1.15 Implementation of the Pyrmont Peninsula Place Strategy	-	Not applicable.
1.16 North West Rail Link Corridor Strategy	-	Not applicable.
1.17 Implementation of the Bays West Place Strategy	-	Not applicable.
1.18 Implementation of the Macquarie Park Innovation Precinct	-	Not applicable.
1.19 Implementation of the Westmead Place Strategy	-	Not applicable.
1.20 Implementation of the Camellia-Rosehill Place Strategy	-	Not applicable.
1.21 Implementation of South West Growth Area Structure Plan	-	Not applicable.
1.22 Implementation of the Cherrybrook Station Place Strategy	-	Not applicable.
Focus area 3: Biodiversity and Conservation		

Ministerial Direction	Consistent	Comment
3.1 Conservation Zones	-	Not applicable.
3.2 Heritage Conservation	✓	The proposed development has been designed to ensure the retention of the historic warehouse located within the site. The Heritage Impact Statement at **Appendix J** details an acceptable impact to the proposed heritage item within the site and existing heritage items and conservation areas surrounding the site.
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.
3.6 Strategic Conservation Planning	-	Not applicable.
3.7 Public Bushland	-	Not applicable.
3.8 Willandra Lakes Region	-	Not applicable.
3.9 Sydney Harbour Foreshores and Waterways Area	-	Not applicable.
3.10 Water Catchment Protection	-	Not applicable.
Focus area 4: Resilience and Hazards		
4.1 Flooding	✓	The proposed development has been undertaken in accordance with a Site-Specific Flood Study and WSUD Report which has determined suitable minimum floor levels based upon the catchment flood study. Refer to the Flood Risk Assessment (**Appendix K**).
4.2 Coastal Management	-	Not applicable.
4.3 Planning for Bushfire Protection	✓	The site is not located on mapped bush fire-prone land.
4.4 Remediation of Contaminated Land	✓	The site has been occupied by built forms since approximately the 1920s, and it is anticipated that in the event of contamination the site can be made suitable for the proposed land use as per the Site Remedial Concept Plan (**Appendix O**). It is considered unlikely that activities at the site have contaminated the land to the degree that would prevent redevelopment for the proposed land use.
4.5 Acid Sulfate Soils	✓	In accordance with the Sydney LEP 2012, the site is classified as Class 5 Acid Sulfate Soils. At the time of any future development application, the need for an Acid Sulfate Management Plan will be addressed.
4.6 Mine Subsidence and Unstable Land	-	Not applicable.

Ministerial Direction	Consistent	Comment
Focus area 5: Transport and Infrastructure		
5.1 Integrating Land Use and Transport	✓	The proposed development is consistent with the guidelines identified within this Direction in that it will Create additional dwellings proximate to numerous high capacity transport links. Deliver additional employment opportunities within close walking distance of adjoining dwellings in a highly serviced area.
5.2 Reserving Land for Public Purposes	-	No land is proposed to be acquired by the relevant authorities.
5.3 Development Near Regulated Airports and Defence Airfields	-	Not applicable.
5.4 Shooting Ranges	-	Not applicable.
5.5 High pressure dangerous goods pipelines	-	Not applicable.
Focus area 6: Housing		
6.1 Residential Zones	-	Not applicable.
6.2 Caravan Parks and Manufactured Home Estates	-	Not applicable.
Focus area 7: Industry and Employment		
7.1 Business and Industrial Zones	✓	The proposed development will provide for a net increase in FSR which will provide for the opportunity to increase the floor space for employment uses. No change to the existing land zoning is proposed.
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.

7.2 Site-specific merit

7.2.1 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?

The proposed development resulting from the Planning Proposal will not result in any impact on critical habitat or threatened species, populations or ecological communities or their habitats, given the site's urban location. No approvals are required to facilitate the proposed development under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) and Biodiversity Conservation Act 2016.

Q9. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

A detailed assessment of the environmental effects as a result of this proposal is identified in **Section 7.0**. Relevant management measures are identified where appropriate, and, on this basis, no unacceptable impacts are likely to result from this rezoning request or future development on the site.

Q10. Has the planning proposal adequately addressed any social and economic effects?

Yes. The economic and social impacts arising from rezoning request have been fully identified and addressed by specialised reports which are assessed at **Section 8.8**.

7.2.2 Section D – Infrastructure (Local, State and Commonwealth)

Q11. Is there adequate public infrastructure for the planning proposal?

Yes. The site is located adjacent to two well serviced bus stops that provide connectivity to a range of train stations to the east and west of the site, inclusive of Central Station, which is serviced by heavy rail, light rail and metro services. As the existing built form on the site includes a Medical Foundation Building and serviced apartments, the site is serviced by the full range of public utilities including electricity, telecommunications, water, sewer and stormwater. It is expected that these services be upgrade where required alongside the development. For further details on the capability of the site to be adequately serviced, refer to the Utility Services Review available at **Appendix P**.

The Proponent has prepared a Public Benefit Offer which will be formalised through a Voluntary Planning Agreement with Council to be undertaken at a later development stage.

7.2.3 Section E – State and Commonwealth Interests

Q12. What are the views of state and federal public authorities and government agencies consulted in order to inform the Gateway determination?

Where necessary, further consultation with relevant authorities will be undertaken as required in accordance with the Gateway Determination. State and Commonwealth authorities will have the opportunity to provide comment on the Planning Proposal as part of its formal exhibition.

8.0 Environmental Assessment

This chapter provides an overview of the key planning and technical assessment issues relating to the Planning Proposal. This assessment collectively addresses matters which form the basis of adequacy to confirm the site-specific merit of the proposal and the suitability of the proposal.

8.1 Built Form and Urban Design

HDR Architects and Matthew Pullinger Architect have prepared an Urban Design Report provided at **Appendix A**. The proposed envelope has been designed with consideration of the existing site size, the surrounding residential and Parramatta Road context, and the proposed land uses at the site. The proposed envelope achieves a balance between internal functionality of the proposed life sciences uses and considering the external aesthetics and impacts, designing with consideration for the massing of the development to ensure the best public domain outcomes.

8.1.1 Podium

The proposed envelope includes a traditional podium and tower form; with the tower massing designed exclusively for the life sciences uses. The proposed building podium height is 30 metres and is generally consistent with the building height of the surrounding built form and adjoining residential buildings. The inclusion of the podium enables the retention and integration of the warehouse at 88-90 Parramatta Road, reflecting the heritage significance of the item as identified by Council through pre-lodgement discussions and Curio within the Heritage Impact Statement at **Appendix J**.

The proposed podium height effectively maintains a sense of openness to the street and respects a human scale, enabling the achievement of a comfortable street environment for pedestrians along Parramatta Road, as well as mitigating potential wind impacts (as discussed further at **Section 8.12**). The indicative reference scheme illustrates that an elegant and attractive podium design can emerge within the proposed envelope to benefit the Parramatta Road corridor, significantly improving the current site situation.

The podium setbacks have been informed by the surrounding residential land uses and the individual urban settings of each of the adjoining neighbours. At the northern boundary of the podium, an 18-metre building separation is proposed to the residents to the north, whilst a 12-metre separation is proposed to the eastern boundary. These separation distances have been informed by the requirements of the ADG regarding separation for habitable and non-habitable rooms for the neighbouring residential apartments. The separation distances have additionally been informed by ADG requirements for the proposed serviced apartments uplift at 84 Parramatta Road. Furthermore, to ensure solar amenity and ADG compliance is maintained to the existing serviced apartments at 84 Parramatta Road, the building podium has been chamfered at the north-eastern corner.

Finally, it is noted that the podium envelope is proposed be located on the majority of the site. However, the maximum FSR controls proposed will not enable this podium envelope to be built in its entirety. Instead, this broad podium envelope is designed to enable a range of design outcomes through future design excellence processes. The indicative reference scheme demonstrates only one potential outcome for the podium.

See **Figure 46** for a visual indication of the proposed building envelope massing.

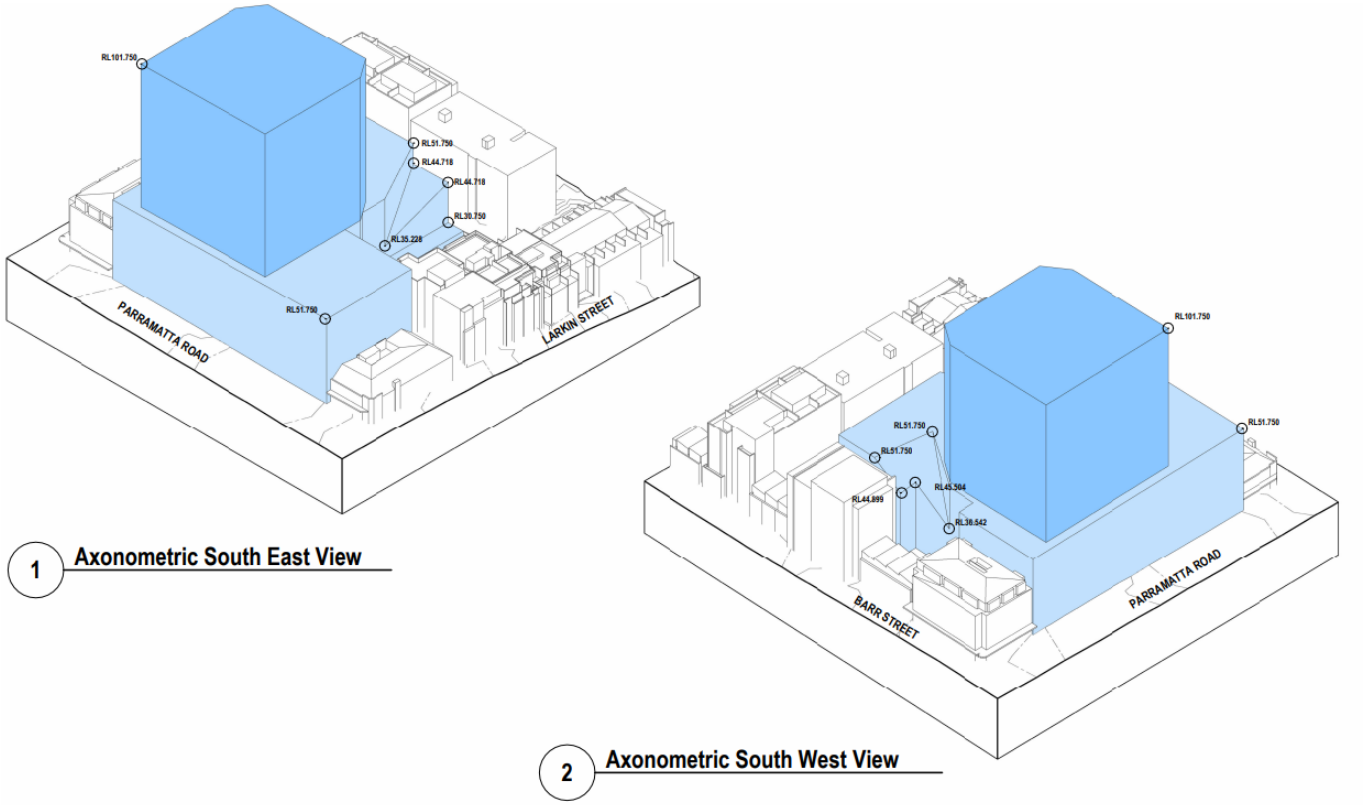


Figure 46 Building envelope – massing

Source: HDR Architects and Matthew Pullinger Architect

8.1.2 Tower

This Planning Proposal seeks to facilitate a tower form that can achieve design excellence, whilst also meeting the unique needs of life sciences. The tower massing strategy has been informed by these needs, as well as the surrounding environmental impacts and adjoining built form. The proposed height and massing of the tower have been designed in consideration of the required floor-to-floor heights for the laboratory spaces within the life sciences use, as well as the layout efficiency to maximise laboratory spaces and servicing efficiencies. Laboratory spaces are required to have a taller than standard floor-to-floor height of 4.5m as required to accommodate extensive mechanical services, specialised ventilation systems, and large ductworks.

To maintain the solar access to the neighbouring residential apartments, a sun protection plane has been identified, specifically for residents along Barr Street, as well as Larkin Street. As a result of this solar protection, the tower has been chamfered on the northwestern corner. The chamfer will be applied symmetrically to the northeastern corner, creating a logical building envelope and benefitting the eastern residential neighbours through additional building separation.

The tower envelope is proposed to be located closer to the Parramatta Road frontage, more closely aligning with the dense urban form of the corridor. This also further minimises overshadowing to the adjoining residential buildings. The tower massing has also been informed as per Council's pre-lodgement feedback to minimise the bulkiness of the building and any resultant impacts.

8.1.3 Life Sciences Floorplates

One of the key design considerations informing the tower are the building and design requirements needed to support life sciences as a use. These considerations include:

- A diverse mix of uses supporting the primary life sciences use, such as retail, conference spaces and meeting rooms and break out spaces.
- Ensuring maximum flexibility through a 10.2 metre x 10.2 metre structural framework with 3.4 metre x 3.4 metre laboratory modules to allow for either a closed or open laboratory configuration as desired.

- Increased floor to floor heights of 4.5 metres to accommodate extensive mechanical services, specialised ventilation systems, and large ductwork. Additional height also allows for structural vibration control, flexible service distribution, and the integration of specialised equipment
- The floorplate size is based off the typical research group structure requiring approximately 120m^2 plus 30m^2 of dry research space, with 6 research groups per floor, including shared support labs, core facilities and storage. This configuration results in a 1000m^2 floorplate, as shown in **Figure 47** that can accommodate up to 42 researchers inclusive of 6 primary investigators and 36 laboratory technicians.

Therefore, the mass and scale of the tower have been designed with consideration of the requirements of life sciences laboratory floorspace, which will ensure that the building resulting from the proposed envelope is built for purpose and can accommodate a state-of-the-art life sciences facility.



Figure 47 Typical Life Sciences floorplate

Source: HDR

8.1.4 Visual Impact

The proposed design response aims to be sensitive to the local context, respond to site-specific conditions, and contribute to a high-quality public domain. As illustrated at **Appendix A**, HDR has prepared a series of key views incorporating the proposed envelope to inform a visual impact analysis. Viewpoints have been selected from key areas of the public domain where the proposed tower will alter the current visual setting. These views include:

- Parramatta Road looking west and east **(Figure 48** and **Figure 49**).
- University of Sydney Campus looking north (**Figure 50**).
- Barr Street looking south (**Figure 51**).
- Lambert Street looking east (**Figure 50**).



Figure 48 Parramatta Road view looking west

Source: HDR Architects and Matthew Pullinger Architect



Figure 49 Parramatta Road view looking east

Source: HDR Architects and Matthew Pullinger Architect



Figure 50 View from University of Sydney campus

Source: HDR Architects and Matthew Pullinger Architect



Figure 51 View from Barr Street looking south

Source: HDR Architects and Matthew Pullinger Architect



Figure 52 View from Lambert Street looking east

Source: HDR Architects and Matthew Pullinger Architect

The views of the envelope demonstrate that:

- The bulk of the development is located along the Parramatta Road boundary of the site, moving the tower towards the busy road corridor and away from the residential development. The larger built form is also more consistent with the typology and scale of Parramatta Road, as well as the future character of the corridor.
- No key view corridors are impacted by the development, with no major landmarks or significant vistas within the vicinity of the site. The wide views of St Johns College from St Johns Oval and surrounds (**Figure 50**) are not obscured in anyway. No other heritage items are visually (or physically) impacted by the proposed development.
- The proposal is read as a highly distinguished podium and tower from, establishing an appropriate human scale to the streetscape.
- The proposal will not result in an overbearing tower form read from the northern, lower scale built form on the site. The chamfered corners of the tower to the north help to articulate the form and create visual interest from Barr and Lambert Streets.

More broadly, the view impacts of the proposal are appropriate given the changing nature of Parramatta Road, as well as the site's location in the Camperdown-Ultimo Health and Education precinct, which is rapidly evolving. **Figure 53** below shows the future context surrounding the site, which shows that there is a significant amount of new development expected surrounding the site, which further supports the appropriateness of tower envelope, and any resultant visual impact.

It is noted that the visual impact of the proposal will be refined and improved through the design excellence process and detailed design, as the Planning Proposal assessment considers a maximum building envelope. In summary, the analysis demonstrates that the preferred envelope generates an overall acceptable visual impact that can be supported.

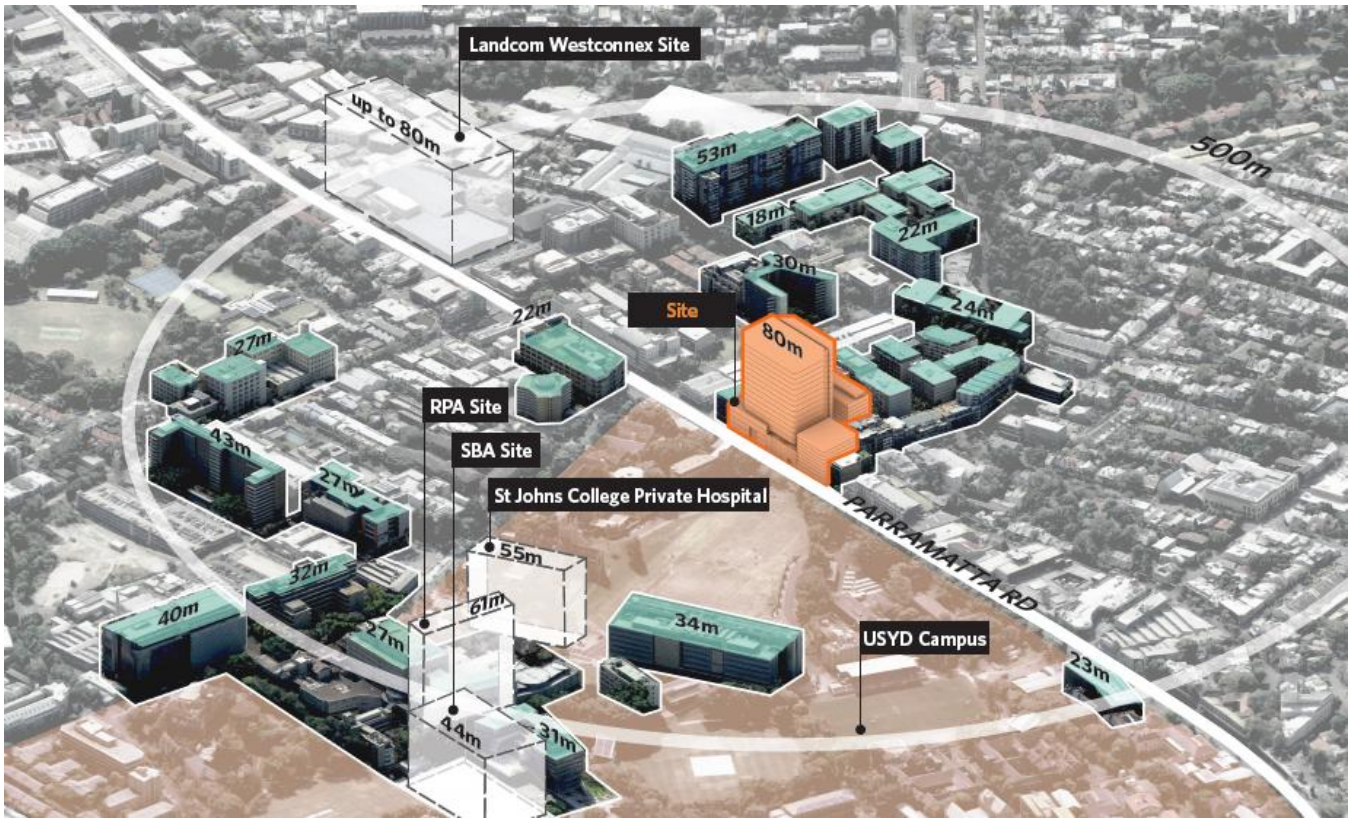


Figure 53 Future development surrounding the site

Source: HDR Architects and Matthew Pullinger Architect

8.2 Design Excellence Strategy

Included at **Appendix E** is a Design Excellence Strategy that details the process and approach the Proponent proposes to adopt in achieving the objectives and requirements of Clause 6.21 of Sydney LEP 2012. This Design Excellence Strategy establishes a framework with minimum requirements to ensure that a fair, transparent and facilitative invited architectural design competition can be completed to ensure the achievement of design excellence and the highest sustainability outcomes.

8.3 Heritage Impact

A Heritage Impact Statement has been prepared by Curio and is provided at **Appendix J** which includes a detailed analysis of the historic warehouse at 88-90 Parramatta Road and opportunities for the retention and preservation of this building, subject to structural feasibility.

The report identifies that there are no listed items of local or State heritage significance within the study area or adjacent, however the site is located in proximity to several local heritage items and heritage conservation areas (HCAs) within the Sydney LEP 2012 and with a State item listed on the NSW State Heritage Register.

The existing warehouse at 88-90 Parramatta Road is not heritage listed but has been identified as having historical significance through an assessment in accordance with the *Assessing Heritage Significance* 2023 guidelines by the NSW Government Department of Environment and Heritage. In 1924 Sneddon Motors purchased the surrounding lots inclusive of the subject site to become a service station. In 1927 the interwar warehouse structure was likely built, for the purposes of selling used motor cars and was likely the only three-storey building on that portion of Parramatta Road at the time of construction. The warehouse building at 88-90 Parramatta Road has the potential to contribute to our understanding of how motor car showrooms and warehouses were constructed in early part of the twentieth century, how they operated internally, and how they reflected the commercial motor car culture during Sydney at the time.

The warehouse is in good condition with a high level of integrity with an intact façade and brickwork at the outside and interiors alongside intact timber interior floorboarding and ceiling and floor support beams on the first and second level. The buildings ground floor showroom area has been altered considerably, including the installation of carpeting, new partition walls, potential concrete capping over the original timber columns and false-ceiling panels. Some damage and deterioration have occurred because of neglect to the façade and vandalism due to the break-ins.

A preliminary assessment in January 2025 established that the Inter-war warehouse building was able to meet the threshold for significance at a local level, these findings were presented to the City of Sydney at the DAP meeting on the 13 February 2025. Council issued feedback on the 11 March 2025 that identified the following matters are to be addressed:

- 'It is noted that your heritage assessment identified 88-90 Parramatta Road as being potentially locally significant. It is recommended that the building be retained and adapted and that future detailed design should seek to retain the whole structure. A facade only approach to adaptation would not be supported.
- The retention of the 88-90 Parramatta Road building is an opportunity to accommodate the proposed exchange, conference or 'science on display' spaces.'

Considering the feedback received from Council, the Proponent intends to retain the warehouse building at 88-90 Parramatta Road, subject to structural feasibility. This has been included in the proposed LEP controls discussed at **Section 6.0**.

With regards to the impact of the proposed envelope on the warehouse, Curio concludes that the envelope and reference scheme have an acceptable visual and physical impact. The proposed layout and massing of the proposed built form have been designed to respect the heritage values of the site and will provide a defined street wall with the opportunity to conserve the site's historic values whilst balancing the need to minimise the impact to residential amenity of the neighbouring residents and activate Parramatta Road.

The layout of the new built forms provides opportunities for areas of open space and landscaping as well as opportunities for historical interpretation, vehicular access proposed will run parallel to the historical link of Parramatta Road to the former Horse Bazaar and sale yard. The indicative reference scheme involves retention of the warehouse and reuse for

the purposes of 'science on display' and/or conference area to support the new research and innovation function, which is a positive approach to the historic warehouse.

The proposed envelope will rely on some level of structural requirements that may potentially be required to be located within the footprint of the warehouse, where Curio recommend the works align and sit adjacent to the existing columns. The incorporation of the structural supports for the tower form above may require some intervention to the fabric of the building, however the impacts can be of a limited and localised nature and potentially reversible.

Curio have also considered the potential view impact of the development to the warehouse in their assessment. Although the development will be visible from surrounding viewpoints and will change the context in which the warehouse is viewed, the retention, reuse, and activation of the warehouse will complement the wider historical setting. Curio also acknowledges that that the built form uplift represents an important component of the future vision for Tech Central.

The report concludes that the proposed development is considered to have an acceptable visual impact on the heritage setting and heritage items within the vicinity, the built form will respect the scale and rhythm of surrounding development along Parramatta Road. The report recommends the following, in alignment with the conclusions:

- Further investigations are required to understand the extent of surviving fabric along the ground floor of the front façade of the Inter-war warehouse, and any surviving elements should be assessed regarding their condition and considered for incorporation within the future design. This can be undertaken as part of the future detailed DA
- The indicative reference scheme proposes a new void on the first-floor level, which would require the removal of timber flooring. Future design development should consider the retention of this timber floor if this component is carried into the detailed design, to provide visual interpretation of the original floor structure.
- Future design of the new podium building at 92-96 Parramatta Road and design of the alterations to the existing serviced apartment building at No.84-86 Parramatta Road should incorporate articulation and materiality which complements the setting of the Inter-war warehouse building.
- A Heritage Interpretation Plan should be prepared in conjunction with the future detailed design development for the site to ensure that the heritage values are thoroughly integrated, and its significance appropriately recognised.

As a result of the above feedback from Council, Curio has developed several design principles that will be carried forward through the future design excellence process and any future DA on the site:

- **Retain and Adapt** - Preserve the building's overall volume, street-facing façade, and internal spatial character, adapting it for contemporary use within the life sciences precinct.
- **Prioritise Heritage Interpretation** - Utilise the building for public-facing uses - such as exhibitions or conferences- to celebrate and interpret its historical architectural significance.
- **Respect Visual Curtilage** - Set back any new tower elements to conserve the roof form and maintain legibility of the Inter-war building from Parramatta Road and key view corridors, where possible.
- **Minimise Physical Intervention** - Locate structural supports in the eastern and western zones to avoid impact to significant interiors, and concrete demolition/adaptive reuse in key existing modified areas for services and access, where possible.
- **Enhance Natural Light and Ventilation** - Retain original northern and southern windows at upper levels to support both heritage values and environmental performance objectives.
- **Activate the Ground Plane** - Reconfigure the altered ground floor to provide a pedestrian link and a welcoming public interface while allowing for adaptive reuse of original circulation elements.

8.4 Overshadowing

HDR Architects and Matthew Pullinger Architect have minimised the overshadowing impacts on the adjoining residences to the east and west of the site, undertaking an overshadowing analysis in accordance with Council's guidelines '*Minimising Overshadowing of Neighbouring Apartments*'. For further detail see the Urban Design Report at **Appendix A**.

8.4.1 19-21 and 23-25 Larkin Street

Two apartment buildings are identified to the east of the development, at 19-21 and 23-25 Larkin Street. As the existing built form on the subject site has no setbacks to the eastern boundary, any setbacks to the eastern boundary proposed will result in improved amenity to those apartments. The analysis found that units at 23-25 Larkin Street currently received zero hours of sunlight to the living rooms between 9am and 3pm, and all units at 19-21 Larkin Street receive no hours of sunlight to the living rooms, with the exception of 2 units at 19-21 Larkin Street which receive at most, 1 hour of sunlight to the living rooms between 9am and 3pm. These two units that receive sunlight are located at the northern most end of the apartments and will therefore not be impacted by overshadowing from the proposal.

8.4.2 96 Parramatta Road and 32-38 Barr Street

96 Parramatta Road and 32-38 Barr Street adjoin the site to the west. An analysis of the ADG solar compliance of the apartment building at 96 Parramatta Road found that less than 70% of apartments currently receive 2 hours of sunlight. However, there is a row of north facing apartments on levels 2-5 that individually receive in excess of 2 hours of sunlight between 9am and 5pm under the current site conditions. These apartments are required to be protected from overshadowing as part of this Planning Proposal. Sun eye views of the current arrangement of these apartments are shown at **Figure 54**. To the west of the site, 32-38 Barr Street contains a row of three storey terraces with a rear courtyard that faces east. These rear courtyards currently receive no direct sunlight.



Figure 54 96 Parramatta Road, and 32-38 Parr Street solar analysis

Source: HDR Architects and Matthew Pullinger Architect

To maintain the current solar compliance conditions on the identified neighbouring properties, a sun protection plane has been identified to inform the built form of the proposal, illustrated in **Figure 55** below. Compliance with these solar planes will ensure the retention of a compliant level of solar access to these apartments. This solar protection plane has informed the proposed envelope, and as a result, the relevant apartments will not have their solar reduced below the minimum amount required within the ADG.

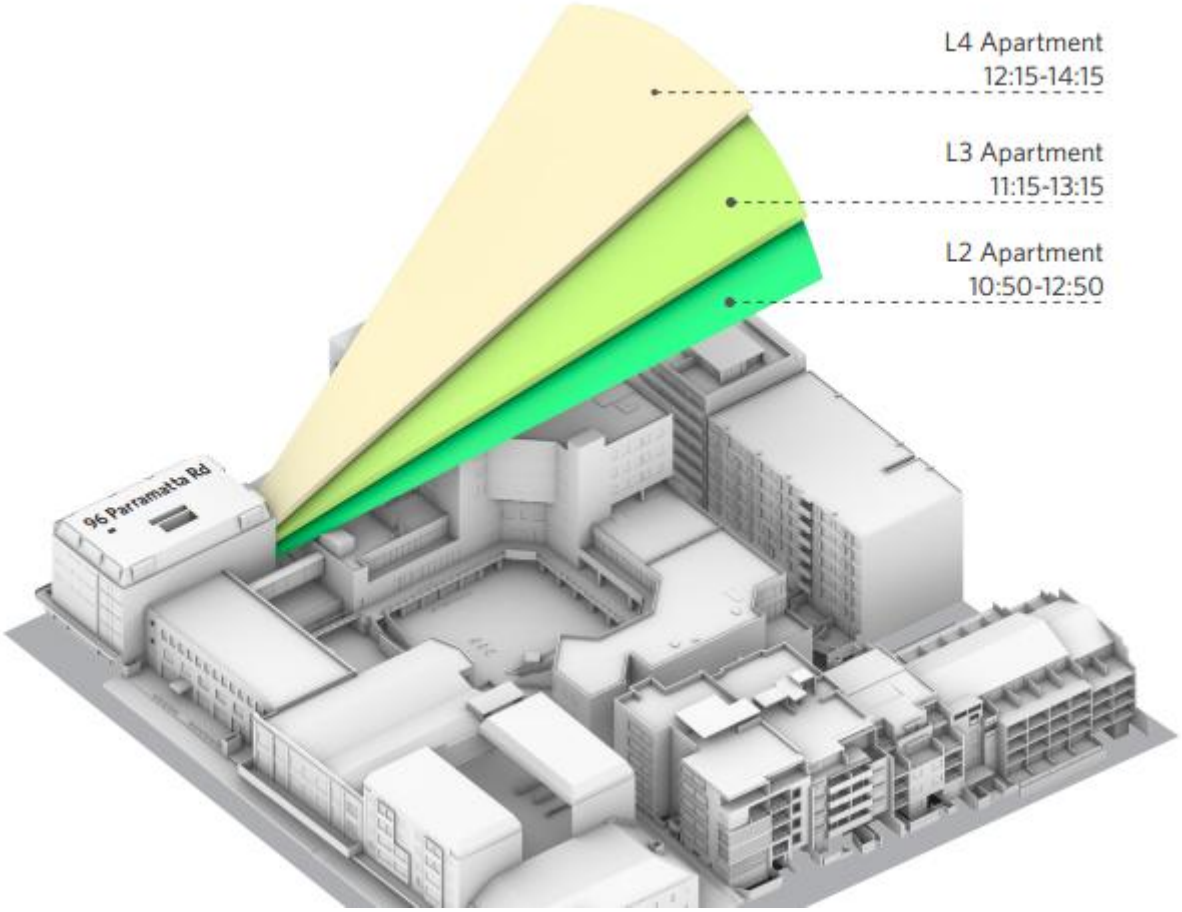


Figure 55 Sun protection planes required

Source: HDR Architects and Matthew Pullinger Architect

8.4.3 84 Parramatta Road

The proposed overshadowing resulting from the proposed tower envelope has been assessed to ensure that there are no unacceptable overshadowing impacts at the existing and proposed serviced apartments at 84 Parramatta Road. It is noted that 84 Parramatta Road forms part of the site. The solar assessment undertaken reveals that 9 of the 28 (32%) of existing apartments currently achieve ADG solar compliance due to the limited norther aspect and overshadowing of adjacent buildings.



Figure 56 84 Parramatta Road solar analysis

Source: HDR Architects and Matthew Pullinger Architect

The analysis identifies that the north facing apartments on levels 3 and 4, and an additional single apartment on level 2 receive in excess of 2 hours of solar access. To retain the solar access at the level 2 apartment for afternoon sun, a sun protection plan has been identified to retain solar access and inform the massing of the proposed development.

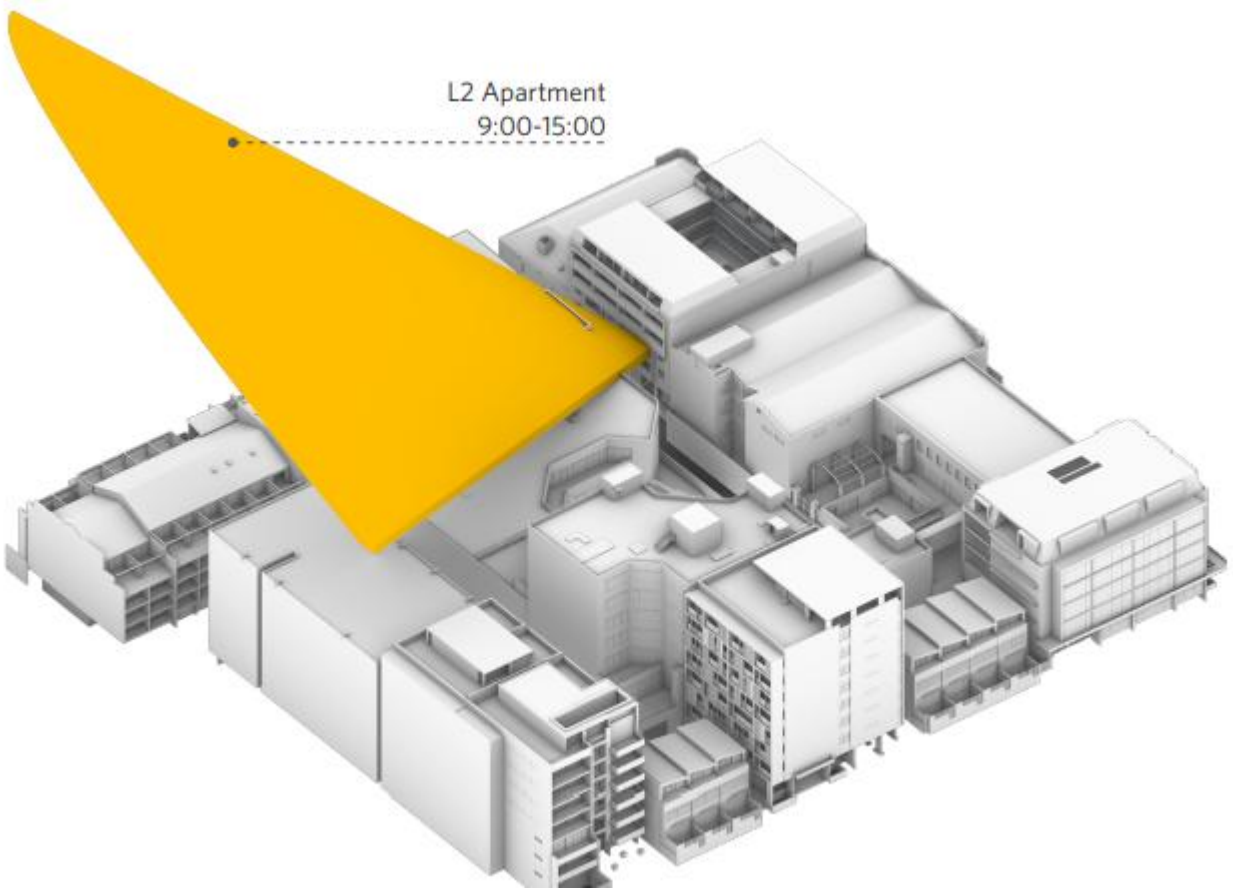


Figure 57 Sun protection planes required

Source: HDR Architects and Matthew Pullinger Architect

8.5 Residential Amenity

To ensure consistency with Section 7.28 of the Sydney LEP 2012, any future serviced apartments uplift at 84 Parramatta Road must demonstrate consistency with the residential amenity requirements of the ADG. This includes any amenity impacts, notably solar access and overshadowing on the site from the proposed life sciences building envelope as part of this Planning Proposal. Furthermore, Section 4.4.8 of the Sydney DCP 2012 details that the health and amenity of serviced apartments are to meet a high standard to ensure that any future conversion of to residential flats are not compromised by poor amenity. Council's '*Minimising Overshadowing of Neighbouring Apartments*' guidelines were used to identify key ADG solar access objectives, design criteria and guidance as applicable.

The design of the building envelope included general considerations of solar compliance, natural ventilation and building separation requirements at 84 Parramatta Road to preserve amenity. The proposed envelope has also been designed with consideration for surrounding existing residential development adjoining the site. The building envelope is capable of complying with the ADG, with compliance details to be provided at a future detailed design stage.

Furthermore, the proposed envelope of the tower form and proposed serviced apartment uplift ensures that no new non-compliances result from the redevelopment of the precinct overall.

8.6 Flooding and Stormwater

A Flood Risk Assessment has been prepared by Arup and is appended at **Appendix K**, the key objectives of the flood report are to undertake a desktop analysis to assess the existing flood conditions and determines the suitability of the site for the proposal development.

The Sydney LEP 2012 does not permit development which significantly adversely affects flood behaviour resulting in detrimental increases in the potential flood affectation of other developments or properties. Arup has confirmed that there is no adverse flood impacts anticipated as a result of the development which cannot be appropriately managed and mitigated.

8.6.1 Existing Site Conditions

The existing buildings within the site area are not identified to be impacted by the 1% annual exceedance probability (AEP) flood level according to the revised flood planning modelling undertaken in the report, as identified in **Figure 58** below. Additionally, the site is not mapped as being affected or partially affected in the probable maximum flood (PMF) event according to the revised flood planning modelling undertaken in the report, as shown in **Figure 59** below.



Figure 58 Revised baseline flood model peak depths - 1% AEP event

Source: Arup

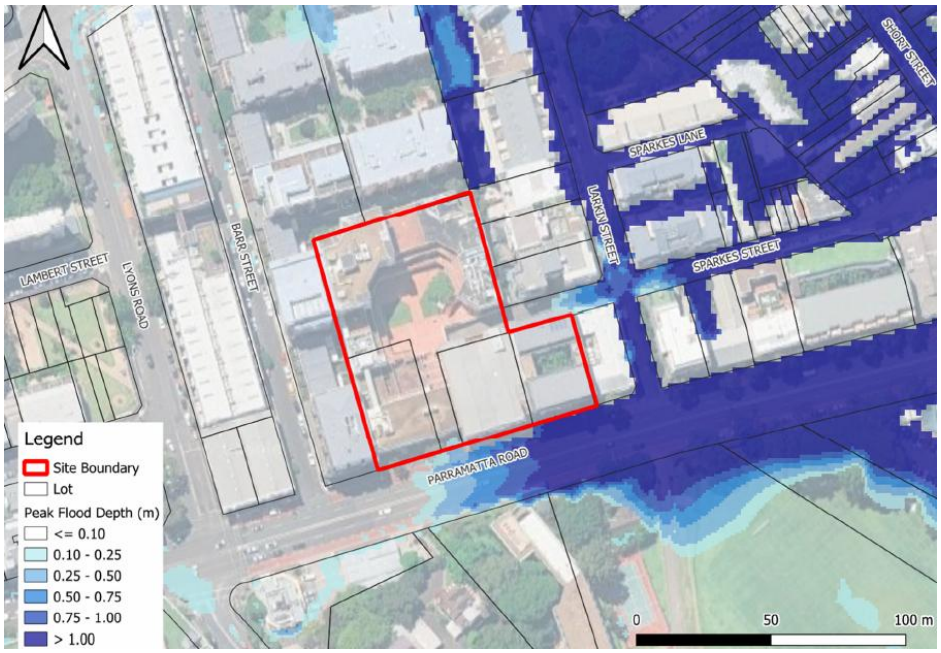


Figure 59 Revised baseline flood model peak flood depths - PMF event

Source: Arup

8.6.2 Flooding Mitigation Measures

84 Parramatta Road (Veriu Hotel Building) – Revised Flood Modelling

Council's most recent flood study applicable to the site, the Johnston Creek 2015 flood study, was undertaken prior to the development of the now built Veriu Hotel building at 84 Parramatta Road. The development of 84 Parramatta Road has subsequently changed the outcomes of this flood model, and therefore, Arup has undertaken an updated flood modelling study to reflect this.

The key conditions that changed from the Johnston Creek 2015 flood study include that the overland flow path through 84 Parramatta Road (formerly a vacant lot) was closed off, which has restricted the surface flow draining from Parramatta Road to the north. As a result, Arup has identified that the PMF level along Parramatta Road has increased approximately 0.17m to 21.72m AHD, now 0.12m above the ground floor level residential entrance to the Veriu Hotel building. It is noted that this is an existing risk, regardless of the development resulting from this Planning Proposal.

The report concludes that given the low probability of flood and the low hydraulic hazard flooding, the flood risk to the existing building can be managed through operation and emergency risk management plans. Flood emergency management will need to be considered in further detail at future development stages, and the report concludes with the following recommendations for flood evacuation responses:

- Where off-site evacuation is feasible, this should be the appropriate flood emergency response strategy.
- A shelter-in-place flood emergency response is to be reviewed and the provision of a flood-free connection from the Veriu Hotel building to the internal walkway is to be considered.

Proposed Building Envelope

The Flood Assessment notes that there is little difference between the amount of existing impermeable surfaces on the site, and that resulting from the potential built form. Therefore, Arup anticipate that proposal will not result in increased runoff, as no new overland flow paths are created or blocked and the development is contained to the existing building footprint.

With consideration of the reference scheme, the proposed ground floor level of is proposed at an elevation of 21.75m AHD, above the flood planning level requirements, and similarly the lifts connecting the ground floor to the existing warehouse will be raised above the PMF flood level to achieve the requirements. Therefore, no mitigation measures are required, and the proposed reference scheme demonstrates compliance with the relevant flood controls.

8.6.3 Water Cycle and Stormwater

A Water Cycle and Stormwater Management Report has been prepared by Arup and is provided at **Appendix Q**. The site is identified to be within the Johnston's Creek catchment at the eastern side of the catchment and is serviced by a major and minor drainage system. Stormwater runoff from the site is directed into the Council owned minor street drainage network, and those flows are routed into the Sydney Water trunk drainage system.

A desktop analysis of the stormwater infrastructure surrounding the site found that there is a drainage line that runs west to east along Parramatta Road and is assumed to connect into a line running north along Larkin Street and then continues east along Sparkes Street and connects into the Sydney Water trunk drainage network. It was recommended that the drainage line that is assumed to run along Larkin Street is further investigated and the drainage infrastructure along Sparkes Streets should also be confirmed.

Stormwater runoff from the proposal will be directed to a new proposed discharge point, with roof drainage from the extended building at 84 Parramatta Road utilising the existing discharge points on Parramatta Road. Stormwater runoff from any other future built form on the site will be captured from each of the new building roofs, the laneways and landscaped areas through a proposed site drainage network, following which it will be stored in a new rainwater tank within the basement extent. A gross pollutant trap is then to be placed downstream of the proposed rainwater tank to meet stormwater quality water targets, of which the final configurations will be determined at a later design stage. Runoff will ultimately be draining into the Sydney Water owned trunk drainage line and into Johnstons Creek.

The report concludes that the proposal will not alter the overall footprint of the site and will therefore not result in an increase to the stormwater system. This is subject to further design at the detailed development application stage. Sydney Water have been consulted to confirm if a development will require an on-site stormwater detention and confirmed that it is not required and subsequently is not included as part of the proposal.

8.7 Traffic and Transport

Two Traffic Impact Assessments have been prepared by Arup, a report specific to the Life Sciences component of the Planning Proposal, and a report specific to the Serviced Apartments component of the Planning Proposal, available at **Appendix G** and **Appendix H** respectively. The reports provide an analysis of existing traffic conditions and assesses the likely traffic impacts on the surrounding road network during the construction and operation stages of the Proposal, based on the maximum floor space achievable resulting from the Planning Proposal. The reports also assess the internal traffic network within the site, inclusive of access arrangements, internal circulation and loading dock operations.

The site is identified as having very good walking accessibility, and good cycling accessibility, being in an urban setting close to the Sydney CBD. The site is well connected to metropolitan Sydney and Greater Sydney via public transport, with the site identified as 'Category D' for the highest level of accessibility from public transport as per the Sydney LEP 2012.

8.7.1 Site Access and Parking

Pedestrian access to the site is proposed from Parramatta Road with an entrance to the life sciences building. The development has been designed to accommodate vehicle movements associated with car parking and loading dock accessible from Sparkes Street. Accessibility for services will be available via Sparkes Street with traffic management required as necessary, noting that future trucks able to service the site will be limited in vehicles sizes due to size constraints and on-way configuration of the road network. Details are to be resolved during the future detailed development application to assess accessibility and provide for relevant mitigation measures as required.

Life Sciences

The development proposes a total of 185 car parking spaces over three basement levels. The proposed basement level car parking will replace 77 existing car parking spaces associated with the existing site and will therefore result in a net increase of 108 spaces. The car parking spaces have not been assigned to a specific land use yet but still comply with the required car parking maximums under Part 7 Division 1 of the Sydney LEP, that identify parking maximums for various land uses within the different allocated accessibility categories. Specifically, the maximum number of parking spaces has been calculated based on the industrial land use category, given the site's future land use as high technology industry.

Based on the land uses outlined in the indicative reference scheme, the development will provide bicycle parking and end of trip facilities in compliance with the Sydney DCP at the following rates:

- 1 space per 10 staff for the life science land use.
- 1 per 250m^2 area for retail uses resulting in 1 space
- 2 spaces, plus 1 per 100m^2 over 100m^2, resulting in approximately 4 visitor spaces

The detailed provision of bicycle parking will be assessed as part of any future detailed development application on the site.

Serviced Apartments

A total of 28 car parking spaces are currently provided within the existing Veriu serviced apartment building at 84 Parramatta Road. The proposal will retain all existing 28 car parking spaces at the site. As the parking rate within Part 7 Division 1 of the Sydney LEP is a parking maximum, the existing car parking provided is considered acceptable.

Based on the land uses outlined in the indicative reference scheme, the development will provide bicycle parking and end of trip facilities in compliance with the Sydney DCP at the following rates:

- 1 space per 4 staff for the serviced apartments.
- 1 per 20 serviced apartment rooms for visitors, resulting in 4 spaces for visitors

8.7.2 Loading and Servicing

Life Sciences

Regarding the future loading of the site, the proposed envelope has taken into consideration the specific loading and servicing requirements required for the life sciences use. Based on the detailed reference scheme, it is proposed that delivery and servicing activities will take place in the basement level loading dock provided on site. Vehicle access to the loading dock is proposed from Sparkes Street. The loading dock is proposed to contain five loading bays suitable to accommodate one 12.5m rigid heavy goods vehicle, two 8.8 metre medium goods vehicle and two 6 metre light goods vehicles. The loading dock has been designed such that vehicles will be able to access and exit in a forward direction.

Cryogenic gas is likely required for laboratory activities at the proposed development. Delivery and servicing activities associated with laboratory gases are proposed to take place on Sparkes Street adjacent to the proposed basement ramp access. It is expected that most cryogenic gas deliveries will be made by 12.5 metre rigid vehicles, and it is noted that vendors will be limited to these vehicle sizes due to the space constraints and one-way configuration on the surrounding road network. Arup has confirmed this is a manageable issue and will be resolved during future detailed application stages.

Serviced Apartments

All loading and servicing associated with the Veriu serviced apartments will continue to occur via Sparkes Street and will operate independently of the life sciences-built form and basement levels.

8.7.3 Transport Impact Assessment

Based on the maximum amount of floorspace that can be achieved, Arup anticipate that 145 trips are estimated to be generated during the AM peak, and 127 trips are estimated during the PM peak. Considering the existing development generates trips similarly to the proposal, the net additional trips are anticipated to be 78 additional trips during the AM peak and 67 additional trips during the PM peak. The first principles approach to total trip generation is highlighted in **Table 21** below, with the amount of additional spaces generated as a result of the proposal indicated within the brackets.

Table 21 First principles approach – total trip generation

Land use	Total number parking spaces	Peak hour factor		Trips	
		AM	PM	AM	PM
Life sciences (industrial)	172 (+ 95)	70%	60%	121 (+ 67)	104 (+ 58)
Life sciences (Office)	14 (+15)	70%	60%	10 (+ 11)	9 (+ 9)
Life sciences total	**186 (additional 110)**	**Total peak hour trips**		**131 (additional 78)**	**113 (additional 67)**
Serviced apartments	28	50%	50%	14 (+0)	14 (+0)
Grand Total	**214 (additional 110)**	**Total peak hour trips**		**145 (additional 78)**	**127 (additional 67)**

The report concludes that the Planning Proposal is not expected to significantly worsen network conditions and can be accommodated with appropriate travel demand management measures provided for in the Framework Travel Plan. This will be explored in further detail as part of any future detailed development application for the site.

8.8 Economic Impacts

An Economic Impact Assessment has been prepared by Atlas Economics and is available at **Appendix I**. This assessment sets out the key drivers for the development from a social and economic perspective, highlighting how these drivers are aligned with Council's and NSW Government's strategic policy drivers. The key social and economic benefits of the development are identified as follows.

The Planning Proposal will deliver significant and positive economic impacts during the construction stage, as follows:

- $649.6 million in output (including $455.5 million in direct activity).
- $204.4 million in contributions to GRP (including $104.8 million in direct activity).

- $139.1 million in incomes and salaries paid to households (including $83.4 million in direct income).
- 1,217 ongoing FTE jobs (including 688 FTE directly related to activity at the Site).

The Planning Proposal would have the following economic benefits during operation:

- $670.9 million in additional output (including $440.9 million in direct activity).
- $336.8 million in additional contributions to GRP (including $215.1 million in direct activity).
- $195.8 million in additional incomes and salaries paid to households (inc. $110.5 million in direct income).
- 1,940 additional ongoing FTE jobs (including 1,225 FTE directly related to activity at the Site).

8.8.1 Demand for Life Sciences

Australia's life sciences sector is experiencing rapid growth, driven by global megatrends such as an ageing population, rising chronic disease rates, and technological advancements. Despite this momentum, the sector faces significant constraints, particularly in the availability of modern, high-quality laboratory and innovation space, due to the lack of private sector investment. Nationally, there is only around 900,000m^2 of life sciences floorspace, with just 100,000m^2 privately operated and accessible to startups—far below global benchmarks, such as San Diego's 2.5 million m^2. Venture capital investment also lags behind other countries, limiting commercialisation opportunities.

Australia's life sciences industry faces several key challenges that hinder its growth and global competitiveness. A major constraint is the limited availability of specialised, high-quality laboratory and innovation space, particularly privately operated facilities accessible to startups. The sector also suffers from low levels of venture capital funding and government investment in research and development, both of which fall short of OECD averages. Attracting and retaining skilled talent is difficult due to competition from more established global hubs, and the small domestic market limits scalability for emerging companies. Additionally, Australia lags in commercialising research outputs, partly due to weak university-industry collaboration and insufficient infrastructure to support translational research. These challenges collectively impede the sector's ability to grow and compete internationally.

The proposed Camperdown Life Sciences Hub directly responds to this demand by delivering 34,332m^2 of life sciences, commercial and ancillary floorspace, expanding the precinct's total to 190,000m^2. This development will provide critical infrastructure to support research translation, startup growth, and private sector engagement, positioning Camperdown as a leading innovation district in NSW.

8.8.2 Demand for Serviced Apartments

Short term accommodation plays a distinct role in health and education precincts, directly influencing the capacity to attract specialist workers, host collaborative research programs, deliver tertiary health services, and participate in national and international innovation networks. The Camperdown Precinct is currently host to four short-term accommodation establishments with a total of 257 beds, and 84 Parramatta Road has the smallest capacity within the Precinct at just 28 rooms. The proposed uplift at the site will enable growth of the Camperdown Precinct, particularly prudent given the ongoing expansion of Royal Prince Alfred Hospital. In turn, this uplift will also support the new life sciences development that will be on the site.

8.9 Services and Utilities

A Utility Services Review has been prepared by Arup and is available at **Appendix P.** The purpose of the review is to provide a high-level review of available utilities to identify constraints, provide input into the future design requirements for the site, whilst confirming the feasibility of utility provision. The report concludes that the proposal is capable of compliance with the relevant services and utilities and will be able to be serviced as required.

8.9.1 Electrical services

The site has access to Ausgrid HV underground network via Parramatta Road and through Larkin Street. The existing Ground Sub transmission panel on the road reserve will require consultation with local power supply authority Ausgrid in the case of relocation. Preliminary design maximum demand calculations anticipate that the site power demand requires

a 3x1500kVA triplex transformer chamber substation to be installed in consultation with Ausgrid, with options for location detailed in **Appendix P**.

8.9.2 ICT Services

There are existing NBN Fibre services along Parramatta Road and Larkin Road, with ICT service strategies to be development in consultation with project stake holders.

8.9.3 Water and sewer services

Existing water supply available at Parramatta Road and Larkin Street are to be reconfigured or new supply is to be obtained depending on the water supply arrangement requirements for the proposal. There are two separate sewer mains connections available to the proposal via Barr Street and Sparkes Street. These existing sewer mains are to be reconfigured as required for the proposal.

8.9.4 Natural gas services

There is a high pressure and medium pressure gas available along Parramatta Road and medium pressure gas available along Larkin Street. The proposed Life Sciences development is designed to be entirely electrical and new gas connections to the site are not required, on the other hand existing gas connections to the existing Veriu Hotel building at 84 Parramatta Road are to be further discussed in the future detailed design phase.

8.10 Sustainability impacts

An Environmentally Sustainable Development (ESD) Design Strategy Report has been prepared by Arup and is available at **Appendix N**. ESD can be achieved through the implementation of the following principles and programs, in accordance with the applicant statutory legislation. The report has been prepared to reflect the requirements of the *State Environmental Planning Policy (Sustainable Buildings) 2021* (Sustainable Buildings SEPP), providing initiatives for the future development to commit to.

The following opportunities have been identified the for the proposal:

- Retention and adaptation of the existing warehouse results in reduce embodied carbon and maintains the current street character.
- Targeting of a 5-star Green Star rating ensures the future development is Net Zero ready.
- Best practice procurement and management will be embedded via Green Star rating.
- Provision of share housing will contribute to more equitable housing outcomes.

A Green Star rating of 5-stars is to be targeted, integrating the following criteria into the building design:

- Commitment to 100% renewable electricity purchase for base building requirements.
- Commitment to 100% renewable energy for all non-electric energy, base building and tenant requirements.
- 20% reduction in annual energy use relative to benchmark building performance.
- 20% reduction in upfront carbon emissions relative to benchmark building design.
- Offset of all scope one emissions.

8.11 Contamination

JBS&G have prepared a Site Remedial Concept Plan, provided at **Appendix O**. Based on the desktop information reviewed, JBS&G concludes that the site represents a low risk in relation to contaminants of potential concern with concentrations that would pose a potential risk to human health and or the environment or constrain the future use of the site for the intended purposes.

Specifically, the report concluded that:

- The site was historically used for various commercial and industrial enterprises as early as the 1920s, with previous uses including car dealerships, motor body repair shops, and wholesale manufacturers

- Potentially contaminating activity that could have occurred at the site include fill used for site levelling for the current commercial buildings, former industrial land uses, potential above ground storage tanks, and the former service station and dry cleaner located near the site
- It is recommended that a limited and targeted intrusive investigation of the site is completed as art of the future development application process, to provide a quantitative assessment of contamination levels as associated with the areas of environmental concern as identified
- The assessment did not identify potential for widespread contamination, and it is anticipated that in the event that contamination is identified on site it can still be made suitable for the proposed land-use as guided through the preparation of a Remediation Action Plan

8.12 Wind

L2T have prepared a Wind Tunnel Environmental Wind Assessment available at **Appendix R** to assess whether the predicted wind conditions created by the development will be acceptable. The analysis included a desktop analysis inclusive of computational fluid dynamics to resolve the wind conditions around the proposed development. The study measured mean and peak wind speeds around the Existing and Proposed development envelope and combined them with long-term wind climate model to compare them to prescribed criteria.

At the ground level, walking criteria are achieved on footpaths and sitting or standing criteria are achieved at shopfronts and entrances. Nearby outdoor dining on Barr Street and Parramatta Road, and bus stops along Parramatta Road achieve sitting and standing criteria, respectively. On the podium level terrace, exceedances of the wind safety criterion were measured near the southeast and southwest corners with the remainder area of the terrace satisfying the wind safety criterion and walking comfort criterion. Terraces on nearby building satisfy the safety criterion and walking comfort criterion at a minimum.

Mitigation measures may be required to ensure comfort conditions are met on future outdoor spaces, particularly if outdoor terraces are considered as part of any future scheme, as per the indicative reference scheme. Further details and specifications to emerge at a future detailed design stage.

8.13 Airspace Operations

Clause 7.16 of the Sydney LEP 2012 requires that developments that penetrate the Limitations or Operations Surface (OLS) Map must consult with the relevant Commonwealth body who must advise no objections to its construction prior to the consent authority granting approval. While approval is not required at the Planning Proposal stage, an Aviation Impact Assessment Report has been prepared by AviPro and is attached at **Appendix L** to assess the likelihood of future approval and identify any potential approval barriers. The applicable OLS at the site location is 93 AHD.

The proposed development is identified to intrude into the Sydney (Kingsford-Smith) Aerodrome OLS, and any future construction crane(s) associated with the construction stage of the development are likely to intrude into the Sydney (Kingsford-Smith) Aerodrome OLS due to their likely exceedance of 93AHD. The Report concludes that:

- The proposed development will not adversely impact aviation safety in relation to RPA Hospital Helicopter Landing Site (LHS) and the cumulative impacts to Sydney Airport and the RPA Hospital are negligible.
- Approval is required for the tower and construction crane(s) due to the intrusion into the Sydney (Kingsford-Smith) Aerodrome OLS
- Aviation-standard obstacle lighting for the construction crane(s) is to be implemented as per NSW Ministry of Health Helicopter Landing Site specifications, and are to exceed the Civil Aviation Safety Authority (Australia) (CASA) standard
- The completed building is to be notifiable to Airservices Australia as a building in excess of 45m above ground level.

Early consultation with CASA is encouraged due to the proposed height of the development. This will be undertaken as part of any future detailed development application.

8.14 Public Art

Initial considerations for public art provisions have been prepared by Amanda Sharrard Consulting as provided with the Preliminary Public Art Plan and is appended at **Appendix M**. The purpose of this statement is to identify initial opportunities and constraints for public art provisions and to guide a future detailed public art strategy at later stages of the development. The strategy is consistent with Council's *Interim Guidelines for Public Art in Private Development* and sets out to achieve exemplary art in the public realm in accordance with the Sydney DCP 2012, City Art Public Art Strategy, City of Sydney Public Art Policy, Guidelines for Acquisitions and Deaccessions, and Sustainable Sydney 2030 – 2050 Continuing the Vision.

The public art sought at the site will be high quality and will be relevant to the site and local community, resonating with the innovation and scientific research being carried out in the facility. The Public Art Strategy proposes that the future public art is to announce the site as a facility for innovation and scientific research through memorable, exciting and distinctive art that will address themes around sustainability and life sciences research and advances. Mandatory requirements for any permanent artwork integrated into the built environment are the use of materials that are durable, safe, resistant to weather conditions and wear and tear commensurate to their contracted lifespan, which will be specified in the Artist Agreement once the artist has been commissioned. The public art will consider public safety and the public's access to and usage of the public domain.

The strategy has identified key opportunity sites for public art installation, with major opportunities along the Parramatta Road façade and entrances, and throughout the development in publicly accessible laneways as genuine through site links. The location of the public art is to be determined at a later design date upon the finalisation of the built form design and confirmation of a through site link.

9.0 Conclusion

This amended Planning Proposal requests amendments to the *Sydney Local Environmental Plan 2012* (Sydney LEP 2012) relating to 84-94 Parramatta Road, Camperdown. Colliers Urban Planning has prepared this Planning Proposal on behalf of Wenworth Capital, under a long-term ground lease from the University of Sydney.

This Planning Proposal applies to three individual lots, being:

- 84 Parramatta Road (currently containing Veriu Hotels containing serviced apartments).
- 88 – 90 Parramatta Road (currently containing an historic warehouse).
- 92 – 94 Parramatta Road (currently occupied by University of Sydney uses).

The broad intent of this Planning Proposal is to achieve and facilitate the redevelopment of the site for the purposes of a new life sciences research facility, supporting a mixture of ancillary uses, such as retail and educational uses. This Planning Proposal intends to facilitate uplift at the adjacent Veriu Hotels for additional serviced apartments for the health and education precinct locality. This will be achieved via amendments to the Sydney LEP 2012, as well as accompanying amendments to the *Sydney Development Control Plan 2012 (*Sydney DCP 2012).

This Planning Proposal seeks Council's support for a site-specific amendment to the LEP for the following:

- A mapped maximum building height of part 80 metres, part 30 metres.
- A mapped maximum floor space ratio for 84 Parramatta Road of 4.8:1.
- A site-specific provision for 88-94 Parramatta Road that enables a floor space ratio of 6.5:1 for non-residential uses.

The indicative reference scheme totals 38,317m^2 of gross floor area (GFA) comprising 27,685m^2 of life sciences uses and 6,647m^2 ancillary life sciences and on 88-94 Parramatta Road (the University of Sydney owned site), and approximately 1,350m^2 of uplift to the existing 2,635m^2 of residential (serviced apartments) floorspace as part of an extension to the existing Veriu Hotel building at 84 Parramatta Road. The reference scheme includes basement parking for 185 car parking spaces over two basement levels for life sciences purposes, in accordance with the applicable maximum parking rates for the mix of land uses considered in the reference scheme.

The Proponent intends to deliver a range of public benefits as part of this Planning Proposal, including a commitment to site-specific sustainability measures and local infrastructure works-in-kind by way of a Voluntary Planning Agreement (VPA) to be entered into with Council at a future development stage.

Regarding the relevant strategic context, the site sits within the Camperdown Health, Education and Research Precinct in the Tech Central Strategy document. The Camperdown Precinct that is home to global tech businesses, venture capital funds, research institutes, two universities (University of Sydney and University of Technology Sydney), and a leading research hospital (Royal Prince Alfred Hospital). The key objective of the Camperdown Precinct within the Tech Central document is to build on existing health, education and research strengths to create a region that is internationally significant in these fields. The development considered as part of this Planning Proposal directly aligns with this objective, by seeking to facilitate uplift for the purposes of life sciences and biotechnology research. Furthermore, by providing for uplift at 84 Parramatta Road for serviced apartments, this Planning Proposal aligns with objectives within the applicable strategic documentation that identify the importance of increasing housing affordability and diversity within the locality.

The site is also identified within the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS), a strategy aiming to provide a long-term vision and framework to support co-ordinated employment and housing growth in the Parramatta Road Corridor in response to significant transport and infrastructure investment, economic and demographic shifts, and industrial and technological advances. The development aligns with the PRCUTS as it is facilitating significant employment floorspace uplift along the Parramatta Road corridor.

This Planning Proposal responds to the above and is justified for the following reasons:

- The proposal is directly aligned with the strategic planning framework, identifying and underpinning the appropriate emergence of a life science research facility at a key location in proximity to the University of Sydney and the Royal Prince Alfred Hospital.

- The site is located within the Camperdown-Ultimo Health and Education precinct, co-located with similar land uses to create a specialised precinct accessible by active and public transport. The site is well-positioned, adjacent to two well serviced bus stops providing connectivity in the eastern and western direction of the site, and notably to Central Train Station (2.5km east of site). Central Station provides extensive connectivity across Greater Sydney through bus, light rail, heavy rail, and newly unveiled metro services.
- The future built form will exhibit design excellence through the requirement for a competitive design process and demonstrate a high-quality urban design outcome that will enhance the site and surrounding urban area.
- The developed built form envelope has been sympathetically designed to minimise overshadowing to neighbouring residential dwellings and does not result in overshadowing that impacts the capability of adjoining residential dwellings to comply with Apartment Design Guide (ADG) requirements.
- The built form envelope for the uplift of Veriu Hotel serviced apartments (84 Parramatta Road) has been designed to comply with the standards of the ADG in alignment with Council feedback, the Sydney LEP 2012, and the *State Environmental Planning Policy (Housing) 2021*. Furthermore, the built form envelope of the life sciences portion has been carefully considered to ensure ADG compliance for the serviced apartments uplift.
- The proposal requires the future development to include a variety of sustainability features and will deliver beyond its required targets for sustainability, energy efficiency and water and waste management.
- The proposal is consistent with the objects of the *Environmental Planning and Assessment Act 1979*, as it promotes the orderly and economic use and development of land.
- The proposal is consistent with the applicable State Environmental Planning Policies and Ministerial Directions.
- Traffic modelling undertaken indicates that the uplift will not result in unacceptable traffic impacts on the surrounding road network.
- The proposal will deliver significant economic benefits to the locality, including:
  - An estimated 1,217 ongoing FTE jobs associated with the construction of the development.
  - An estimated 1,940 ongoing FTE jobs (direct and indirect) associated with the operation of the development, resulting in $195.8 million in incomes and salaries paid to households.

Accordingly, considering the proposal and the overall strategic nature of the site and justification provided in addressing planning issues, the Planning Proposal is considered to have sufficient strategic merit to support a purpose-built life sciences facility with ancillary uses in line with the Camperdown-Ultimo Health and Education precinct. This Planning Proposal demonstrates that the proposed land uses and density sought can be appropriately accommodated on the site in an attractive urban form, maximises activity and improves social and economic outcomes, whilst minimising amenity impacts of surrounding residential receivers. This supports the site-specific merit of the Planning Proposal.

Notwithstanding the proposed amendments to the Sydney LEP 2012 to facilitate uplift at 84 Parramatta Road and 88-94 Parramatta Road, future development at the respective sites will proceed independently. To confirm, the delivery of the serviced apartments uplift at 84 Parramatta Road is not contingent upon nor linked to development of 88-94 Parramatta Road development for life sciences uses.

For these reasons, we have no hesitation in recommending this Planning Proposal for Gateway Determination.

Attachment A2

Urban design report – Part 1

LIFE SCIENCES HUB CAMPERDOWN

URBAN DESIGN REPORT

WENTWORTH CAPITAL

THE UNIVERSITY OF SYDNEY

HDR

MATTHEW PULLINGER ARCHITECT

Biointelect

Atlas Economics

Ethos Urban

Paddock

CURIO PROJECTS

ARUP

L2T

URBAN DESIGN REPORT
Revision: 5
Date: 17.07.2026
Prepared by: HDR
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4	25.02.26	For Issue	HDR	GS
5	17.07.26	CoS Response	HDR	GS

TABLE OF CONTENTS

01 Project Vision

02 Strategic Planning Framework

03 Site and Context Analysis

04 Life Science Typology

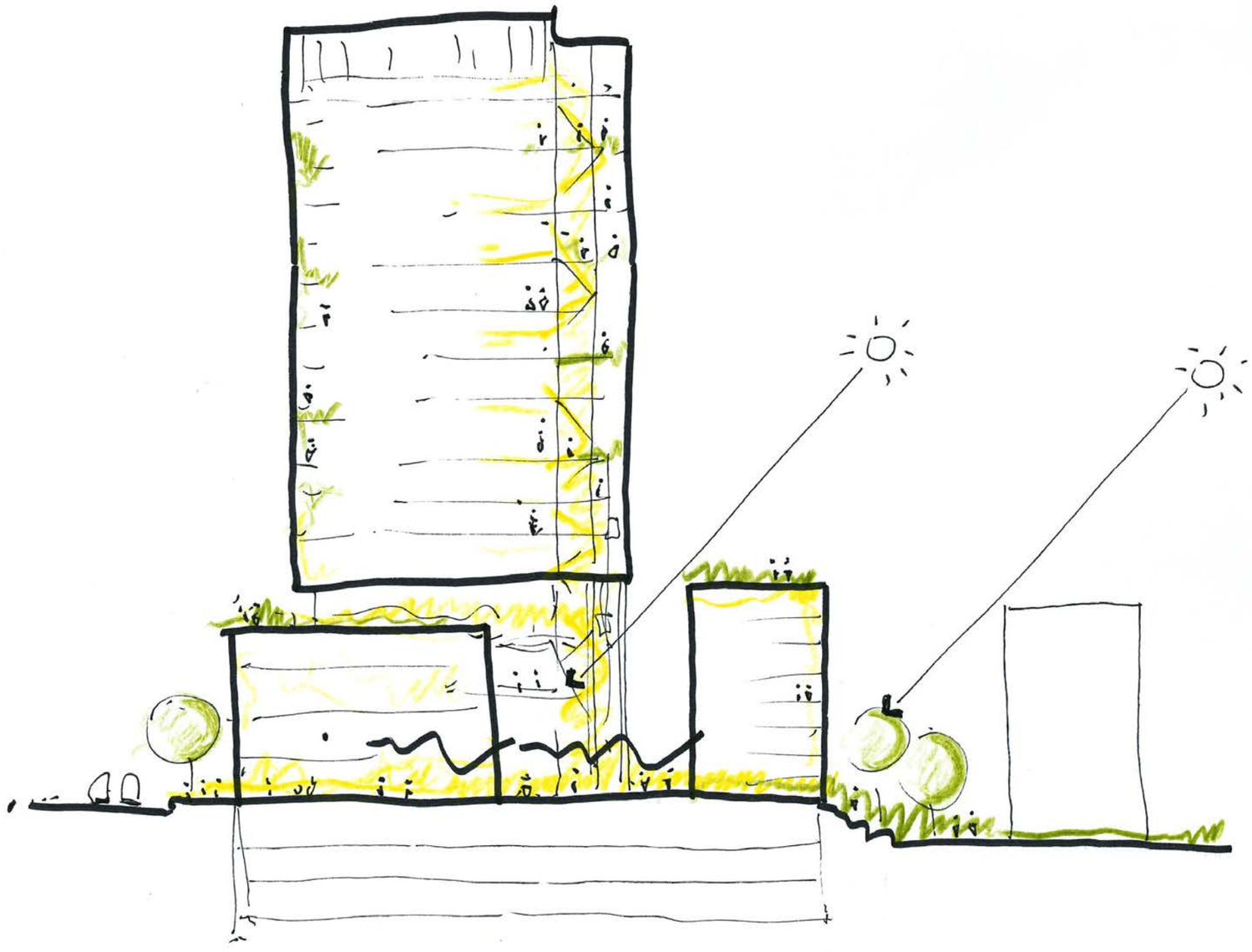
05 Design Principles

06 Planning Envelope Documents

07 Design Proposal / Reference Scheme

08 Reference Scheme Plans

09 Impacts Assessment



01

01 PROJECT VISION

Wentworth Capital, in partnership with University of Sydney, envisions creating a World-class Life Science and Mixed-use Campus at 84-94 Parramatta Road, Camperdown. The proposal aims to establish Camperdown as Sydney's premier biomedical hub, centered around top-tier life science facilities. The new facility is proposed to comprise ~27,000m² of science floor space to house over 800 researchers and 200 support staff supported by ~6,000m² life science office space, conference, retail and serviced apartments.

This new campus will be integrated and complement the larger University of Sydney life science and innovation ecosystem and will enhance the existing research facilities and strategic infrastructure presently being developed by the University, including the Sydney Biomedical Accelerator, as well as the Royal Prince Alfred Hospital (RPA) upgrades. This proposal provides critical space for the translation and commercialisation of biomedical and life sciences research.

The proposed life sciences hub will be a catalyst for the regeneration of Parramatta Road and designed to meet the specific needs of the science and innovation industry, leading to the creation of new life science jobs and wider economic benefits for the city.

Wentworth Capital has an agreement in place with the University of Sydney and the land holders of Veriu serviced apartments to develop the sites at 84-94 Parramatta Road, Camperdown with a vision to deliver a thriving life science campus. Under the agreed terms, Wentworth Capital will undertake a planning proposal for the site, seeking an increase to FSR and Height. Post planning approvals, Wentworth will commence the development of a world class life science campus.

Wentworth Capital recently announced a $1.5b life science real estate fund in Australia, in partnership with BlackRock, the world's biggest asset owner, seeking to support science and innovation with purpose-built infrastructure within key innovation clusters.



02

02 STRATEGIC PLANNING FRAMEWORK

Tech Central - Camperdown Activity Node

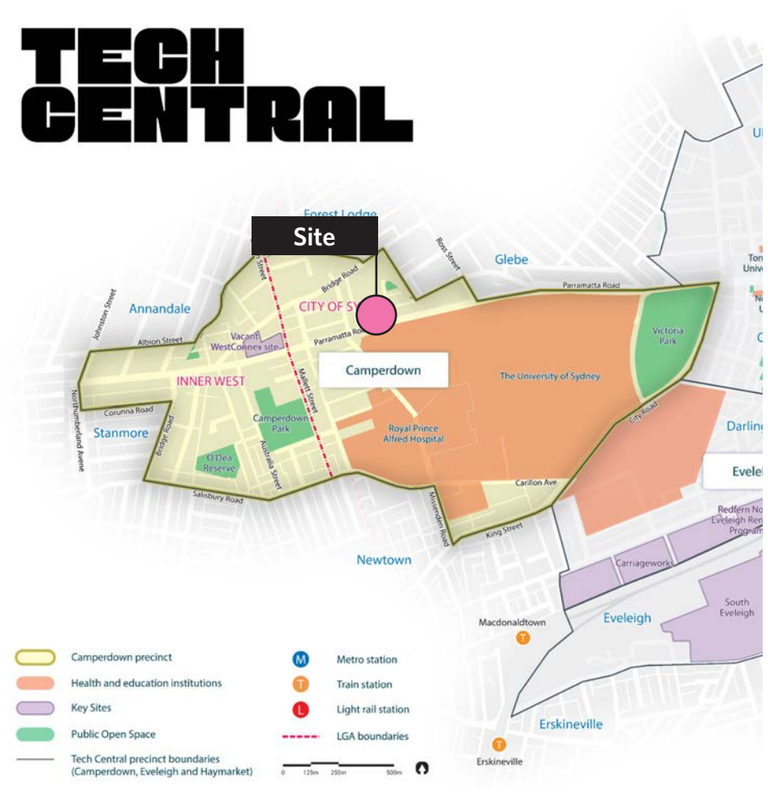
The key objective of the Camperdown activity node is to build upon the existing health, education and research strengths to create an area of international standing, with a diverse and engaging public realm. The two largest asset owners, RPA Hospital and University of Sydney, collaborate closely and are co-located with more than 35 medical research institutes and research centers. Together, these institutions form a unique cluster of health, innovation, research, academic and medical expertise within Tech Central. The co-location strategy is driven by a vision to provide world-class facilities in which the best and the brightest minds come together to collaborate and contribute to the future of health, education and research.

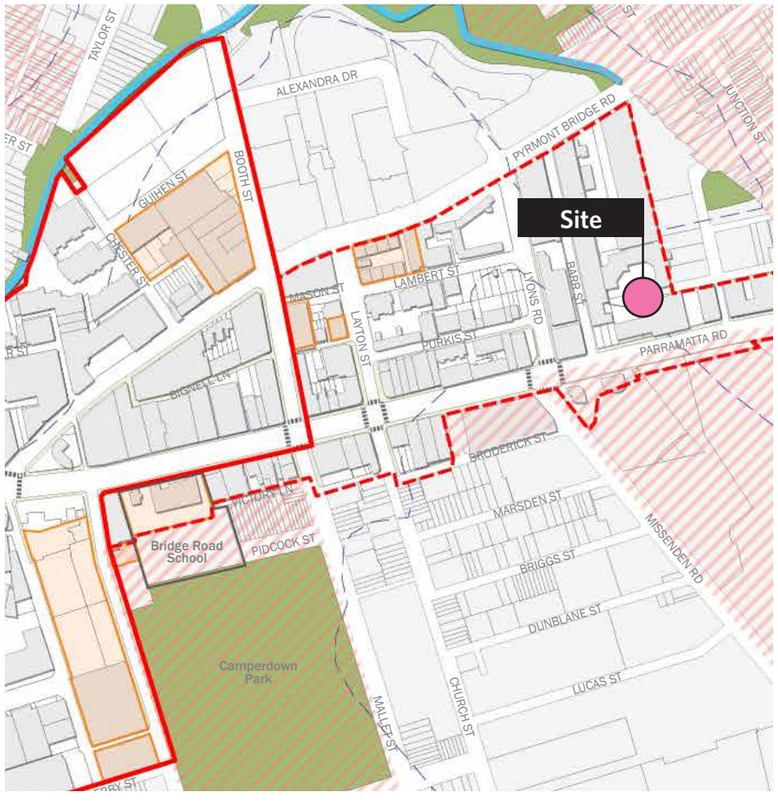
Parramatta Rd Corridor Urban Transformation Strategy

The Strategy sets out the vision and land use and transport principles to accommodate 27,000 new homes and 50,000 jobs in a range of industries across the Corridor over the next 30 years. It provides an integrated land use planning and transport framework to guide future land use change in a staged manner that will be coordinated with infrastructure delivery and funding, bringing new life to Parramatta Road and adjacent communities.

Sustainable Sydney 2030—2050 Continuing the Vision

City of Sydney envisage transforming and revitalising Broadway and Parramatta Rd, our city's western gateway, as a green link with more space for people to walk and ride bikes. This will support the area's evolution into Sydney's innovation and education precinct. The road space could be reduced to 2 lanes in each direction, allowing extra room for trees and people. It also provides more space for efficient and reliable public transport, linking activities on Broadway and Parramatta Road.







02 STRATEGIC PLANNING FRAMEWORK

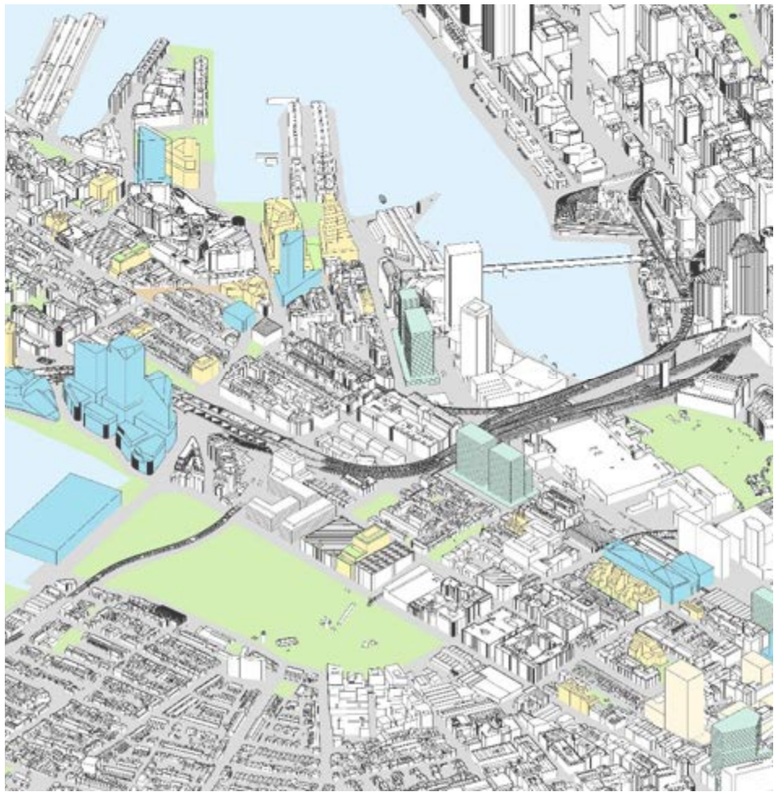
Draft Minimising Overshadowing of Neighbouring Apartments

The purpose of this guide is to describe the documentation required to be submitted in a Development Application to meet the requirements of State Environmental Planning Policy 65 (SEPP 65), the Apartment Design Guide (ADG) and associated regulations. Use this guide where a proposed building to which SEPP 65 applies overshadows an apartment building. The guide explains how the ADG solar access objectives, design criteria and design guidance are applied when documenting and assessing overshadowing of neighbouring apartments.



Pyrmont Peninsula Planning Strategy

The Ultimo Pyrmont Urban Design Study defines urban design principles in response to the Pyrmont Peninsula Place Strategy. These design principles are used as a framework to assess the development potential and inform site specific planning controls to identified key development sites.



Walanga Wingara Mura Design Principles University of Sydney

The purpose of the Walanga Design Principles is to provide guidance on how to weave Aboriginal and Torres Strait Islander cultures, world views and practices into the very fabric of our University and beyond. It will serve as a guide to those who are involved in realising the University's aspirations in physical design, including architects, engineers and landscapers, as well as in scholarship - curriculum developers, researchers, educators, and others.

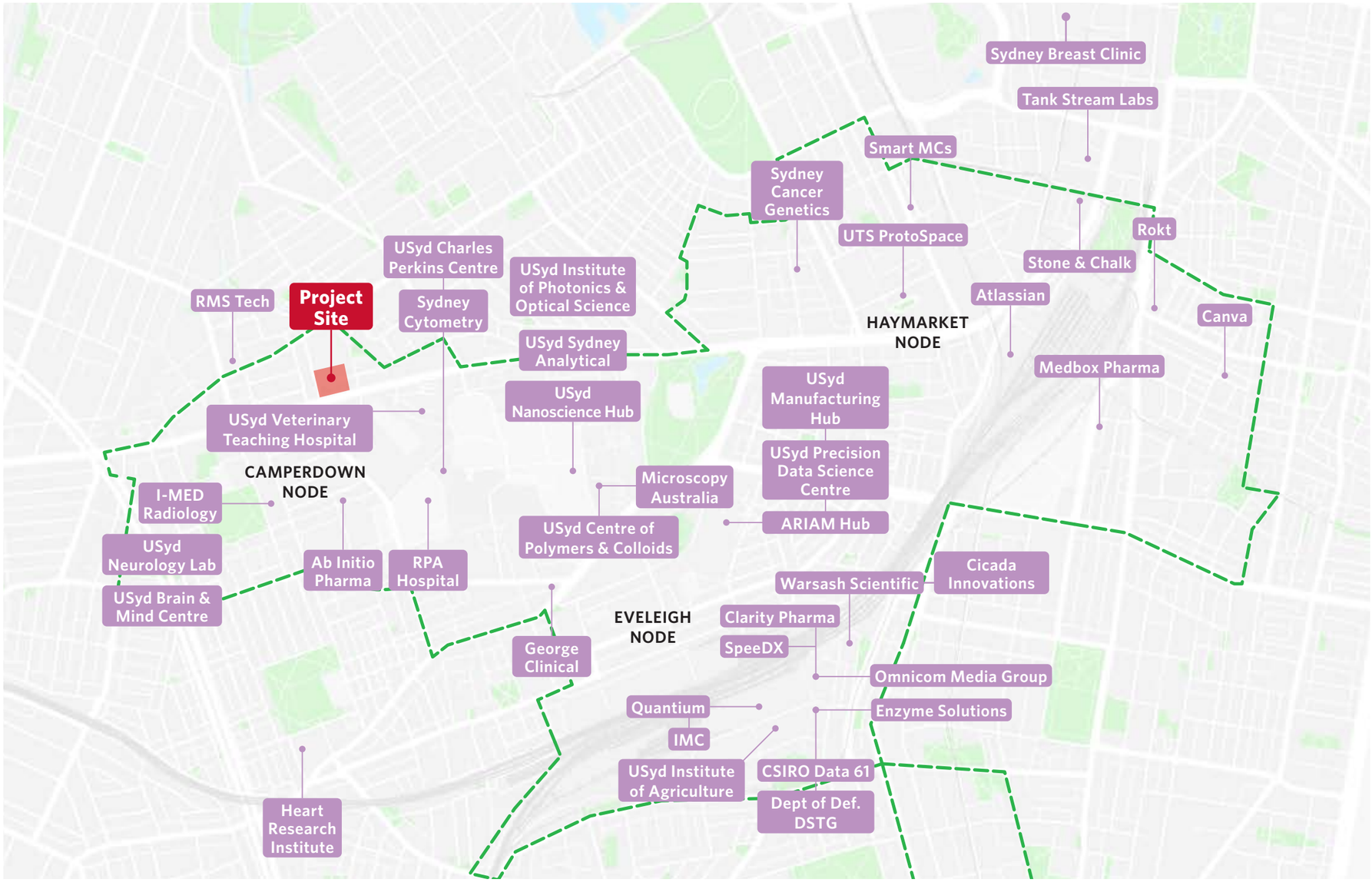


02 STRATEGIC PLANNING FRAMEWORK

University of Sydney Ecosystem

The proposed life sciences hub will be strategically integrated into the broader University of Sydney life sciences and innovation ecosystem, complementing and enhancing both existing research infrastructure and major developments currently underway, including the Sydney Biomedical Accelerator and the Royal Prince Alfred Hospital (RPA) upgrades.

Tech Central Innovation District



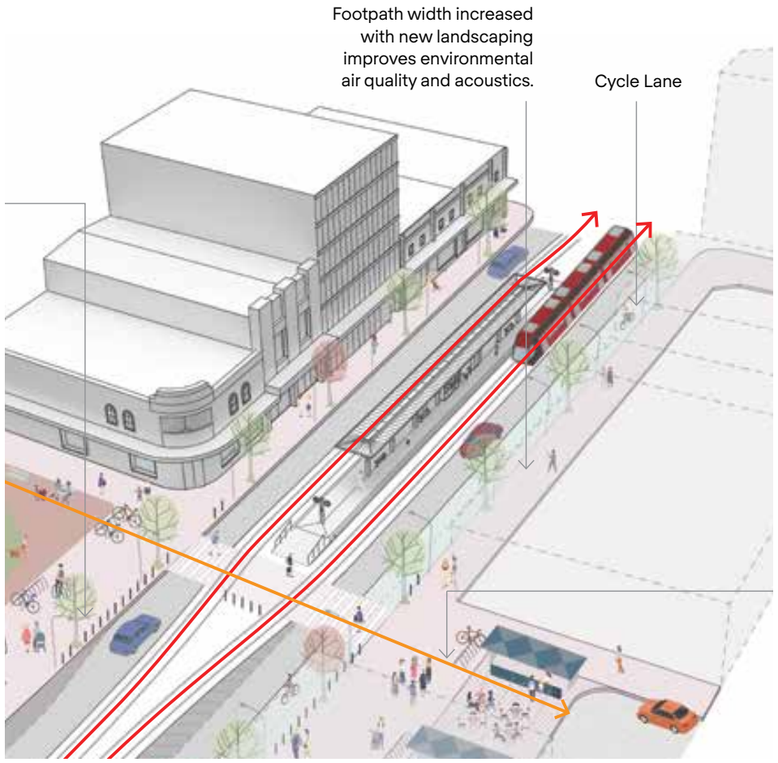
02 STRATEGIC PLANNING FRAMEWORK

Vision for Parramatta Rd

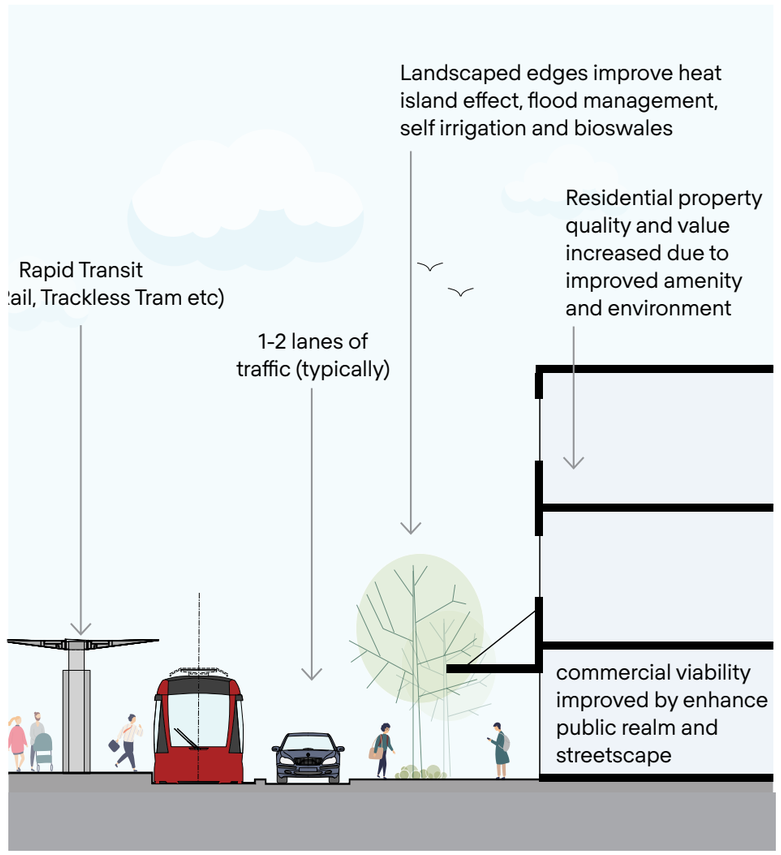
The proposal considers the future vision for the upgraded Parramatta Road corridor, recognising the transformative potential of this major urban renewal. It envisions a corridor of enhanced public transport, pedestrian-friendly spaces, and increased connectivity to maximise the benefits not only for the facility itself but also for the wider Camperdown Tech Central precinct.



Sustainable Sydney 2030—2050



Committee for Sydney



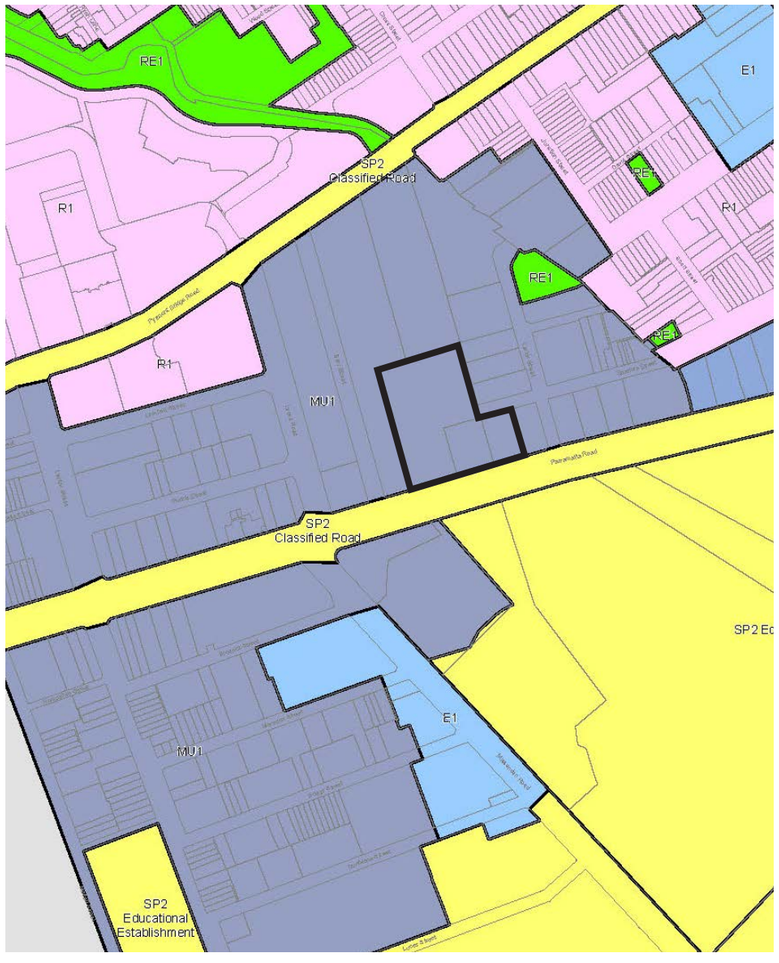
Committee for Sydney

02 STRATEGIC PLANNING FRAMEWORK

Existing Planning Controls

CoS LEP Land Use Zoning

- **MU1 - Mixed Use**



CoS LEP Height of Building

- **P - 18m**



CoS LEP Floor Space Ratio

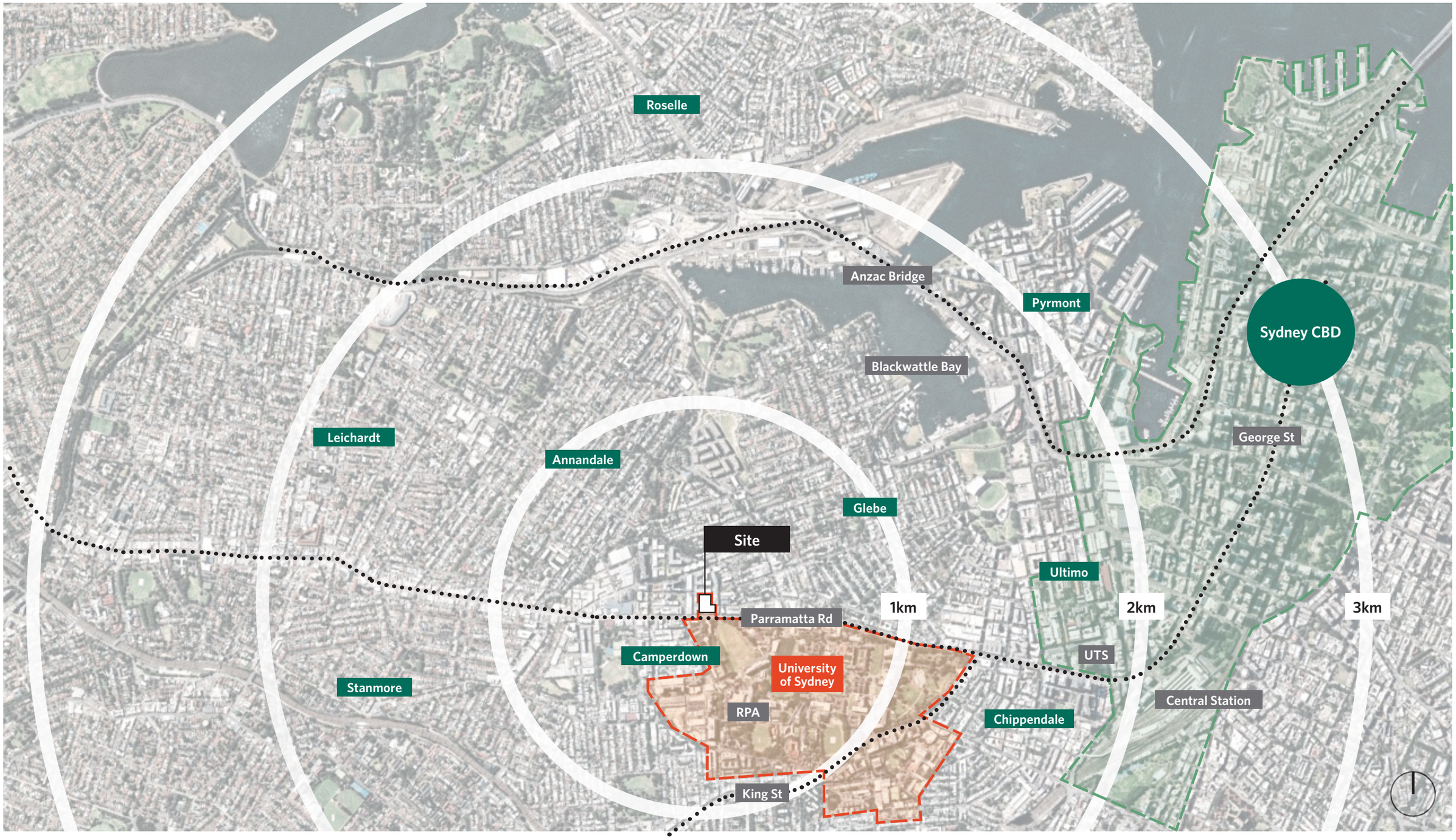
- **U1 - 2.5:1**



03

03 SITE & CONTEXT

Site Overview



03 SITE & CONTEXT

Site Summary

The proposed site consists of 3 separate properties.

- **92-94 Parramatta Rd.** Existing University of Sydney medical research building.
- **88-90 Parramatta Rd.** 3 storey brick warehouse building, currently vacant with identified heritage value.
- **84 Parramatta Rd.** Recently developed 6 Storey serviced apartment building.



92-94 Parramatta Road
Lot A DP 402925
Lot 1 DP965792
4382m²

88-90 Parramatta Road
Lot 1 DP178634
976m²

84 Parramatta Road
Lot 1 DP1216911
836m²

USYD

03 SITE & CONTEXT

92-94 Parramatta Rd

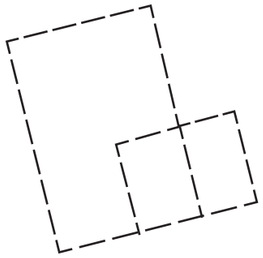
Existing Use: Medical Research Laboratories

Existing Height: 28m
(exceeding 18m control)

Existing GFA: 11,876 m²

Existing FSR: 2.7
(exceeding 2.5:1 control)







03 SITE & CONTEXT

88-90 Parramatta Rd

Existing Use: Vacant

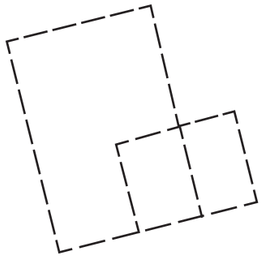
Existing Height: 14m

Existing GFA: 2,714 m²

Existing FSR: 2.8
(exceeding 2.5:1 control)







03 SITE & CONTEXT

84-86 Parramatta Rd

Existing Use: Serviced Apartments

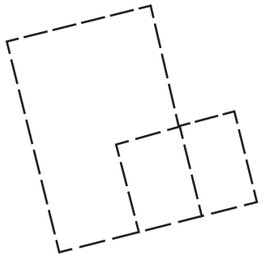
Existing Height: 19m
(exceeding 18m control)

Existing GFA: 2635 m^2

Existing FSR: 3.1
(exceeding 2.5:1 control)







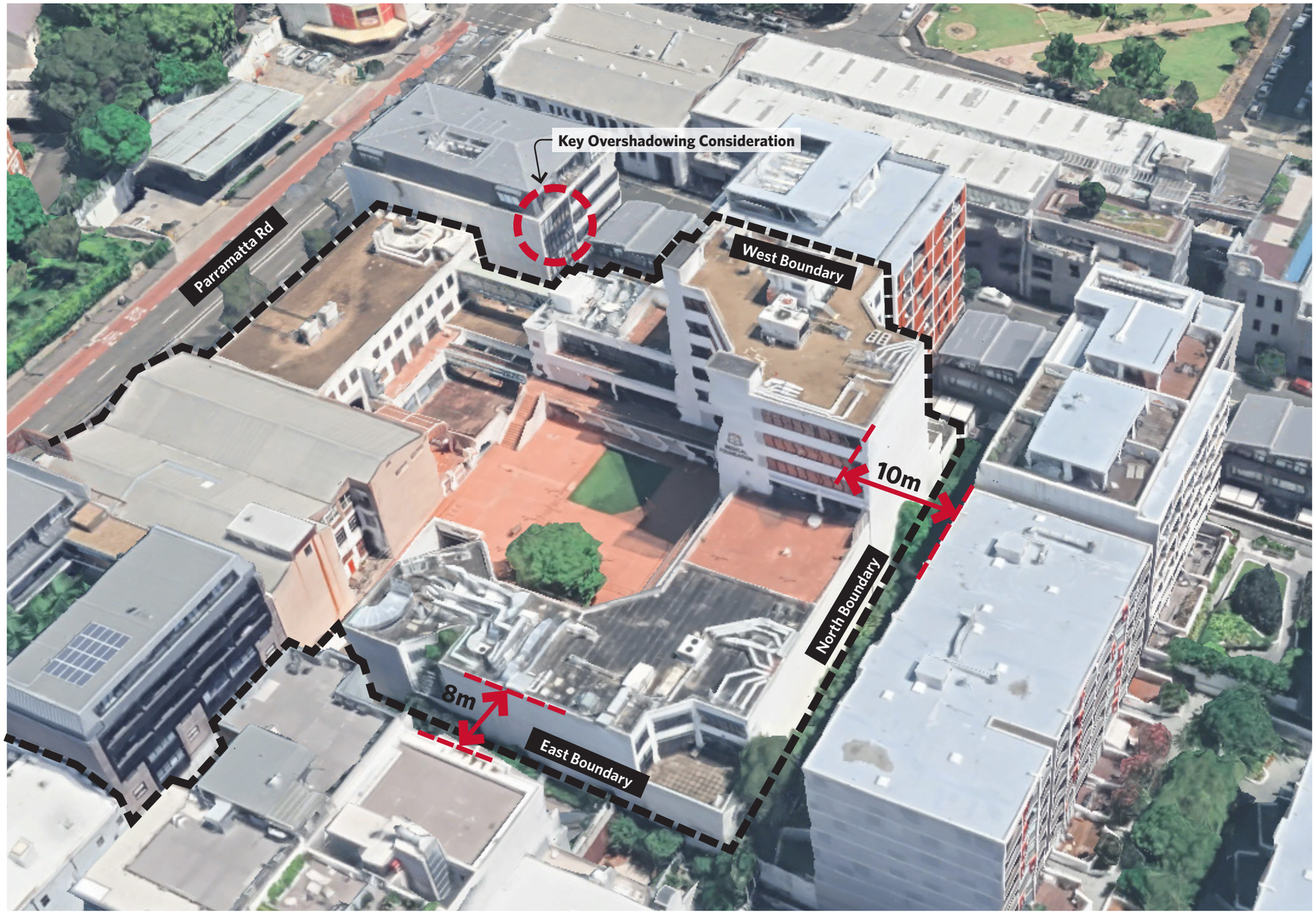
03 SITE & CONTEXT

Interface with Immediate Neighbours

The site shares its west, north and eastern boundaries with recently developed multi residential apartment buildings.

The western residential neighbour is built with zero setback and a blank boundary wall to the two apartment blocks. The apartment buildings to the north and east provide an appropriate boundary setback with landscaped private courtyards to the site boundary.

The existing medical research building is built to the boundary on the west, north and east boundaries presenting a blank wall to each side.



03 SITE & CONTEXT

Natural & Landscape Context

Natural & Landscape Features

Camperdown is an inner-city suburb with a highly urbanised character. The site is located on the watershed of the former Orphan School Creek, a tributary of Johnstons Creek which terminates at Roselle Bay.

The surrounding topography is gently undulating and sits adjacent to the landscaped ground of the University of Sydney campus.



Waterways

Former Creekline

1m Contours

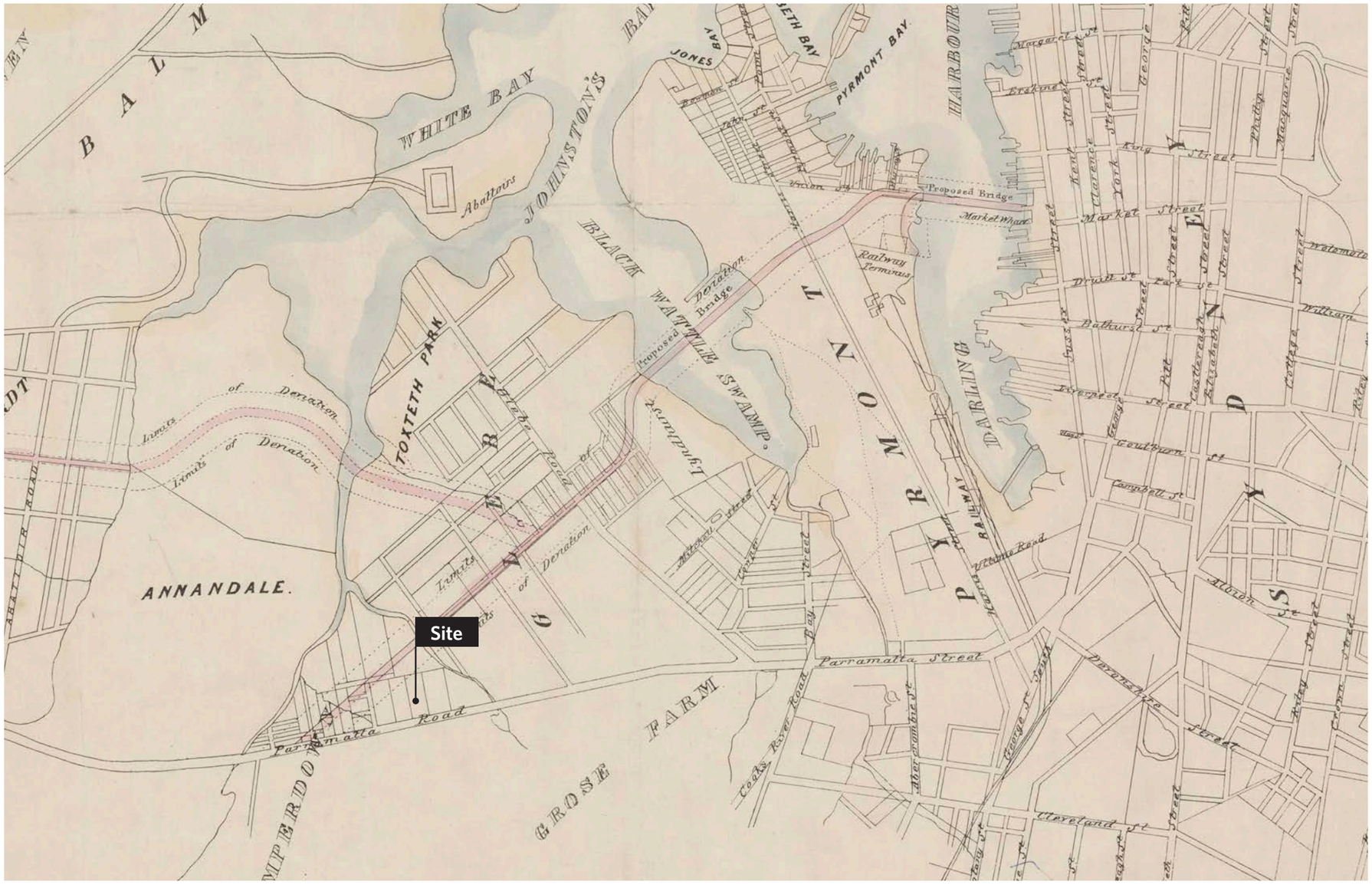
Open Space, Parks and Green Network

03 SITE & CONTEXT

Urban History

From the 1800s through the mid-20th century, Parramatta Road was a vital corridor reflecting Sydney's evolving transport and social landscape. Initially, it was lined with stables, carriage workshops, and horse-related businesses that catered to the era's reliance on horse-drawn vehicles—a key status symbol for residents.

As motor vehicles emerged in the early 20th century, Parramatta Road adapted rapidly, becoming the city's hub for car dealerships, mechanics, service stations, and related industries. This transformation mirrored the broader shift from horses to motor cars, with Parramatta Road playing a central role in supporting and shaping Sydney's transition into the motor age.

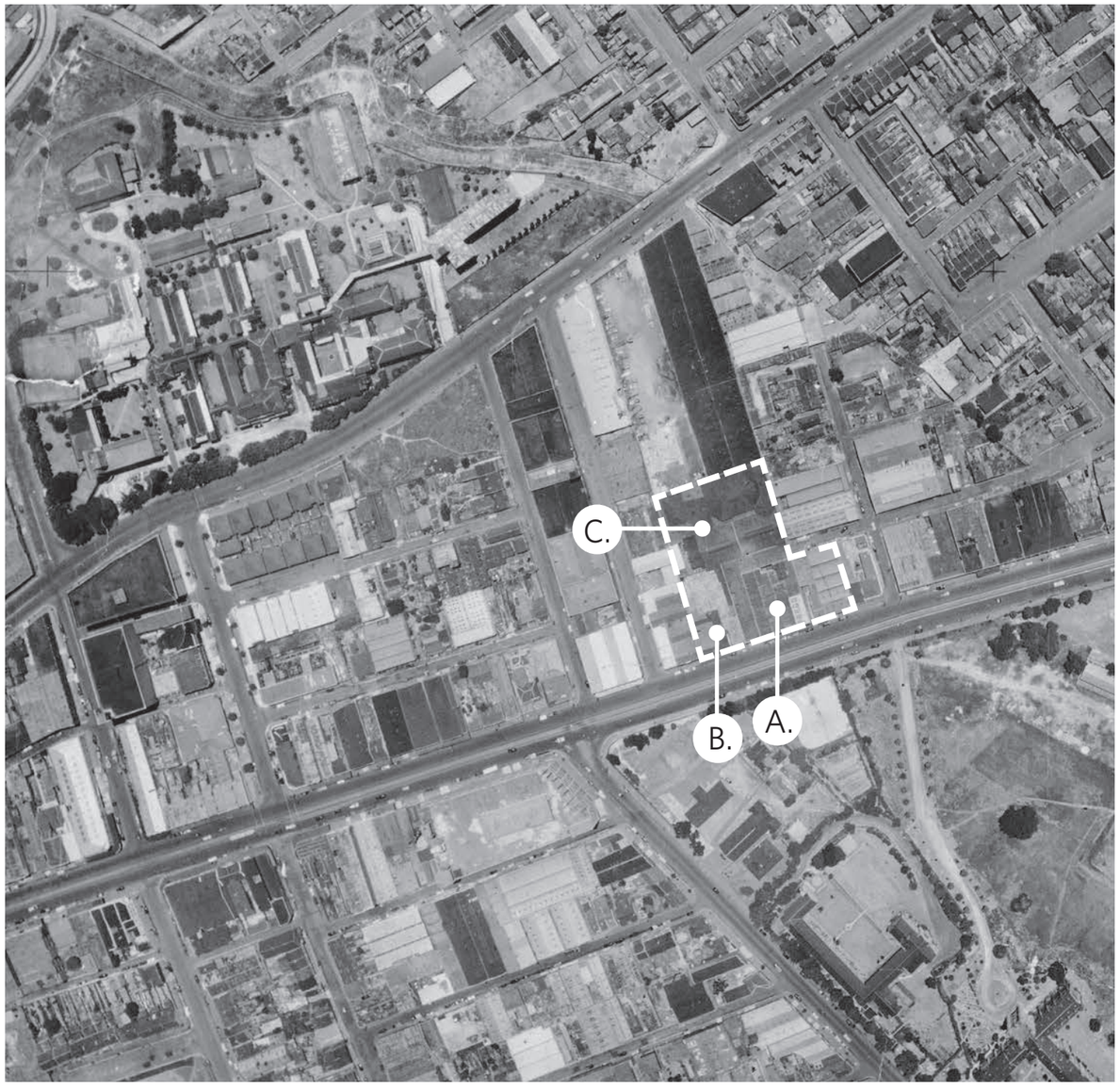


Map c.1859 - Parramatta Rd

03 SITE & CONTEXT

Urban History

Originally, the site was occupied solely by the Governor Bourke Hotel in its southwestern corner. Around 1913, a 'Horse Bazaar' was built on the remaining area for the sale of horses, buggies, and carriages. This structure was later occupied by various motor vehicle manufacturing and servicing businesses. The building at 88-90 Parramatta Road was constructed for motor vehicle sales & service and housed a series of motor vehicle-related businesses and now exists vacant on the site today.



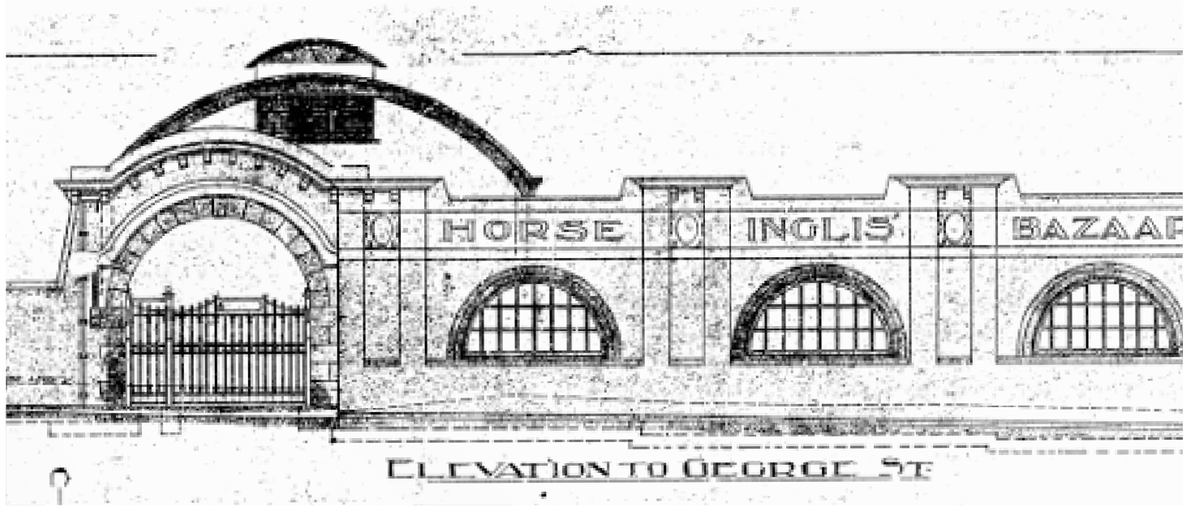
Aerial Photo c.1942



A. Parramatta Rd 1931 - Note existing 88-90 Parramatta Rd warehouse highlighted.



B. Former Governor Bourke Hotel. 94 Parramatta Rd c.1950



C. Inglis Horse Bazaar - Used for the sale of horses, buggies and carriages.

03 SITE & CONTEXT

88-90 Parramatta Rd Heritage Assessment

Assessment of Significance

An Assessment of Heritage Significance has been prepared to investigate the heritage significance of the existing structures, particularly the warehouse building at 88-90 Parramatta Road, to determine its heritage value within its context and the proposed development.

The assessment has identified that the warehouse building is of heritage significance as a surviving example of an Inter-war motor-car warehouse and showroom. The building type once made up a significant part of this area of Parramatta Road during the early to mid twentieth century but most have since been demolished or significantly altered.

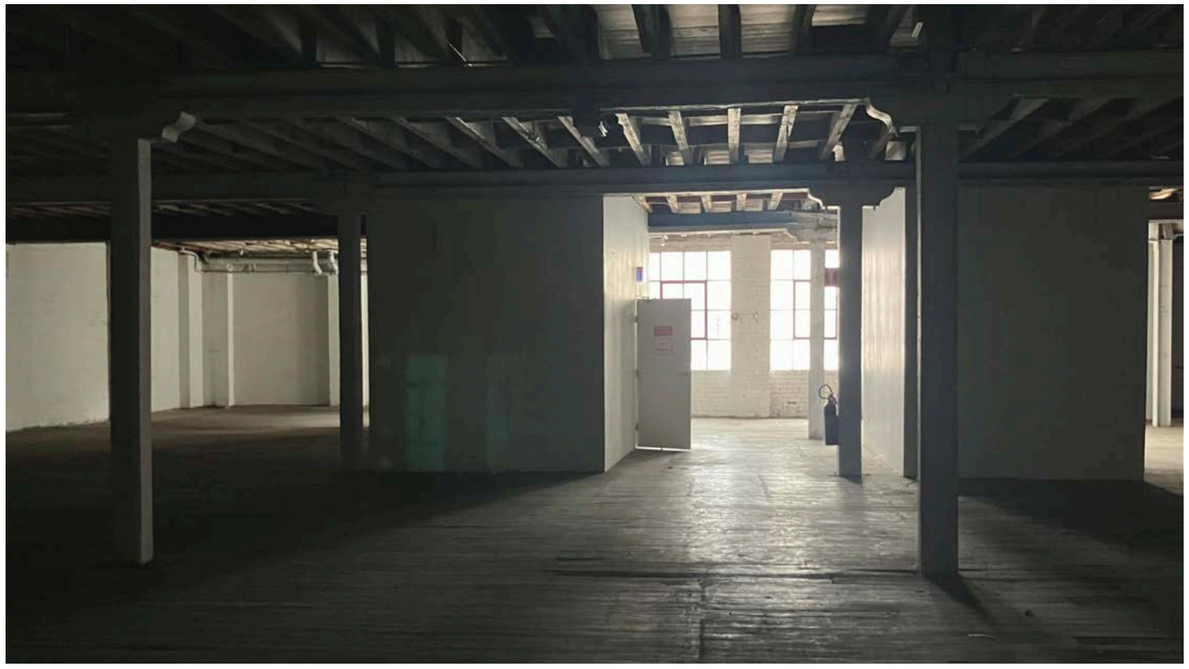
The identified significance of 88-90 Parramatta Rd should be considered within the future architectural design of the Life Science Hub Redevelopment. Retention of heritage fabric is to be assessed against achieving the requirements for a best in class life sciences facility.

Heritage Impact Statement

A heritage Impact Statement has been prepared by Curio Projects, to accompany this submission, to assess any potential impacts the planning proposal may have on the heritage values and fabric of 88-90 Parramatta Rd and provide recommendations for future design considerations.



88-90 Parramatta Rd warehouse facade.



88-90 Parramatta Rd warehouse interior.

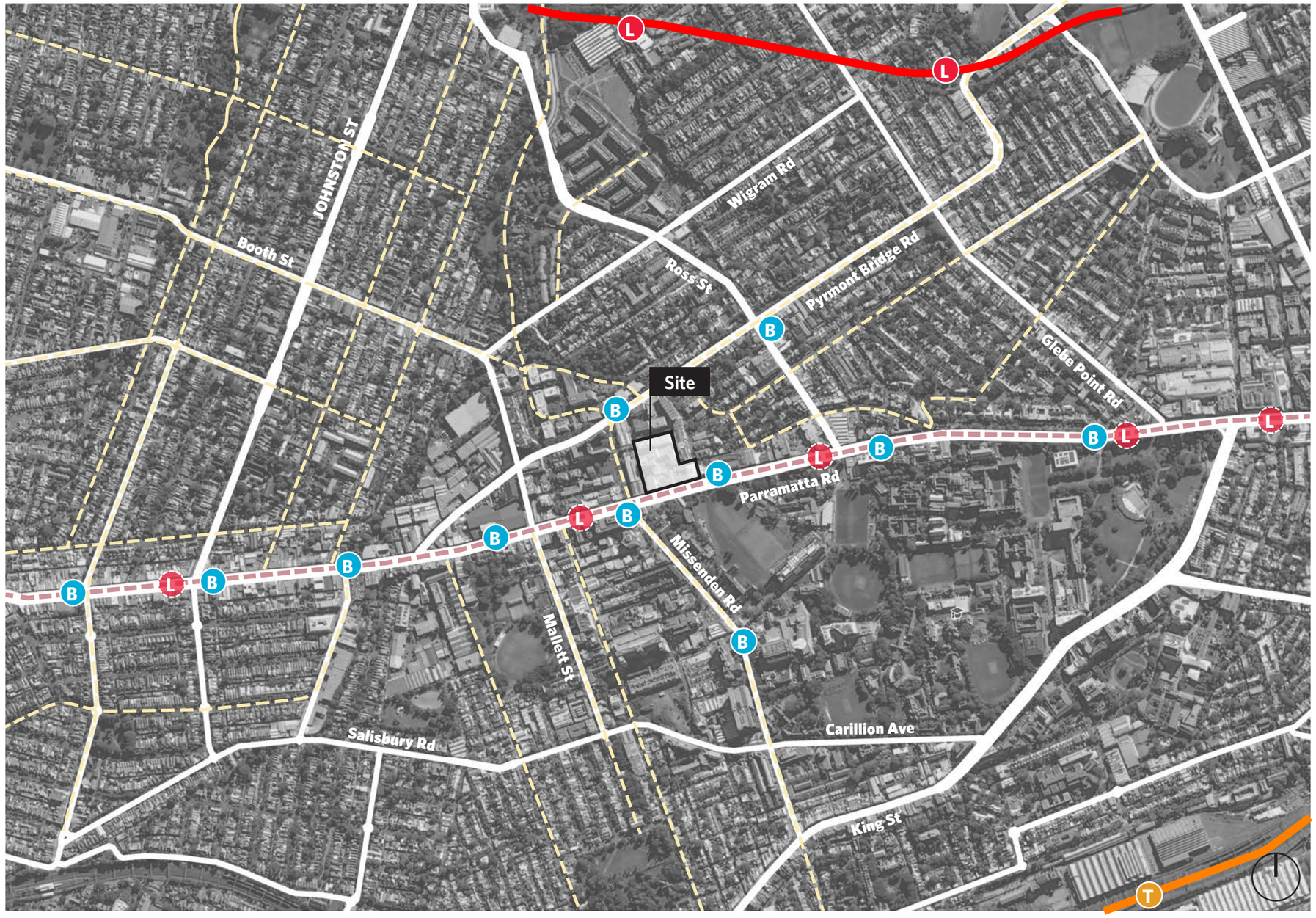
03 SITE & CONTEXT

Transport Network

The site is well connected to both metropolitan and Greater Sydney via an extensive public transport network. The City of Sydney has classified the site's public transport accessibility as Category D, indicating the highest level of accessibility.

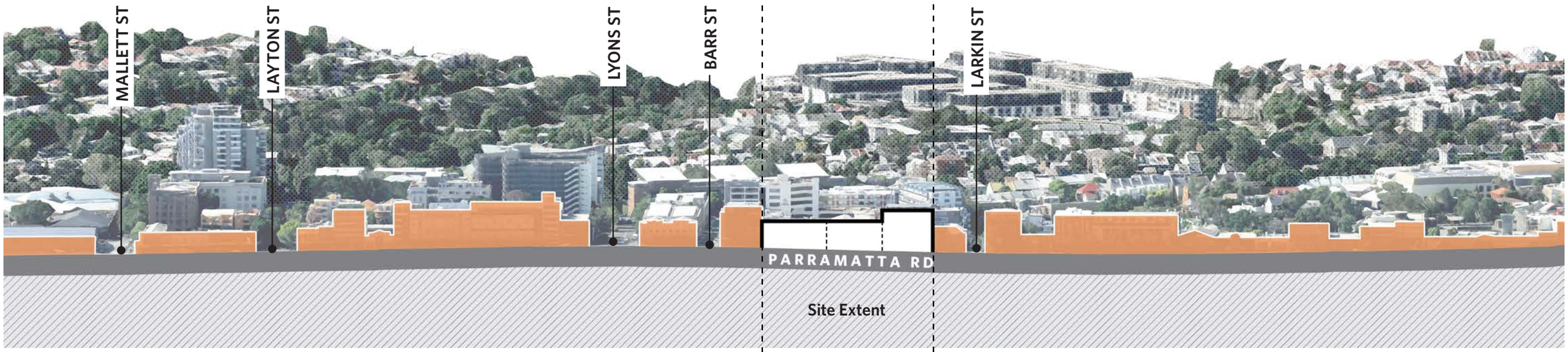
Frequent bus services operate along Parramatta Road and King Street, linking the site with other key inner-city areas.

The Site benefits from strong pedestrian accessibility due to its inner-urban location near the Sydney CBD. The surrounding street network includes footpaths on both sides of most roads. Cycling access is also favourable, supported by a network of separated and shared-use paths in the area. While Parramatta Road itself lacks dedicated cycling infrastructure, Bridge Street to the north features a separated off-road cycleway that connects into a broader network of shared paths, offering safe and efficient cycling routes to and from the Site.



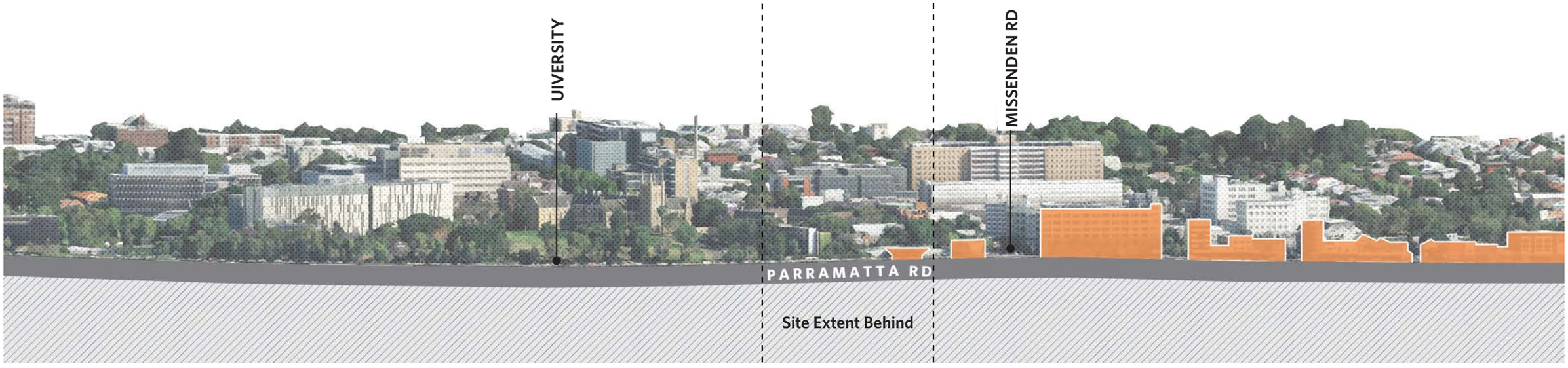
03 SITE & CONTEXT

Street Elevations



208

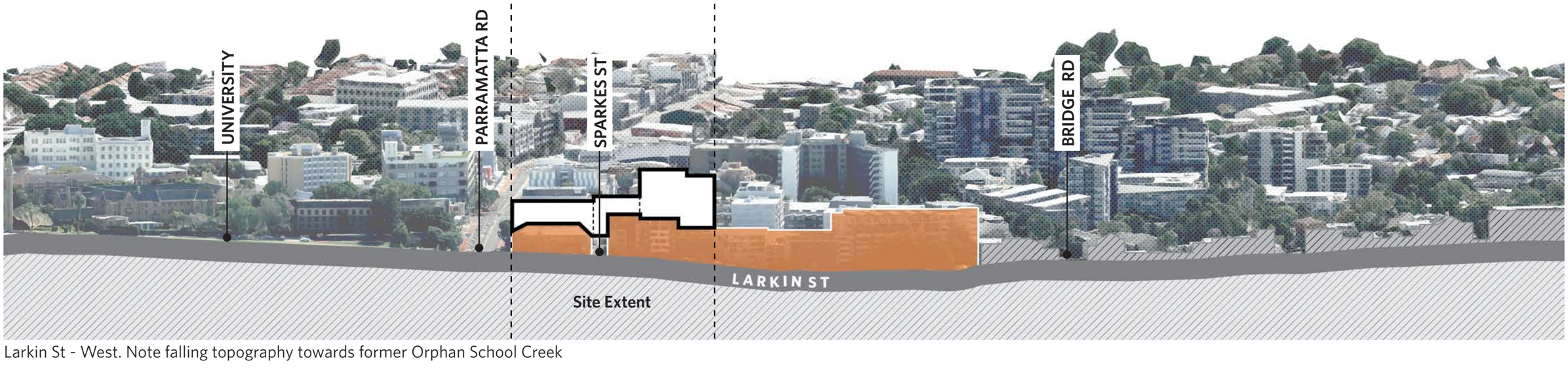
Parramatta Rd - North. Note grain and scale of street wall.



Parramatta Rd - South. Note open landscape character presented by the University.

03 SITE & CONTEXT

Street Elevations



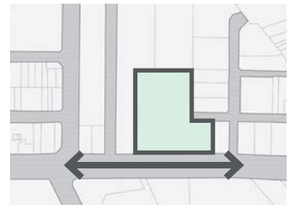
Larkin St - West. Note falling topography towards former Orphan School Creek



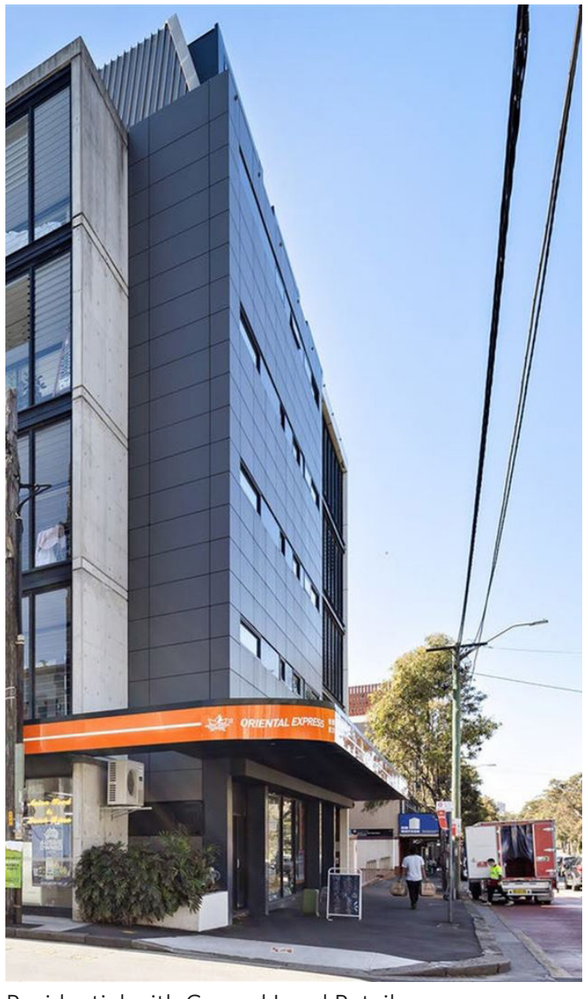
Larkin St - East. Note falling topography towards former Orphan School Creek

03 SITE & CONTEXT

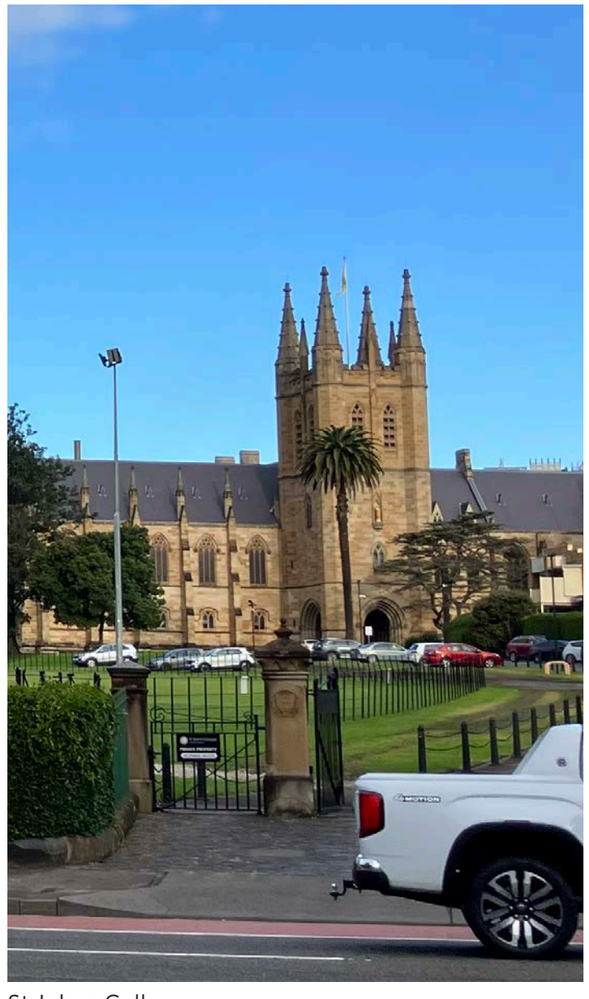
Street Character



Parramatta Rd



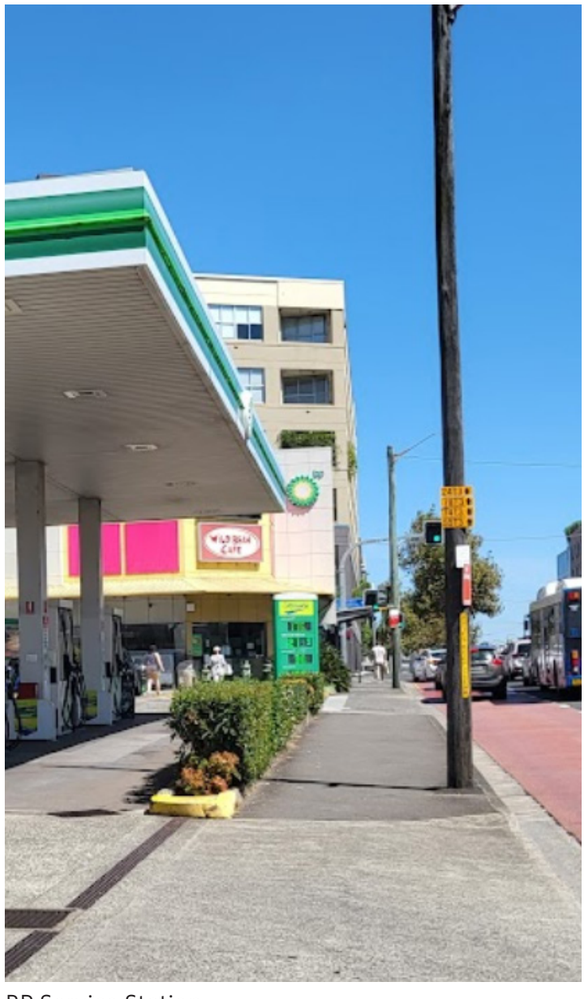
Residential with Ground Level Retail



St Johns College



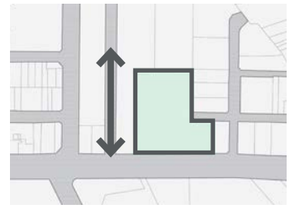
Veriu Serviced Apartments



BP Service Station

03 SITE & CONTEXT

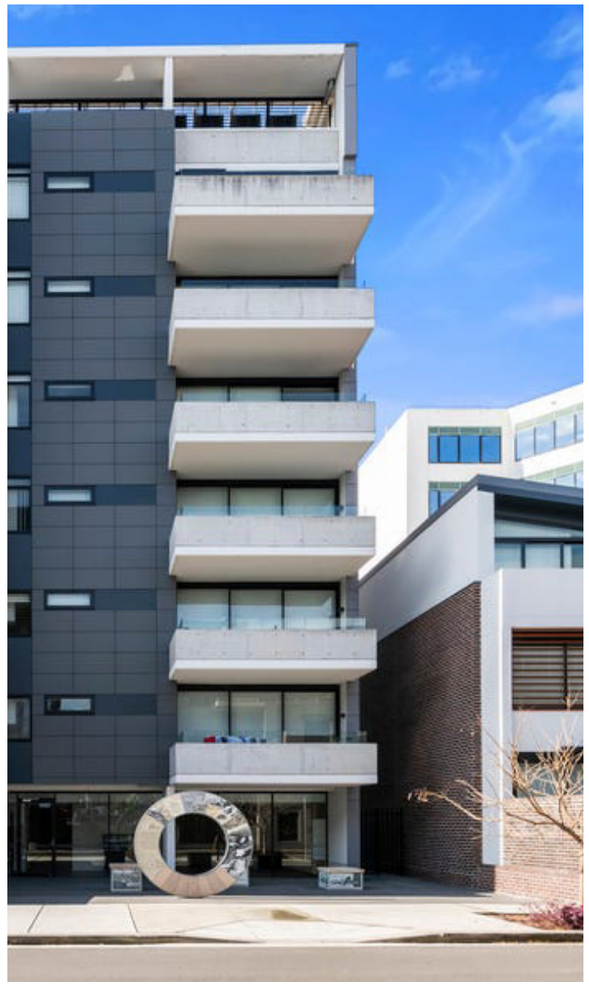
Street Character



Barr St



Residential Apartment Buildings



Residential Apartment Buildings



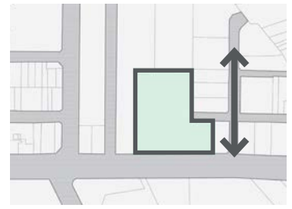
Adaptive Reuse Retail



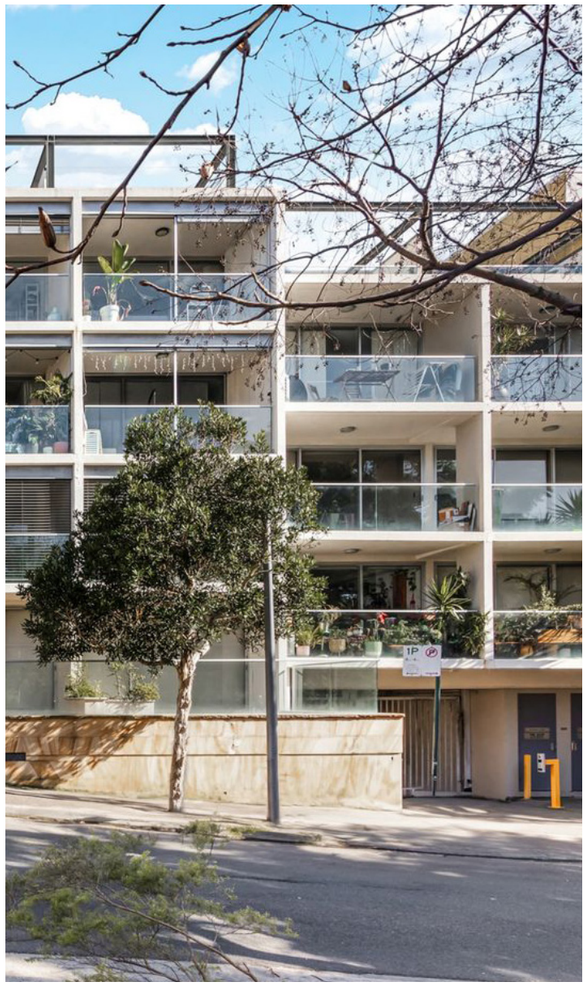
Adaptive Reuse Residential

03 SITE & CONTEXT

Street Character



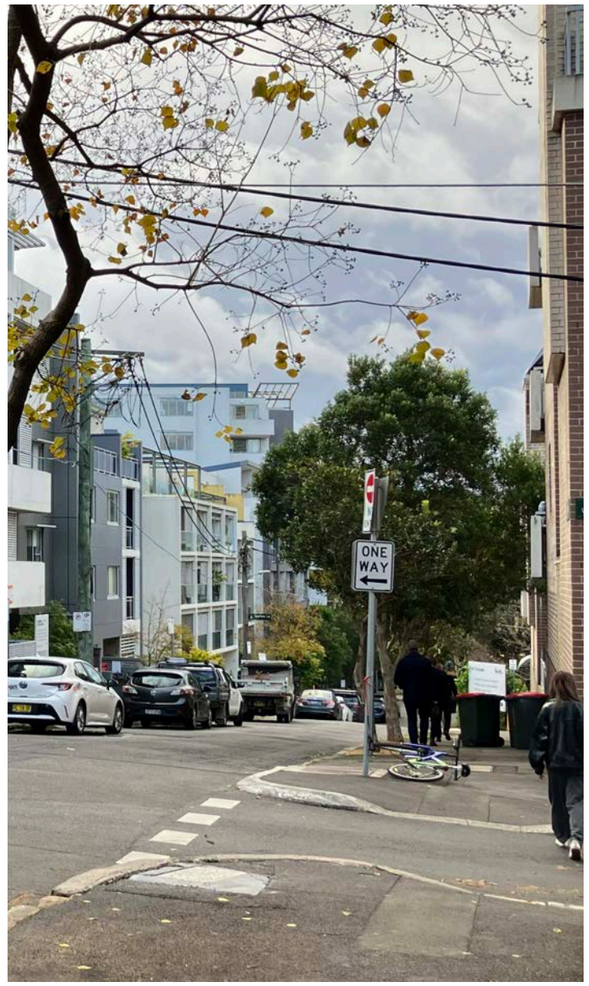
Larkin St



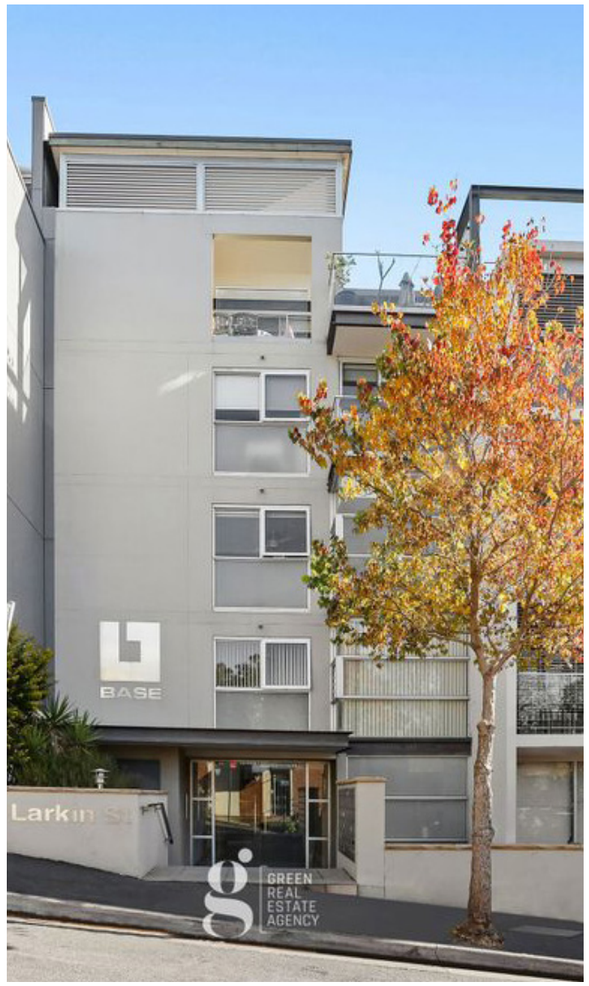
Residential Apartment Building



View to University



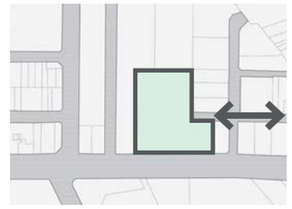
Residential Streetscape



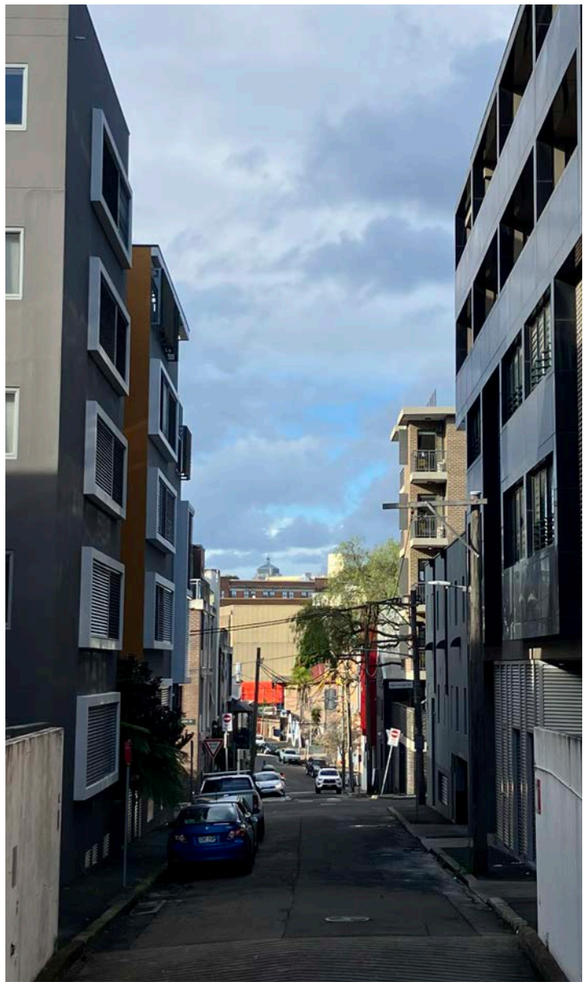
Residential Apartment Building

03 SITE & CONTEXT

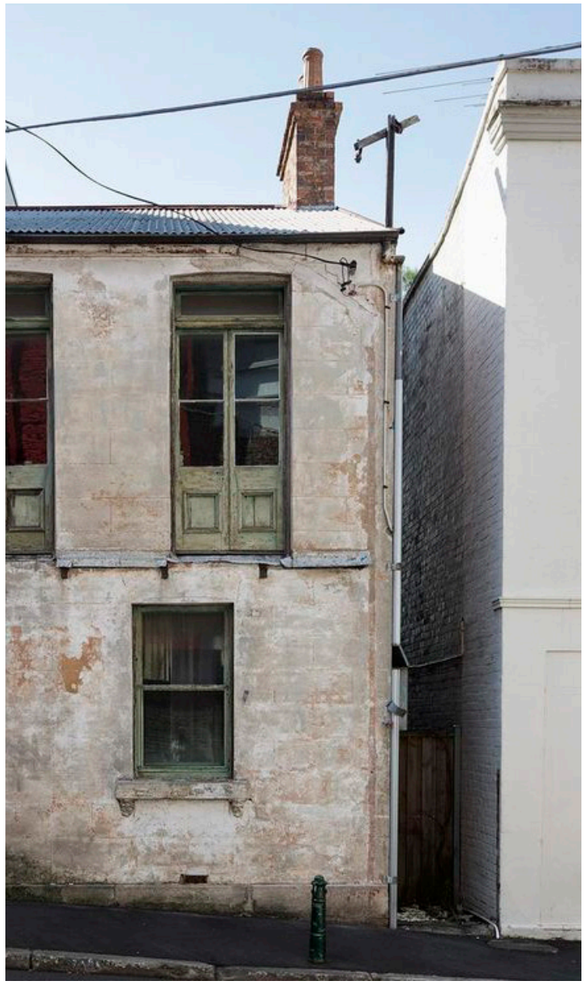
Street Character



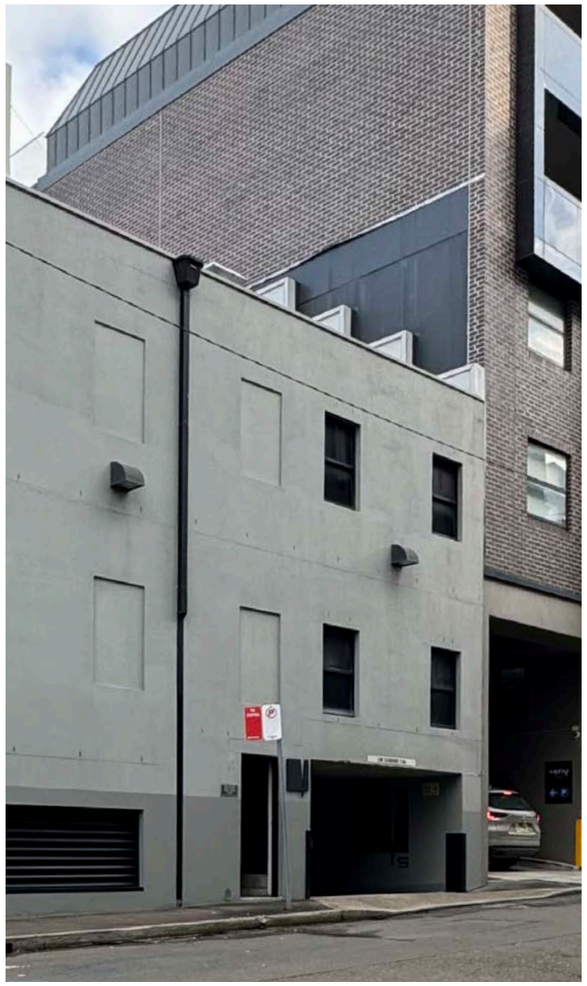
Sparkes St



View East along Sparkes St



Fine Grain Residential



Rear vehicle access



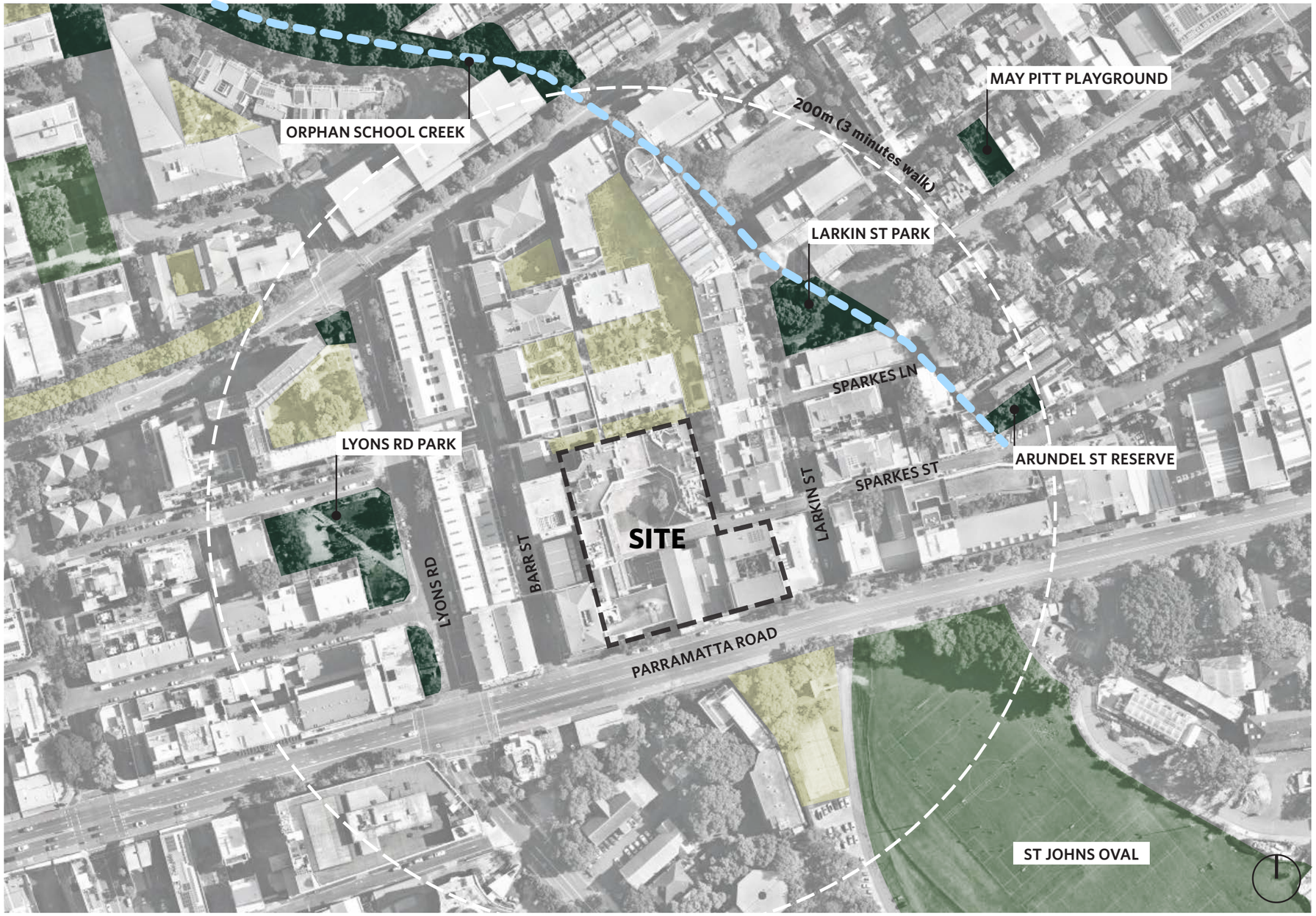
View West to Termination of Sparkes St

03 SITE & CONTEXT

Open Space

Green Spaces

The dense urban context contains a series of small scale neighbourhood parks and reserves. A larger reserve exists along Orphan School Creek to the north which is subject to naturalisation and restoration efforts to return a natural ecosystem to this urban area. To the south of the site, the grounds of the University of Sydney dominate the natural context with mature tree canopy and the open space of St Johns Oval.



Orphan School Creek

Public Green Space

University Green Space (Publicly Accesible)

Private Green Space

03 SITE & CONTEXT

Green Analysis

Canopy Coverage

Tree coverage in urban areas is essential in providing a liveable city, providing shade cover, reducing urban heat island effect and provide habitat for native fauna. An analysis of canopy coverage has been undertaken to seek opportunity to increase cover in alignment with the City of Sydney Urban Forest Strategy.



Orphan School Creek

Existing Canopy Coverage

Site

Canopy coverage in site: 2.6%

Canopy coverage within 200m: 14.1%

Canopy coverage of map extent: 15.5%

CoS Canopy target 2030: 23%

CoS Canopy target 2050: 27%

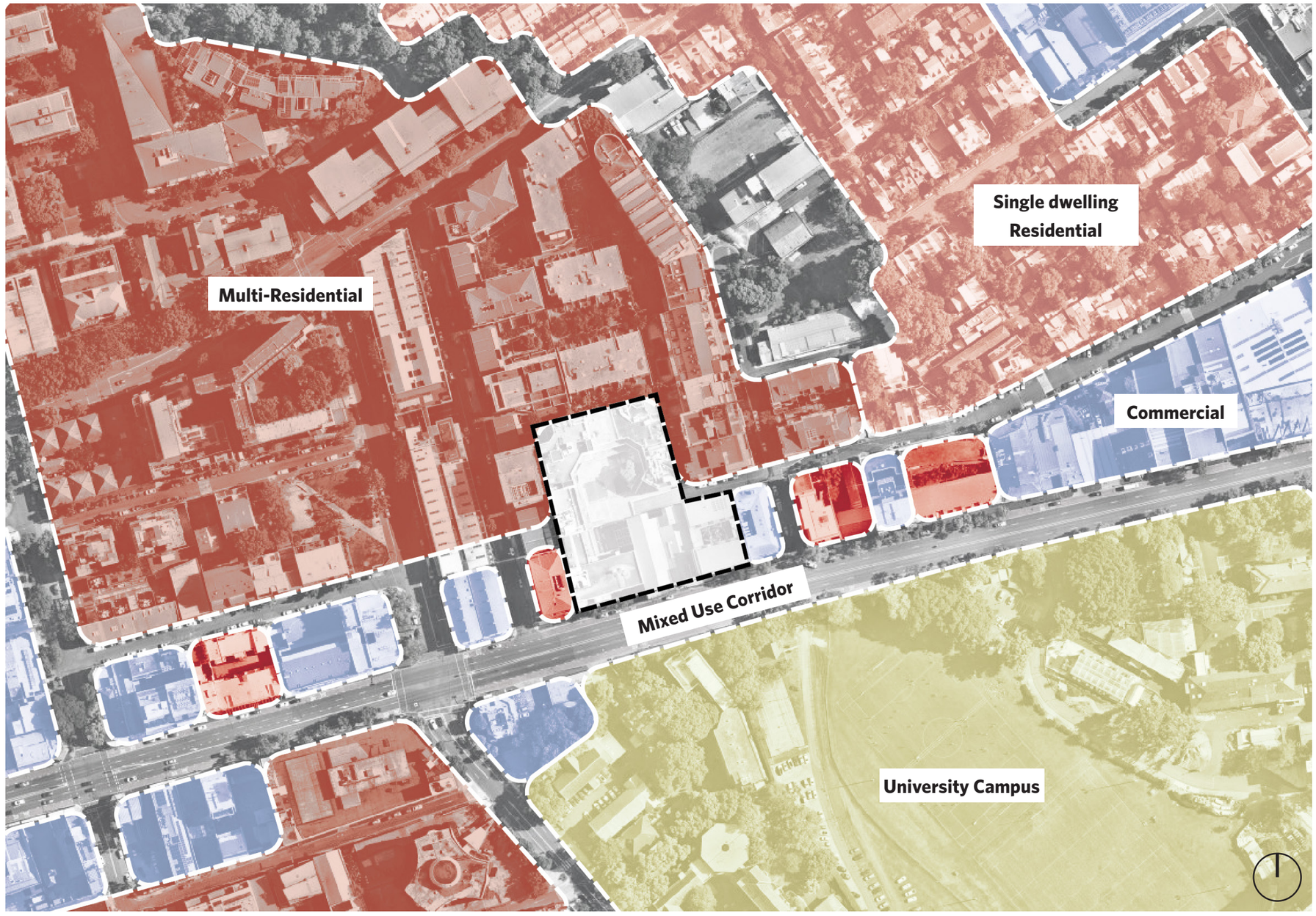
03 SITE & CONTEXT

Building Uses

Neighbourhood Building Use Zones

The surrounding building uses are characterised by a distinct mixed use zone following Parramatta Rd. North of Parramatta Rd, there exists a distinct zone of multi residential apartments and a zone of dense single residential dwellings. The south side of Parramatta Rd is dominated by the University of Sydney campus.

- Multi-Residential
- Single Residential
- Commercial
- University

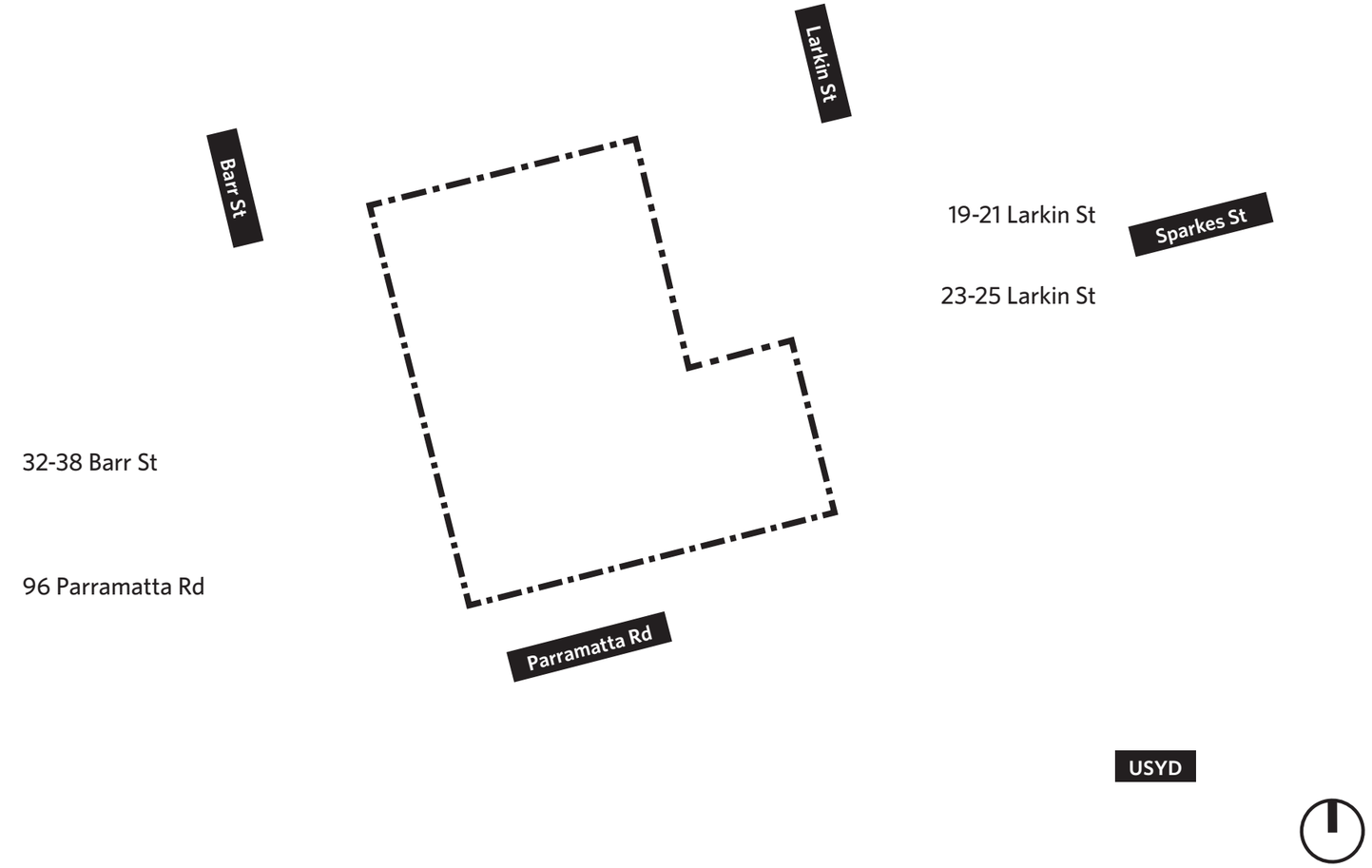


03 SITE & CONTEXT

Overshadowing Neighbouring Properties

An overshadowing analysis has been undertaken to determine an appropriate building envelope that ensures adequate solar access to neighbouring residential apartment buildings to the east and west. This analysis is informed by the City of Sydney's guidelines on Minimising Overshadowing of Neighbouring Apartments.

This following analysis evaluates direct sunlight reaching the living room windows. Since the living rooms in neighboring apartments are generally set back behind balconies, we have assessed solar access at the window level. If the living room windows receive compliant levels of sunlight, it can be concluded that the balconies in front of them will also meet solar access requirements.



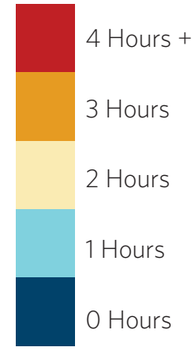
03 SITE & CONTEXT

Solar Analysis

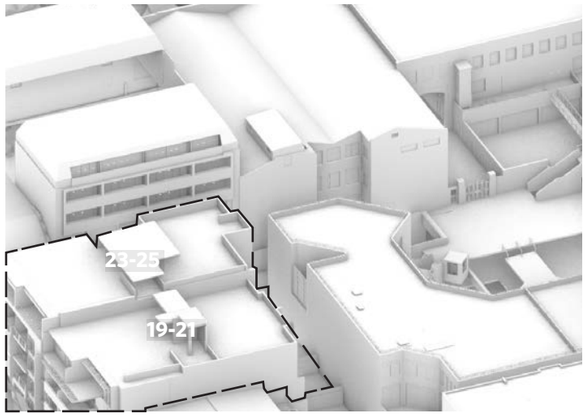
19-21 and 23-25 Larkin St

19-21 and 23-25 Larkin St are apartment buildings to the East of the proposal. The typical floor plate of these apartments contains single frontage apartments, with 2 apartments facing east to Larkin St and 2 apartments facing west toward the proposed development. The west facing apartments have glazing to living rooms off deep recessed balconies. The existing buildings on the proposal site are built with no setback to the east boundary meaning any proposal with setbacks will greatly improve amenity to these properties. The following analysis of existing solar access conditions has been undertaken.

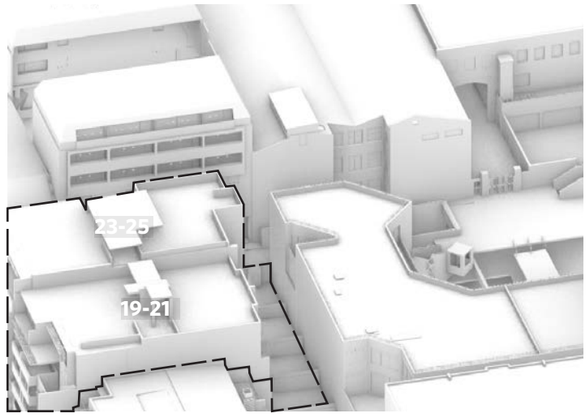
- Apartments of 23-25 Larkin St recieve zero hours of sunlight to the living rooms between 9am and 3pm.
- There are only 2 apartments of 19-21 Larkin St which receive, at most, 1 hour of sunlight to the living rooms been 9am and 3pm. Important to note is that these 2 apartments are located at the northern extremity of the site where they will not be impacted by overshadowing from the proposal site.



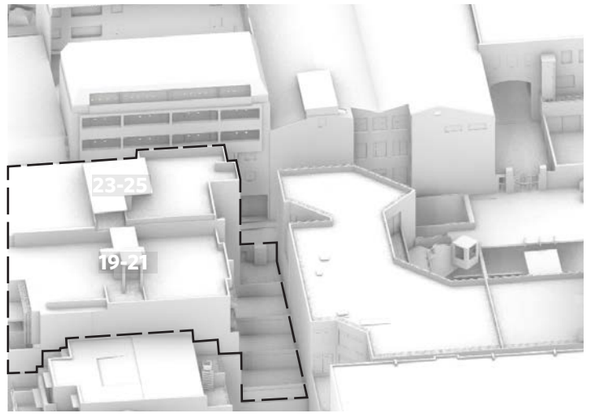
Hours of sunlight to living room windows between 9am and 3pm. (Colours are applied to visible windows)



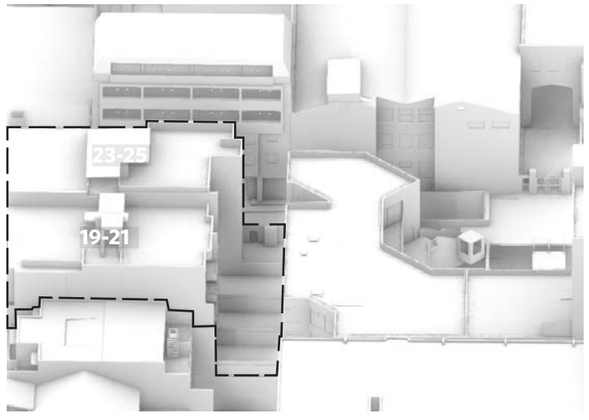
11:30am - June 21



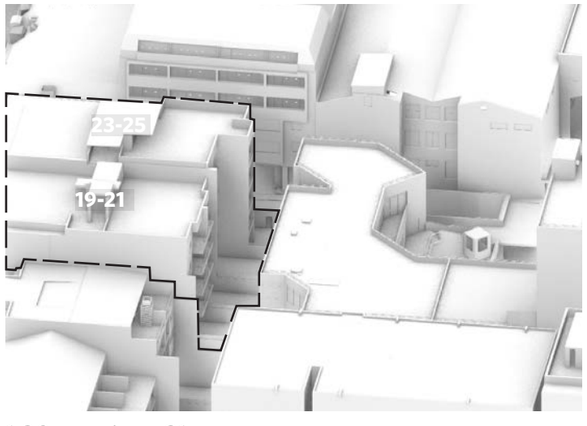
12pm - June 21



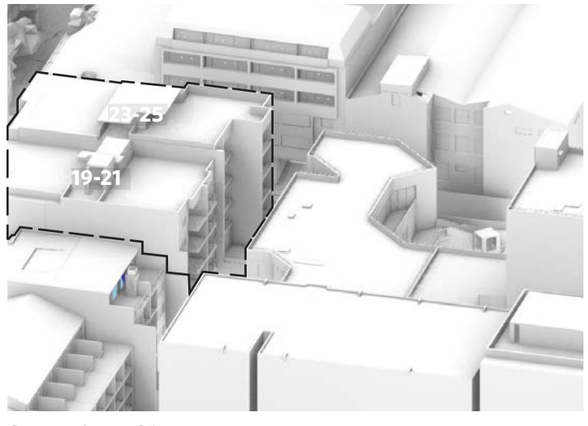
12:30pm - June 21



1pm - June 21



1:30pm - June 21



2pm - June 21



2:30pm - June 21



3pm - June 21

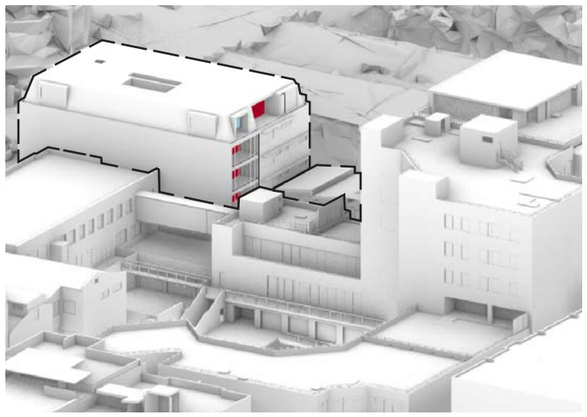
03 SITE & CONTEXT

Solar Analysis

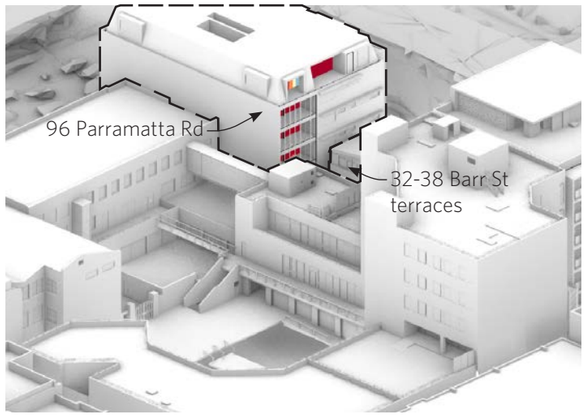
96 Parramatta Rd & 32-38 Barr St

96 Parramatta Rd is an apartment building on the western boundary of the proposal site. An analysis of the ADG solar compliance of the building as a whole identifies that less than 70% of apartments currently receive 2 hours of sunlight. The row of north facing apartments on levels 2-5 individually receive in excess of 2 hours of sunlight between 9am and 5pm under the current site conditions. The proposal will seek to retain a mimimum of 2 hours of sunlight to these apartments.

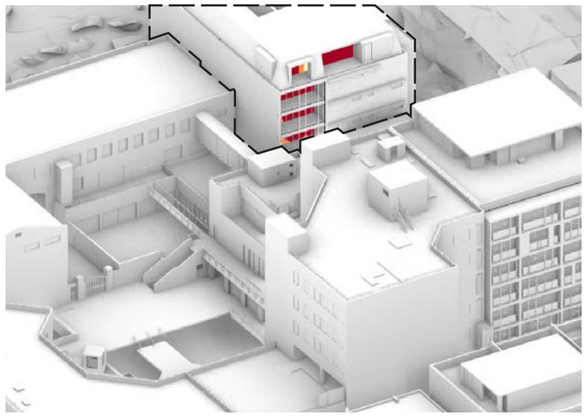
32-38 Barr St are a row of 3 storey terraces, each with living spaces at ground level opening to a front courtyard facing Barr St and a rear courtyard facing east adjoining the proposal site. These rear courtyards currently receive no direct sunlight.



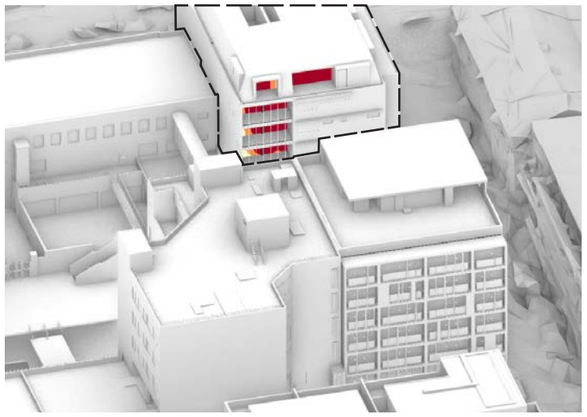
9am - June 21



10am - June 21



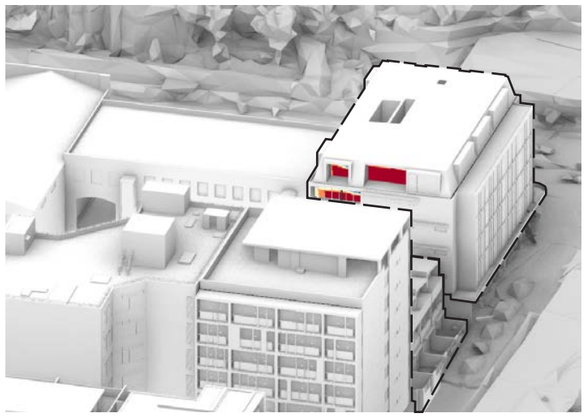
11am - June 21



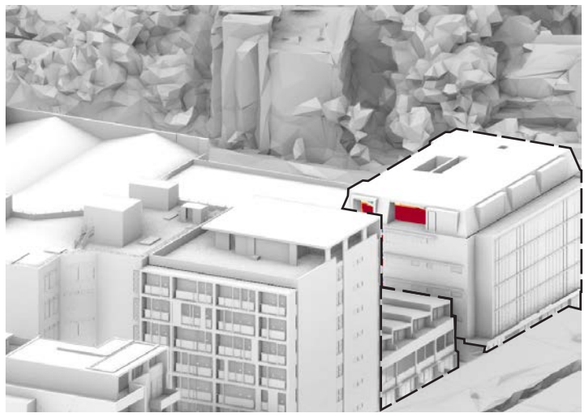
12pm - June 21



1pm - June 21



2pm - June 21



3pm - June 21



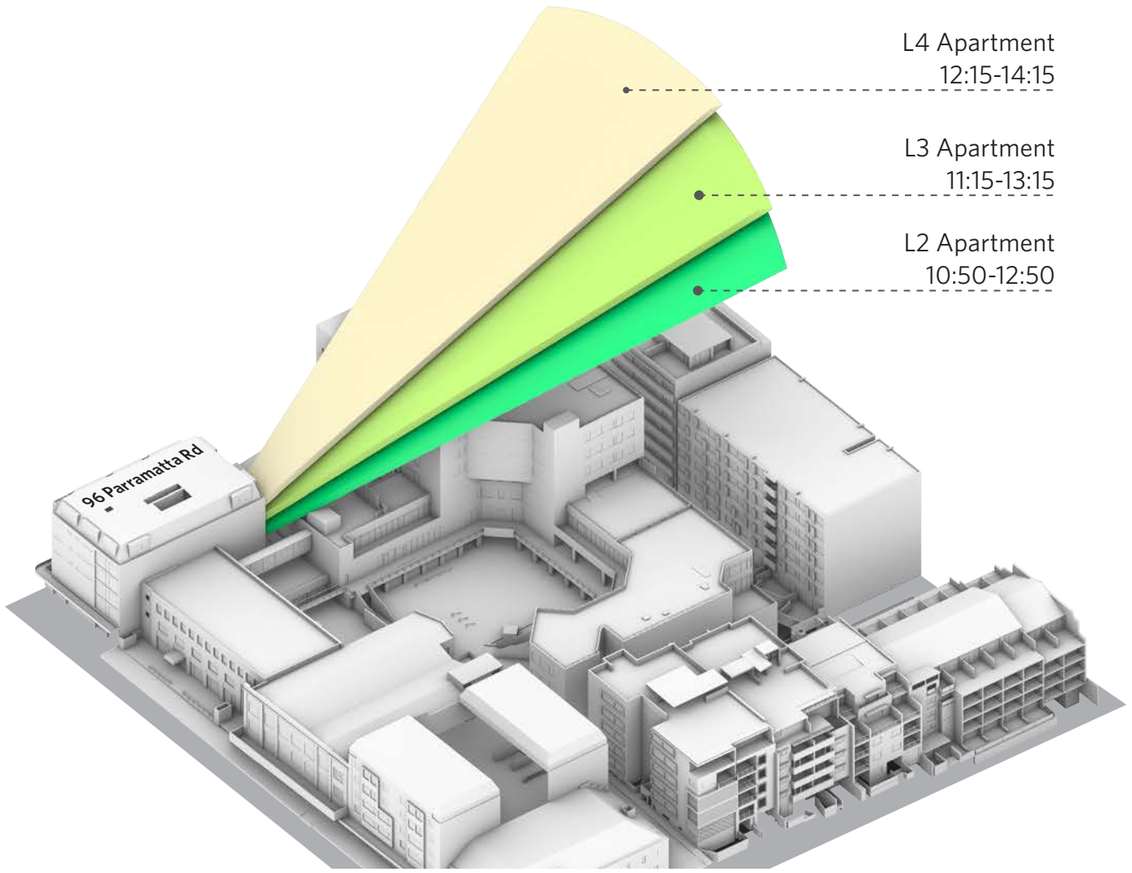
Hours of sunlight to living room windows between 9am and 3pm. (Colours are applied to visible windows)

03 SITE & CONTEXT

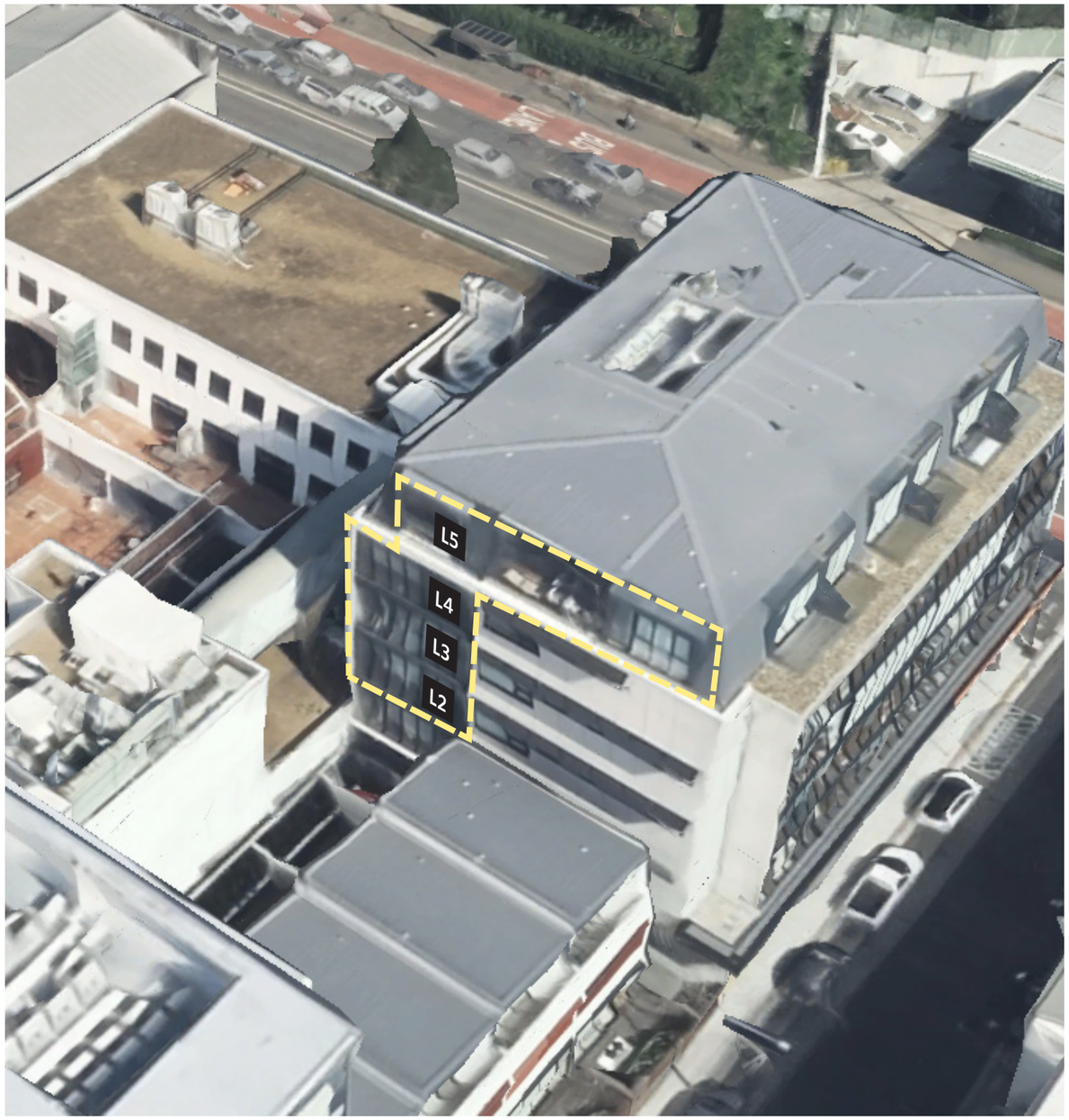
Solar Analysis

96 Parramatta Rd Sun Protection Planes

From the analysis of existing solar access to all residential neighbours, it has been identified that there are only 4 apartments in 96 Parramatta Rd that currently receive in excess of 2 hours of direct sunlight to living room windows between 9am and 3pm. Following the City of Sydney overshadowing guidelines, the proposal will seek to retain a minimum of 2 hours of solar access to these apartments. To achieve this, a sun protection plane has been developed which will inform the massing of the proposal.



Sun protection planes required to 96 Parramatta Rd.



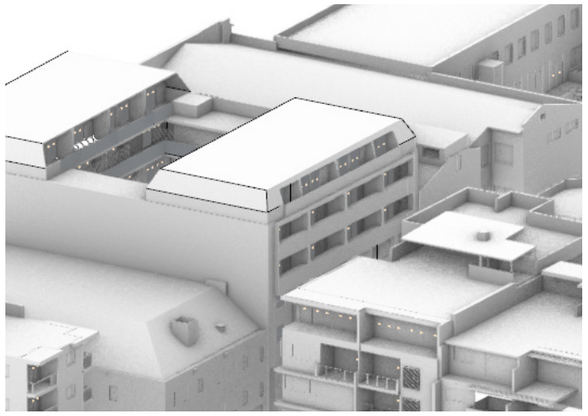
Apartments with currently compliant solar access.

03 SITE & CONTEXT

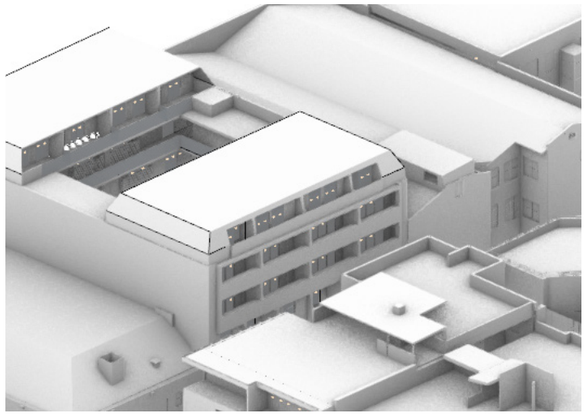
Solar Analysis

84 Parramatta Rd - Veriu Serviced Apartments

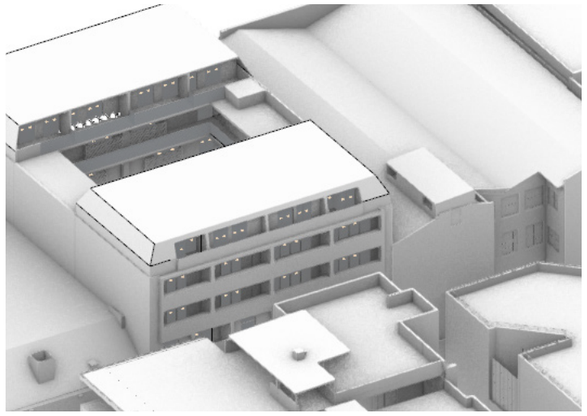
The existing Veriu Serviced Apartments are located at 84 Parramatta Rd and are intended to be retained with an additional 3 floors provided as part of this proposal. The proposal seeks to retain all existing solar compliance of these apartments. Solar analysis of this building identifies that 9 of the 28 apartments (32%) achieve ADG solar compliance due to the limited northern aspect and overshadowing of adjacent buildings.



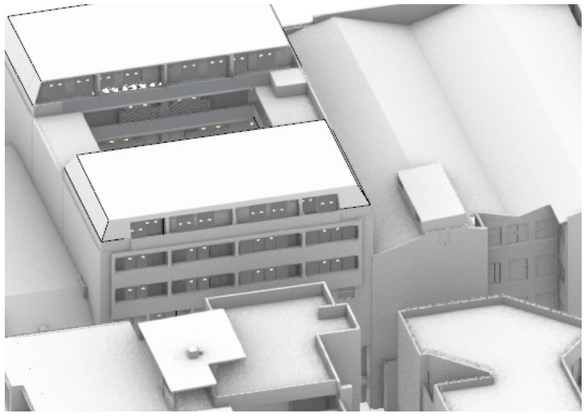
9am - June 21



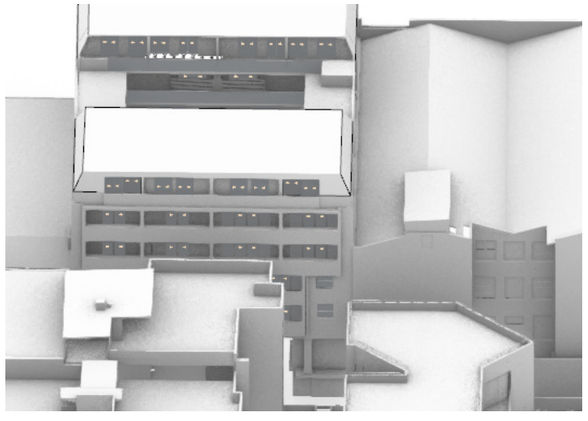
10am - June 21



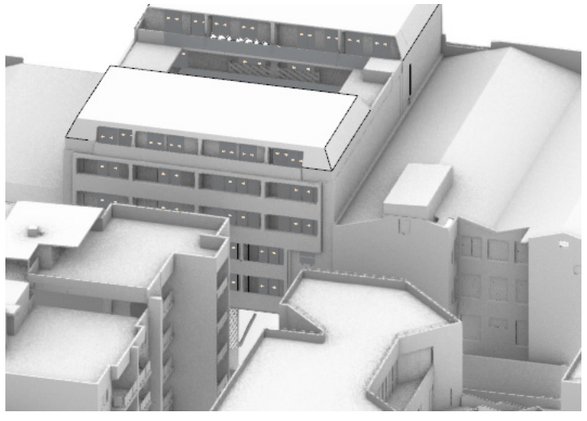
11am - June 21



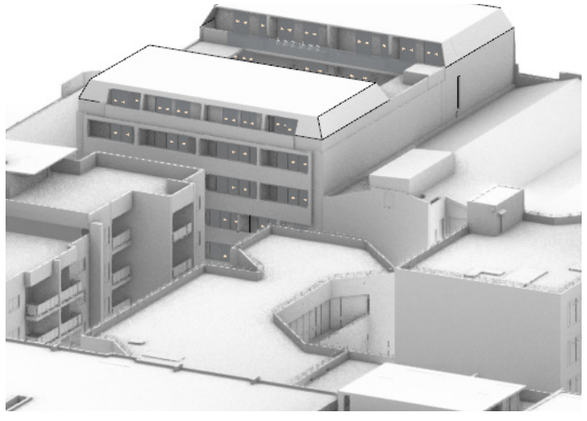
12pm - June 21



1pm - June 21



2pm - June 21



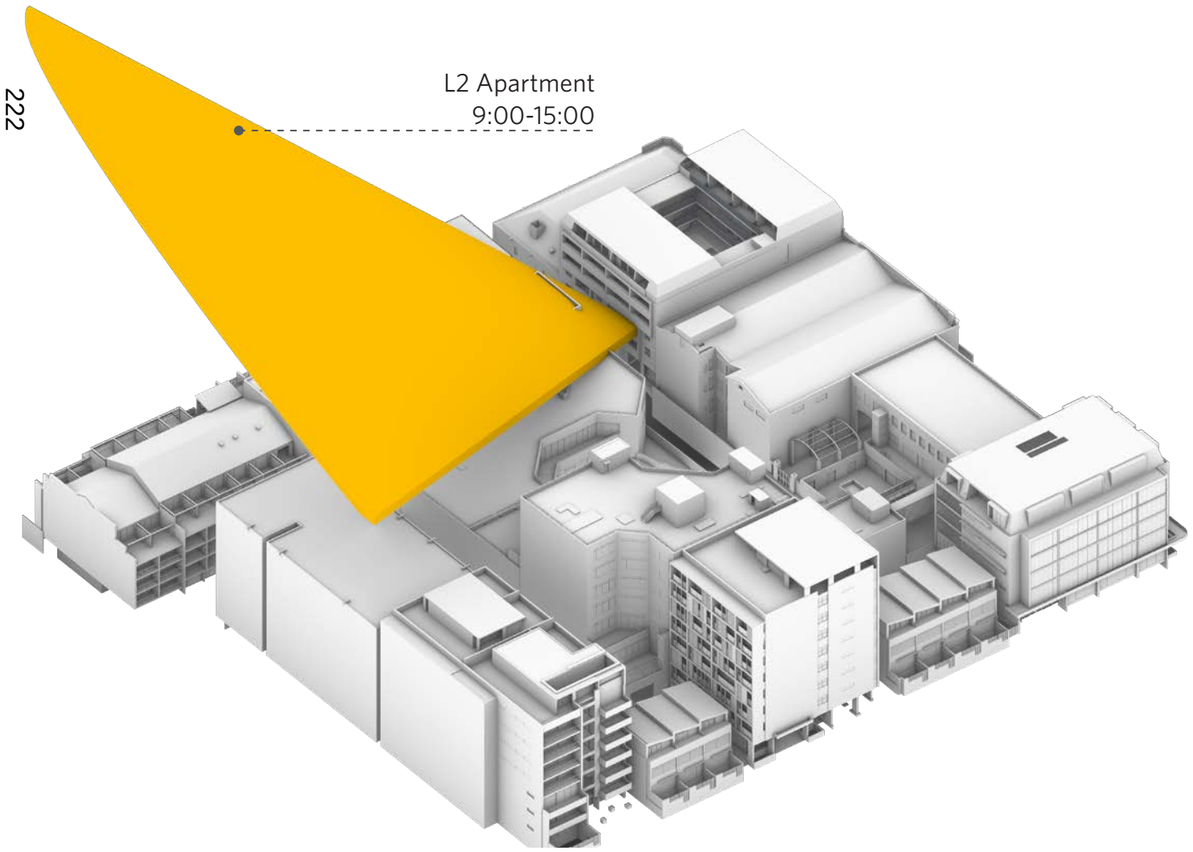
3pm - June 21

03 SITE & CONTEXT

Solar Analysis

84 Parramatta Rd Sun Protection Planes

The solar analysis identifies that the north facing apartments on levels 3 and 4, plus a single apartment on level 2 currently receive in excess of 2 hours solar access. The level 2 compliant apartment is reliant upon afternoon sun for its compliance which could be obscured by a new building form on the northern end of the proposed development site. To ensure solar access is maintained, a sun protection plane has been identified to retain solar access to this apartment and inform the massing of the new proposed development.



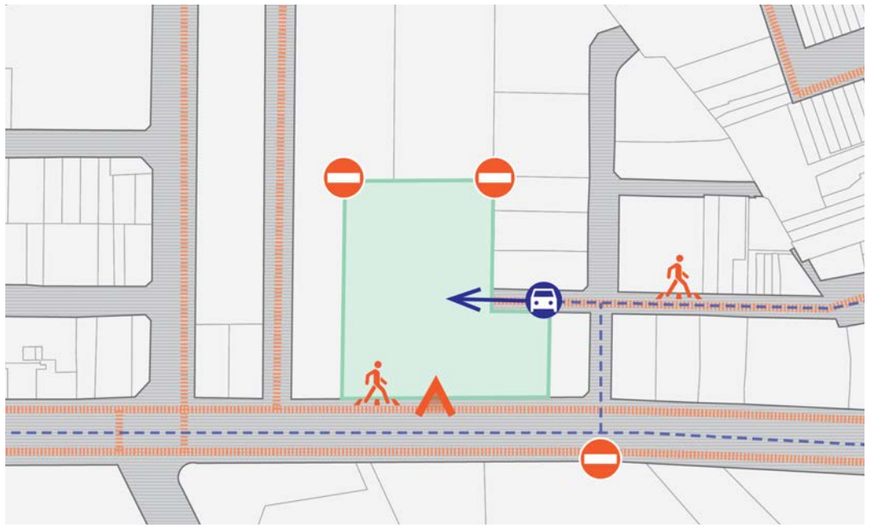
Sun protection planes required to 84 Parramatta Rd.



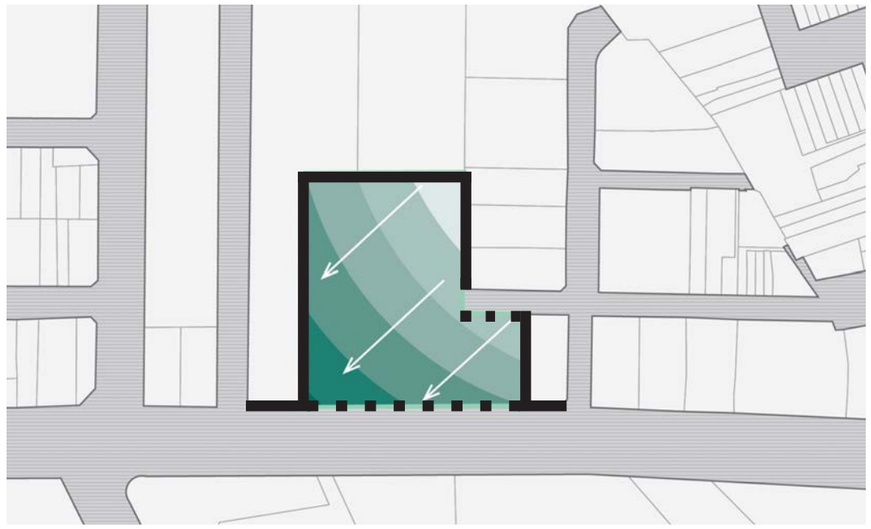
Apartments with currently compliant solar access.

03 SITE & CONTEXT

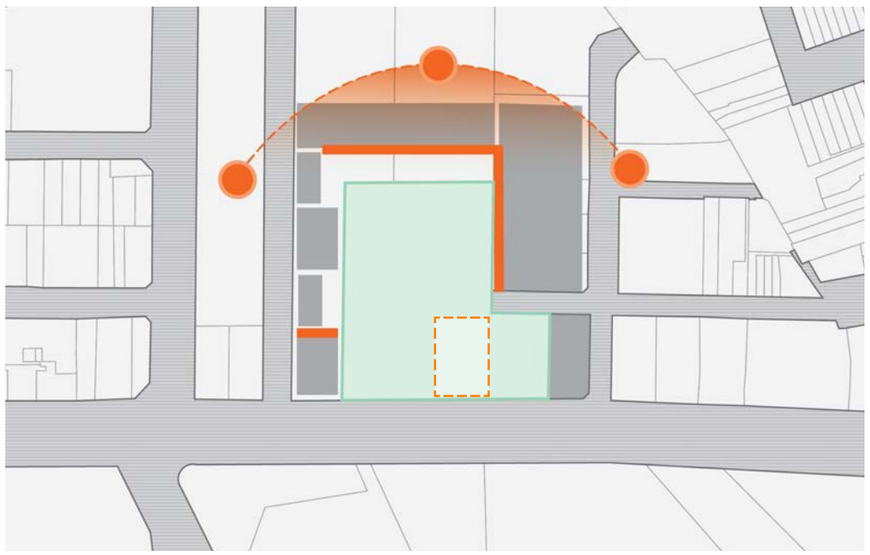
Summary of Existing Site Conditions



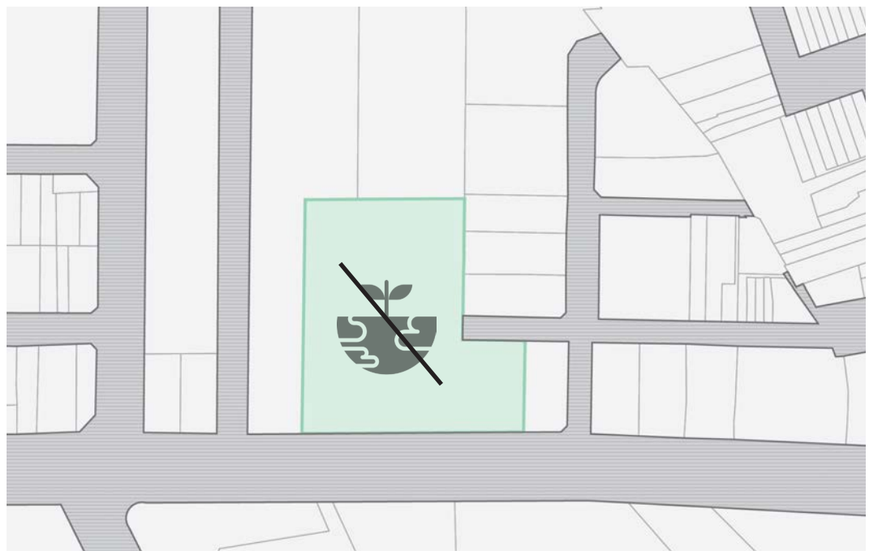
1. Traffic noise/pollution from Parramatta Rd with limited pedestrian and service access.



2. Limited site porosity and falling topography



3. Sensitive adjacencies and characterful warehouse building.



4. Low landscape values and limited ecological function.

224

04

04 LIFE SCIENCES

Elements of an Innovative Life Science Precinct

Mix of Uses

Connectivity

Building Chassis

Floorplate Functionality



Canary Wharf Life Sciences Tower , London, UK, by KPF

04 LIFE SCIENCES

Elements of an Innovative Life Science Precinct

Mix of Uses

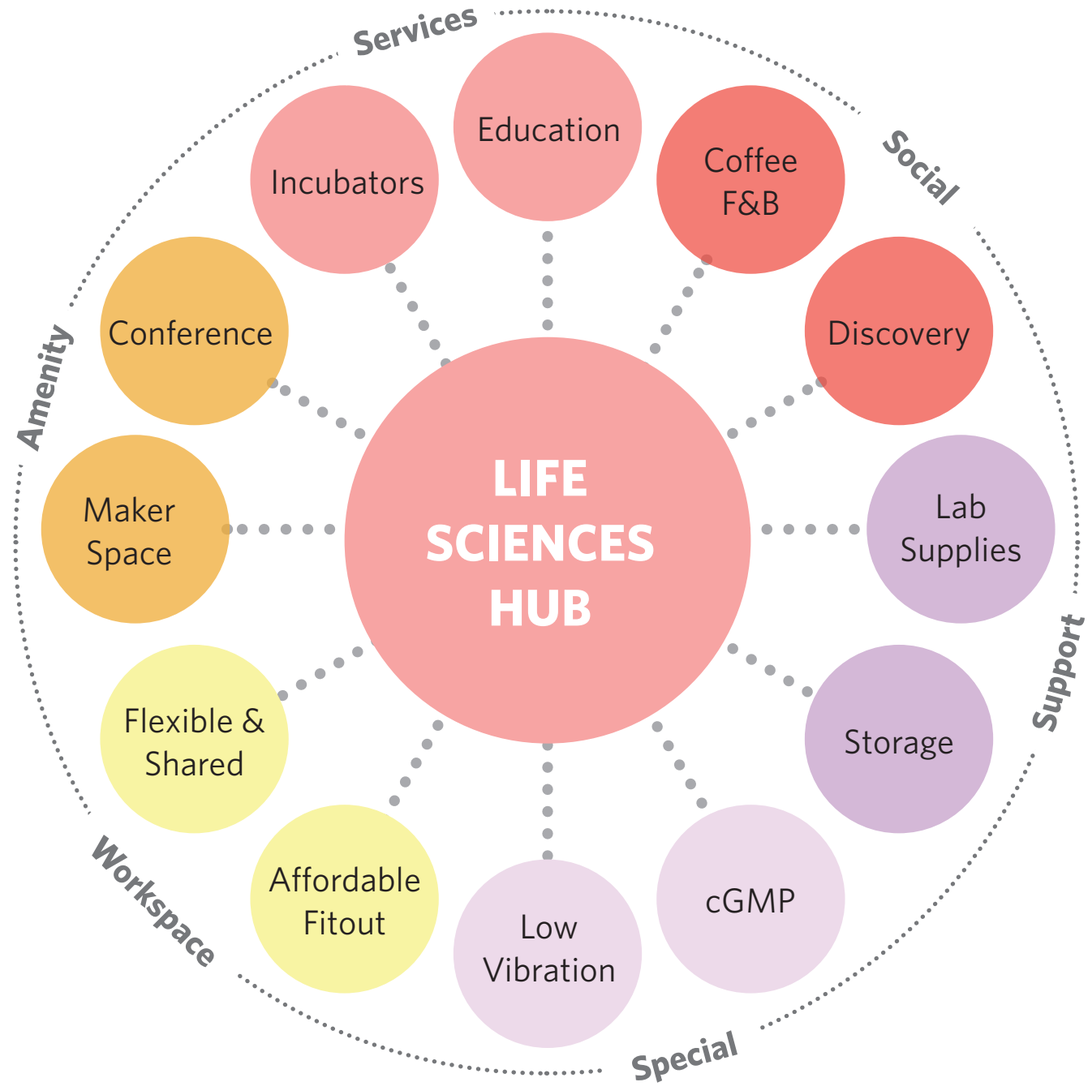
A mix of building uses supports an innovative life science precinct by fostering collaboration. Integrating laboratories, offices, education, retail, hospitality, and public spaces encourages interaction between researchers, entrepreneurs, and the broader community. This diversity activates the precinct throughout the day, supports talent attraction and retention, and creates a dynamic environment

Tenant Diversity

Small to large, start-up to established Institutional, academic, government, private industry, health clinic / diagnostics.

Supporting Uses

- All day activation
- Food and Beverage
- Bar - Gathering a university crowd
- Seminar / conference facilities
- Large event space / town hall
- Coworking
- Education
- Network Space
- Kids play area
- Roof top amenities - Sky lounge
- Life style terrace - fitness and wellbeing
- End of Trip facilities
- Serviced Apartments









04 LIFE SCIENCES

Elements of an Innovative Life Science Precinct

Connectivity

The Right Connections

Translation happens when connections are made among the right people. Precinct spaces that are designed to be destinations—to attract people from their clinical and research workplaces—foster unplanned interaction that can lead to new partnerships, and, ultimately, to new ideas.

Proximity Matters

Research has shown that proximity is important not only to the quantity of collaborations, but also to the quality of collaborations, even in today's world of technology and virtual engagement.

Drive Moment

Proximity matters, but simply locating a basic science lab next to a clinic does not guarantee that researchers will interact with clinicians. Innovation occurs when incentives, spatial and otherwise, drive not only interaction, but transfer of ideas and knowledge between groups.

Vertical Integration

Both outside of and within buildings, vertical integration and visibility creates physical awareness. Tom Allen of MIT has noted that, without such integration, "being on a different floor is like being in a different world."

Horizontal Integration

Across a precinct, creating a strong horizontal link and strategically locating destination points and gatherings areas - such as retail outlets, dining venues, libraries and outdoor plazas - along paths of circulation promotes interaction among people and helps create a transdisciplinary base.

Transform Workplace

Finding the right balance between group/interactive places and individual/restorative places is crucial. Providing people with the time and space to think is essential, but so is exploring ideas with others. Knowledge transfer must occur to develop good ideas and to translate them to real-life solutions.



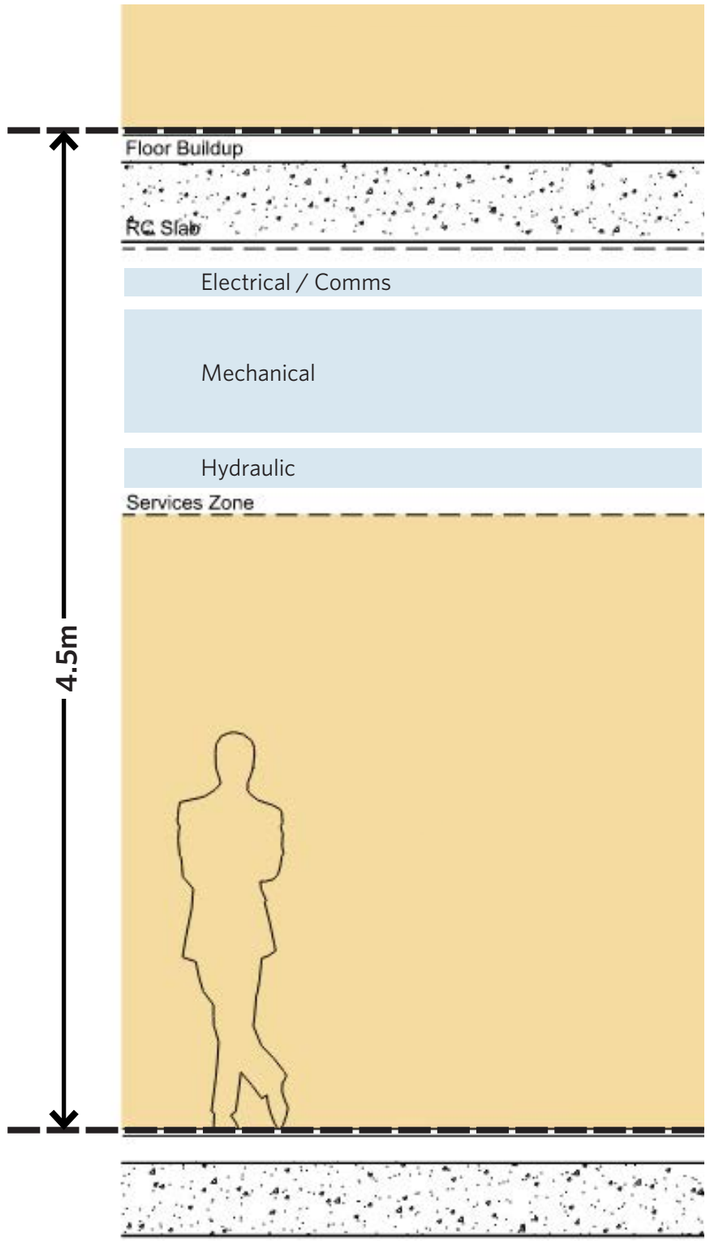




Elements of an Innovative Life Science Precinct

Increased Floor to Floor Heights

Laboratory buildings require higher floor-to-floor heights to accommodate extensive mechanical services, specialised ventilation systems, and large ductwork. Additional height also allows for structural vibration control, flexible service distribution, and the integration of specialised equipment



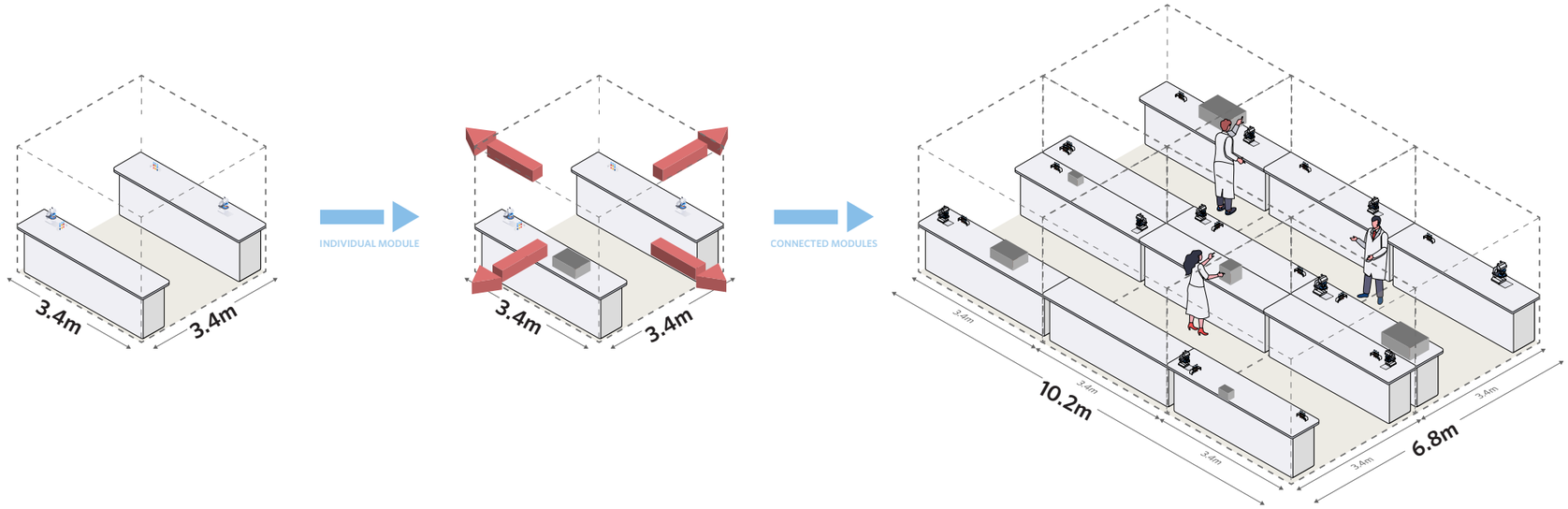


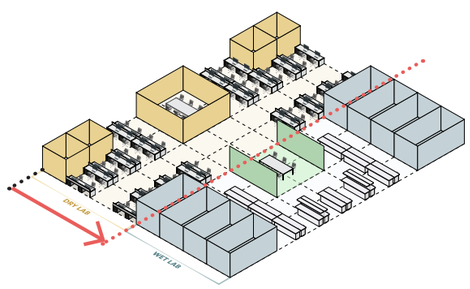
04 LIFE SCIENCES

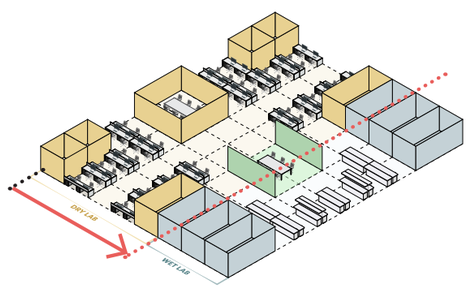
Elements of an Innovative Life Science Precinct

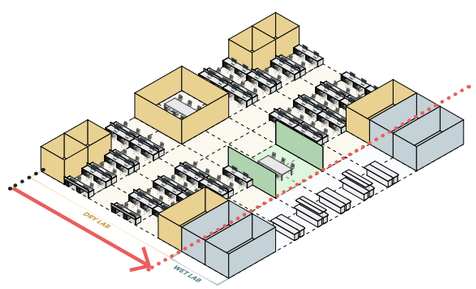
Planning Modules

A modular planning strategy for the design of the life sciences floorplate ensures long-term flexibility by balancing standardised grids with adaptable spaces. A 10.2 x 10.2m structural framework with 3.4 x 3.4m lab modules allows for specialised closed or open laboratory configurations, supporting evolving research needs while minimising disruptions and extending the facility's lifespan.









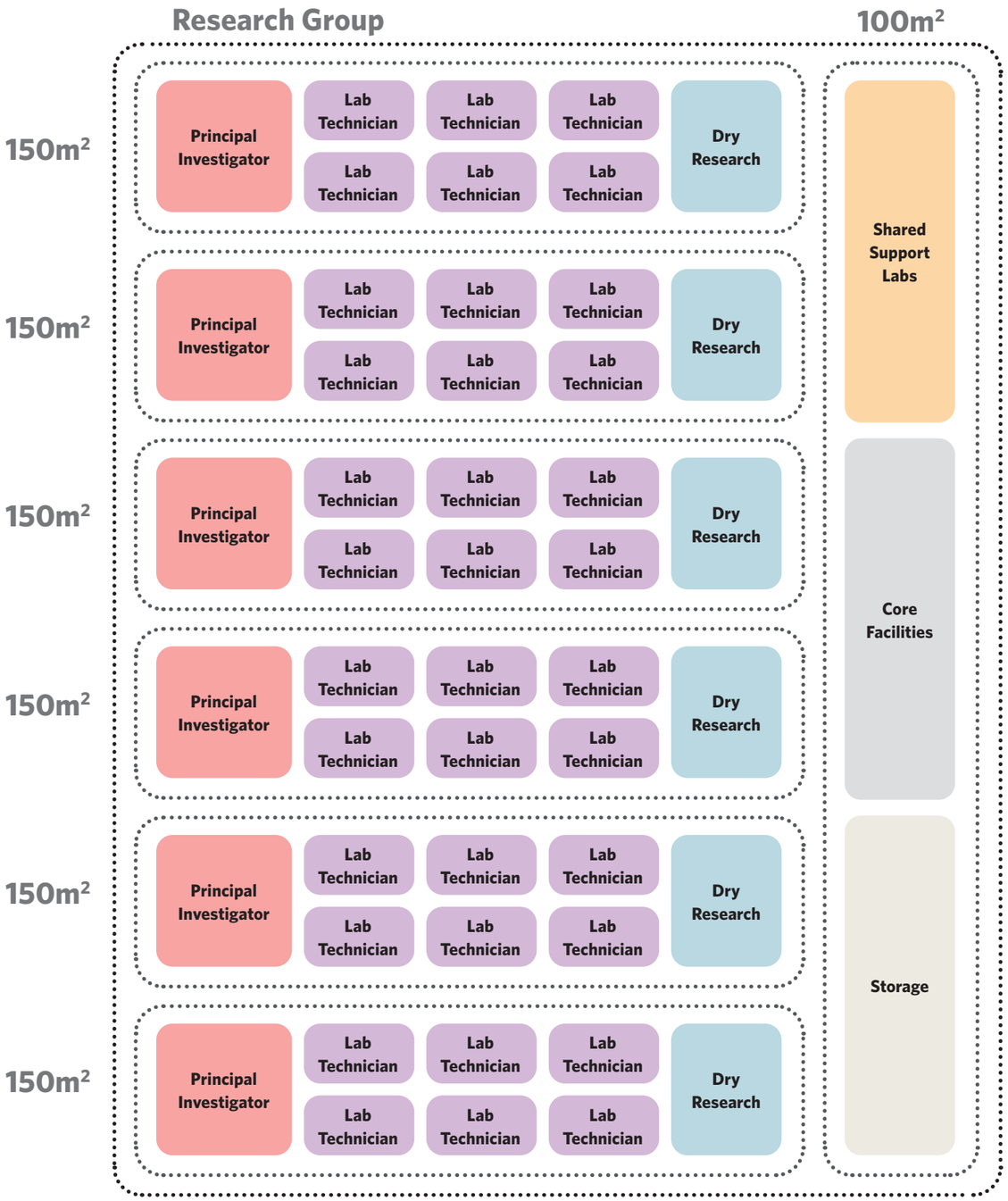
04 LIFE SCIENCES

Elements of an Innovative Life Science Precinct

Typical Research Floorplate Size

- A typical Research Group structure consists of 1 x Principal Investigator + 6 lab technicians requiring approximately 120m² lab space plus 30m² dry research space.
- An average research group consists of 6 PI's per floor including shared support labs, core facilities & storage.
- 42 researchers per 1000m² floorplate.

This structure of research groups is used to inform the floor plate size, proportions and arrangement of cores of the proposed scheme.

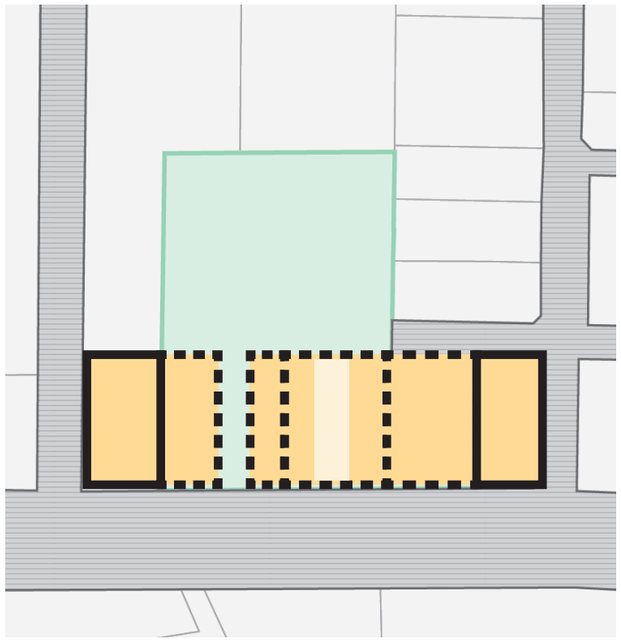






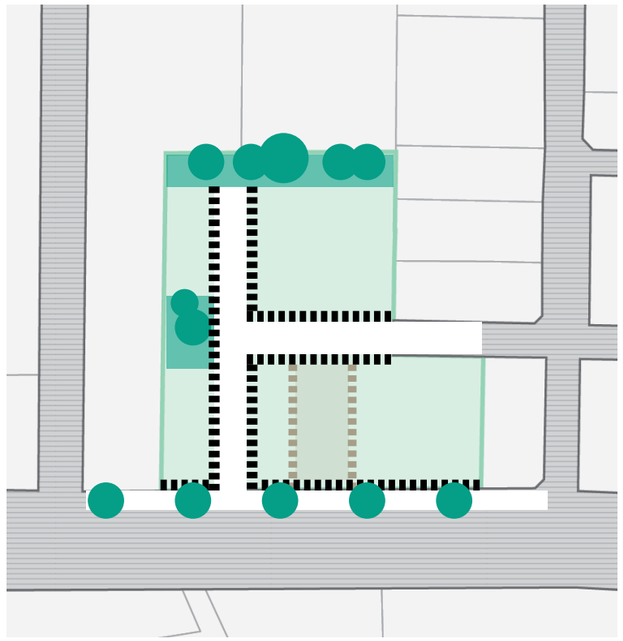


05



Positively Address Parramatta Road

- Respond to grain and scale of Parramatta Rd street wall.
- Acknowledge, adapt and reuse existing warehouse.
- Present science and learning to wider public.



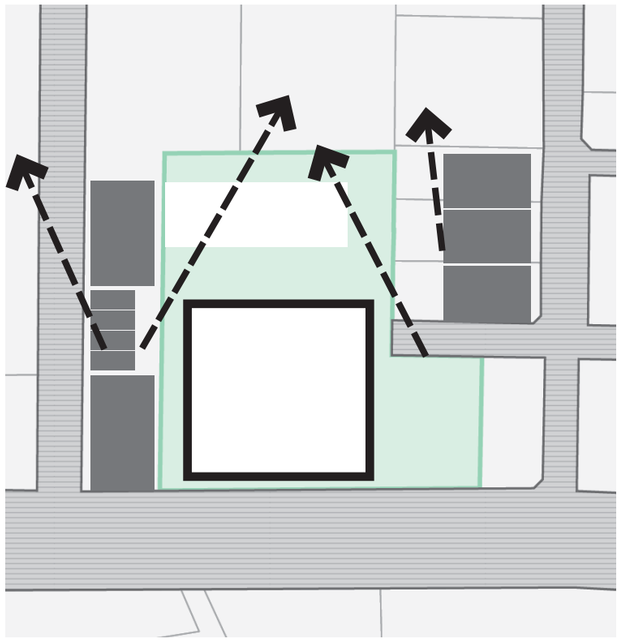
Create Open Spaces, New Arcade and Laneway Network

- Improve site porosity.
- Provide deep soil and building separation to northern boundary.
- Introduce planting and landscape.
- Support the transformation of Parramatta Rd boulevard.



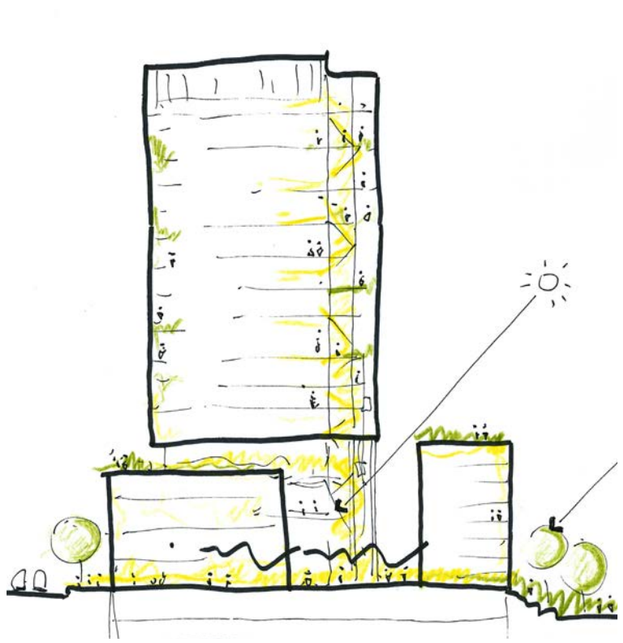
Diversity of Use

- Introduce activating uses.
- Support a mix of site users.
- Extend hours of utilisation and activation.



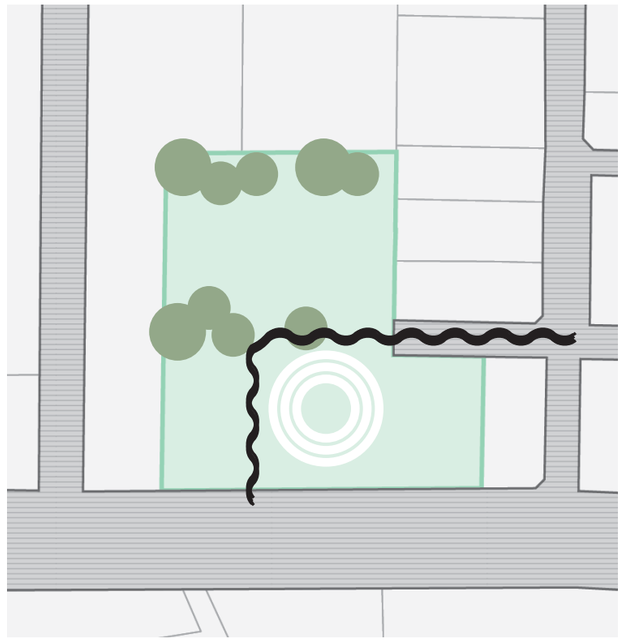
Be a Responsible Neighbour

- Minimise shadowing impacts upon neighbouring apartments.
- Provide improved building separations to the north.
- Provide deep soil along northern boundary.



Life Science Precinct Excellence

- Create Vertical Integration
- Create Horizontal Integration
- Provide Spaces for Exchange



Strategies for Connecting with Country

- Celebrate the site as a place of knowledge and learning.
- Interpret the original walking track between Sydney and Parramatta.
- Improve ecological function, deep soil, tree canopy and water cycle management.

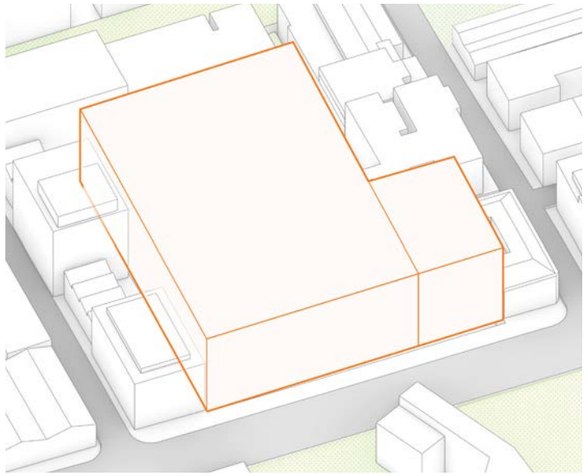
06

07 PLANNING ENVELOPE

Defining the Envelope

The planning envelope proposed embeds the fundamental urban design responses identified in the design response to ensure that any future development will be bound by these considered massing limitations. The key issues of sensitive placement of building mass, overshadowing of neighbouring properties, and appropriate boundary setbacks are all embedded into the proposed envelope.

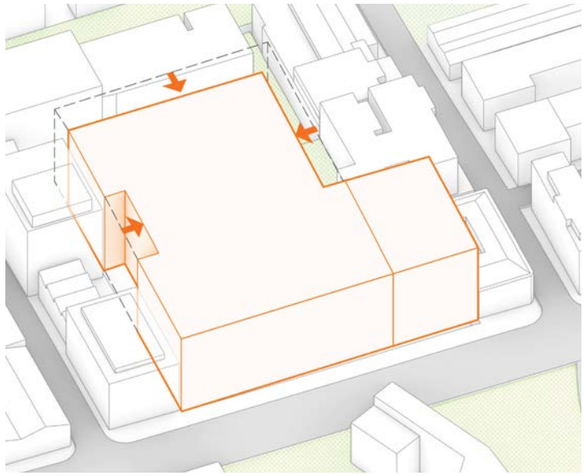
30m Podium Limit



The northern building is proposed to be 8 storeys and matching the height with the abutting building to the west and is consistent with the character of neighbouring properties. The uppermost level provides setback from the building edges, minimising bulk & allowing opportunity for rooftop communal living spaces.

Taking reference from the existing street character, the proposal seeks to continue the rhythm of the street wall grain expressing the frontage as a series of 3 distinct forms each with varying heights.

Define Deep Soil and Required Setbacks

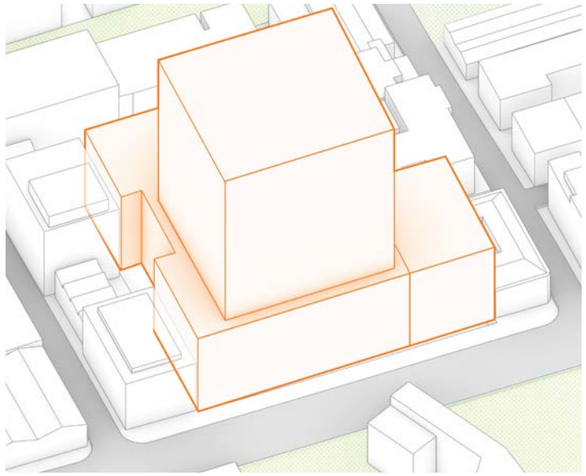


Setbacks to the north, east and west boundaries are provided as a response to the adjoining residential properties.

A 9m setback is proposed to the north establishing a minimum 18m ADG building separation for the frontage addressing the neighbouring apartments. To the east a 6m setback is implemented to achieve a 12m habitable to non-habitable separation.

On the west boundary a localised setback is provided in response the terraces whose rear courtyard abuts the proposal site.

80m Tower Limit

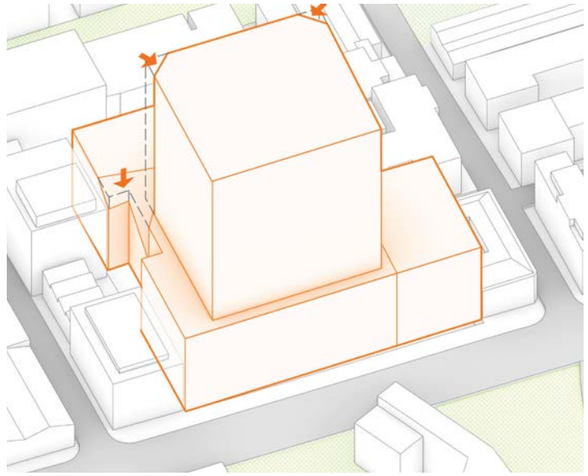


The massing of the tower element is located towards the south of the site to avoid overshadowing impacts to the neighbouring properties.

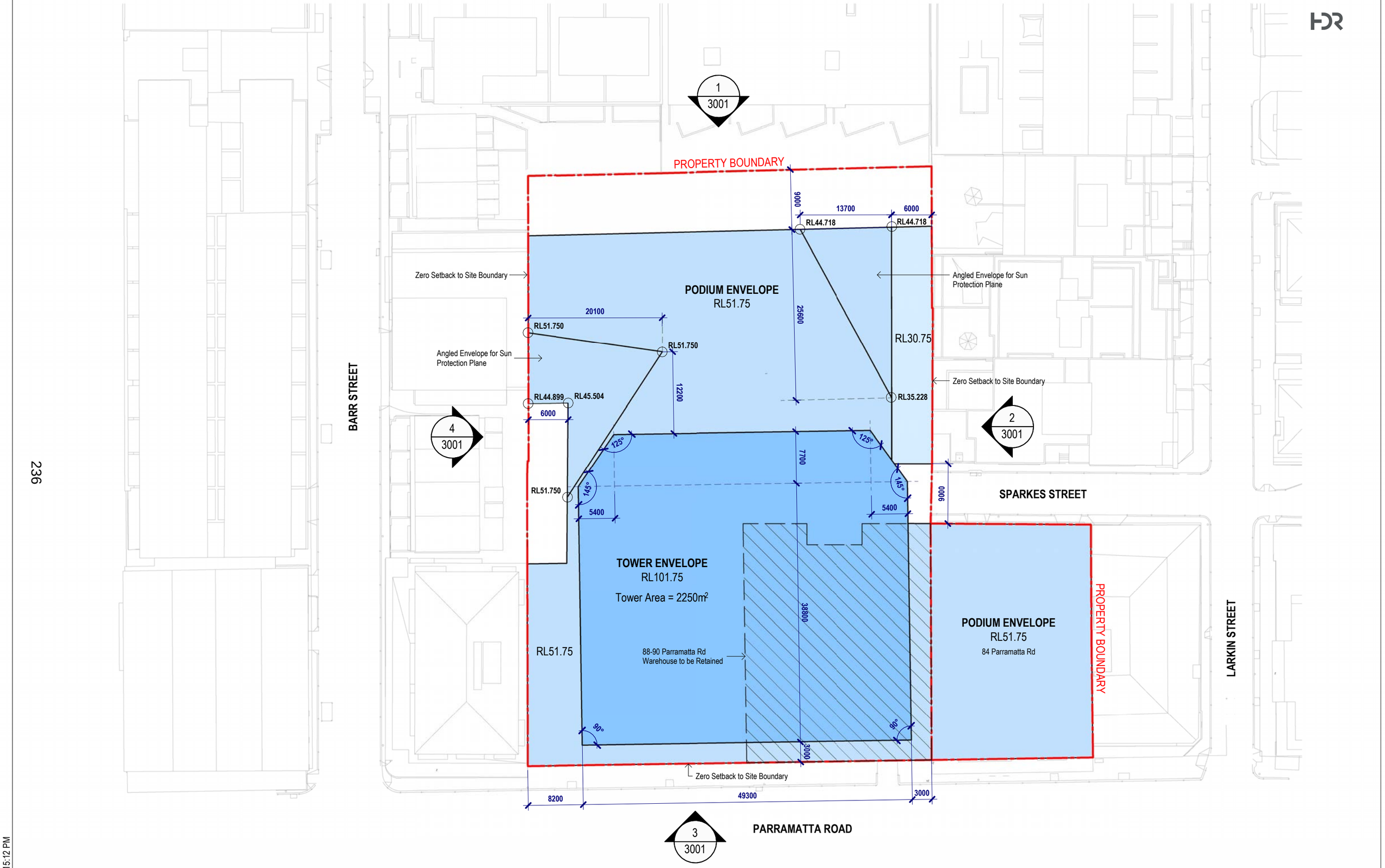
A setback from the podium form is provided at the Parramatta Rd frontage to allow a clear expression of the street wall and to provide an appropriate curtilage to the retained warehouse building below.

The 80m height requirement is informed the specific floor to floor height requirements of a life sciences laboratory building typology.

Refine to Maintain Solar Access



Refinement of the envelope massing is provided with a chamfer to the tower corner and shaping of the podium to maintain solar access compliance to the western residential neighbours.



NORTH

0 1m 5m

ARCHITECTS

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PROJECT
LIFE SCIENCES HUB CAMPERDOWN

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BUILDING ENVELOPE - PLAN

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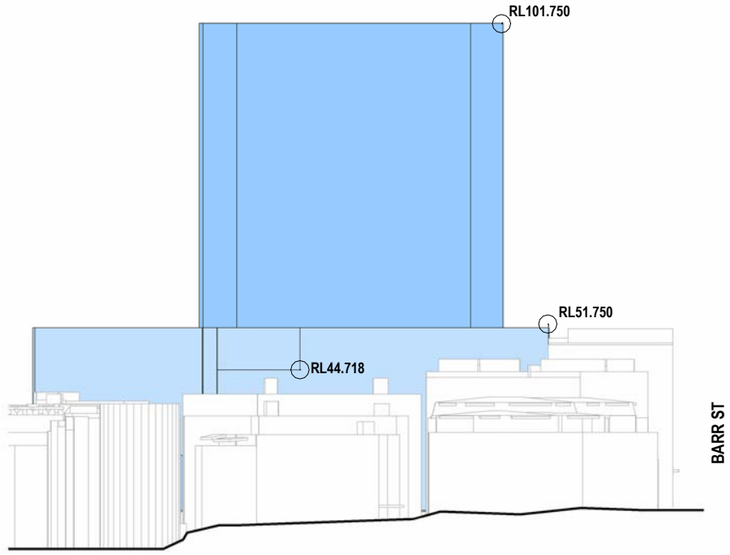
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DATE

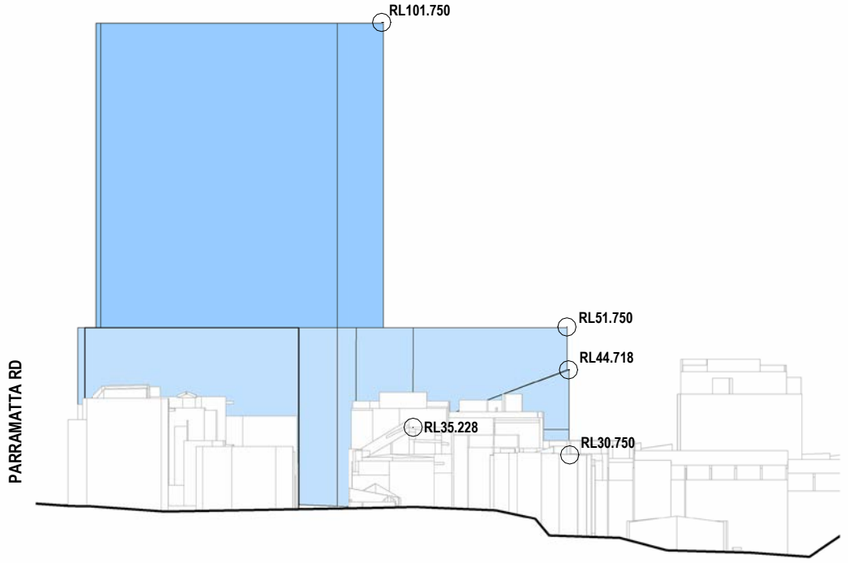
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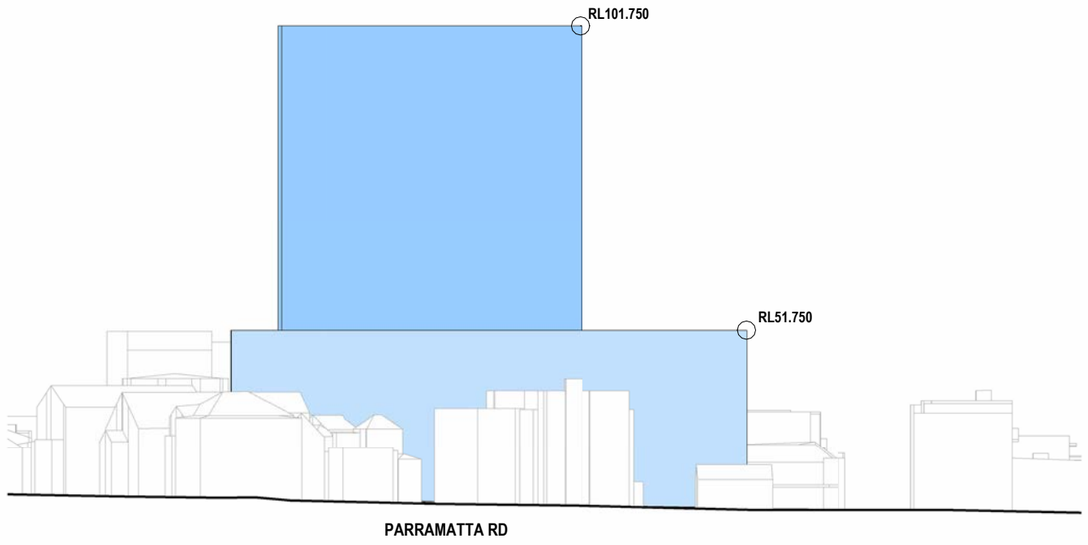
Autodesk Docs://10412728_Life Science/LSC-HDR-AR-R25-BLD.rvt



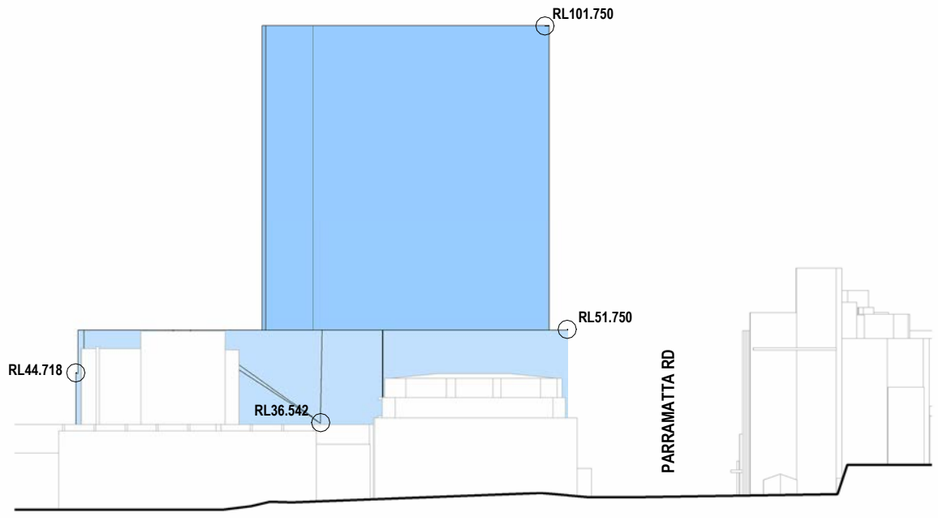
1 North Elevation
1 : 1000



2 East Elevation
1 : 1000



3 South Elevation
1 : 1000



4 West Elevation
1 : 1000

237

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NORTH

0 1m 5m

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PROJECT
LIFE SCIENCES HUB CAMPERDOWN

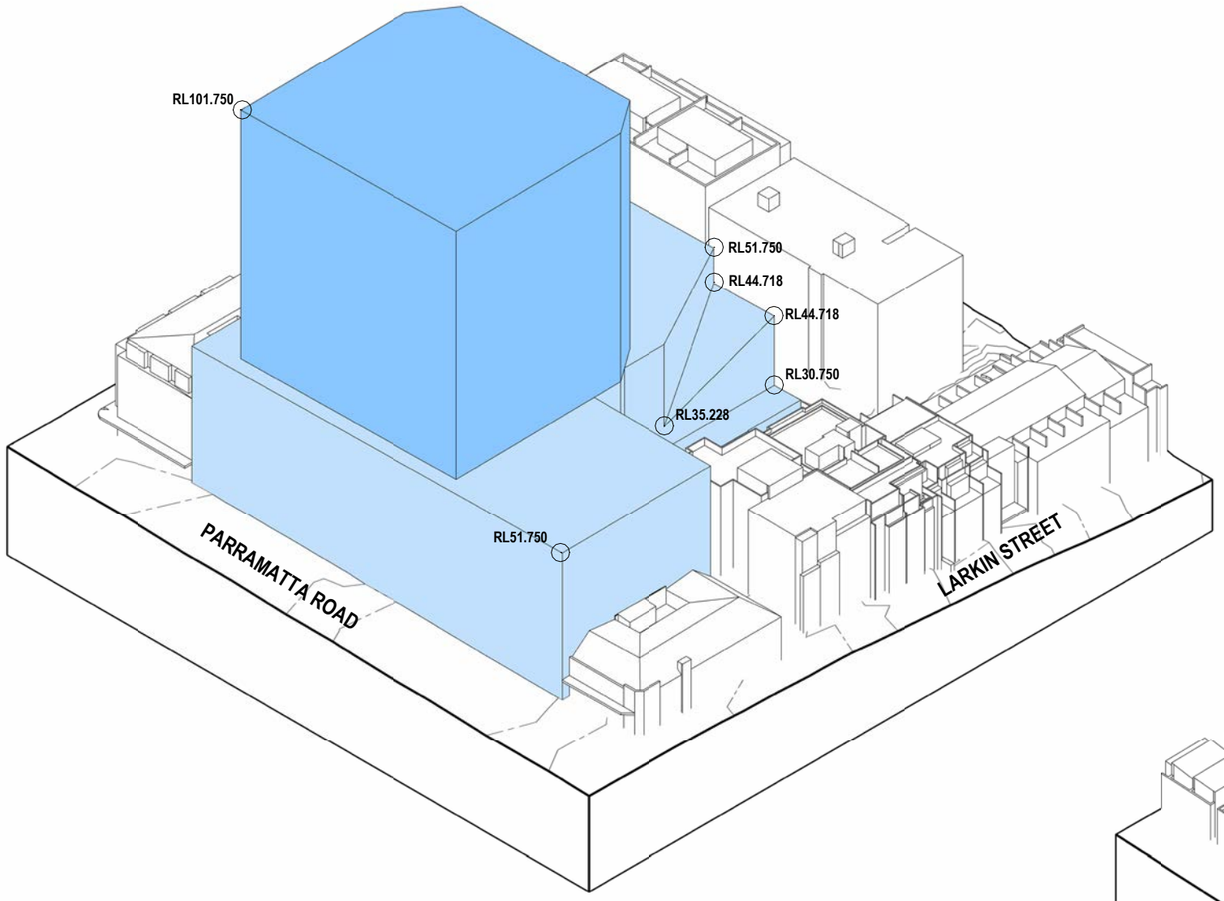
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BUILDING ENVELOPE - ELEVATIONS

SCALE
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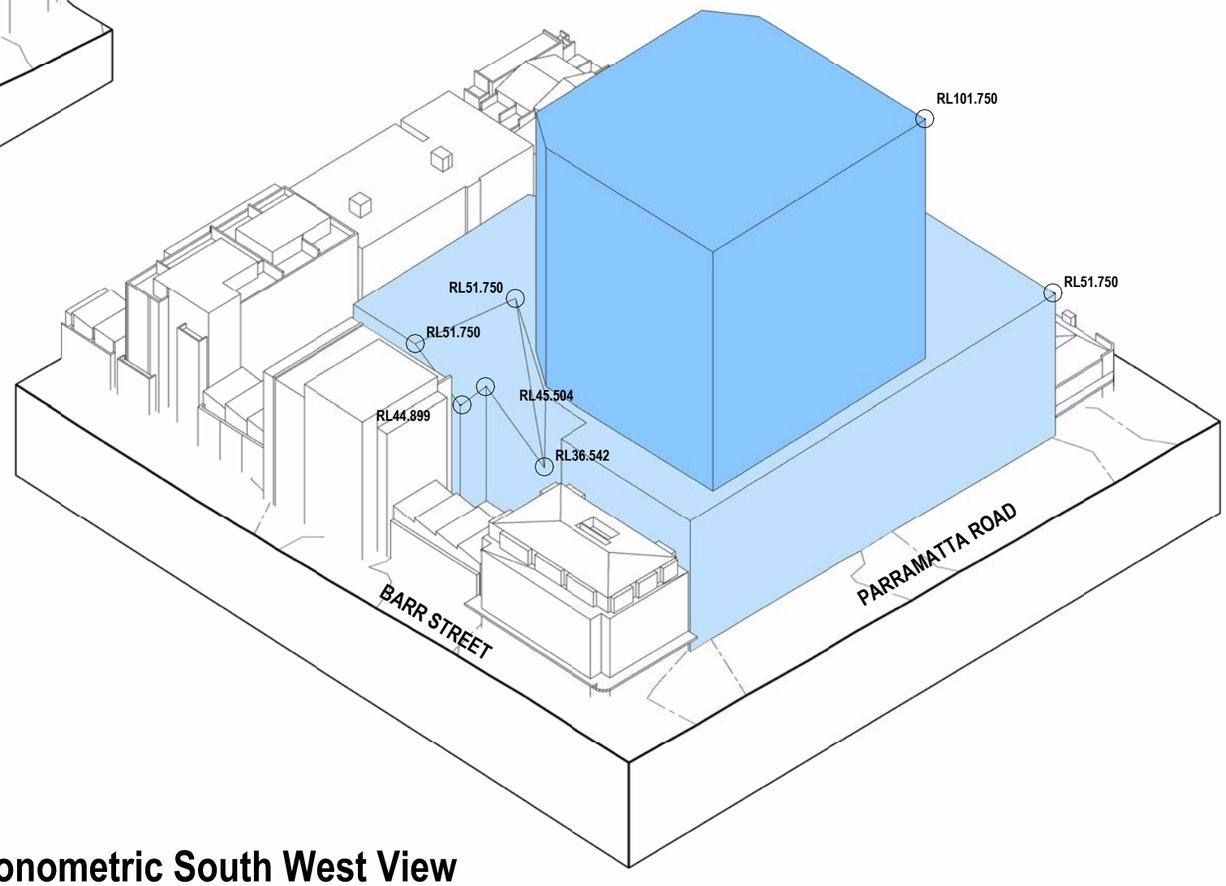
ISSUE

DATE

DRAWING NUMBER
HDR-AR-3001



1 Axonometric South East View



2 Axonometric South West View

238

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NORTH

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LIFE SCIENCES HUB CAMPERDOWN

DRAWING TITLE
BUILDING ENVELOPE - MASSING

DATE

DRAWING NUMBER
HDR-AR-4001

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07 PLANNING ENVELOPE

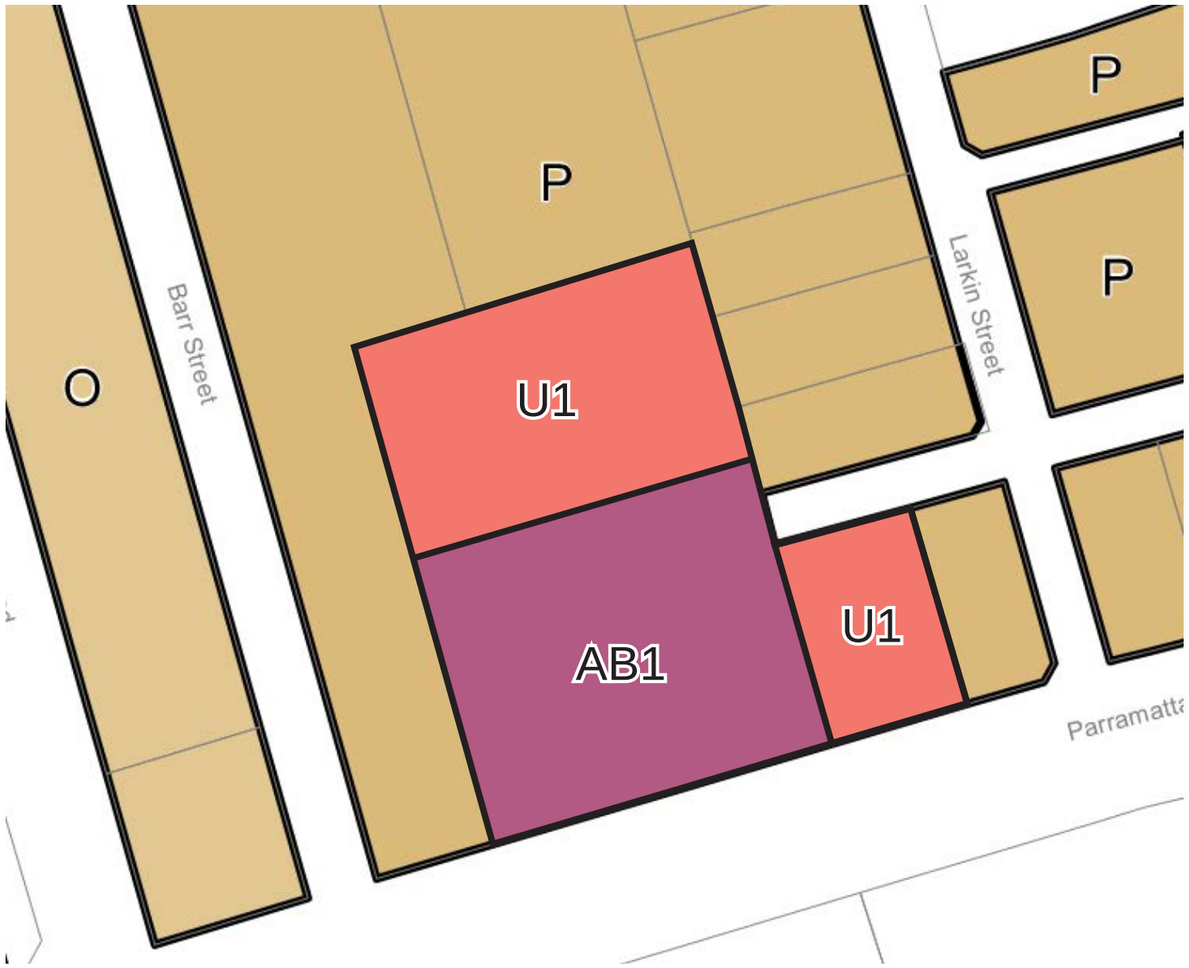
LEP Maps Amendments



Existing LEP 2012 Height of Building Map



Proposed



07 PLANNING ENVELOPE

LEP Maps Amendments

Maximum Floor Space Ratio (n:1)

F	0.6	X	4
H	0.7	Y	4.5
J	0.8	Z	5
L	0.9	Z	5
N	1	AA1	6
P	1.25	AA2	6.5
S1	1.5	AB1	7
S2	1.75	AB2	7.5
T	2	AC	8
U1	2.5	AD	9
U2	2.75	AE	10
V	3	AF	11
W1	3.5	Refer to clause 6.14	
W2	3.75	Refer to clause 6.4	

Existing LEP 2012 FSR Map



Proposed



240

Attachment A2

Urban design report – Part 2

07

07 DESIGN PROPOSAL

Design Response



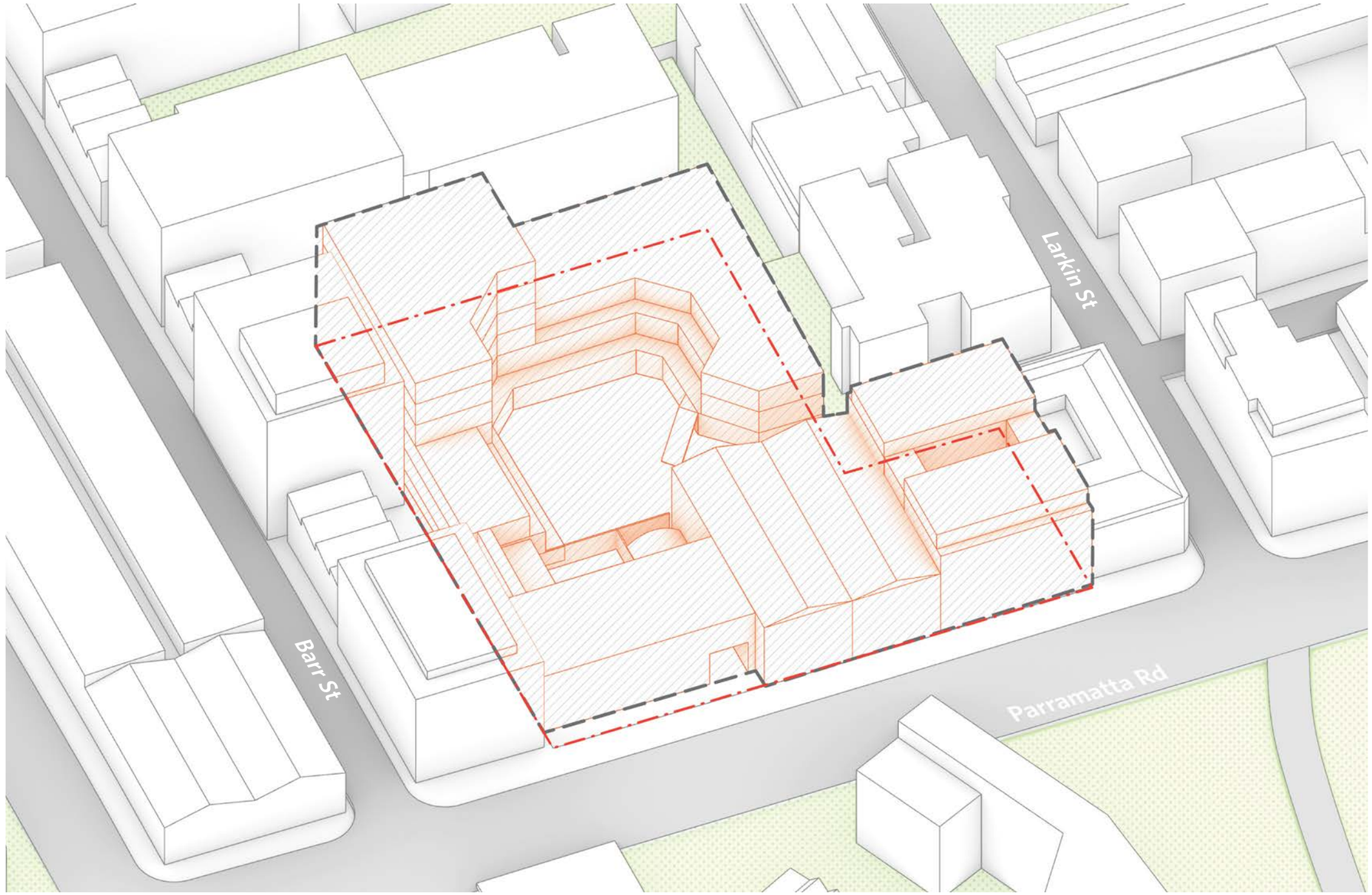
07 DESIGN PROPOSAL

Design Response

Site Extent of Proposal

The site extent of the proposal considers the full extent of the properties outlined.

- **92-94 Parramatta Rd.** Existing University of Sydney medical research building.
- **88-90 Parramatta Rd.** 3 storey brick warehouse building, currently vacant with identified heritage value.
- **84 Parramatta Rd.** Recently developed 6 Storey serviced apartment building.



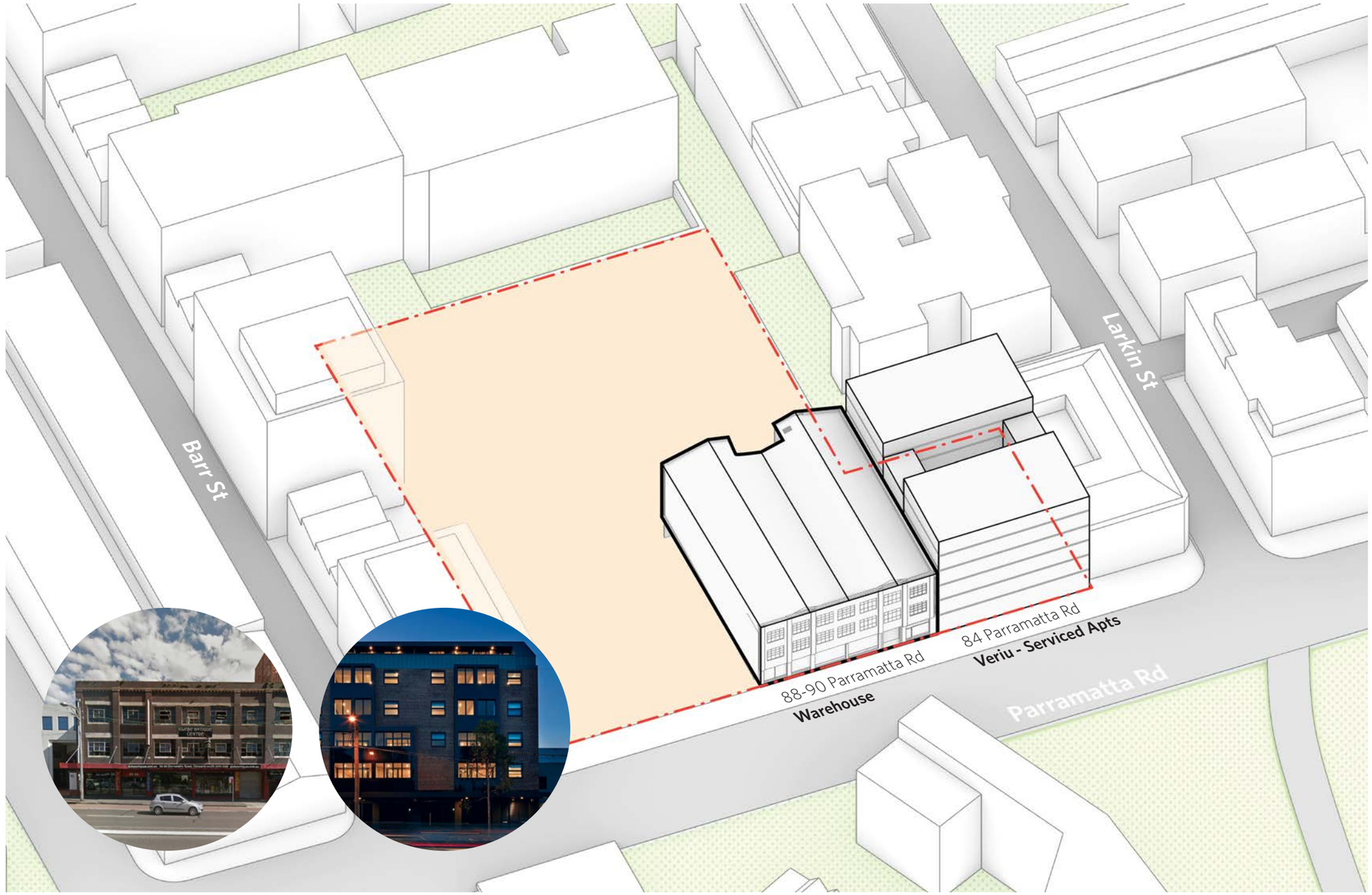
07 DESIGN PROPOSAL

Design Response

Existing Buildings to be Retained

The warehouse building at 88-90 Parramatta Rd is proposed to be retained due to its heritage significance as a rare surviving example of an Inter-war motor-car showroom, a building type once common along Parramatta Road but now largely lost or altered. The proposal will seek to adaptively re-use and sympathetically integrate within the wider development.

The serviced apartment building at 84 Parramatta Rd is to be retained with an extension of additional levels. The existing structure has been designed with capacity for future additional levels. Extending the existing building helps reduce embodied carbon by avoiding demolition and making use of existing structures and services.



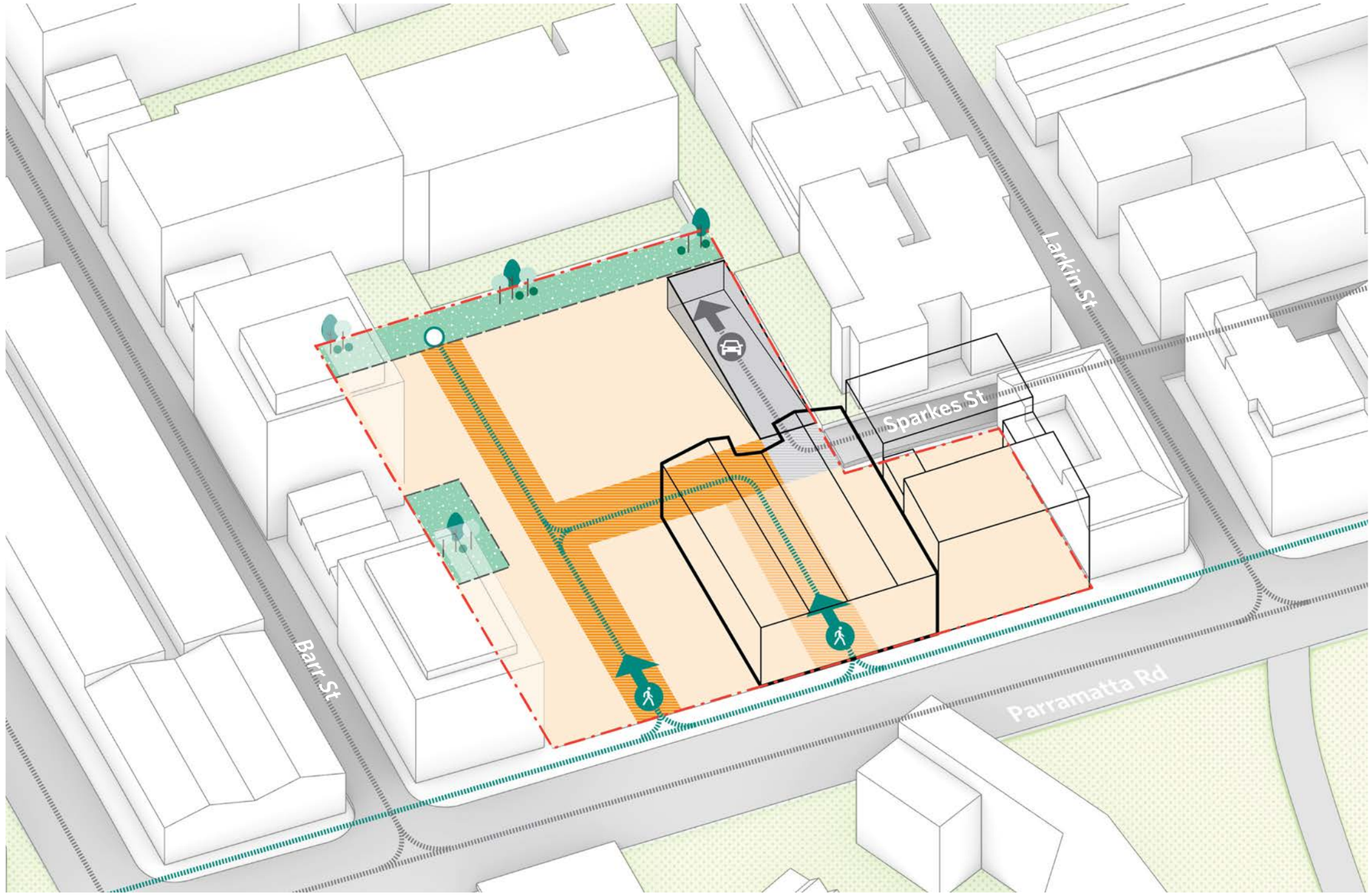
Public Domain & Site Permeability

Street frontages to the site consist of the primary frontage to Parramatta Rd and a secondary connection where Sparkes St terminates at the eastern boundary. The proposal seeks a continuation of the public domain of Sparkes St with a new laneway proposed to provide site permeability connecting Sparkes St through to Parramatta Rd.

Two primary entrances are proposed from Parramatta Rd. The new laneway connection provides access to the lobby of the science tower, a dedicated access to educational uses and access to ground level retail. Stitched into the public domain will be a public connection through the ground plane of the existing warehouse, integrating this with the internal laneway network.

A zone of deep soil landscaping is identified to the northern boundary providing a landscaped zone to the northern neighbours and providing a terminus to an additional north south laneway.

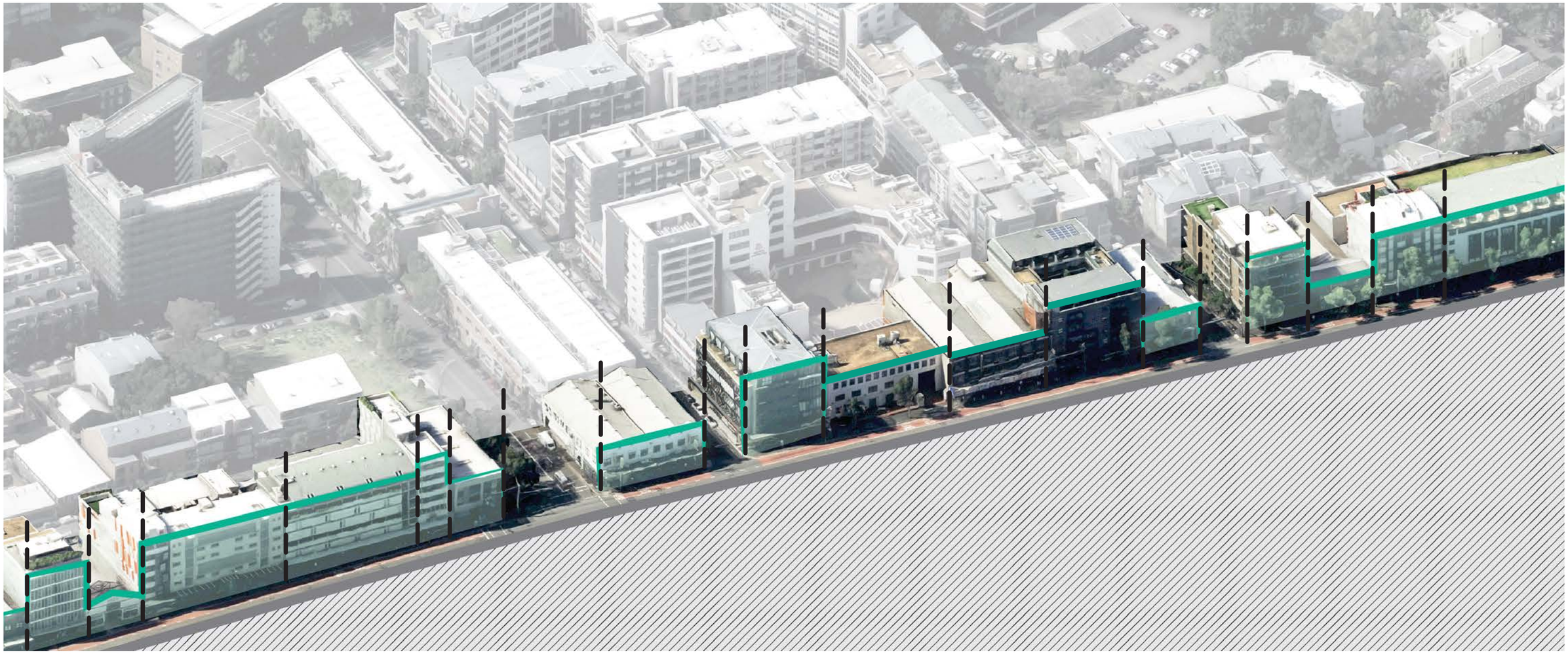
Sparkes St is proposed to provide service vehicle and parking access to the basement levels.



07 DESIGN PROPOSAL

Parramatta Rd - Responding to Street Wall Grain and Height

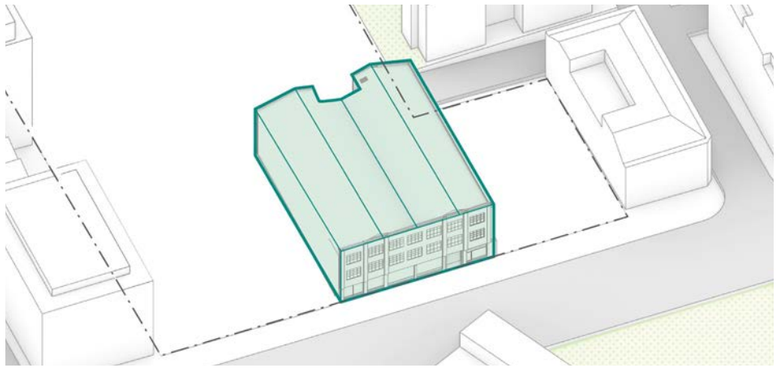
Parramatta Rd features a distinctive fragmented and varied built form. The corridor features a mix of building types, eras, and uses - from early 20th-century shopfronts and warehouses to post-war industrial buildings and pockets or recent redevelopment. We look to identify the grain of building frontages and regular variation in streetwall heights within the immediate precinct to inform the proposal.



Parramatta Rd street wall grain and rhythm.

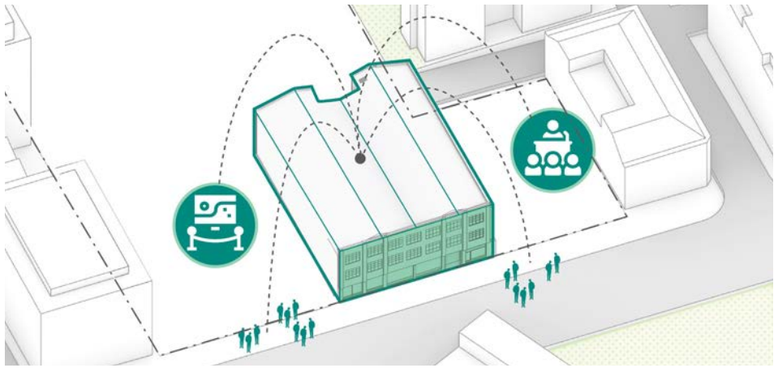
07 DESIGN PROPOSAL

Heritage Design Principles - Adaptive Reuse of the Warehouse (88-90 Parramatta



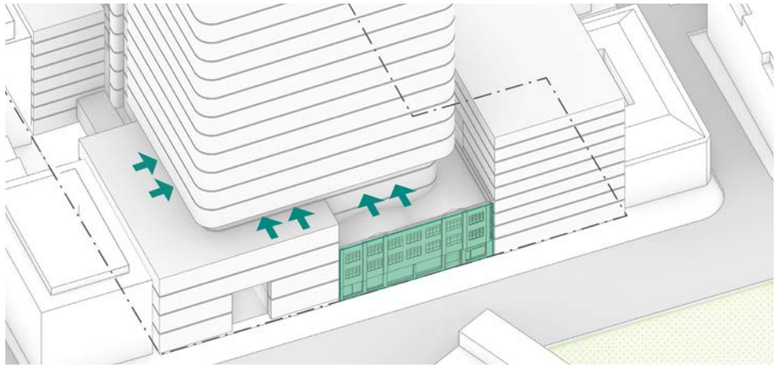
Retain and Adapt

Preserve the building's overall volume, street-facing façade, and internal spatial character, adapting it for contemporary use within the life sciences precinct.



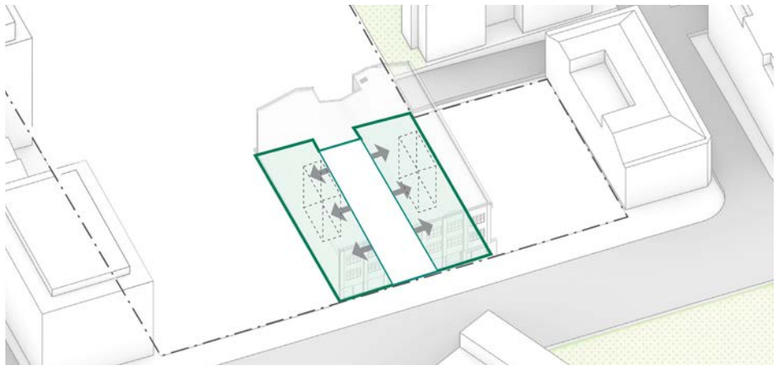
Prioritise Heritage Interpretation

Utilise the building for public-facing uses - such as exhibitions or conferences - to celebrate and interpret its historical and architectural significance.



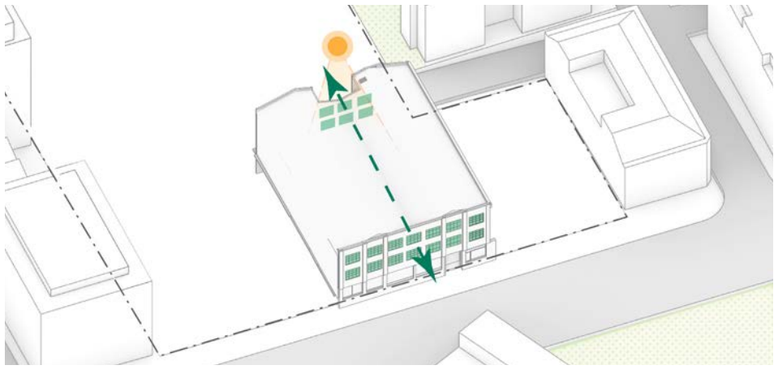
Respect Visual Curtilage

Set back any new tower elements to conserve the roof form and maintain legibility of the Inter-war building from Parramatta Road and key view corridors, where possible.



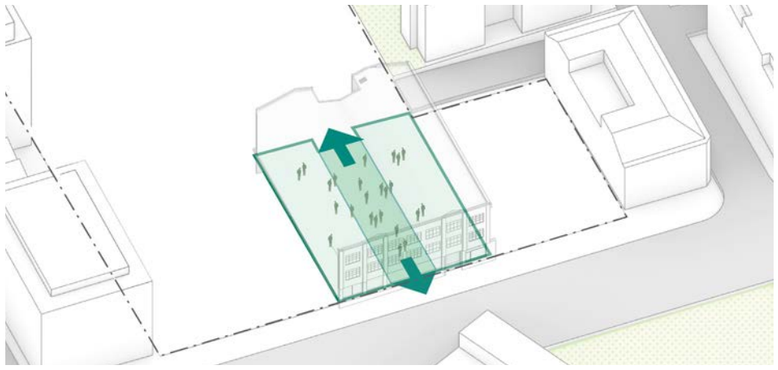
Minimise Physical Intervention

Locate structural supports in the eastern and western zones to avoid impact to significant interiors, and concrete demolition/adaptive reuse in key existing modified areas for services and access, where possible.



Enhance Natural Light and Ventilation

Retain original northern and southern windows at upper levels to support both heritage values and environmental performance objectives.



Activate the Ground Plane

Reconfigure the altered ground floor to provide a pedestrian link and a welcoming public interface while allowing for adaptive reuse of original circulation elements.

07 DESIGN PROPOSAL

Heritage Design Principles - Planning Responses

Public Domain

The warehouse is proposed to be a public facing space providing the main arrival and lobby space for the development which links through to the internal laneways behind. Primarily designed as a showcase for science, the space is envisioned to include areas for education, exhibitions, and conferences.

Void & Structure Retain

Proposed uses within the space are sympathetic to the existing building fabric allowing for the retention and celebration of existing structures. A new void is proposed on level 1 to add volume to the ground level lobby space. The void is located to respond to the existing structure and allows to retain and express significant beams and columns crossing through the void.

New Structure Thread

Structure from the tower above will be required to pass though the warehouse. To minimise intervention to the warehouse it is proposed that the tower columns are transferred to a consolidated few which pass through the warehouse in a considered location. In this proposal the columns pass through the void and adjacent to warehouse columns avoiding the primary floor beams.

Services and Cores

Its proposed that major services and stair cores avoid passing through the warehouse to preserve the integrity of its open floor plates. A new stair core is located in the new build to the immediate west of the warehouse.

Vertical Transportation

A new passenger lift is to be located within the warehouse to provide independent vertical transportation allowing the warehouse to retain its identity as a stand alone building. The lift is located where it does not disrupt the clear north-south access through the site, and positioned away from any existing north or south facing windows.

Curtilage Setback

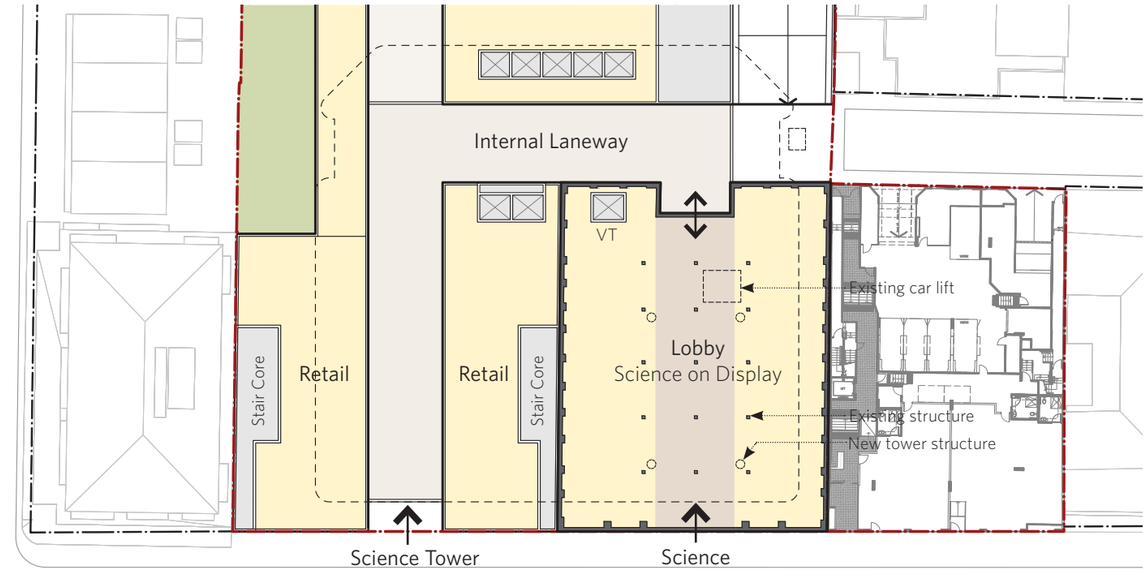
The tower above is set back front the Parramatta Rd frontage to provide a visual curtilage to the warehouse building.

Light & Ventilation

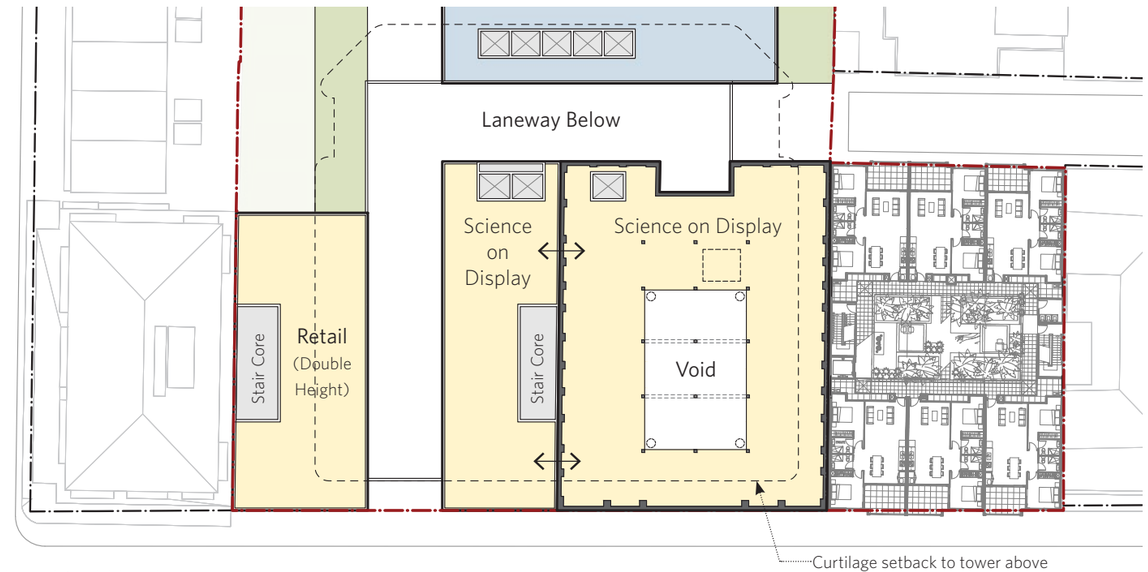
The warehouse retains its original steel framed windows to the north and south maximising opportunity for natural light and ventilation.

Consideration of Past Use

An original car lift exists within the warehouse which was previously used to move vehicles onto the first floor of the building. This link to the past uses of the building is an opportunity for further investigation into possible retention and display of the buildings history.



Ground Floor - Warehouse



Level 1 - Warehouse

07 DESIGN PROPOSAL

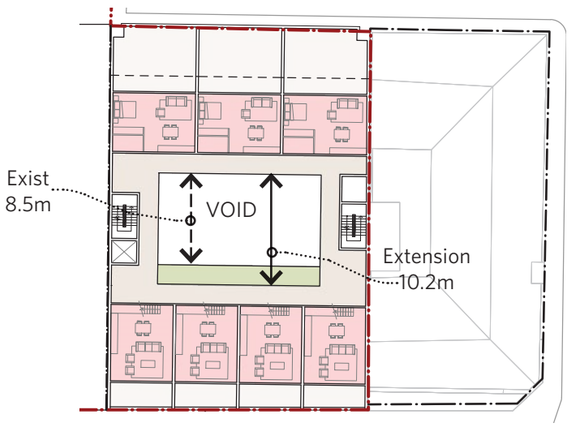
Design Response

Serviced Apartments Extension

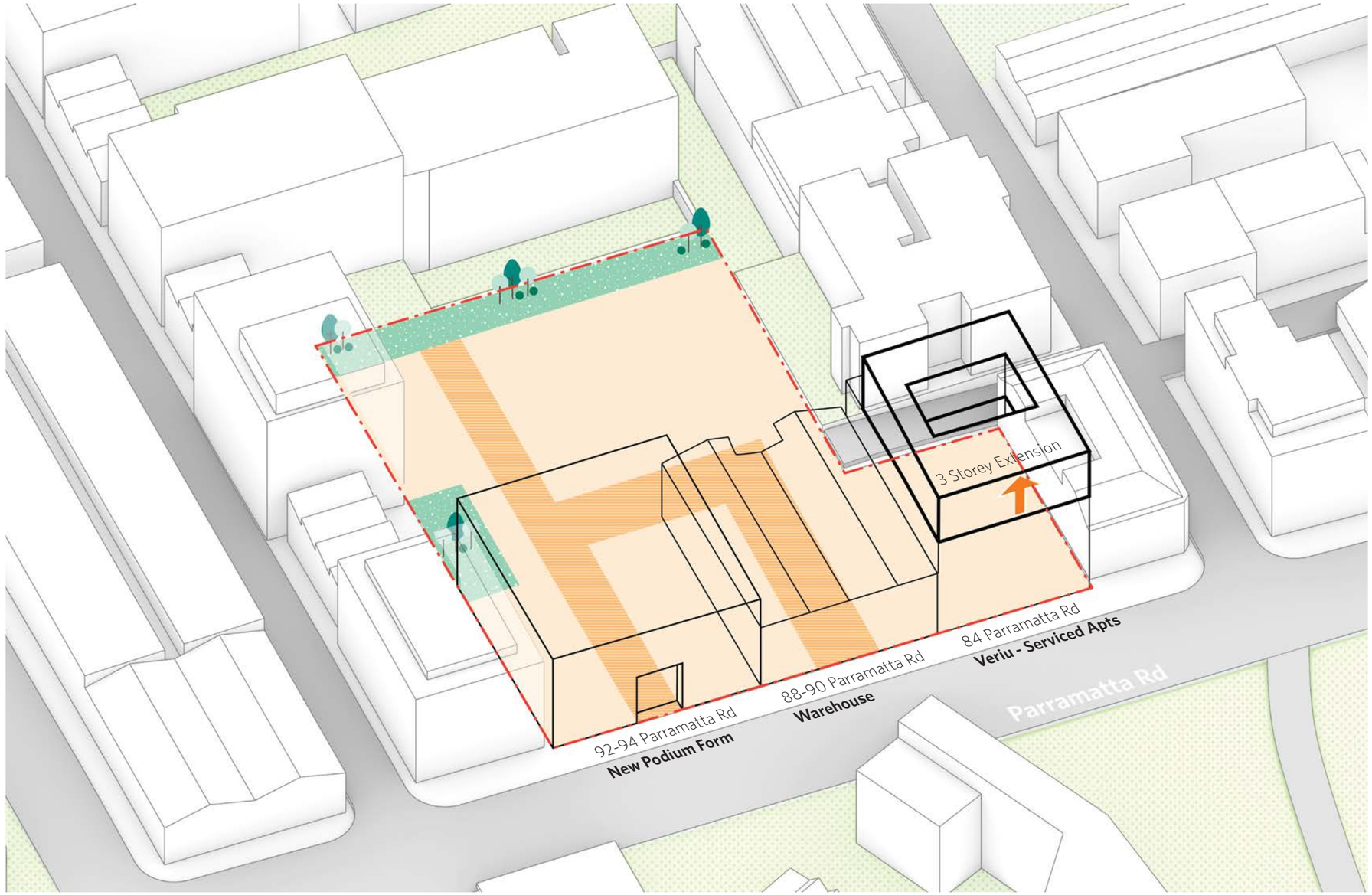
The existing Veriu serviced apartment building at 84 Parramatta Rd is to receive a 3 storey extension above the existing 6 stories. The existing structure has been designed with additional capacity to facilitate future additional stories.

The existing building wraps a central atrium and the new levels will continue this arrangement with an enlarged atrium to the new upper levels. A new setback is to be provided at the northen face of the extension providing a suitable 18m building separation to the neighbouring apartments to the north.

Providing additional height to this building gives variation to the massing of the 3 forms which comprise the Parramatta Rd frontage of the proposal. This selective additional height assists the composition and scale of this frontage in relation to the larger tower form to be provided above.



Expanded Void Width



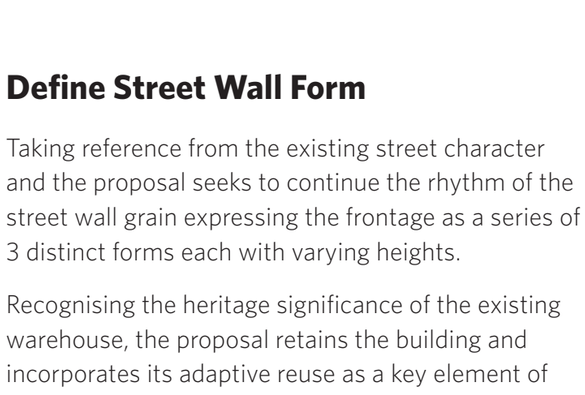
07 DESIGN PROPOSAL

Design Response

Define Street Wall Form

Taking reference from the existing street character and the proposal seeks to continue the rhythm of the street wall grain expressing the frontage as a series of 3 distinct forms each with varying heights.

Recognising the heritage significance of the existing warehouse, the proposal retains the building and incorporates its adaptive reuse as a key element of the development.



Rhythm of Street Wall Continued



07 DESIGN PROPOSAL

Design Response

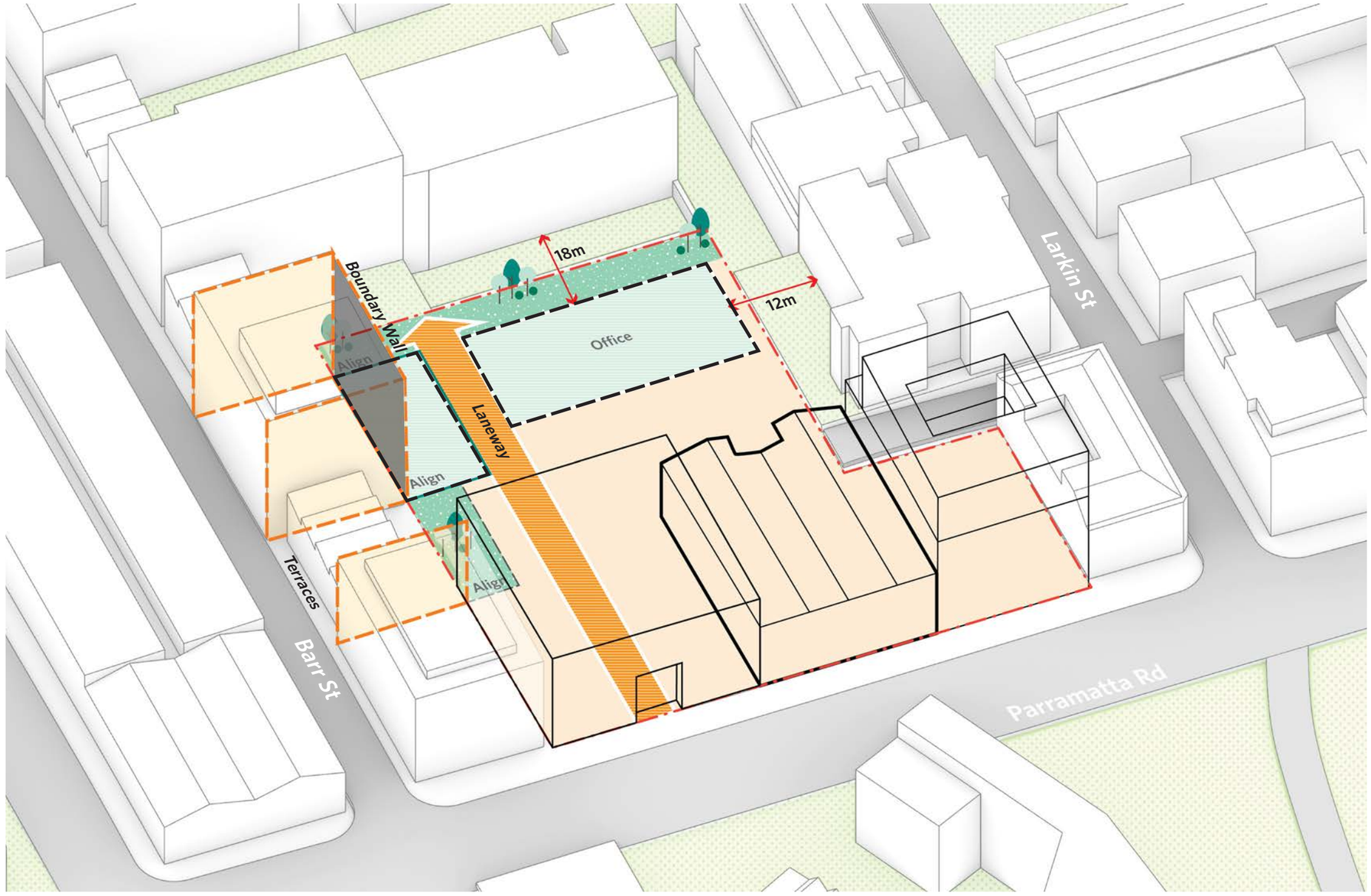
Office Building Siting

The northern edge of the site is to be occupied by a low scale building for use as an ancillary science office space.

The building's alignment responds to the configuration of adjacent properties, with the massing constructed to the western boundary where it abuts the party wall, and maintaining a rhythm of separation consistent with buildings to the north and east.

The proposed north-south laneway is proposed to bisect the office building providing relief to the elongated building forms and providing a public domain link through to the buildings lobby and landscaped communal area to the north. A row of low scale terraces to the west are respected through the dedication of a landscape pocket adjoining their rear courtyard and alignment of low scale building forms adjacent to them.

ADG building separation guidelines are used to inform appropriate setback to the residential neighbours. For an 8 storey building an 18m separation is proposed to the north for habitable to habitable spaces and minimum 12m separation to the east for habitable to non-habitable spaces.

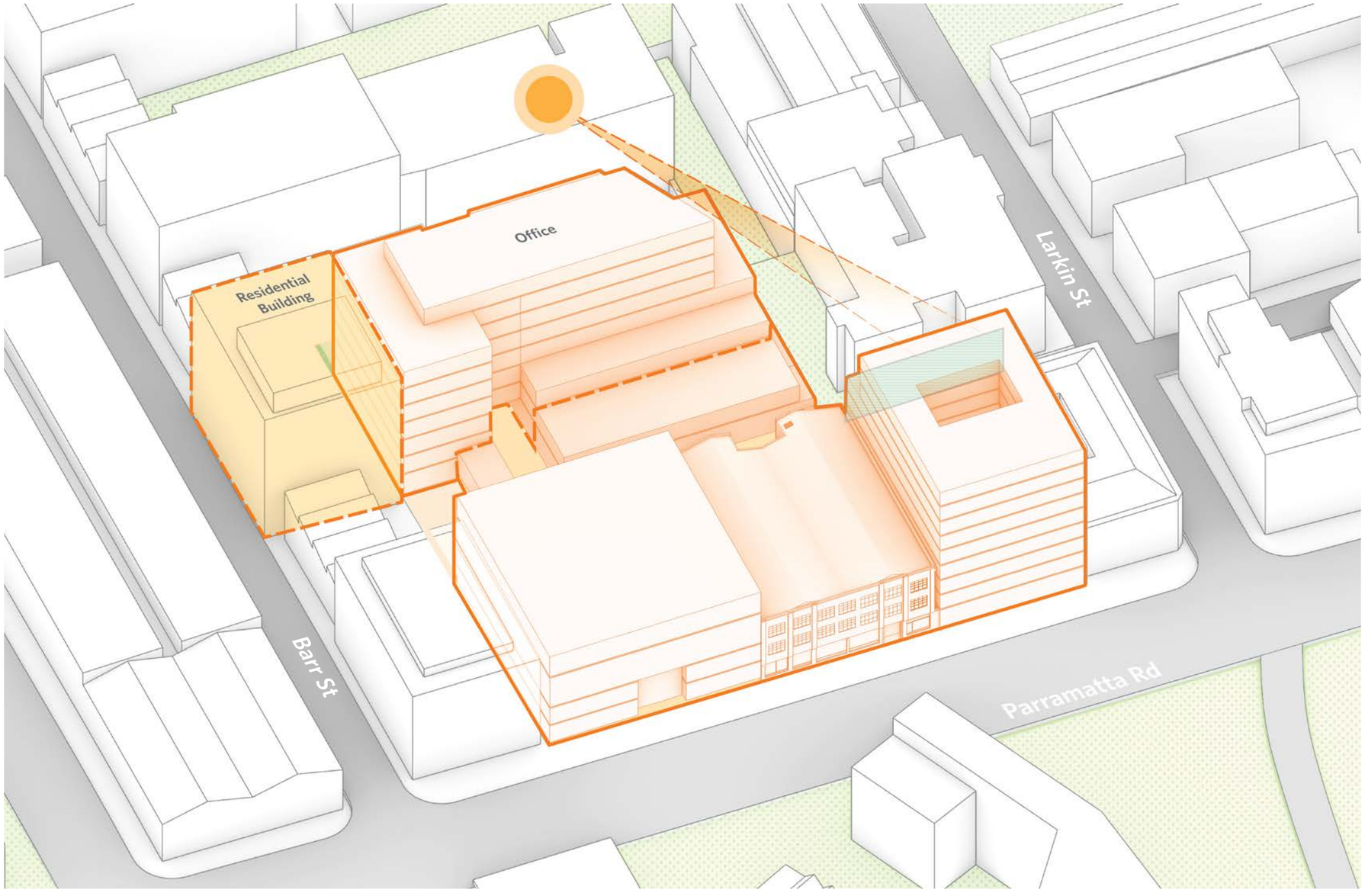


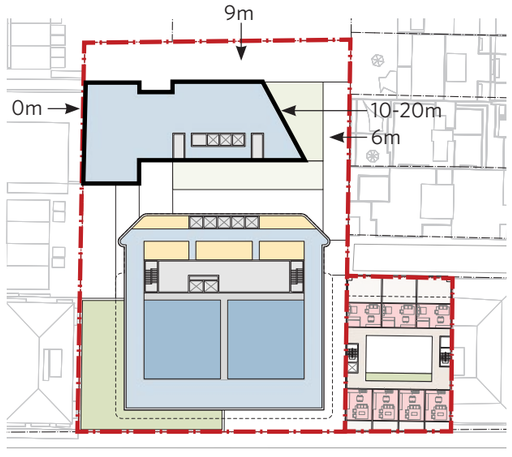
07 DESIGN PROPOSAL

Design Response

Define Office Form

The height of the office building is proposed at 8 storeys matching height with the abutting building to the west and is consistent with the character of neighbouring properties. The eastern end of the building is provided with an increased setback at the upper levels improving separation and amenity to the neighbouring apartments to the east, and maintaining solar access to the existing Veriu apartments. The uppermost level provides further setback from the building edges, minimising bulk & allowing opportunity for shared landscape breakout and collaboration spaces.





Site Setbacks to Office Building

07 DESIGN PROPOSAL

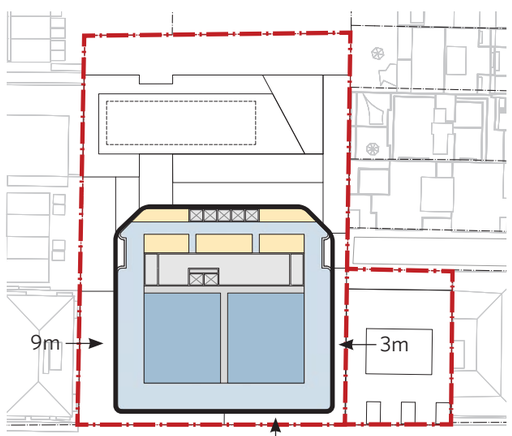
Design Response

Define Tower Massing

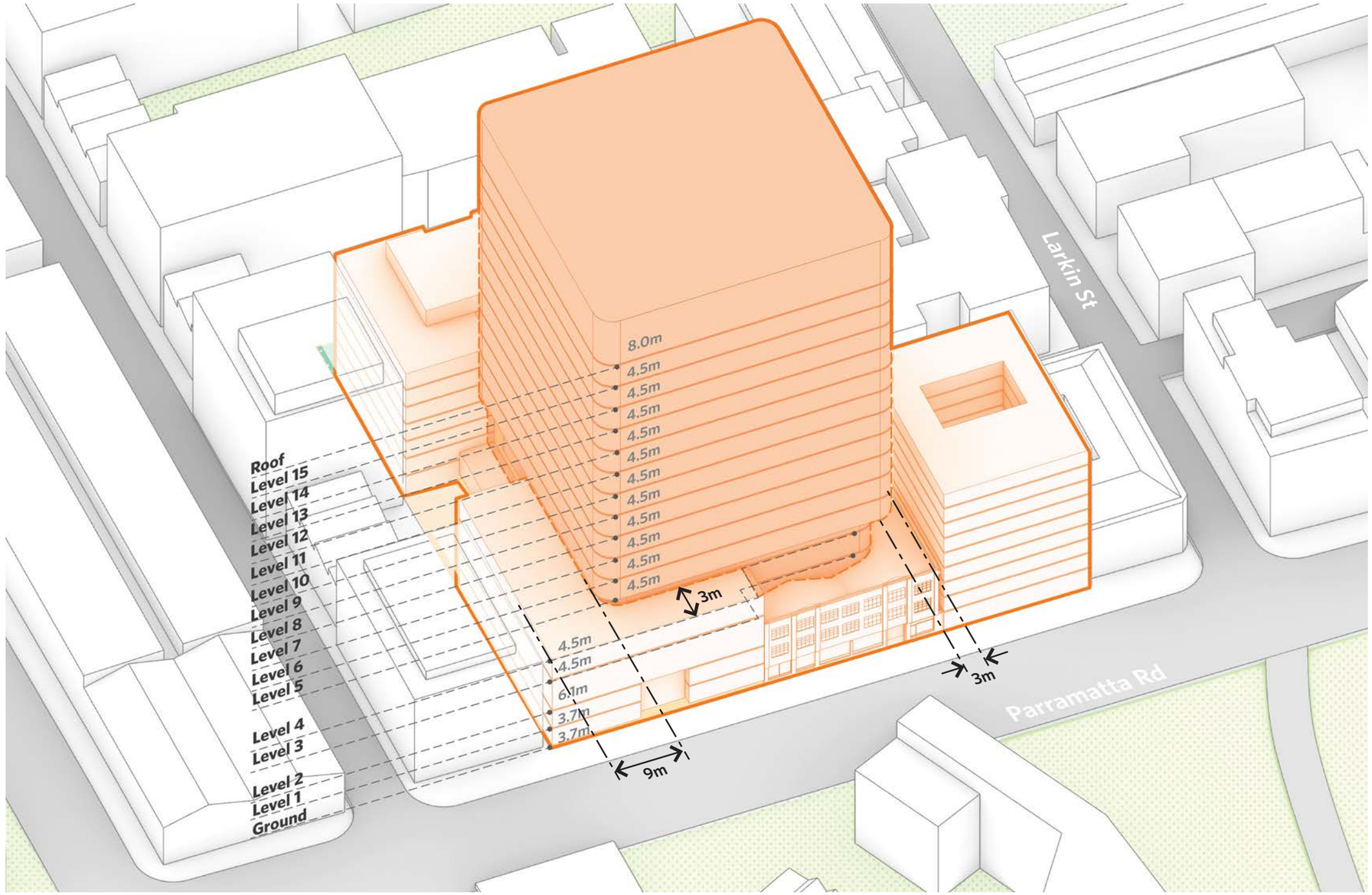
The form and placement of the tower are guided by a considered understanding of the site conditions and the specific requirements of the building typology.

As a dedicated life sciences laboratory, the building incorporates 4.5-meter floor-to-floor heights to meet the servicing demands of laboratory functions. This requirement, along with the need for a regular and efficient floor plate of 1,800m², informs the overall height and massing of the building.

To mitigate impacts on the residential character to the north of the site, the tower has been positioned closer to Parramatta Road, aligning with the denser urban frontage. Setbacks of 3m are provided to the south and east providing a curtilage to the street wall of Parramatta Rd and the existing heritage warehouse. To mitigate overshadowing of the western neighbour, a larger 9m setback is provided to the western boundary.



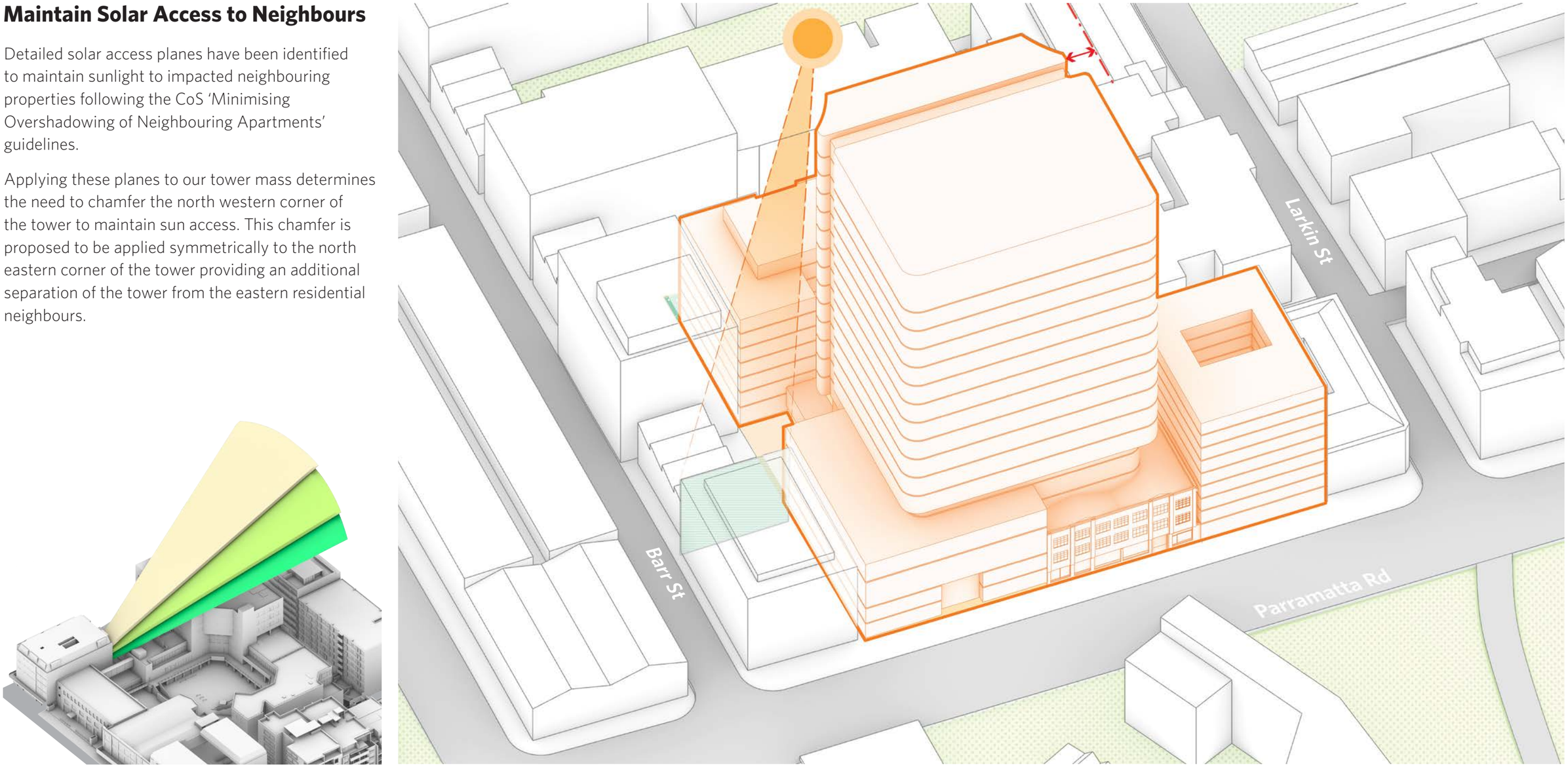
Tower Setbacks



Maintain Solar Access to Neighbours

Detailed solar access planes have been identified to maintain sunlight to impacted neighbouring properties following the CoS 'Minimising Overshadowing of Neighbouring Apartments' guidelines.

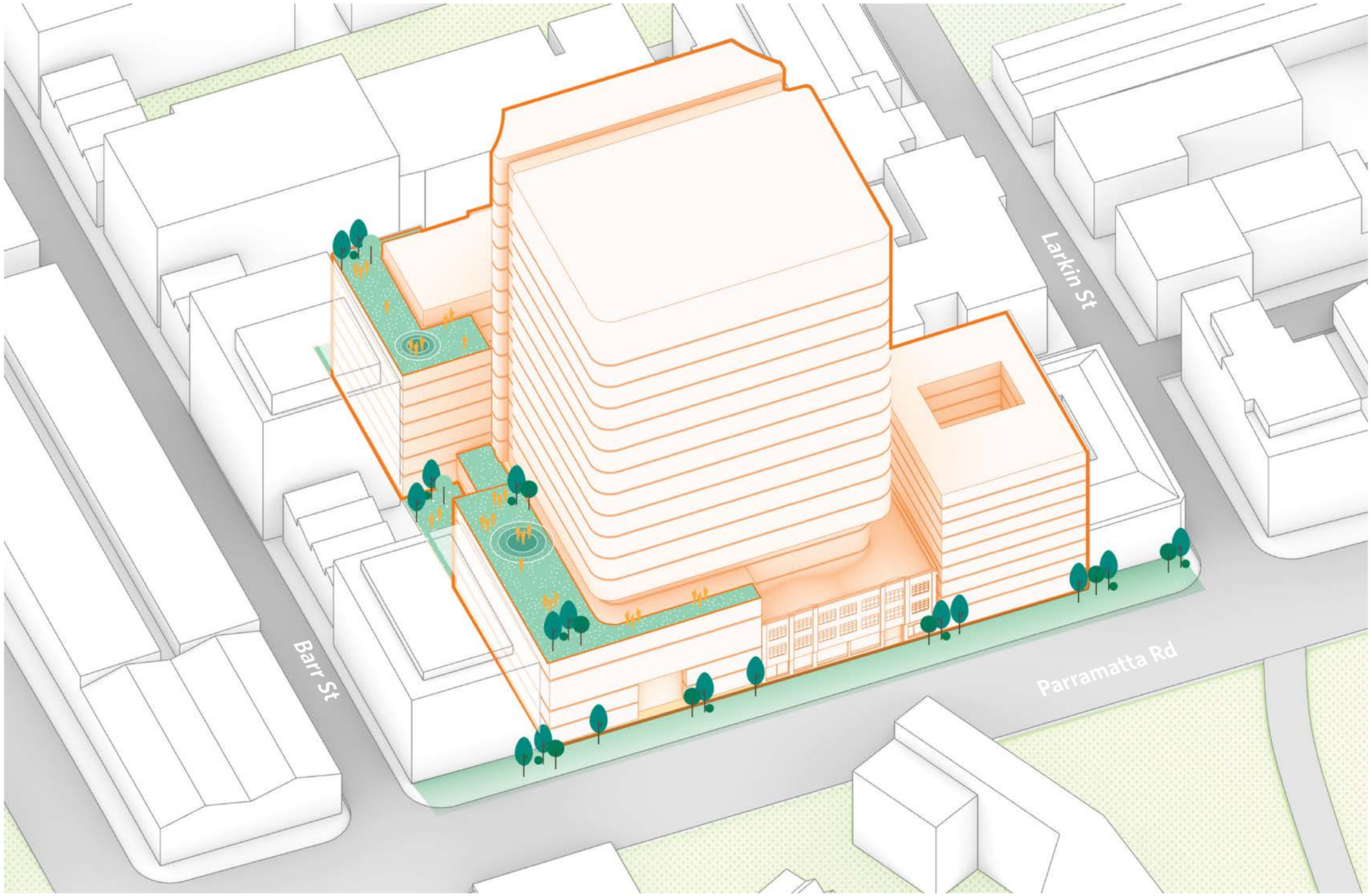
Applying these planes to our tower mass determines the need to chamfer the north western corner of the tower to maintain sun access. This chamfer is proposed to be applied symmetrically to the north eastern corner of the tower providing an additional separation of the tower from the eastern residential neighbours.



Sun access planes to maintain solar access compliance of neighbours

Identify Landscape and Amenity

Inspired by the adjacent landscaped grounds of the University of Sydney, the forgotten ecologies of the former Orphan School Creek, and the envisioned transformation of the Parramatta Road corridor, the proposal establishes a network of green spaces that enhance natural amenity while fostering an active, engaging, and uplifting environment for work and living.





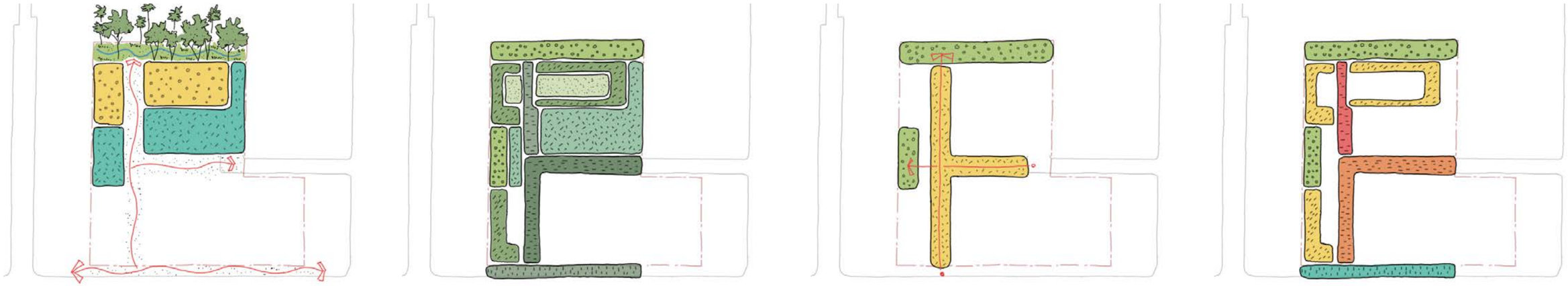
Rooftop Landscaped Spaces

07 DESIGN PROPOSAL

Design Response

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Landscape Design Principles



258

Connection to place

Integrate Aboriginal and Torres Strait Islander cultures, narratives, and practices into the landscape spaces, guided by the Walanga Design Principles.

Create landscape spaces throughout the campus that provide connection to water, landscape and sky.

Educational landscapes

Utilise a species mix of environmentally and culturally significant plants that reflect the surrounding wetlands, grasslands, scrub, and forests.

Support the campus's educational focus by raising awareness among employees, students, and residents of culturally significant edible and medicinal plants used by Indigenous Australians, and their relevance to contemporary practices in education, food, and medicine.

Clear and legible access

Establish a clear and legible pedestrian network throughout the campus and to building entries.

Use thoughtful landscape material selection to facilitate intuitive and safe way-finding across the external spaces of the campus.

Vibrant landscape spaces

Create landscape spaces that facilitate collaboration, educational engagement and meaningful social interaction.

Provide a diverse range of landscape spaces that support active recreation in addition to quiet, passive engagement.

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Ground Floor Masterplan

Clear and legible access along Parramatta Road provide direct entry into the campus via individual building entrances and an internal pedestrian laneway. Additional access from Sparkes Street provides a secondary entry into the campus and improves permeability and circulation within the neighborhood.

The internal pedestrian laneway is carefully aligned to frame views of green spaces, creating a strong visual and physical connection to the landscape and natural light for visitors, employees, and residents. Along the northern boundary, a continuous deep soil zone supports the growth of native canopy trees and understorey planting, enhancing ecological value. This area also features a landscaped terrace, designed for both active and passive use by users within a lush native garden setting.

An additional courtyard along the eastern boundary provides space for native planting and is activated by adjacent ground-floor retail, creating a vibrant and lush outdoor environment.

A robust and cohesive materials palette is applied consistently across the internal pedestrian laneway and external landscape areas, clearly defining primary access routes and ensuring a unified approach to public domain treatment throughout the campus. This may include a mix of natural elements, such as hardwood timbers, stone and gravels that will be informed as part of consultation with indigenous stakeholders.





0 7 14 21 35m

North

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Level 1 Masterplan

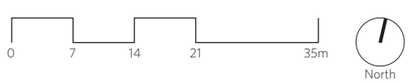
Non-accessible green roofs on Level 1 enhance onsite biodiversity by supporting a diverse mix of native species that create habitats for local fauna. In addition to mitigating the urban heat island effect, these green roofs offer a lush green outlook from the surrounding science tower, life science education spaces and adjacent existing residential apartments.

The species mix includes environmentally and culturally significant flora that reflect the surrounding wetlands, grasslands, scrub, and forests, and will be guided by input from the indigenous consultation process. This complements the broader educational use of the campus by educating employees, students, and residents about culturally important edible and medicinal species used by Indigenous Australians. It also raises awareness of their traditional uses and highlights the benefits of integrating these plants into contemporary practices, particularly in education, food, and medicine.

The planting palette includes a mix of native grasses, groundcovers, and shrubs suited to shallow-depth podium planters and the site's diverse micro-climates. Small to medium-sized native trees and palms will be planted in deeper soil podium planters to provide effective screening between the science tower and the education building.







07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Level 4 and Level 7 Masterplan

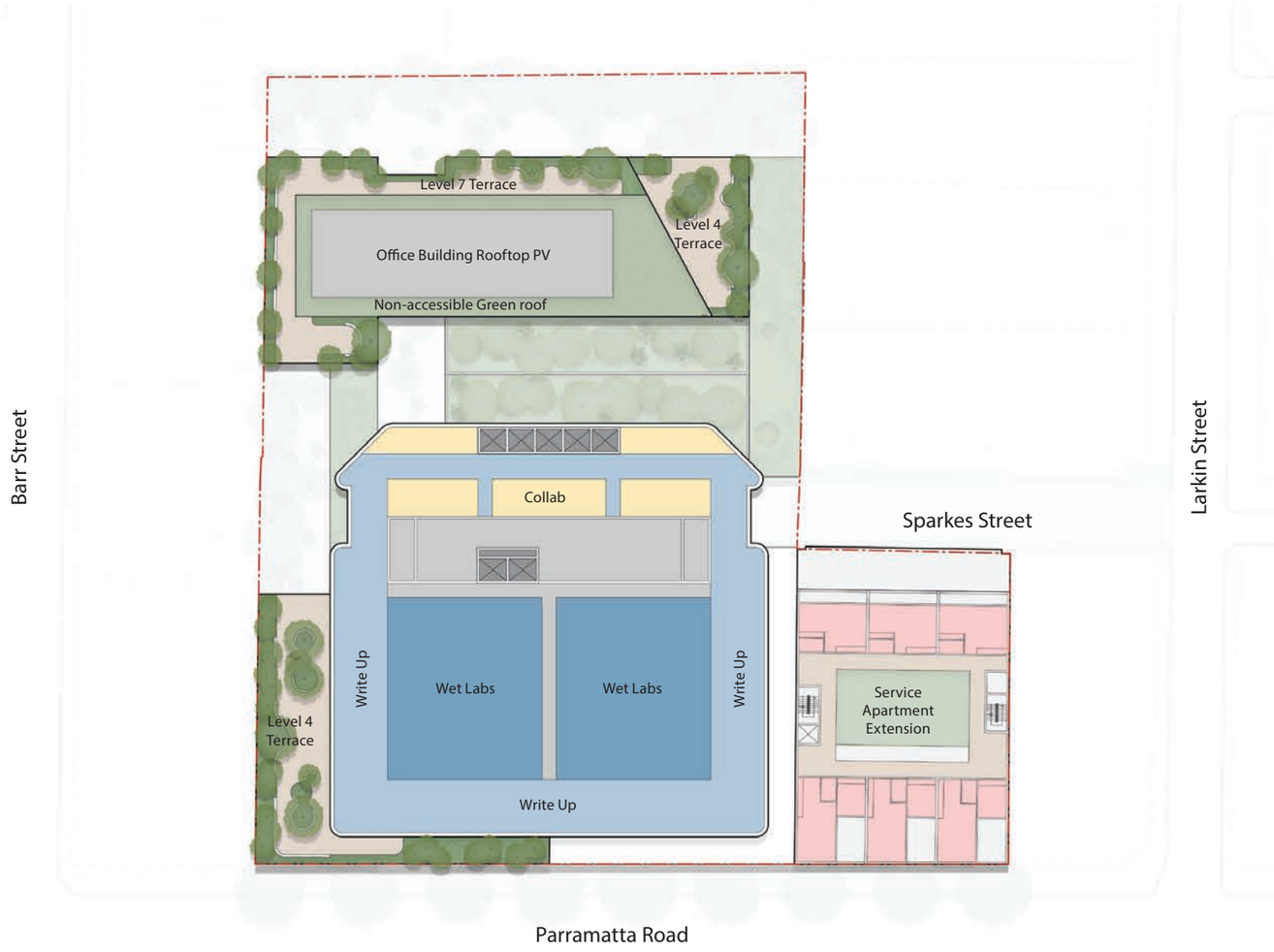
A landscaped roof terrace on the life science education building offers residents both active and passive recreational areas set within a native garden setting. It features a variety of inclusive social spaces designed for gathering and recreation.

The terrace features shade shelters equipped with seating areas. Additional seating located throughout offers users intimate and quiet spots for passive recreation. Large open spaces provide flexibility for various uses, including events or fitness activities.

The terrace is shaded with small and medium size native trees. Weather-proof shading is provided via shade shelters located throughout the terrace.

The non-accessible rooftop integrates photovoltaic panels alongside native understorey planting, helping to mitigate the urban heat island effect while enhancing on-site biodiversity.

A terrace on Level 4 provides a breakout space adjacent to the labs and internal working areas. This terrace provides users a landscaped space for both active and passive use within a lush native garden setting.











07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Greening Strategy

Deep Soil & Podium Gardens

The building setback along the northern boundary allows for a deep soil zone that aligns with the deep soil zone within the adjacent residential property. This provides within the site a contiguous deep soil zone for the growing of native canopy trees and understorey planting.

Additional garden areas are provided within podium planters. These include the Level 1, 2 and 3 non-accessible roof gardens, the level 4 terrace, the level 7 education building terrace and planting underneath solar panels to the rooftop.

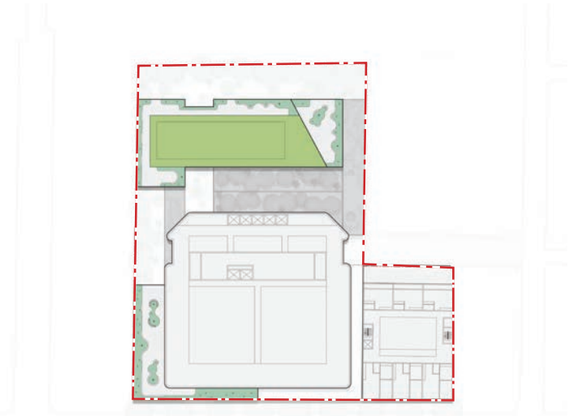
- Deep Soil
- Podium Gardens (soil depth 300-600mm)
- Podium Gardens (soil depth 800-1200mm)



Deep Soil & Podium Gardens - Ground Floor



Podium Gardens - Level 1



Podium Gardens - Level 6

Canopy Cover

New tree plantings across the ground floor and upper levels contribute to reducing the urban heat island effect. A deep soil zone along the northern boundary supports the establishment of substantial native canopy trees. Additional native trees and palms on the upper podium levels provide shade to accessible communal areas—such as the Level 7 education building and level 4 terrace—as well as to the non-accessible green roof on Level 1, 2 and 3.

The streetscape along Parramatta Rd includes new street trees in keeping with the City of Sydney Street Tree Masterplan.

Overall the project achieves an estimated minimum canopy coverage of 25%.



Canopy Cover - Ground Floor



Canopy Cover - Level 1



Canopy Cover - Level 6

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Planting Strategy

Prior to European settlement within the areas identified now as the Inner West of Sydney, a rich tapestry of diverse ecosystems flourished. Predominantly covered in what ecologists refer to as Sydney Turpentine-Ironbark Forest, interlaced with Sandstone Slopes Forest and Woodland, these landscapes housed an array of unique flora and fauna.

The First Nations inhabitants of this area, the Gadigal people, lived in deep connection with these landscapes, drawing on their knowledge of natural systems to sustain a complex and vibrant society. Following European colonisation these landscapes were drastically altered, initially to allow for agriculture, which has since evolved into dense urban cover. Only small pockets of the remnant vegetation remain, drastically fragmented by urban development.

The planting strategy aims to draw inspiration from the distinct ecological communities that originally thrived in this area. Through a collaboration of indigenous, scientific and horticultural knowledge, culturally significant plant species historically used for sustenance and medicinal properties will be utilised to provide the basis of a largely endemic plant list.

This collaboration of knowledge and ideas will also inform vegetation types that optimise landscape amenity and aesthetics, promoting a unique sense of character within the landscapes areas of the Inner West, creating a strong link with the flora of the ancient landscapes that once thrived throughout the campus site.

This complements the broader educational use of the campus by educating employees, students, and residents about culturally important edible and medicinal species used by Indigenous Australians. It also raises awareness of their traditional uses and highlights the benefits of integrating these plants into contemporary practices, particularly in education, food, and medicine.

This species mix will be enhanced through the addition of non-endemic native vegetation and where necessary, non-invasive exotic plant species to ensure adequate amenity and aesthetic value within the varying micro-climates present within the inner west of Sydney.


Acacia myrtifolia
(Myrtle Wattle)


Acacia suaveolens
(Sweet Wattle)


Banksia spinulosa
(Haripin Banksia)


Bursaria spinosa
(Sweet Bursaria)


Callistemon linearis
(Narrow-Leaved
Bottlebrush)


Carex appressa
(Tall Sedge)


Carpobrotus glaucescens
(Pig Face)


Correa alba
(White Correa)


Correa reflexa
(Native Fuchsia)


Dianella caerulea
(Blue Flax Lilly)


Dichondra repens
(Kidney Weed)


Doryanthes excelsa
(Gymea Lilly)


Goodenia ovata
(Hop Goodenia)


Grevillea linearifolia
(Linear-leaf Grevillea)


Hardenbergia violacea
(False Sarsaparilla)


Hibbertia scandens
(Climbing Guinea Flower)


Kennedia rubicunda
(Dusky Coral Pea)


Leptospermum
polygalifolium
(Yellow Tea Tree)


Lomandra longifolia
(Mat-rush)


Pandorea pandorana
(Wonga Wonga Vine)


Poa poiformis 'Eskdale'
(Tussock Grass)


Scaevola albida 'Mauve
Clusters'
(Fan Flower)


Themeda australis
(Kangaroo Grass)


Viola hederacea
(Native Violet)


Westringia fruticosa
(Coastal Rosemary)


Xanthorrhoea media
(Grass Tree)


Allocasuarina littoralis
(Black She-oak)


Allocasuarina torulosa
(Forest Oak)


Angophora costata
(Red Gum)


Angophora hispida
(Dwarf Apple)


Banksia integrifolia
(Coast Banksia)


Banksia serrata
(Saw Banksia)


Callicoma serratifolia
(Black Wattle)


Corymbia gummifera
(Red Bloodwood)


Elaeocarpus reticulatus
(Quandong)


Eucalyptus haemastoma
(Scribbly Gum)


Eucalyptus saligna
(Blue Gum)


Livistona australis
(Cabbage Palm)

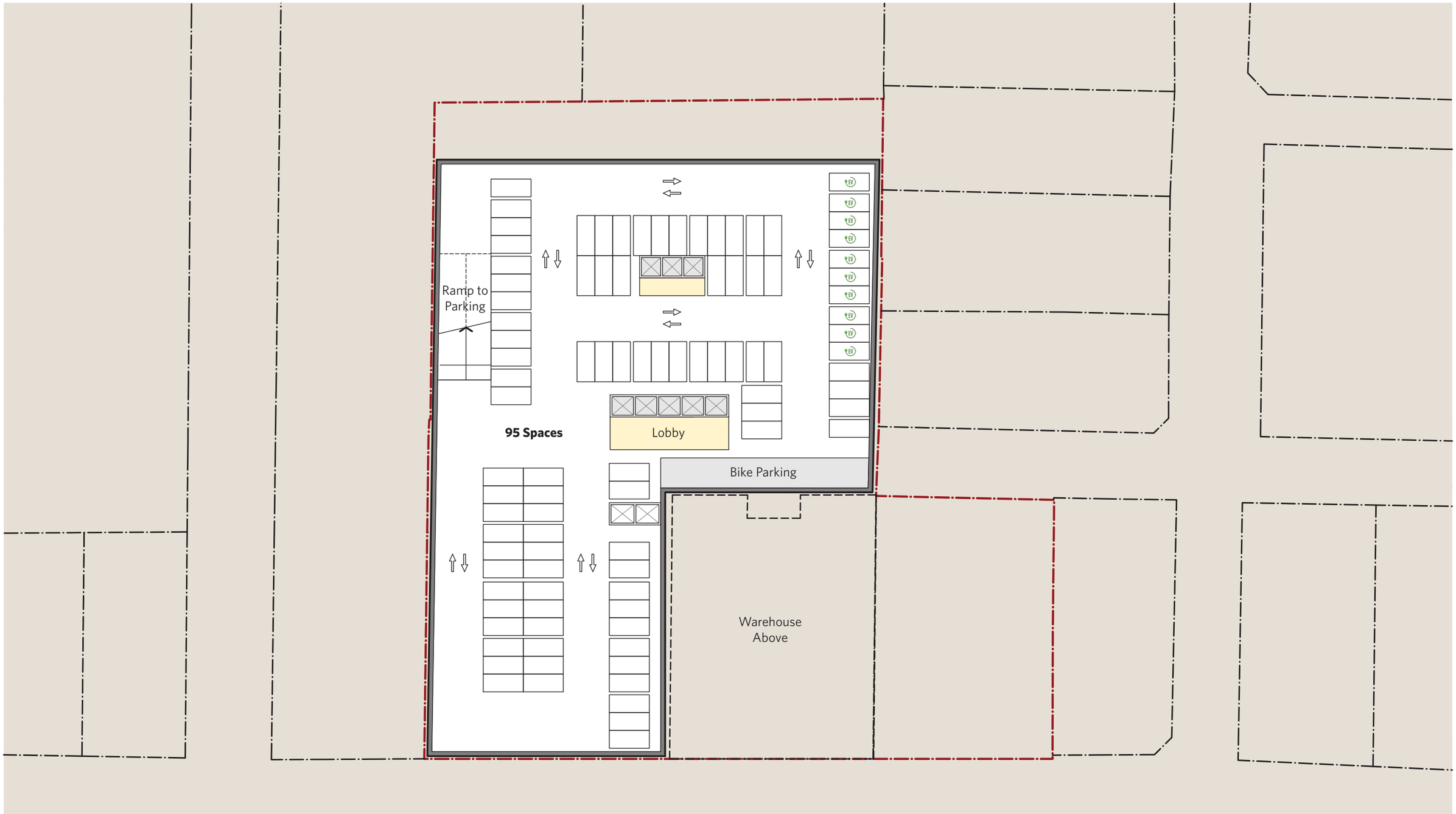

Melaleuca linariifolia
(Snow-in-summer)


Syncarpia glomulifera
(Turpentine or Yanderra)

08

08 REFERENCE SCHEME PLANS

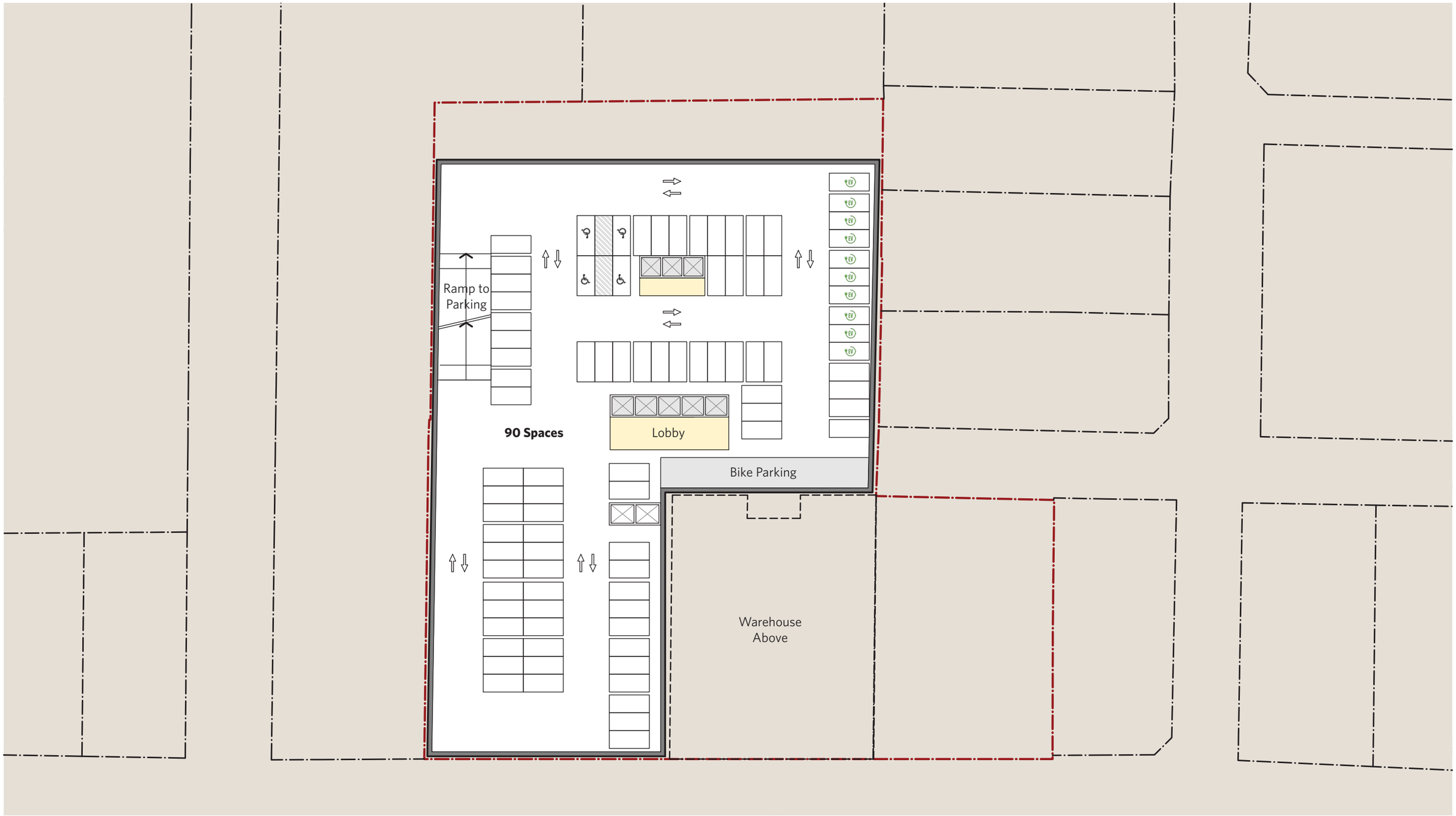
Basement 3



1:500 @ A3

08 REFERENCE SCHEME

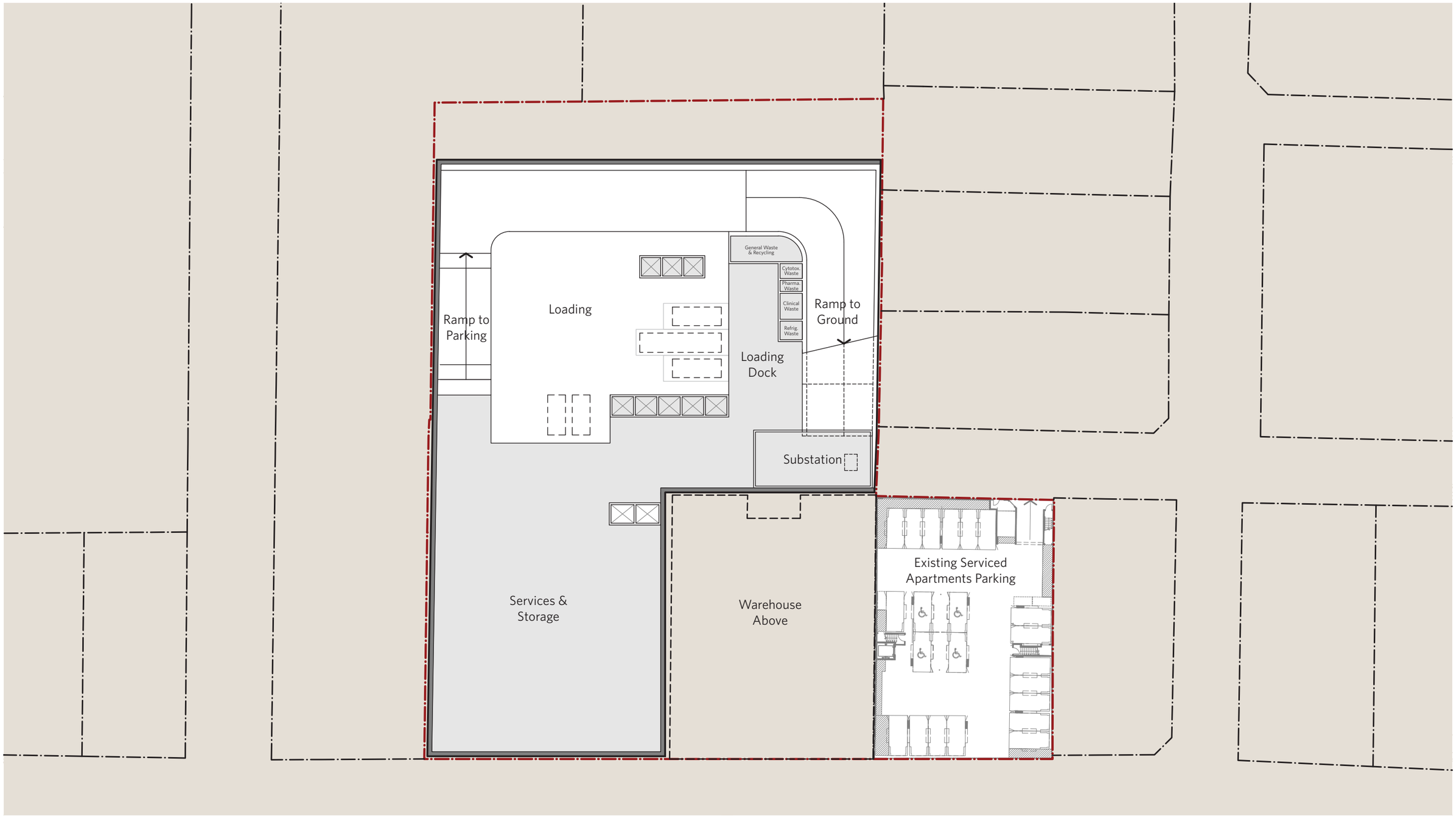
Basement 2



1:500 @ A3

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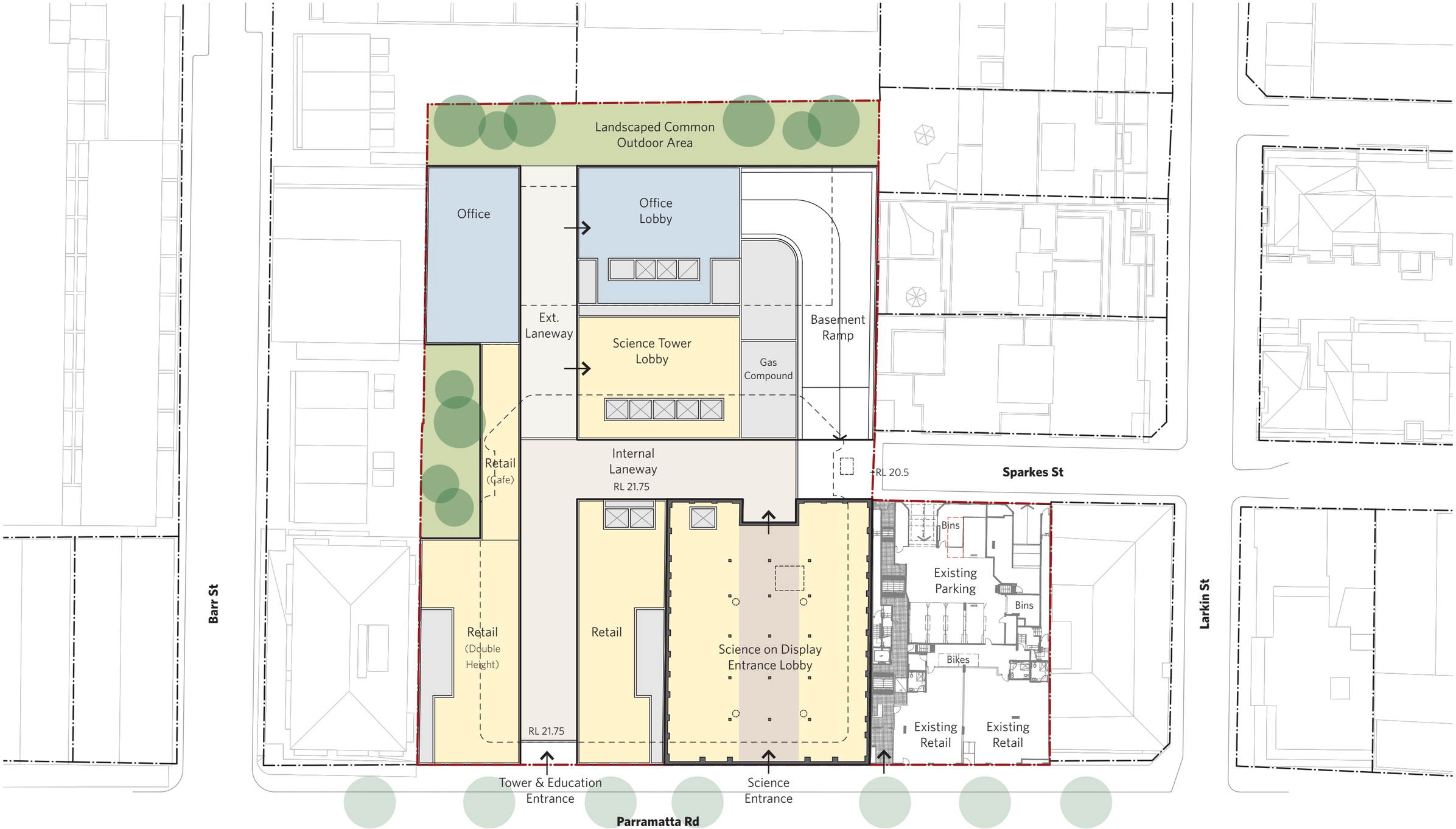
Basement 1



1:500 @ A3

08 REFERENCE SCHEME

Ground Level

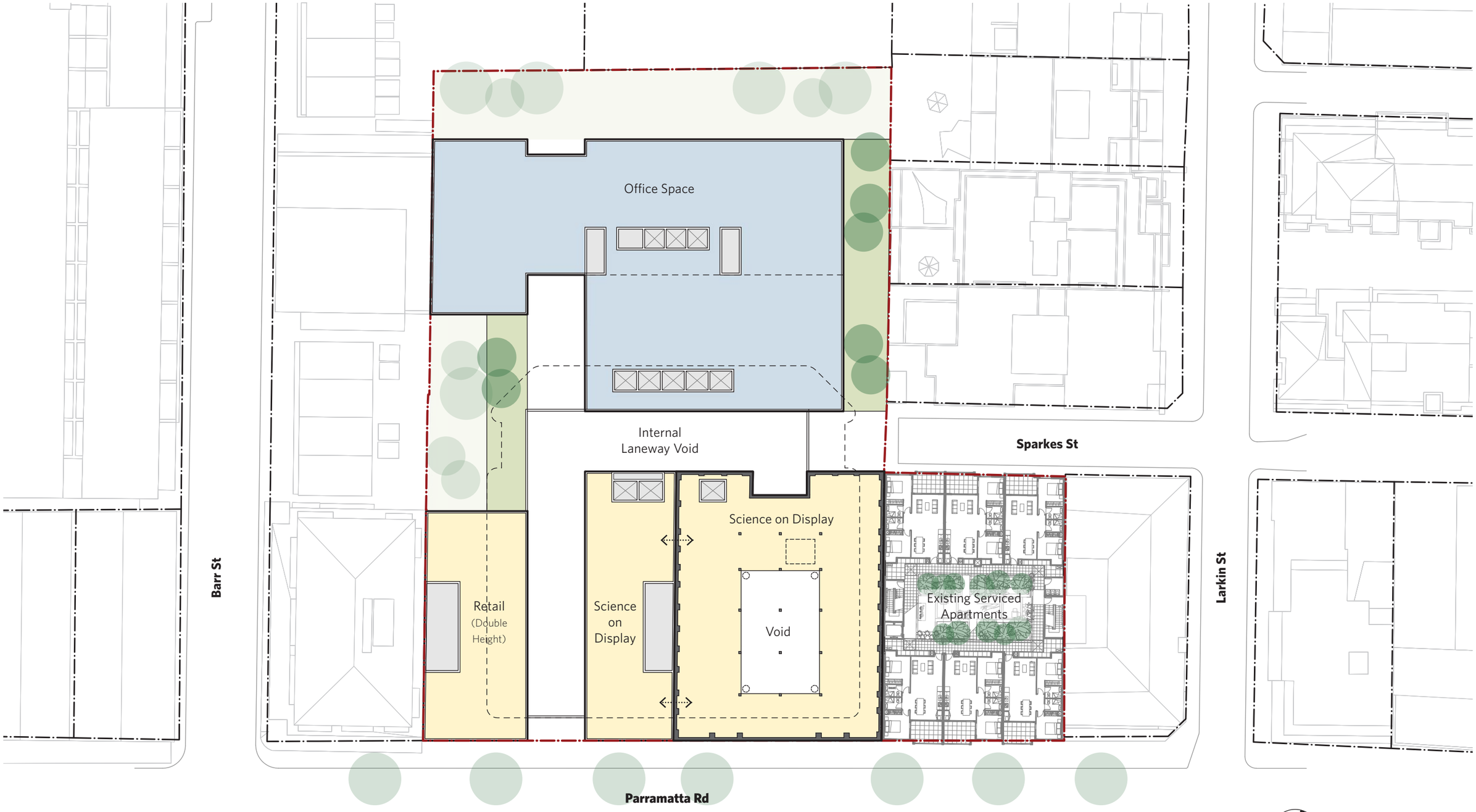


268

1:500 @ A3

08 REFERENCE SCHEME

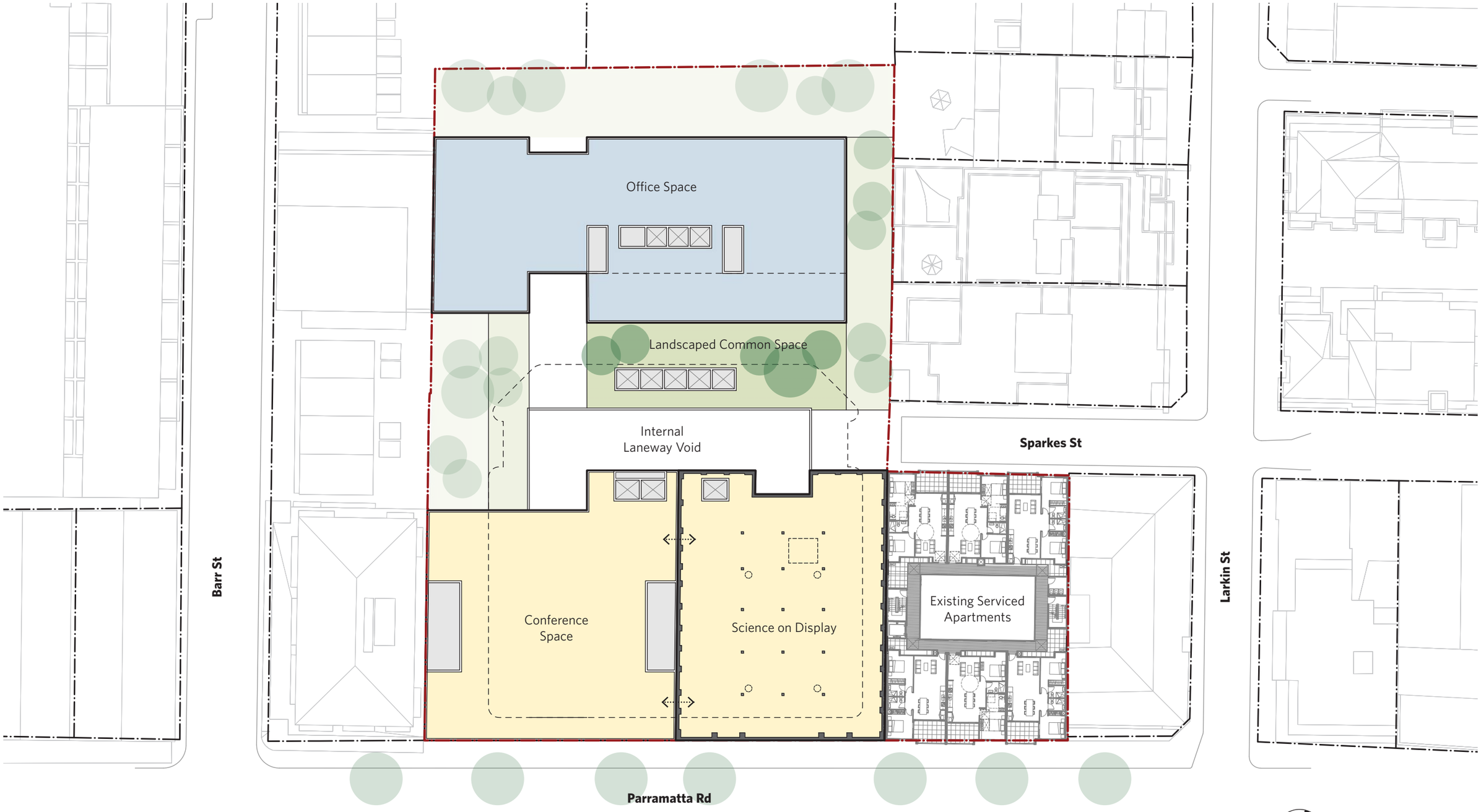
Level 1 Science Tower
Level 1 Office
Level 1 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

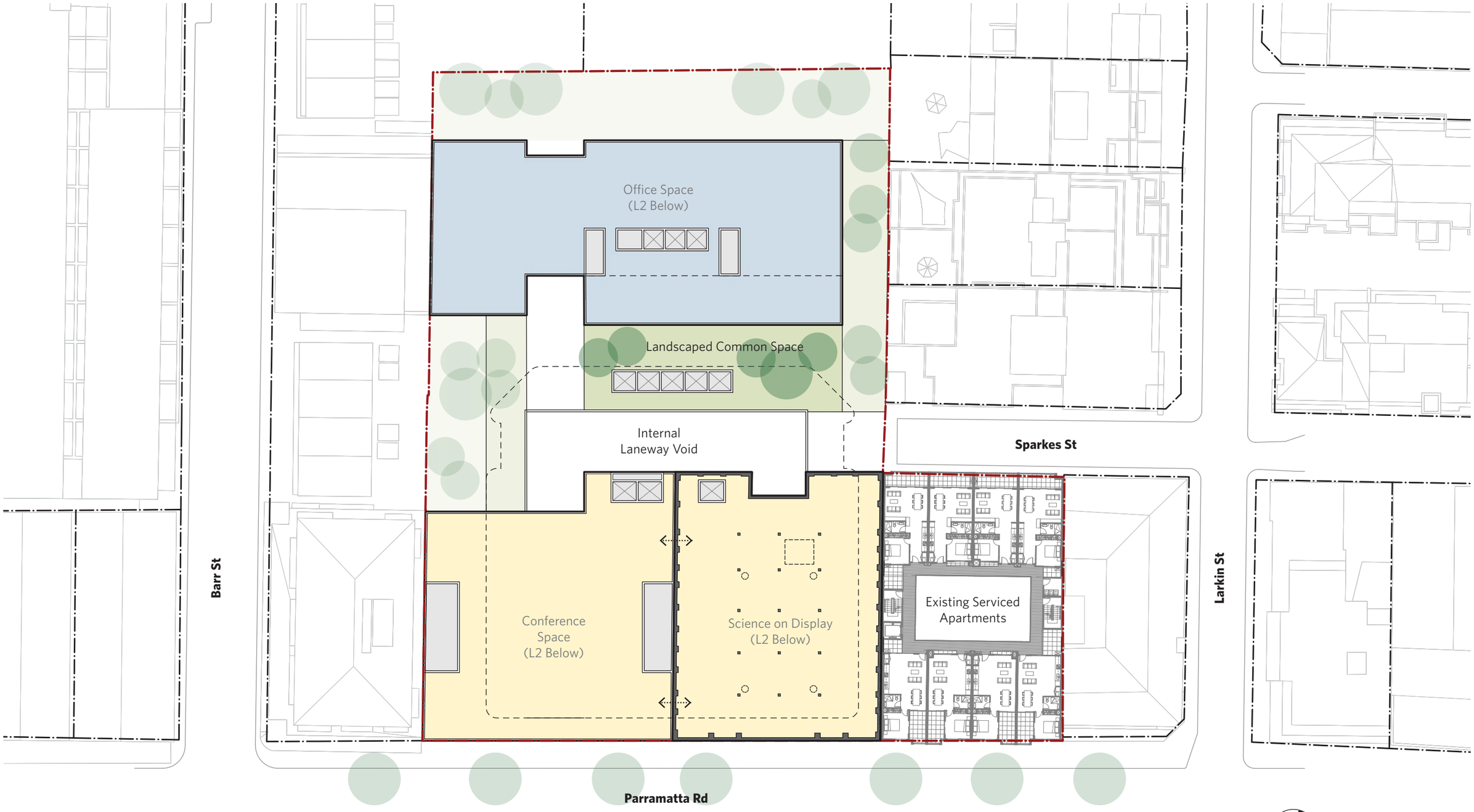
Level 2 Science Tower
Level 2 Office
Level 2 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

(Level 2 Science Tower)
(Level 2 Office)
Level 3 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

(Level 2 Science Tower)
Level 3 Office
Level 4 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

Level 3 Science Tower
Level 4 Office
Level 5 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

Level 4 Science Tower
Level 5 Office
Level 6 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

Level 5 Science Tower
Level 6 Office
Level 7 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

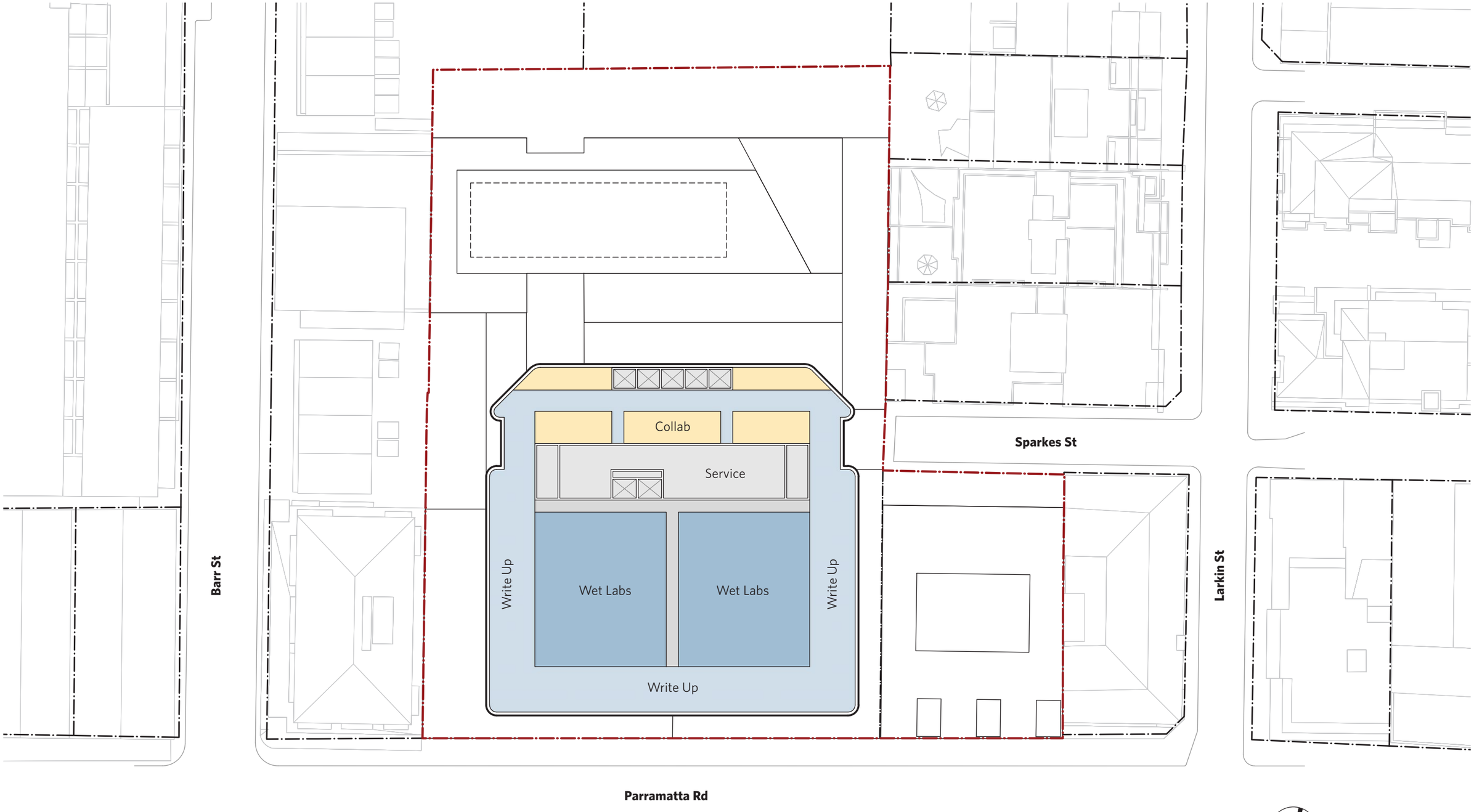
Level 6 Science Tower
Level 7 Office
Level 8 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

Levels 7-15 Science Tower



1:500 @ A3

08 REFERENCE SCHEME

Vertical Arrangement

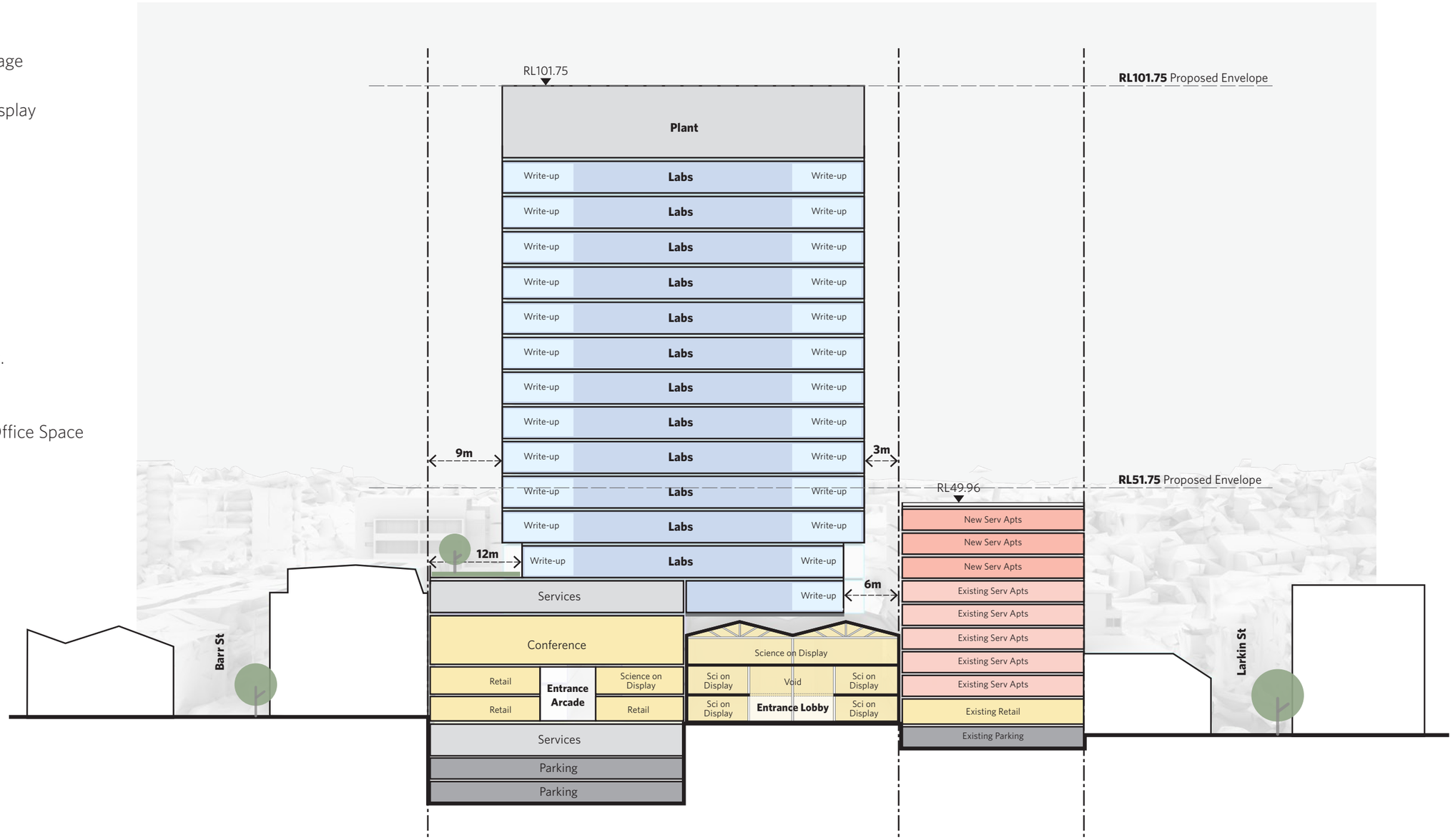
Exchange
Coffee
Food & Beverage
Breakout
Science on Display
Conference

Application
Labs

Service
Plant Spaces

Living
Serviced Apts.

Office
Life Science Office Space



08 REFERENCE SCHEME

Vertical Arrangement

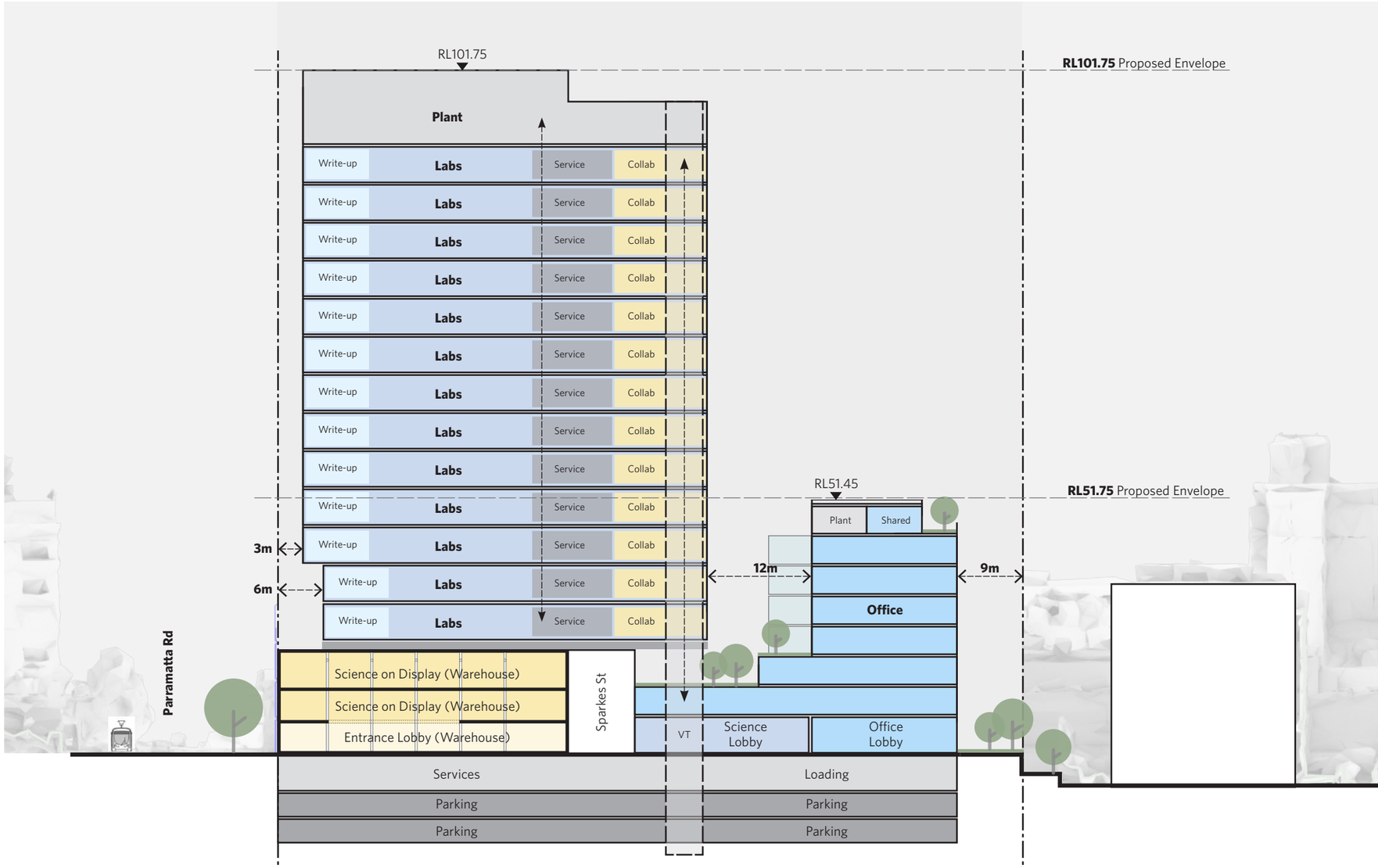
Exchange
Coffee
Food & Beverage
Breakout
Science on Display
Conference

Application
Labs

Service
Plant Spaces

Living
Serviced Apts.

Office
Life Science Office Space



06 DESIGN PROPOSAL

Area Schedule

Area Summary

Total GFA = 37,877m²

Site Area = 6,194m²

Life Science Tower Block

27,685m² GFA

15 Storeys + 2 Plant Level (80m)

Life Science Office Block

6,647m² GFA

8 Storeys (29.7m)

Veriu Block

3,545m² GFA

9 Storeys (29.3m) (6 existing + 3 additional storeys)

FSR Summary

Life Science Site = 6.41:1

Veriu (Serviced Apartments) Site = 4.24:1

	LIFE SCIENCE					OFFICE					SERVICED APTS			
LEVEL	**GFA**	**Eff (%)**	**GBA**	**Level H. (m)**	**RL (m)**	**GFA**	**Eff (%)**	**GBA**	**Level H. (m)**	**RL (m)**	**Prop. GFA**	**GBA**	**Level H. (m)**	**RL (m)**
Basement 3	0	0.00	3500			0	0.0	0			0	0		
Basement 2	0	0.00	3500			0	0.0	0			0	0		
Basement 1	0	0.00	3 500			0	0.0	0			0	0		
Ground	2 205	0.70	3 150	3.7	21.75	550	0.5	1100	4.0	21.75	385	860	4.0	20.66
Level 01	1 280	0.80	1 600	3.7	25.45	1476	0.9	1640	3.6	25.75	450	730	3.1	24.66
Level 02	1 600	0.80	2 000	6.1	29.15	1116	0.9	1240	3.6	29.35	450	730	3.1	27.76
Level 03	1 200	0.50	2 400	4.5	35.25	922.5	0.9	1025	3.6	32.95	450	730	3.1	30.86
Level 04	1 600	0.80	2 000	4.5	39.75	765	0.9	850	3.6	36.55	450	730	3.1	33.96
Level 05	1 800	0.80	2 250	4.5	44.25	765	0.9	850	3.6	40.15	450	730	3.1	37.06
Level 06	1 800	0.80	2 250	4.5	48.75	765	0.9	850	3.6	43.75	295	730	3.1	40.16
Level 07	1 800	0.80	2 250	4.5	53.25	287.5	0.5	575	4.1	47.35	320	580	3.1	43.26
Level 08	1 800	0.80	2 250	4.5	57.75						295	580	3.6	46.36
Level 09	1 800	0.80	2 250	4.5	62.25									
Level 10	1 800	0.80	2 250	4.5	66.75									
Level 11	1 800	0.80	2 250	4.5	71.25									
Level 12	1 800	0.80	2 250	4.5	75.75									
Level 13	1 800	0.80	2 250	4.5	80.25									
Level 14	1 800	0.80	2 250	4.5	84.75									
Level 15	1 800	0.80	2 250	4.5	89.25									
Level 16 (Plant)	0	0.00	2 250	8.0	93.75									
TOTAL	**27 685**		38 150	80.0	101.75	**6 647**		**8 130**	29.7	51.45	**3 545**	6 400	29.3	49.96
TOTAL GFA	**34 332**										**3 545**			

SITE AREA	**5 358**	**836**
GFA	**34 332**	**3 545**
FSR	**6.41**	**4.24**



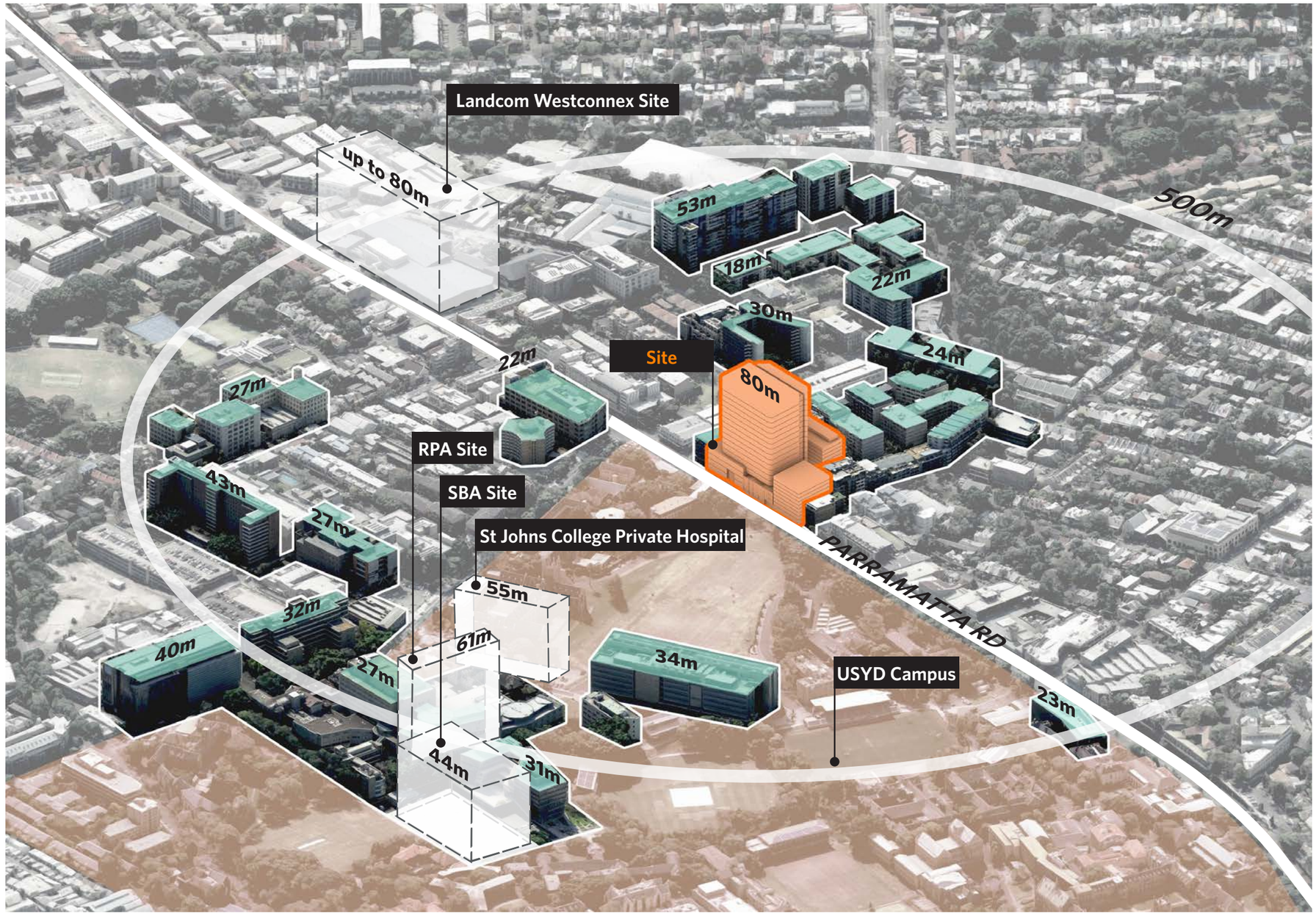
09

09 IMPACTS ASSESSMENT

Overview

A detailed context analysis has informed the development of the proposal, ensuring a design response that is both sensitive to the local setting and consistent with the strategic objectives for the Tech Central precinct. The proposal aims to deliver positive urban design outcomes by responding thoughtfully to site-specific conditions and contributing to a high-quality public domain.

The following pages present a visual impact assessment of the built form from key vantage points and present view-from-the-sun solar analysis to identify the elimination of overshadowing impacts to neighbouring properties.



09 VIEW ANALYSIS

Parramatta Rd Looking West

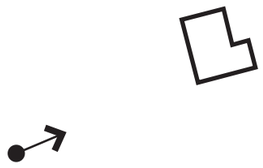
283



09 VIEW ANALYSIS

Parramatta Rd Looking East





09 VIEW ANALYSIS

USyd Campus Looking North

285



09 VIEW ANALYSIS

Barr St Looking South

286



09 VIEW ANALYSIS

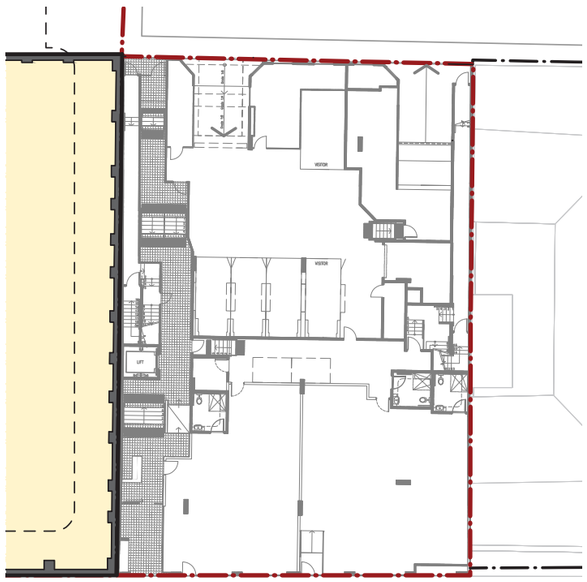
Lambert St Looking East

287

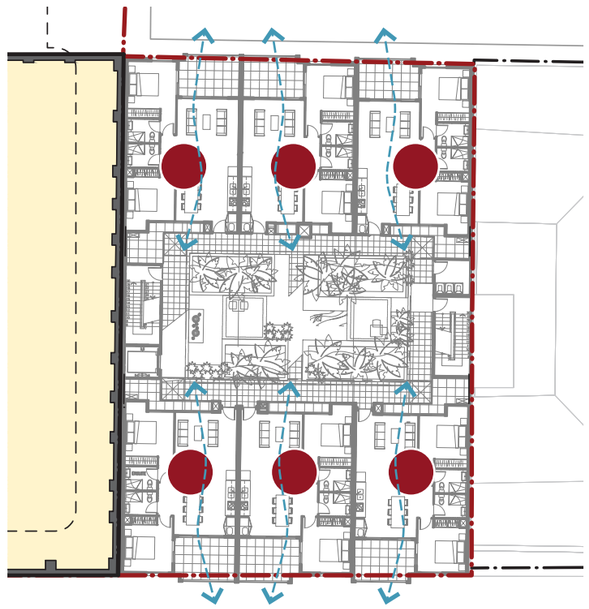


09 ADG COMPLIANCE

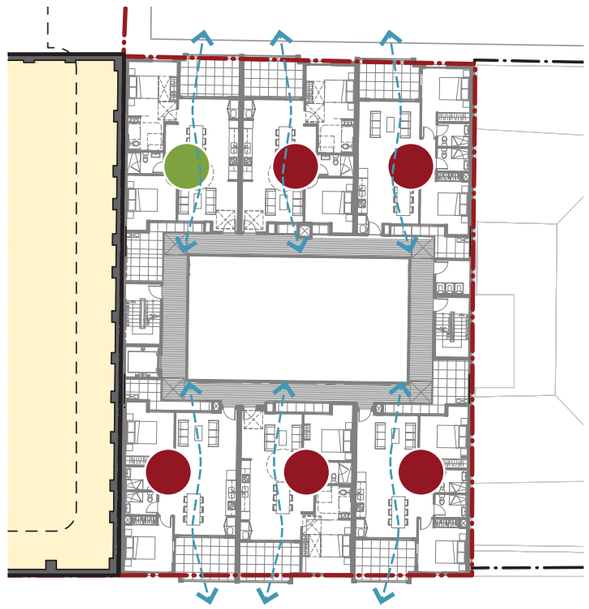
Existing Veriu Serviced Apartments



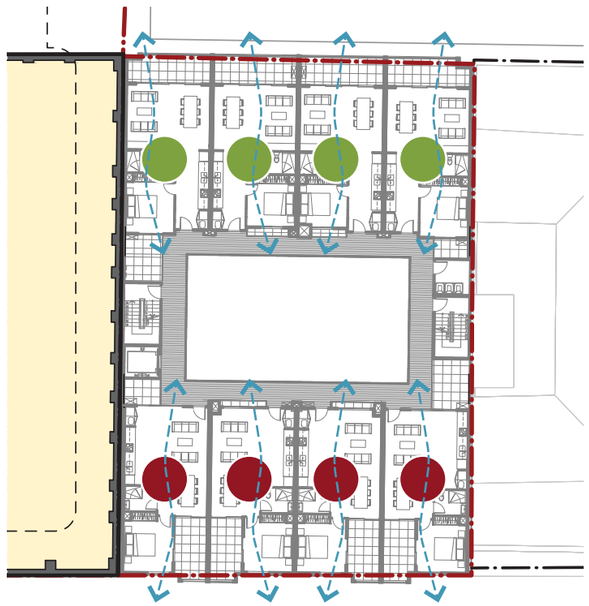
Existing Ground



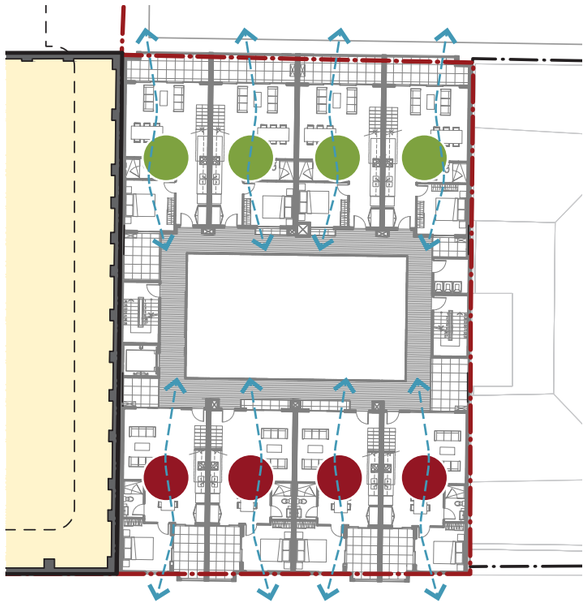
Existing Level 1



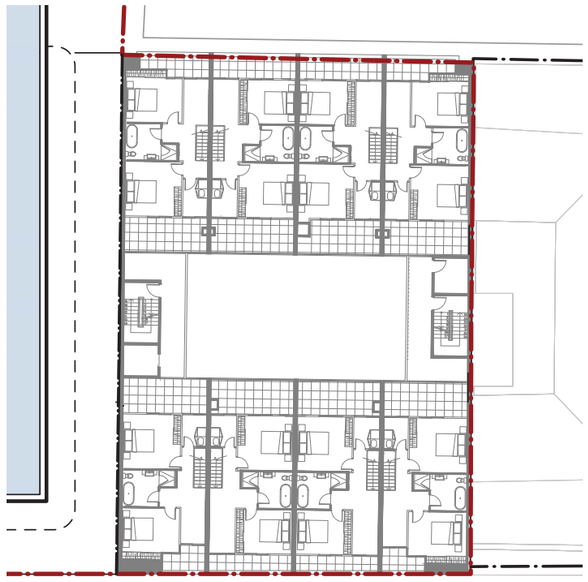
Existing Level 2



Existing Level 3



Existing Level 4



Existing Level 5

2hrs Solar Access Compliant

2hrs Solar Access Non-compliant

Natural Ventilation Compliant

Existing Levels G-5

ADG Solar Compliance

9 of 28 Apartments (32%)

ADG Natural Ventilation

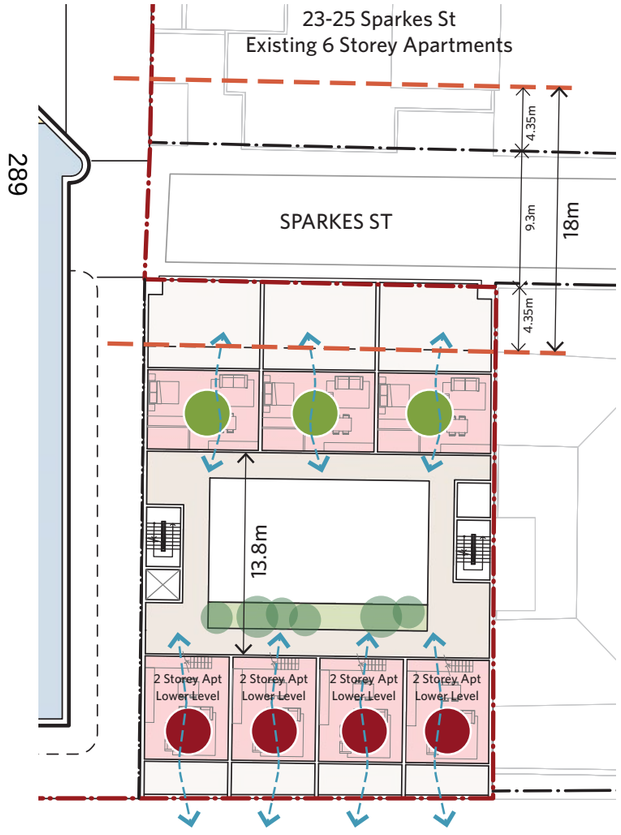
28 of 28 Apartments (100%)

09 ADG COMPLIANCE

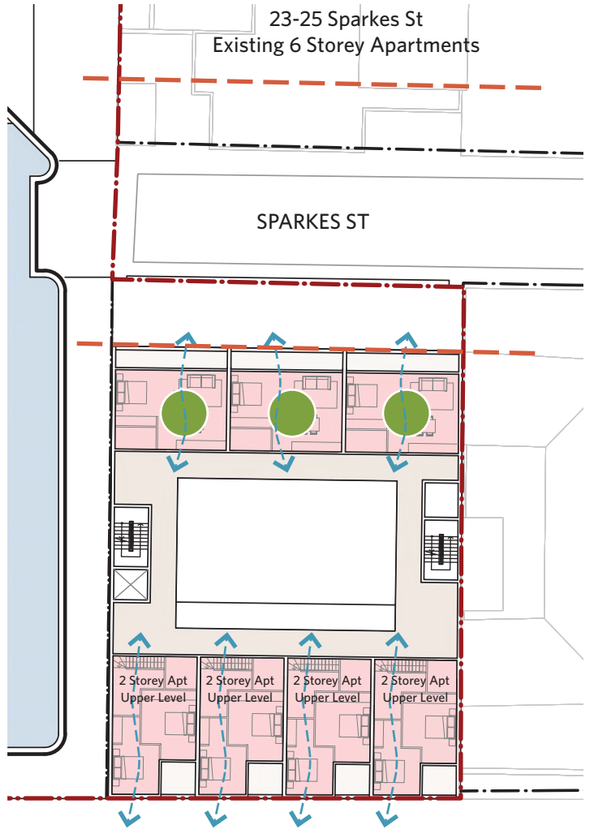
New Veriu Serviced Apartments Extension

The 3 level extension to the serviced apartments have been designed to acheive ADG compliance of solar access and natural ventilation. All new north facing apartments receive 9am to 3pm mid winter solar access. The upper level of the south facing apartments achieve solar compliance through an oversized terrace allowing in excess of 2 hours of morning sunlight into the living space via this terrace. All new apartments receive natural ventilation.

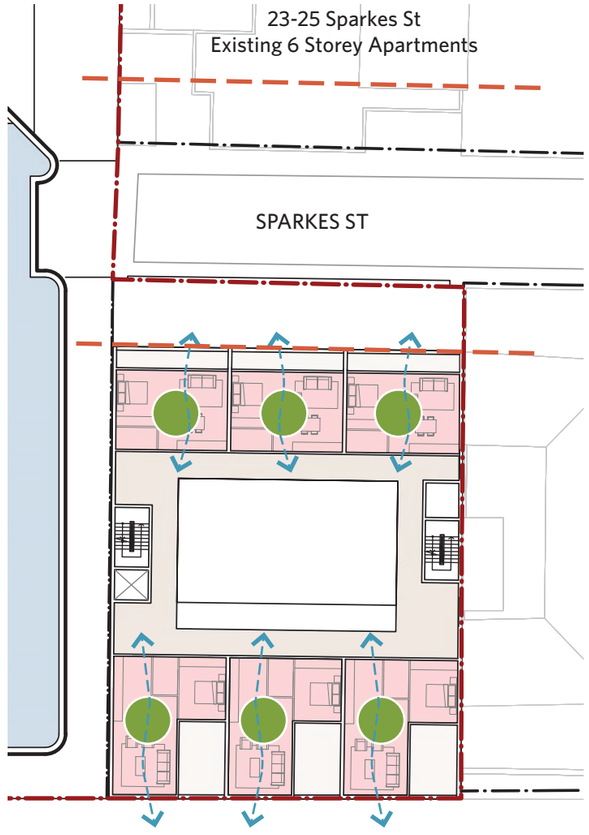
The upper level extension provides a 4.35m setback to the north boundary facilitating an 18m separation to any future development at 23-25 Sparkes St. Internal building separation across the atrium has been increased from the existing 11.4m to 13.8m at the upper level extension providing a wider aperture to the sky maintiaing natural sunlight and ventilation to the lower levels, and creating a new level 6 landscaped area.



New Level 6



New Level 7



New Level 8

2hrs Solar Access Compliant

2hrs Solar Access Non-compliant

Natural Ventilation Compliant

Building Separation Setback

New Levels 6-9

ADG Solar Compliance

12 of 16 Apartments (75%)

ADG Natural Ventilation

16 of 16 Apartments (100%)

09 OVERSHADOWING IMPACT ASSESSMENT

Protection of Neighbours Solar Access Planes

96 Parramatta Rd Solar Access Plane

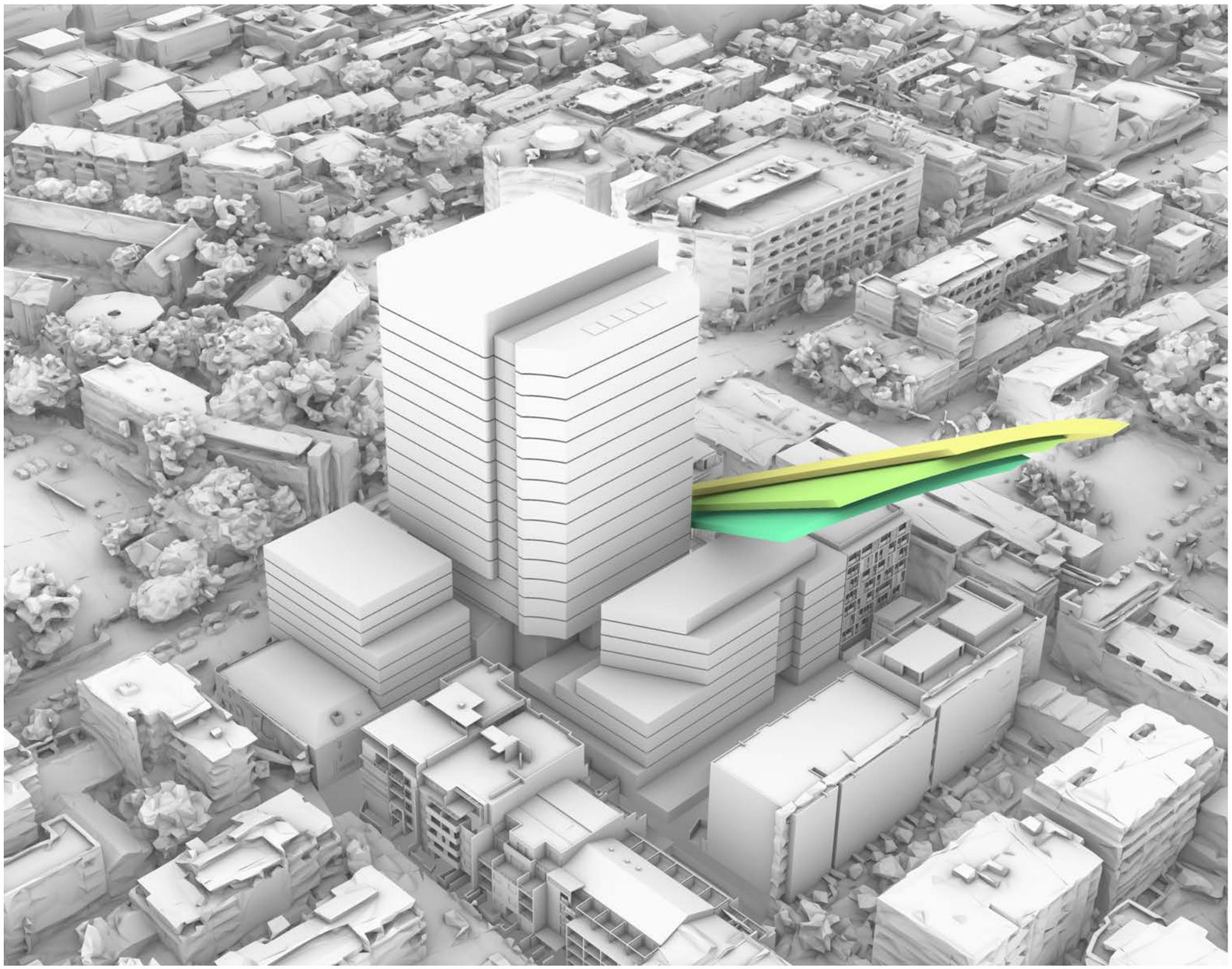
The sun access planes identified to inform the scheme have been overlaid with the proposed massing to review and confirm that they remain unimpeded, ensuring the required solar access to neighbouring

L4 Apartment
12:15-14:15

L3 Apartment
11:15-13:15

L2 Apartment
10:50-12:50





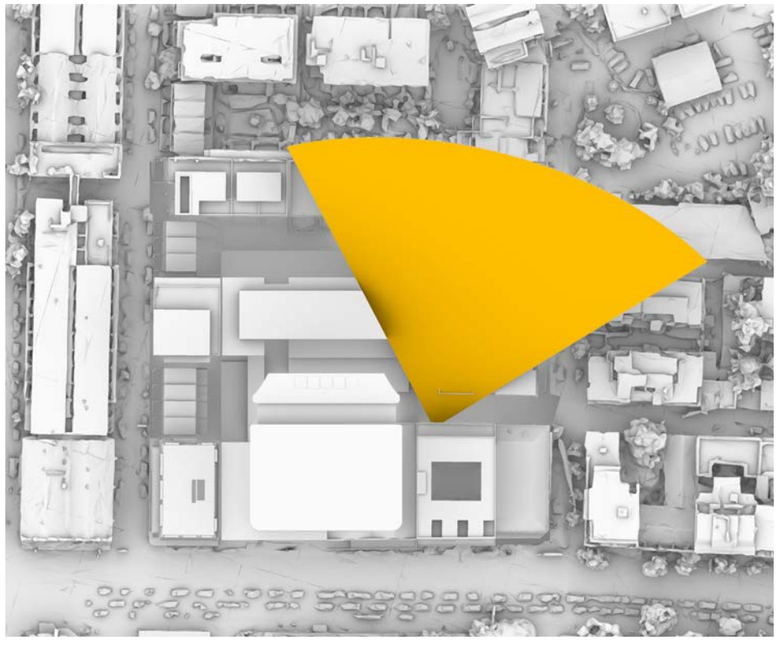
09 OVERSHADOWING IMPACT ASSESSMENT

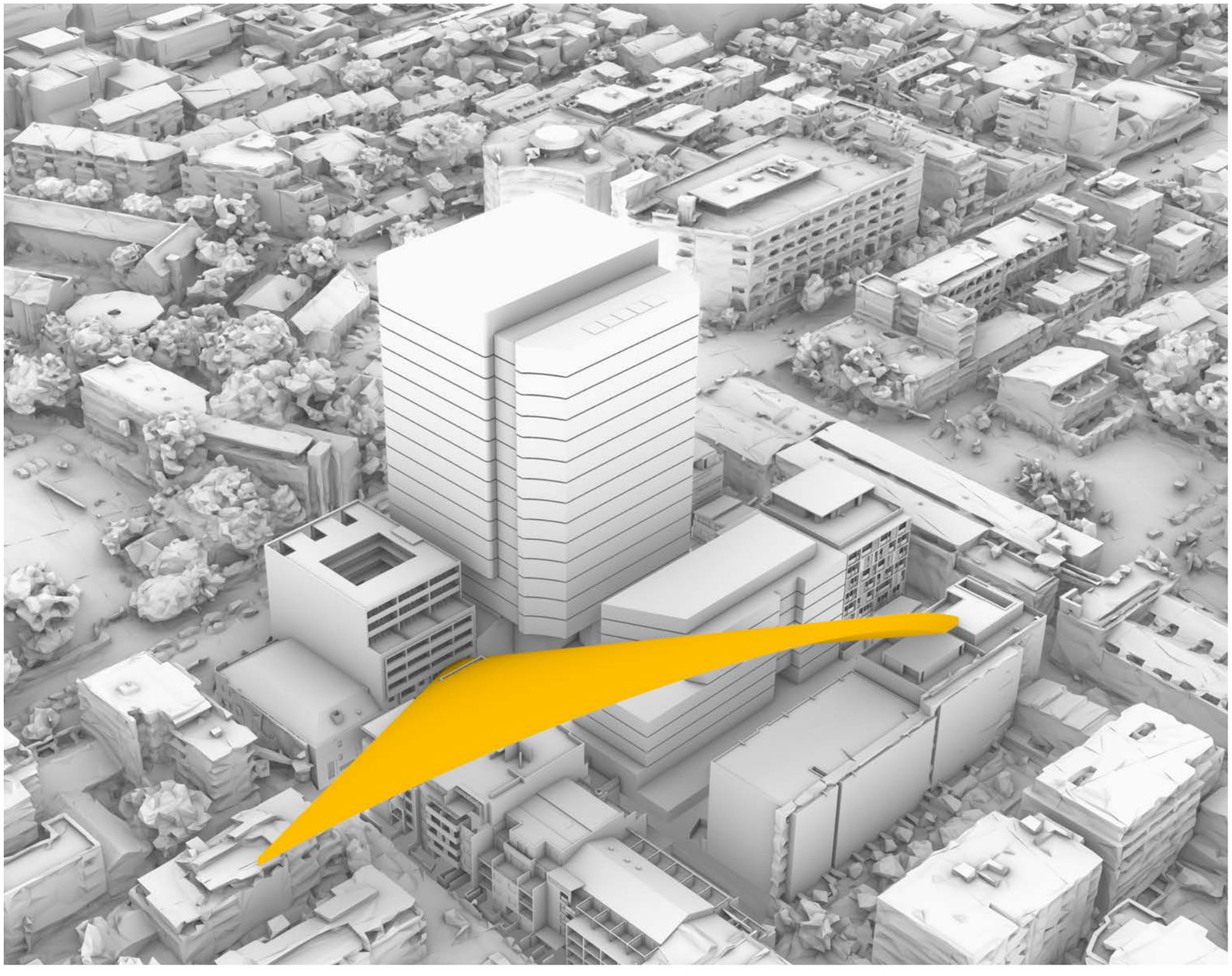
Protection of Neighbours Solar Access Planes

84 Parramatta Rd (Veriu) Solar Access Plane

The sun access planes identified to inform the scheme have been overlaid with the proposed massing to review and confirm that they remain unimpeded, ensuring the required solar access to neighbouring properties is retained.

L2 Apartment
9:00-15:00





09 OVERSHADOWING IMPACT ASSESSMENT

Views From Sun Analysis



9am - June 21



9:30am - June 21



10am - June 21



10:30am - June 21



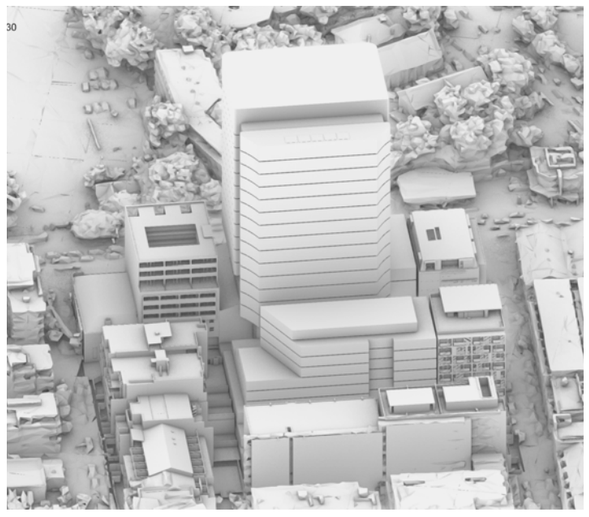
11am - June 21



11:30am - June 21



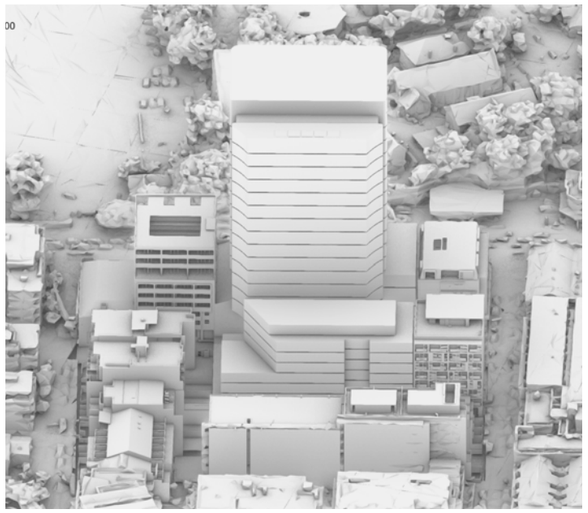
12:00pm - June 21



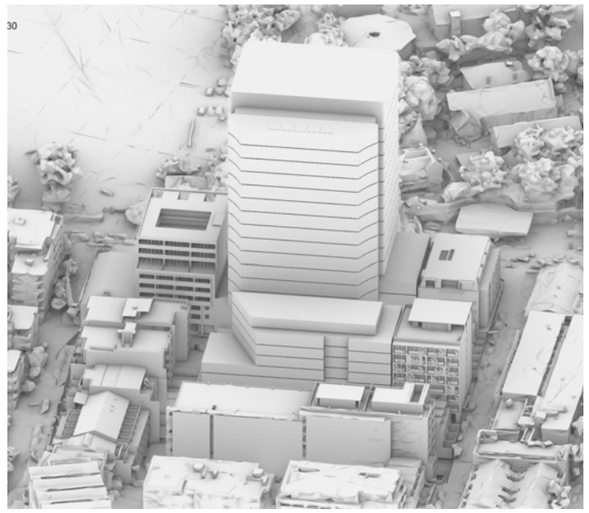
12:30pm - June 21

09 OVERSHADOWING IMPACT ASSESSMENT

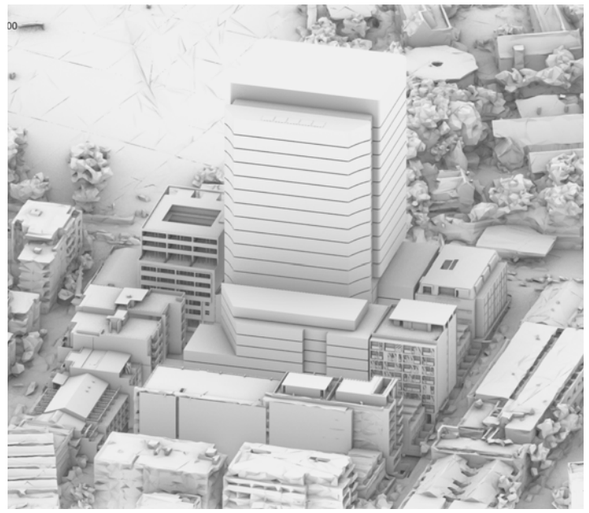
Views From Sun Analysis



1pm - June 21



1:30pm - June 21



2pm - June 21



2:30pm - June 21



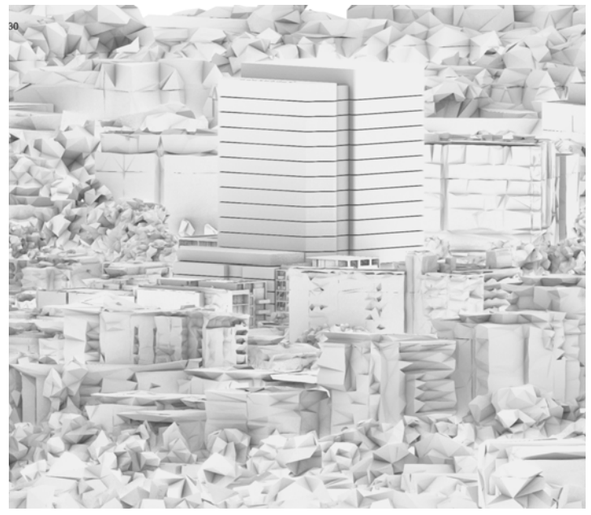
3pm - June 21



3:30pm - June 21



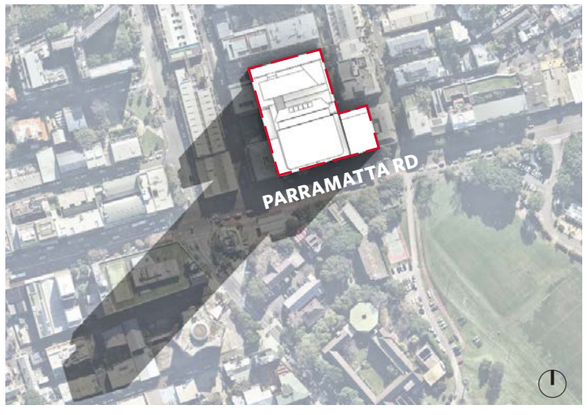
4pm - June 21



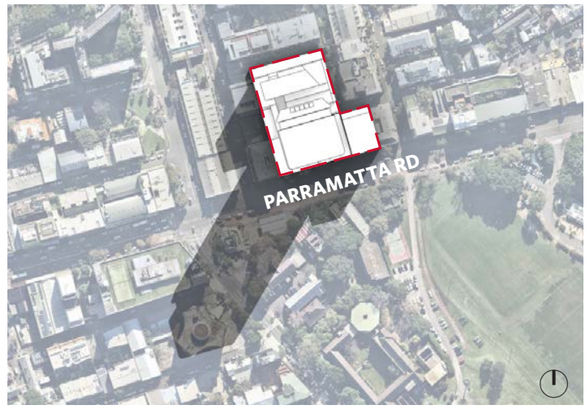
4:30pm - June 21

09 OVERSHADOWING IMPACT ASSESSMENT

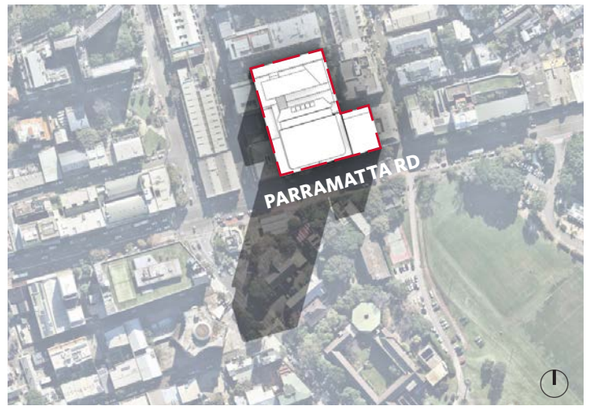
Shadow Diagrams



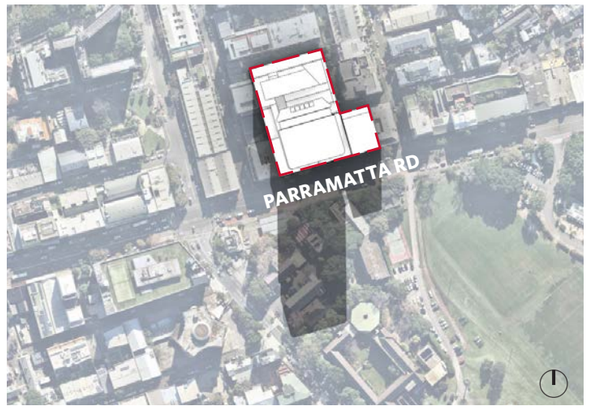
9am - June 21



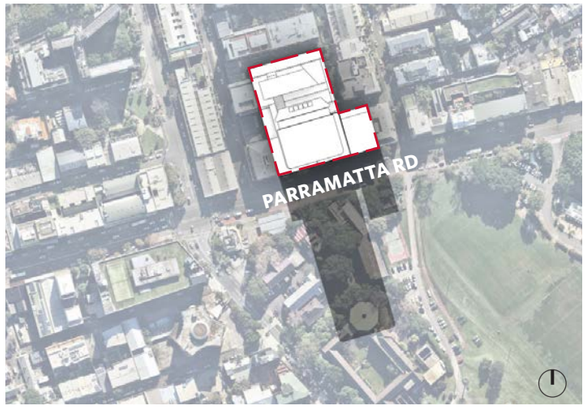
10am - June 21



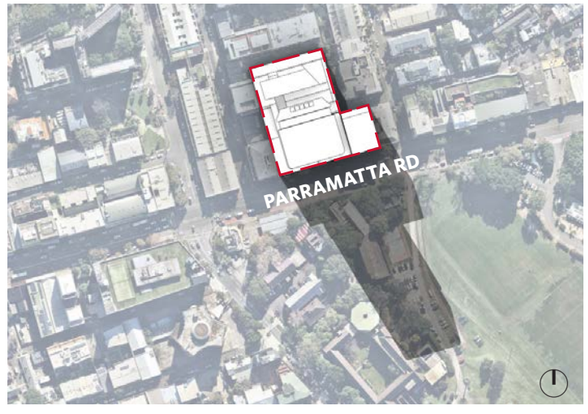
11am - June 21



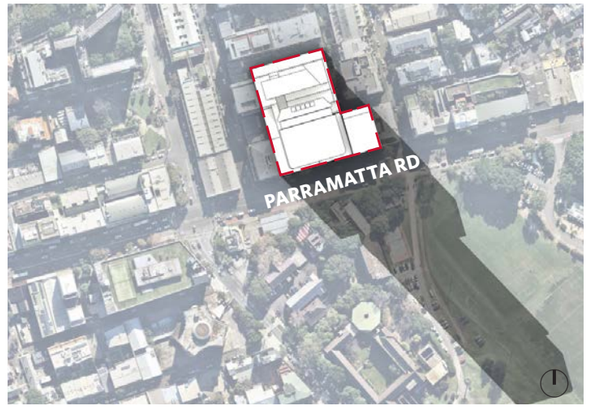
12pm - June 21



1pm - June 21



2pm - June 21



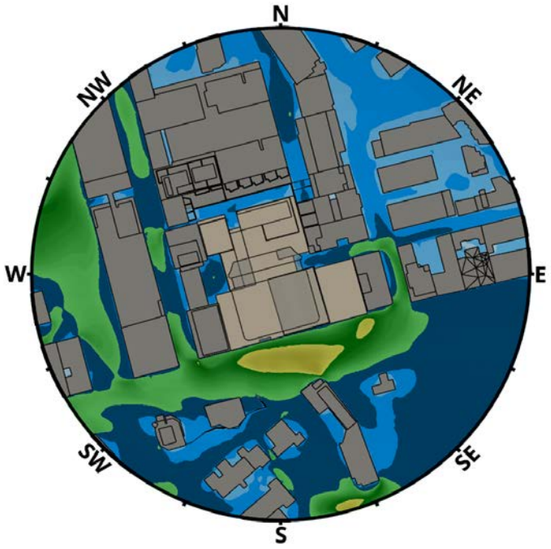
3pm - June 21

09 WIND ASSESSMENT

Summary

A CFD and wind-tunnel study has been performed for the proposed building envelope, in line with requirements set out in the Sydney DCP (2012). The study measured mean and peak wind speeds around the Existing and Proposed development envelope, and combined them with long-term wind climate model to compare them to prescribed criteria.

At ground level, conditions satisfy the safety criterion, and the walking comfort criterion at a minimum. On the podium roof level, exceedances of the wind safety criterion were measured near the southeast and southwest corners with the remainder of the terrace area satisfying the wind safety criterion and walking comfort criterion. These locations can be adressed as the podium rooftop design is developed and activated spaces are confirmed. Terraces on nearby buildings satisfy the safety criterion and walking comfort criterion at a minimum.



CFD Comfort Criteria - Combined Annual
(L2T Wind Impact Assessment)



Wind Tunnel Testing
(L2T Wind TRunnel Environmental Wind Assessment)

09 TRAFFIC ASSESSMENT

Summary

Car Parking Provision

Car parking rates have been calculated using the CoS LEP 2012 and include amendments proposed in the CoS *Appendix C - Parking Rates Update* which is currently on public exhibition.

Life Sciences as a land use is not provided in the LEP parking rates. As this use is a form of high technology industry, the rates for *industry* have been adopted.

Maximum Life Science Parking allowance;

Life Science	185 Spaces
Life Science Education (Office)	15 Spaces
Retail	1 Space
Total	201 Spaces

The reference scheme proposal provides;

- A maximum of 185 parking spaces across 2 life science basement levels.
- 27 spaces of the existing Veriu serviced apartments are retained from the existing 28. 1 space is removed to accommodate an increased bin hold area.

Access to the basement parking is via a dedicated entrance from Sparkes St.

Loading & Servicing

It is proposed that all delivery and servicing for all land uses will occur from a basement level loading dock accessed from Sparkes Street. The development will provide five loading bays within the basement 1 loading area.

The proposed loading dock will have provision for:

- One 12.5 rigid heavy goods vehicle (HGV)
- Two 8.8m medium goods vehicles (MGV)
- Two 6m light goods vehicles (LGV)
- Two good lifts.
- 4.4 meter height clearance.
- Traffic management system.

Sparkes Street is proposed to be reconfigured into a shared zone with kerbside parking removed to facilitate two-way vehicles passing and adequate swept path clearances.

To accommodate increased waste servicing requirements to the extended Veriu serviced apartments building, one existing parking space is to be removed from ground level parking to facilitate an increased waste holding room.

Network Impact

A traffic count survey was conducted at three intersections which has been used to assess the performance of the existing road network:

- Parramatta Road / Missenden Road / Lyons Road intersection.
- Parramatta Road / Western Avenue / Ross Street intersection.
- Bridge Road / Ross Street intersection.

SIDRA modelling results show all intersections currently operate with an acceptable Level of Service during the AM and PM peaks.

The modelled 2028 scenario, using the maximum allowable parking provisions, shows the traffic generated by the proposed development is 4% or less of background traffic.

The impacts of the development on the road network are expected to be low.

09 LIFE SCIENCE WASTE PROVISIONS

Summary

A NSW life science laboratory/research facility of this scale will generate waste streams consisting of general commercial waste plus clinical, biohazardous, sharps, cytotoxic and pharmaceutical streams. The basement loading area will allow for the following waste storage provisions.

- General commercial waste room of 35m²
- Dedicated clinical waste room of 10.5m²
- Separate secure special-stream storage of 15m², including a lockable cytotoxic area
- Lockable pharmaceutical cupboard
- Refrigerated hold room if anatomical/high-risk clinical waste is not removed frequently.

On this basis, the reference scheme makes allowance for 61m² waste holding across individual waste streams, with a minimum "day one" allowance of 54m² if the refrigerated room is left as shell space for future fit-out.

	BASIS OF CALCULATION	MINIUMUM AREA
General Commercial Waste/Recycling	Assumed baseline for general commercial streams only.	35.0m²
Clinical/Medical Waste	Width: 2 × 660 L bins + 1 × 240 L sharps transfer bin + side clearances ≈ 3.0 m. Depth: 660 L bin depth 1.37 m + 1.5 m operating aisle + clearances ≈ 3.5 m. Area = 3.0m × 3.5m	10.5m²
Cytotoxic Room/Cage	1–2 purple bins + spill kit/PPE + working aisle. Adopt 2.0m × 2.5m	5.0m²
Pharmaceutical Locked Cupboard	Lockable yellow/orange pharmaceutical bin + secure shelving/ records + standing clearance. Adopt 1.5m × 1.8m	2.7m²
Refrigerated Hold Room	For anatomical/high-risk clinical waste if collection is not frequent. Adopt 2.5m × 3.0m	7.5m²
Preferred Total		60.7m²

09 FLOOD STUDY

Summary

A Flood and Risk Assessment has been undertaken on the reference scheme to review and assess the proposal against the flood planning criteria of the CoS Interim Floodplain Management Policy.

As the proposed Life Sciences development is contained to within the existing building envelope, it will not increase runoff compared to existing conditions, no new overland flow paths are created or blocked, the proposed development will not result in any changes to the flood behavior outside the extent of the site area.

The assessment indicates that all entrances to the new Life Sciences tower and education building (but excluding the Veriu building) illustrated in the reference scheme, achieve the flood planning level requirements in the CoS Interim Floodplain Management Policy. The internal walkway level of 21.75 m AHD has been positioned at an elevation above the PMF level to help achieve the Flood Planning Level requirements.



Revised Baseline Flood Model Peak Flood Hazard - PMF Event
(Arup - Flood Risk Assessment)

299

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Nominated Architect
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NSW 16065

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Attachment A3

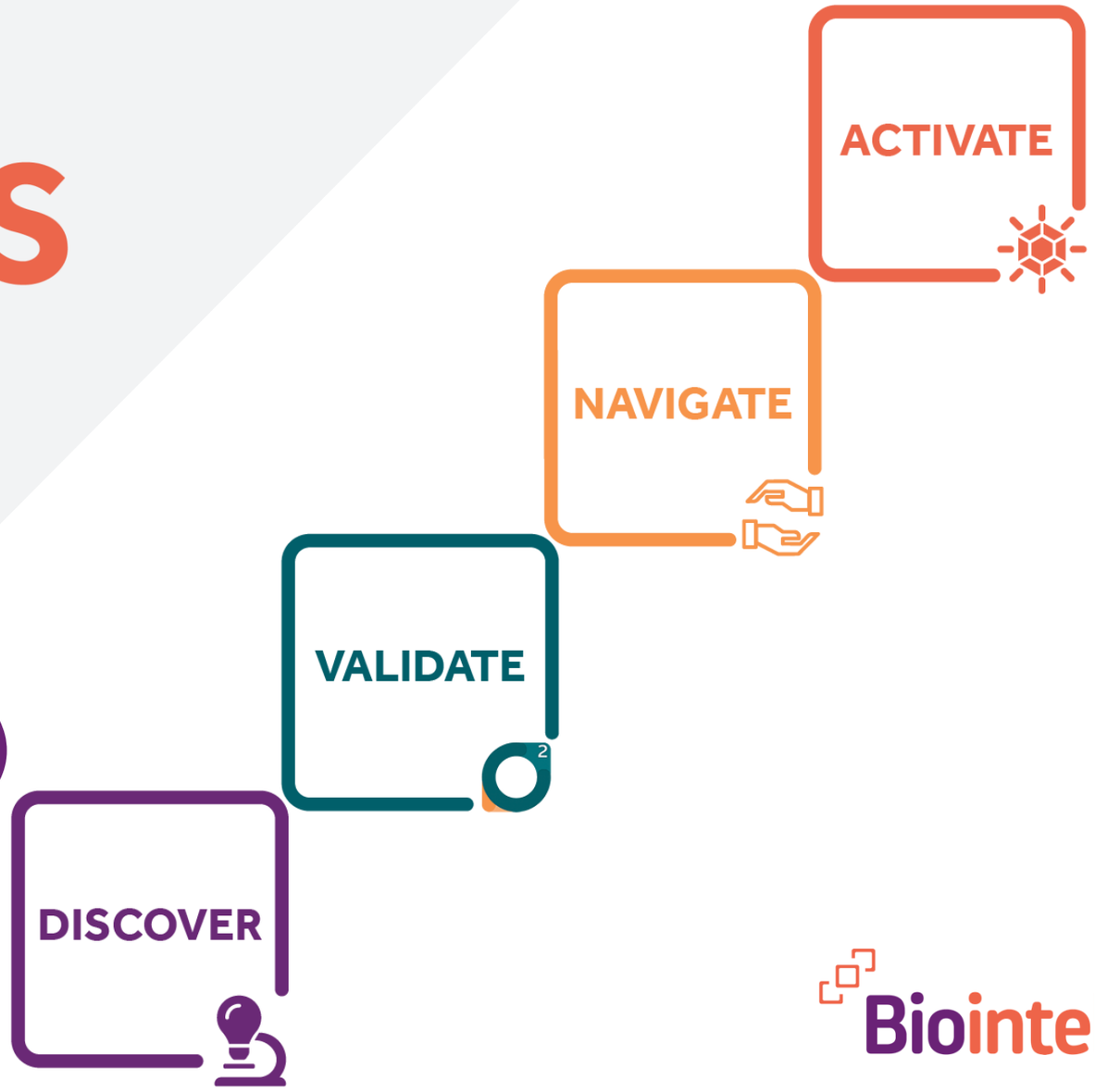
Macroeconomic market analysis report

BRINGING INNOVATIONS TO LIFE

301

STEP BY STEP

Wentworth Capital
Life Sciences Hub (Camperdown)



Final Macroeconomic Market Analysis Report

Version 4

13 June 2025

Biointelect

Table of Contents

	Section	Page
-	Key Findings	5
1	Life Sciences Hub (Camperdown), adjacent to Tech Central	13
2	Global Life Sciences Industry Trends	21
3	Australian Life Sciences Sector Value, Overview & Trends	30
4	Growth Opportunities in NSW	44
5	Government Policy Alignment	53
	Appendix	**72**
1	Life Sciences Hub (Camperdown): Tenant Archetypes & Needs	73
2	Structure of Australia's Life Sciences Industry	84

302

Purpose of this report

Wentworth Capital is seeking to position the development opportunity at the Life Sciences Hub (Camperdown) to key stakeholders, including City of Sydney, NSW Government and investors. *Investment in life sciences precincts requires a sustained and detailed engagement with stakeholders, including the University of Sydney, City of Sydney and NSW Government.*

1. Provide a comprehensive overview of the life sciences industry in Australia (and NSW)

- Provide detailed advice and analysis regarding the current state of the Australian life sciences sector, in international context, organisational structures and existing hubs where life sciences organisations are located (highlighting areas of comparative advantage and potential gaps in the market)
- Identify opportunities to enhance the competitiveness of the Australian (and NSW) life sciences sector
- This analysis will consider the biotechnology, pharmaceutical, medical technology (medtech) and digital health subsectors of the life sciences field

2. Assess macroeconomic factors and government policy affecting the life sciences sector in Australia (and NSW), in international context

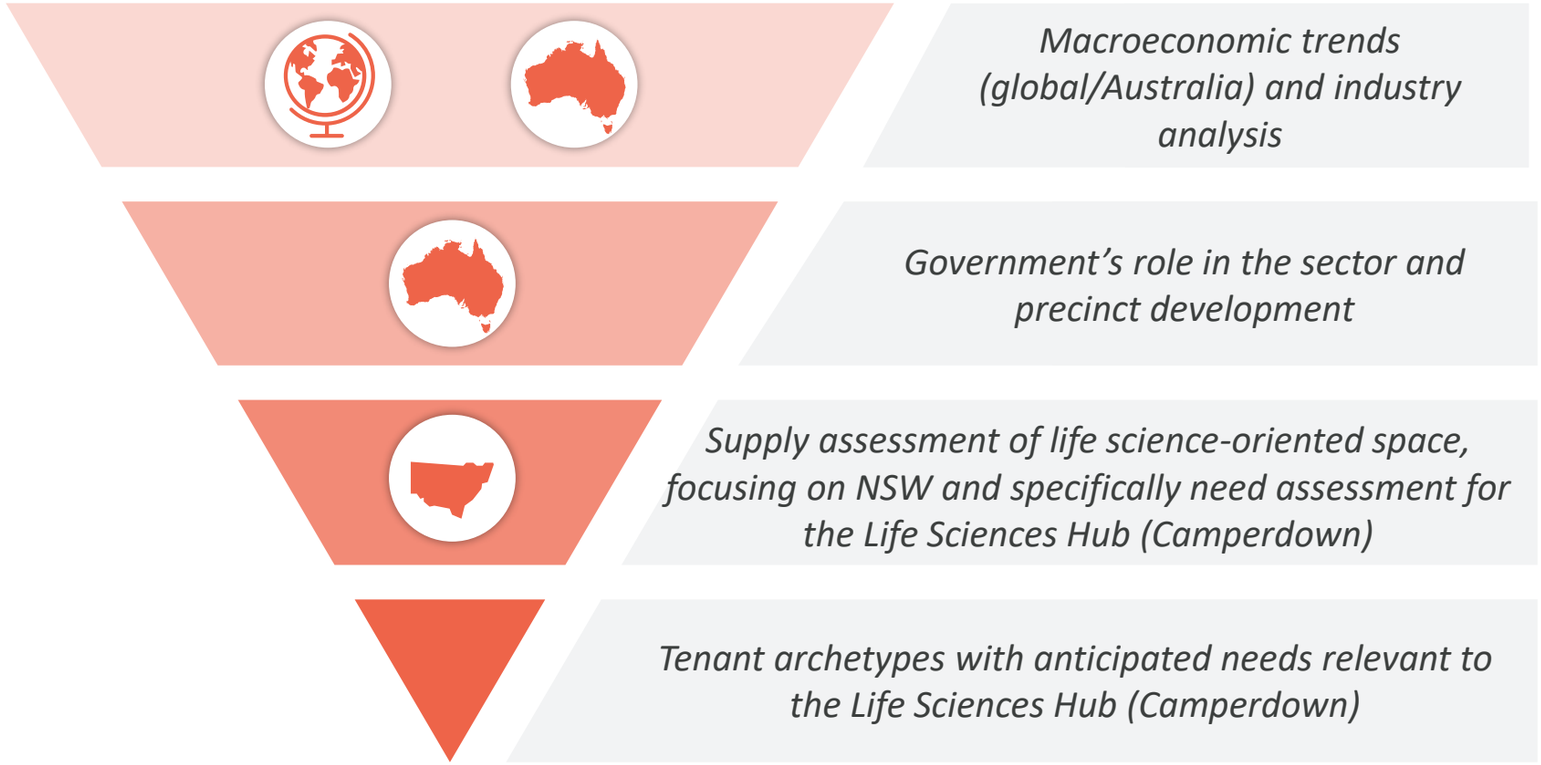
- Assess economic factors affecting the life sciences sector in Australia and investment trends
- Conduct an analysis of investment trends in major global markets (US, EU, UK, Japan, China), considering the anticipated impacts of technological advancements affecting the life sciences sector, and implications for investing in Australian projects (opportunities and threats)
- Review macroeconomic and policy (state and federal) factors affecting the life sciences sector in Australia, in international context

3. Develop a strategic partnership to guide Wentworth Capital's investments in the Life Sciences Hub (Camperdown) and broader life sciences strategy

- Provide a concise report detailing strategic considerations and recommendations based on the current state of the NSW and Australian life sciences sector, international trends, macroeconomic and policy factors – to guide Wentworth Capital's investment in the Life Sciences Hub (Camperdown)
- [Optional, to be further scoped] Develop a roadmap and provide ongoing advisory support to Wentworth Capital as the investment strategy progresses for both the Life Sciences Hub (Camperdown) and broader investments in life sciences in NSW and Australia

Informing Wentworth's strategic priorities for Australian life sciences investments

This report provides an overview of the macroeconomic environment and trends in the Australian life sciences sector, to inform strategic positioning with government and target identification for the Life Sciences Hub (Camperdown), as well as Wentworth's broader life sciences strategy



Key Recommendation: *Market research is recommended as a next step to support a detailed demand assessment and inform decision-making on strategic positioning and the Life Sciences Hub (Camperdown) proposed activity mix. This would seek to validate:*

1) *Current and future demand for life sciences infrastructure,*
2) *Infrastructure needs and success factors, and*
3) *Existing strengths and perceptions of Camperdown/Tech Central for life sciences companies.*

Key Findings

Camperdown is positioned at the nexus of world-leading institutions and businesses

Dedicated life sciences spaces are required to accommodate this growing sector, which has the backing of state and federal governments

Sydney Biomedical Accelerator

- Start-up hub for biomedical spinouts
- Integrated with University of Sydney

- Innovation Blueprint, Industry Policy and Industry Development Framework that promote life sciences and adjacent sectors
- NSW Health & Medical Research Strategy
- Support for biomedical translation and commercialisation
- Major life sciences infrastructure developments in Viral Vector Manufacturing and RNA Pilot facilities

TechCentral Precinct

- Leading Australian tech businesses
- Scale-up hub for technology businesses, including medtech and digital health focus

Life Sciences Hub (Camperdown)

- *Core clinical research facility*
- *Scale-up hub for biomedical businesses*

- Demand for lab space in NSW is expected to be driven primarily by the growth of biotech, medtech, and research and clinical service companies requiring affordable and scalable PC1 and PC2 labs, shared facilities with specialist equipment, and fitted out prototyping and fabrication labs
- Adjacent subsectors, such as quantum and digital health, are likely to seek co-location opportunities through shared office spaces that foster collaboration and knowledge exchange

KEY OPPORTUNITIES

- Australia has an expanding biomedical sector, which has seen growth of more than double the number of life sciences organisations between 2017 and 2024
- Australia is an important global market to commercialise new biomedical technologies and Sydney is home to a majority of multinational affiliate companies operating in Australia
- Foreign direct investment (FDI) in the Australian life sciences sector focuses on contract services, in particular for early phase clinical trials, which is encouraged by the federal R&D Tax Incentive
- Investments in the life sciences sector generate wider economic benefits for the City of Sydney and NSW, through job creation and multiplier effects across the economy

Biointelect

Life sciences is a global growth sector that is generating strong growth in NSW

The global life sciences sector is a high-value, growth industry

The value of the global pharmaceutical market is projected to grow 38% from 2023-28

Pharmaceutical trade flows primarily from EU, US, China and Japan; FDI and deal flows focus on US, Europe and China

Investment in life sciences grew steadily over the last decade, with a rapid increase during the pandemic and slowing since

With reduced risk appetite, investors are focusing on defined/ proven products, and biotechs increasingly rely on partners to support development and commercialisation activities

Global and Australian growth is driven by new technologies

These are shifting treatment modalities and R&D, altering infrastructure needs and highlighting gaps in Australia

Regenerative Medicine

Therapies to manipulate or modify a patient's cells or genes to treat disease

Personalised & Precision Medicine

Omics technologies increasingly applied, enhancing efficiency and reducing costs

Medical Technology

Evolving with patient-specific orthopaedics and bioprinting for regenerative medicine

Advanced Technology & Computing

Convergence of AI, quantum computing and digital health transforming life sciences

The NSW life sciences sector has grown and is well-positioned for further expansion

Digital Health
45.6%
CAGR 2017-22‡

Research & Clinical Services¥
19.3%
CAGR 2017-22‡

Medtech¥
12.5%
CAGR 2017-22‡

Biotech
11.9%
CAGR 2017-22‡

*NSW led Australia's expansion in the number of **digital health companies**, with the greatest increase of between 2020 to 2022.*

*NSW is Australia's leading hub for **medtech**, accounting for 57.3% of all companies in the sector.*

*NSW has the highest density of **multi-national (MNC) pharmaceutical companies** at 61.7%, compared to VIC at 30.9%.*

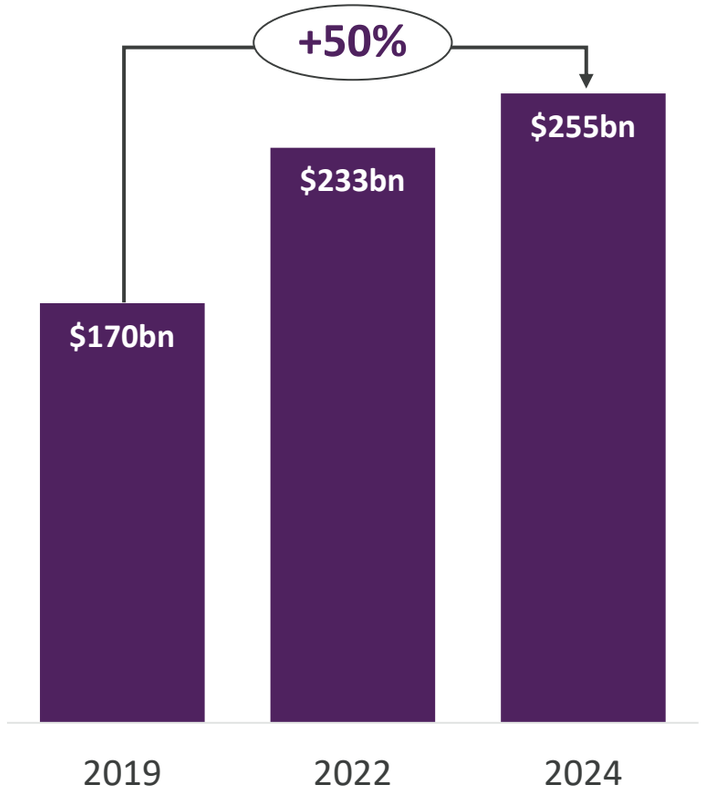
‡CAGR for digital health was calculated based on 2020-2022 figures; ¥ Medtech represents medtech & digital health figures from AusBiotech; Support services were used as an indicative measure of research & clinical services (CRO/CDMO) – there is potential this growth is also driven by consultancies.

Source: IQVIA Institute, The Global Use of Medicines 2024: Outlook to 2028; AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

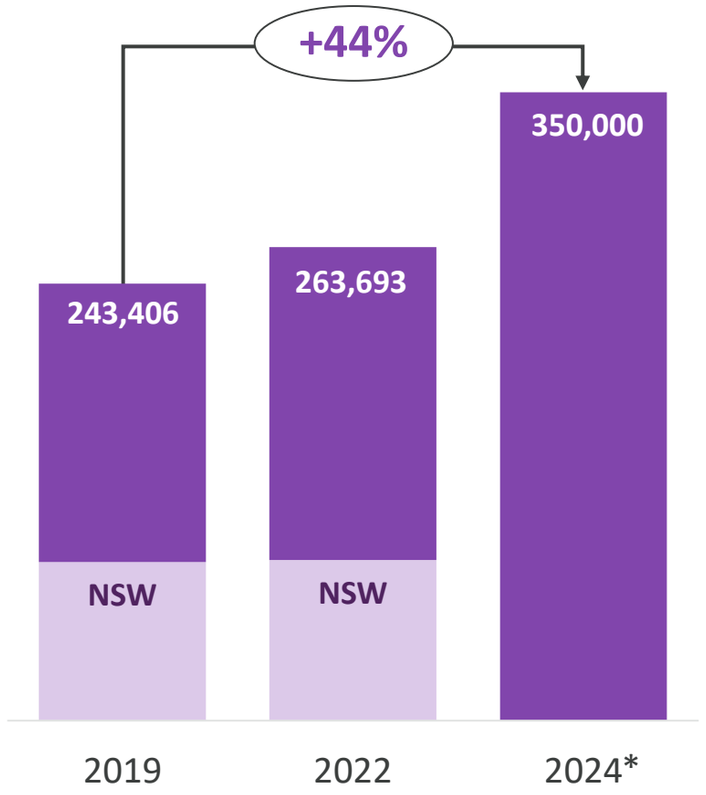
Sustained growth reflects the expanding nature of the sector in Australia

These growth fundamentals are expected to fuel demand for specialised life sciences commercial property

Growth in market capitalisation of ASX-listed biotechnology industry



Growth in number of employees in the life science sector



Growth in number of life science organisations



**NSW number of employees in 2024 not available.*

Source: AusBiotech Australian Biotechnology Sector Snapshot (2022), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

308

Australia is an important market for biomedical products and an R&D destination

Australia is a relatively small market (globally), but has a sophisticated healthcare system and strong government support for R&D

Indicators influencing Australia's attractiveness:

Market for Biomedical Products

Population Growth: Population aged over 65 is set to almost double by 2060, driving health expenditure.

Health Spending as a Percentage of GDP: Australia is among the top 15 countries in the world in health expenditure.

Spend on Innovation: Australia is ranked 15th in OECD for the proportion of new drugs reimbursed.

Respected Regulatory System: Recognition of TGA approvals and work-sharing arrangements can enable streamlined submission across countries.

R&D Destination

R&D Expenditure and Funding: Australia has had consistent growth in health R&D expenditure, >$7bn in 2022-23. 73 biotech IPOs raised $1.55bn between 2010-2022. Biotech/medtech are among the top 3 sectors attracting VC funding.

Government Support: Over $14bn in government R&D expenditure in 2024-25 including $4.2bn in R&D Tax Incentive.

World-Leading Institutions and Clinical Trial Capabilities: Leading universities (40) and medical research institutions (55), supporting a thriving clinical trial sector.

Clinical Trials: Growing sector which attracts $1.25bn in industry expenditure.

Skilled Workforce: Australia has 109K STEM and Health graduates (2022), and 350,000 employed in life sciences (2024).

IP Protection: Perceived as a market with strong IP protection for innovations.

Research Infrastructure & Precincts: Health and innovation precincts across every major city, enabling collaboration across industry, research institutes, and universities.

TGA = Therapeutic Goods Administration

Source: AIHW, Health expenditure (2023;OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023); Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25; DISR, STEM Equity Monitor (2025)

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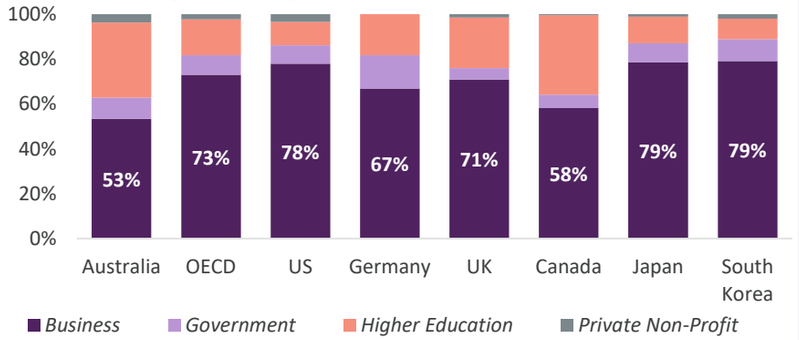
Biointelect

Barriers to commercialisation and translation limit Australia's ability to capitalise on investments in health and medical research

Private investment and partnerships are required to develop the life science ecosystem

Australia remains heavily reliant on public sector funding, with business investment in R&D (BERD) significantly lower than key competitors:

Components of Gross Expenditure on R&D in 2021



- Expanding private sector investment, such as the Life Sciences Hub (Camperdown), will be essential in developing self-sustaining innovation precincts.
- This can attract additional capital, enable collaboration, and fund specialised infrastructure otherwise cost-prohibitive, ultimately supporting commercialisation, strengthening Australia's global competitiveness and driving economic outcomes.

While gaps remain, there have been recent developments across three areas that are associated with commercialisation…

1 Access to private capital

- Australia's industry structure is dominated by small businesses (93%), many of which operate with limited cash flow, restricting the ability to invest in R&D and scale.
- Australia lags behind major global markets in access to venture capital and attracts just 3% of global life sciences FDI, which predominantly goes to contract services.
- Recent expansion of Australian life sciences-focused funds include: Brandon Capital over $1.25bn across six funds; Uniseed over $200m; Breakthrough Victoria $2bn (across multiple sectors); Tenmile estimated $250m; Tin Alley Ventures $100m; ANDHealth; Proto Axiom and One Ventures

2 Specialised infrastructure

- Access to affordable laboratory space and essential infrastructure (e.g., biobanks and advanced manufacturing) remains a key challenge.
- Recent developments include the Jumar Bioincubator (VIC), UNSW Health Translation Hub and UoS Sydney Biomedical Accelerator.
- Major investments from NSW Government intended to stimulate further activity include NSW Health Statewide Biobank, the RNA Pilot Manufacturing Facility and Viral Vector Manufacturing Facility.

3 Skilled workforce

- Australia has historically seen a steady "brain drain" of highly-skilled workers to larger, better-funded life sciences hubs in the US, Europe and Singapore.
- Development of the local life science ecosystem, including through private investment and researcher-industry partnerships, is important.
- Recent partnerships between Sanofi and QLD's Translational Research Hub and Moderna and Monash University provide opportunities to retain talent in Australia – similar partnerships in NSW are required.

Source: Strategic Examination of R&D discussion paper; UK Life Sciences Competitiveness Dashboard (2024);

NSW Govt supports precincts to stimulate economic growth and R&D commercialisation

The Australian and NSW Governments have demonstrated commitments to life sciences through sustained policies and investments

Australia's innovative life sciences industry delivers significant value to the economy

- Life sciences has a high R&D intensity which fuels economic growth from activities across the value chain
- The return on investment from medical research to the economy has been estimated at $3.90 per dollar invested (2018)
- State-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

The Australian Government has demonstrated enduring cross-party commitment to life sciences over the past 100 years

1985
Research & Development Tax Incentive (RDTI)

1990
Cooperative Research Centre Grants (CRC)

1992
National Health & Medical Research Council (NHMRC) Act

2004
National Collaborative Research Infrastructure Strategy (NCRIS)

2015
Medical Research Future Fund (MRFF)

NSW Government's focus for life sciences is driving economic growth, leadership in innovation and healthcare advancement

- NSW continues to invest significantly in health/research infrastructure
- Government is currently driven to improve NSW's relative innovation performance
- NSW Health Research and Innovation Strategy 2025-2030 highlights precincts and place-based initiatives as a key focus

>$5bn
in life sciences infrastructure

$3.4bn
for capital works in 2024-25 budget

Health and innovation precincts have been identified as an opportunity to address Australia's commercialisation challenges

- Precincts generate economic and social returns
- Private investment makes critical contributions to life sciences and precinct developments, contributing to precinct maturity

sanofi — *Translational Research Institute (QLD)*

moderna — *mRNA Manufacturing facility & Regional Research Centre for Respiratory Medicines and Tropical Diseases (VIC)*

Plenary — *UNSW Health Translation Hub (NSW)*

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25;

Camperdown is positioned to promote research commercialisation and translation

This includes access to critical funding to develop infrastructure that attracts capital, retains IP, and supports talent retention

Support needed	*Camperdown's key strengths*	
1 Access to capital	**Industry Tenants which can support crowding in of capital** *Atlassian, SpeedDx, Quantium, Harrison.ai, Clarity Pharmaceuticals, SpeeDx, Anthrocell*	Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and talent. ***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*
	Existing incubators to support a pipeline of companies *Cicada Innovations, SBA Incubator*	
2 Specialised infrastructure	**Strong commitment and support from government** *$48.2 million from NSW government into Tech Central precinct*	Colocation with hospitals and clinical research provide the necessary expertise and patient settings to support successful life sciences product development (and delivery). For example, the advantage of proximity to the Department of Cell and Molecular Therapies (CMT) at RPAH. ***Examples in Tech Central:** RPAH, I-MED, National Research Cyclotron, George Clinical, Professor Marie Bashir Centre, The Boden Initiative Clinical Trials; NHMRC Clinical Trials Centre University of Sydney.*
	World-leading universities & MRIs to leverage existing infrastructure and collaboration	
3 Expertise and knowledge sharing	**Availability and access to talent** *There are over 160,000 STEM graduates in NSW, and Tech Central is projected to have 25,000 jobs by 2036 with a focus on STEM and life sciences*	Proximity to the CBD is a key strength of Tech Central over other health and innovation precincts in NSW. Benefits include a large population and high connectivity from public transport, supporting talent attraction. ***Examples in Tech Central:** Lightrail, Metro, Train, Central Station, Buses along Parramatta Road.*
	Proximity to CBD	

MRIs = Medical Research Institutes; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
Source: NSW Government Sydney Innovation and Technology Precinct

Life Sciences Hub (Camperdown), adjacent to Tech Central

Section 1

The proposed development envisions a world-class Life Sciences Hub

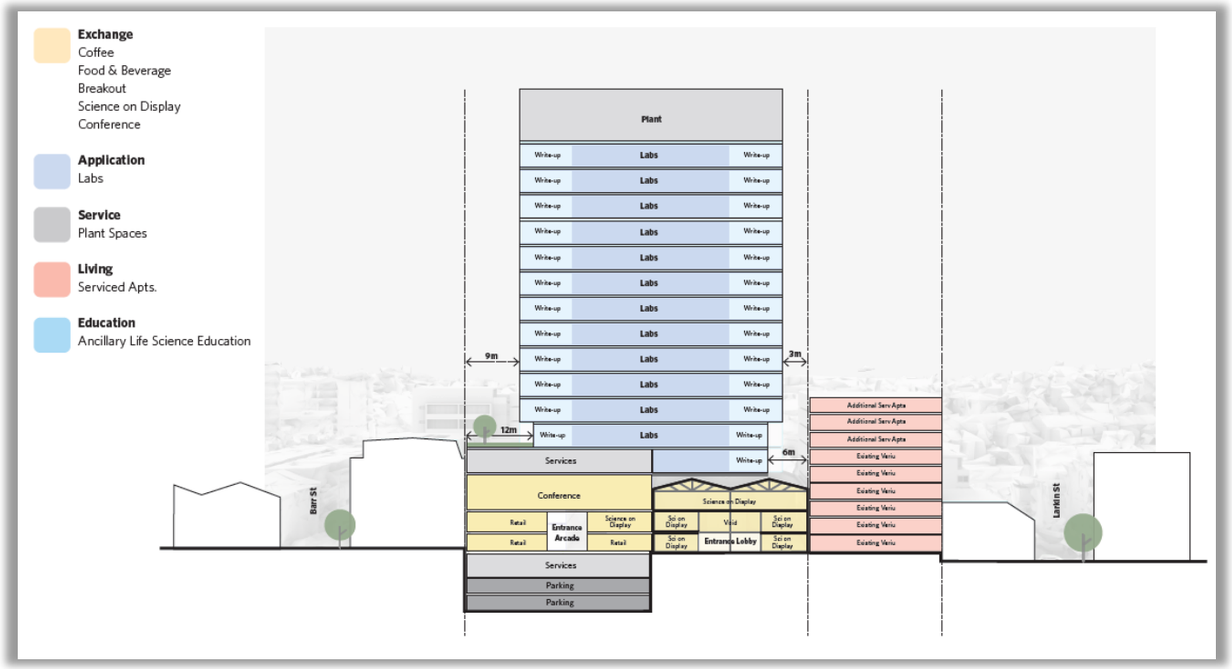
University of Sydney and Wentworth Capital, aim to establish Camperdown as a premier Life Sciences Hub (Camperdown), through a life sciences research facility at 84-94 Parramatta Road, Camperdown

The proposed site will be tailored to the specific needs of the life sciences industry to address the critical need for laboratory infrastructure in NSW and to support translation and commercialisation.

The proposal includes a total gross floor area (GFA) of 38,802m² including a Life Science Tower Block across 15 Storeys and 2 Plant Levels. Economic modelling indicates the proposal will generate approximately 1,200 FTE jobs, including researchers and support staff. This will support the creation of new life science jobs and wider economic benefits for the city.

314

Leveraging the location within the Camperdown node of the Tech Central precinct, this site will aim to attract domestic and international life sciences companies to Sydney.



This new campus will be adjacent to the **University of Sydney** and **Sydney Biomedical Accelerator** and will be integrated to complement the existing life science and innovation ecosystem. This proposal provides critical space for the translation and commercialisation of biomedical and life sciences research, growing the precinct to **~190,000m² of life sciences floor space**.

Atlas Economics Market Demand & Economic Impact (2025); HDR Analysis, Life Sciences Hub (2025)

Biointelect

Camperdown is adjacent to Tech Central, a precinct focused on tech and life sciences

Tech Central is a 6km^2 precinct bordered by Haymarket, Camperdown, and South Eveleigh in Sydney's CBD. The precinct currently has the highest concentration of tech industry businesses in Australia, including Atlassian, Afterpay, Canva, Safety Culture and Rokt, as well as 150 research institutes/centres of excellence.

The precinct **directly** and **indirectly** stimulates the **NSW economy** via:

- **Capital investment** (buildings for office, labs and healthcare)
- **R&D expenditure**
- Labour force **skills** development
- Research **translation**
- Labour force **productivity**
- **Service delivery expenditures** (health and education)
- **Commercial tenant income** generation

The Tech Central Strategy seeks to grow the precinct to deliver:

- **25,000 jobs** by 2036 with a focus on STEM and life sciences
- **250,000m^2 of net lettable** floorspace for tech companies
- **50,000m^2 of lettable** affordable workspace for start-ups
- **100 new scale-up** companies

A number of existing strategic planning documents and policies demonstrate commitment to the precinct:

Draft Central Sydney planning strategy (2016) *City of Sydney*	**The Sydney Innovation and Technology Precinct Panel Report** (2018) *NSW Government*	**Camperdown-Ultimo Place Strategy** (2019) *GSC*	**Draft Local Strategic Planning Statement City of Sydney** (2019) *City of Sydney*	**Tech Central Strategy** (est 2025) *Investment NSW*
20-year growth strategy	Recommendations to position the precinct as globally competitive	Establishes a vision and priorities for the area	20-year vision priorities for City of Sydney land use planning	Empower innovation in Tech Central and support housing and growth industries

https://www.investment.nsw.gov.au/innovation/precincts/tech-central/; https://www.theurbandeveloper.com/articles/sydney-central-precinct-tech-central; https://www.nsw.gov.au/ministerial-releases/nsw-government-to-unleash-full-potential-of-tech-central; https://www.planning.nsw.gov.au/sites/default/files/2023-03/central-precinct-strategic-framework.pdf

Biointelect

Tech Central has attracted major industry anchors across tech and life sciences

Tech Central's focus on digital technologies and medtech differentiates it from other precincts, providing a distinct value proposition

	Tech Central	Westmead Health and Innovation Precinct	Randwick Health and Innovation Precinct	Macquarie Park Innovation District	Melbourne Biomedical Precinct
Life Sciences Focus	Biomedical research including **brain and mind centre, cancer, nanoscience, advanced therapies and medical devices**	Advanced therapeutics, translational cancer, infectious diseases, immunology and vaccinology, clinical research and digital health and big data	Genomics and genetics, children's cancer, neuroscience, mental health, drug and addiction, virtual health	Biotech and pharma, as well as medtech, healthcare, advanced manufacturing and digital technologies	Biotech and clinical research focus including Infectious diseases, neurosciences, cancer, children's health and ageing
World-Leading Universities & MRIs and Hospitals & Clinical Research	RPAH, USYD, UTS, SBA, University of Notre Dame, Sydney Manufacturing Hub, Sydney Nanoscience Hub, CSIRO Data 61, Centenary Institute	Western Sydney University, Westmead Hospital, largest research-intensive pathology service in NSW, Sydney Children's Hospital Network, WIMR	UNSW, Prince of Wales Hospital, Sydney Children's Hospital, Royal Hospital for Women, nine MRIs	Macquarie University, Woolcock Institute of Medical Research, Australian Genome Foundry	University of Melbourne, WEHI, Doherty Institute, VCCC, Royal Children's Hospital, Monash Institute of Pharmacology, Florey Institute
Collaboration with Industry	Atlassian, Cicada Innovations, SBA Incubator, SpeeDx, Quantium, Harrison.ai, Ab-initio Pharma, Anthrocell	Sydney Cell and Gene Therapy, Viral Vector Manufacturing Facility, HealthTech Hub Innovation Quarter	Scientia Clinical Research, Omico	Macquarie University Deep Tech Incubator, Cochlear, GlyTherix, AstraZeneca, Sanofi, Abbott, Nanosonics, Oncosil Medical, Smith & Nephew	CSL, Telix Pharmaceuticals, Rhythm Biosciences
Access to Talent & Government Support	• 12,000 jobs across SLHD • $48.2m committed from NSW government	• 18,000 specialised jobs • 11,096 hospital staff • $3bn committed by government, university & private sector	• 22,000 workforce • $1bn infrastructure investment by UNSW, NSW Government and Federal government	• 63,000 jobs in the precinct • 20,000 health professionals and researchers • $13.6bn in GDP in 2023	• 49,000 employed • $2.8bn investment capital in infrastructure between 2008-18

316

***Green shading indicates key strength**; WIMR = Westmead Institute for Medical Research; VCCC = Victorian Comprehensive Cancer Centre; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator; UNSW = University of New South Wales*

Adapted from https://sgsep.com.au/assets/main/SGS-Economics-and-Planning_Randwick-Health-and-Innovation.pdf; https://www.ausbiotech.org/biotechnology-industry/australian-life-science-and-innovation-directory; https://www.westmeadhealthprecinct.com/ArticleDocuments/210/WHP%20Industry%20Prospectus%20ENDORSED%20March%202022.PDF.aspx?Embed=Y; https://www.connectmpid.com.au/about-macquarie-park

Recent developments and proposals in the precinct reflect its growth and maturity

Both private and public infrastructure projects are well progressed at Tech Central



Atlassian Headquarters
Central Place Sydney

Led by Private Sector *(Atlassian)*

- Commercial office space and tech hub for Atlassian's new headquarters (anchor tenant).
- Affordable space for startups and scaleups.



The Central on Thomas
Thomas Street

Led by Private Sector *(Greaton)*

- Vertically integrated tech village with a hotel, commercial space and technology hub including laboratories.



Greenhouse
Circular Quay*

Led by Public *(City of Sydney)* ***and Private Sector*** *(Investible)*

- $31 million innovation hub for clean-tech/climate change over 3,800m^2.
- Located in the Salesforce Tower at 180 George Street, and closely aligned with Tech Central.



Prince Alfred Substation

Led by Public Sector *(Transport for NSW)*

- Adaptive reuse project for an unused heritage asset as a potential space for tech and creative industries or startups.

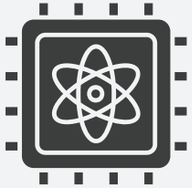
**Not strictly within Tech Central precinct*
https://meetings.cityofsydney.nsw.gov.au/documents/s59828/Tech%20Central%20Innovation%20Precinct%20-%20Progress%20Update.pdf

Tech Central focuses on seven key growth industries, including medtech

These industries have high impact and propensity to drive economic growth, leveraging the expertise and assets in the precinct



Medtech



Quantum Technologies



Artificial Intelligence



Digital Creatives



Connected & Autonomous Vehicles



Applied Robotics



Cyber Security

https://meetings.cityofsydney.nsw.gov.au/documents/s59828/Tech%20Central%20Innovation%20Precinct%20-%20Progress%20Update.pdf

Biointelect

For life sciences companies, Tech Central has existing strengths and value attributes

These six value attributes offer strategic opportunities for the Life Sciences Hub (Camperdown)

World-Leading Universities & MRIs



Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and source of talent.

***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*

Hospitals & Clinical Research



Co-location with hospitals and clinical research provide the necessary expertise and clinical settings to support successful life sciences product development (and delivery). For example, proximity to the Department of Cell and Molecular Therapies (CMT) at RPAH is an advantage.

***Examples in Tech Central:** RPAH, I-MED, National Research Cyclotron, George Clinical, Professor Marie Bashir Centre, The Boden Initiative Clinical Trials; NHMRC Clinical Trials Centre University of Sydney.*

Industry & Incubators



Industry are critical additions to successful precincts as they create job opportunities, collaborative networks and partnerships. Incubators provide important support for entrepreneurship and innovation, which have a particularly strong case in life sciences given the specialised expertise required and capital intensity.

***Examples in Tech Central:** Atlassian, Quantium, Clarity Pharmaceuticals, Cicada Innovations, SBA Incubator, SpeeDx, Anthrocell.*

Talent



Availability and access to talent is critical to supporting the core research and innovation undertaken in a precinct, as well as supporting services and amenities.

***Examples in Tech Central**: There are over 160,000 STEM graduates in NSW, many of which will come from University of Sydney and University of Technology Sydney.*

Connectivity & Proximity to CBD



Proximity to the CBD is attractive to companies, particularly international companies. Benefits include a large population and high connectivity to public transport, supporting talent attraction.

***Examples in Tech Central:** Lightrail, Metro, Train, Central Station, Buses along Parramatta Road.*

Amenity



Amenities in Tech Central support a thriving destination and enjoyable atmosphere for people to live and work. This includes retail, parklands, restaurants and bars, and sporting facilities.

***Examples in Tech Central**: Broadway Shopping Centre, Bars and Restaurants along King Street Newtown, Crown Street Surry Hills, Victoria Park, Carriageworks.*

RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
https://www.investment.nsw.gov.au/assets/Global-NSW/Tech-Central-Precinct-Brochure.pdf

The proposed Life Sciences Hub will promote research commercialisation & translation

This includes access to critical funding to develop infrastructure that attracts capital, retains IP, and supports talent retention

Support needed	*Camperdown's key strengths*	
1 Access to capital	**Industry tenants, which can support crowding in of capital** *Atlassian, SpeedDx, Quantium, Harrison.ai, Clarity Pharmaceuticals, SpeeDx, Anthrocell*	Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and talent. ***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*
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	Proximity to CBD	

MRIs = Medical Research Institutes; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
Source: NSW Government Sydney Innovation and Technology Precinct

Global Life Sciences Industry Trends

Section 2

Life sciences is a global growth sector with significant opportunity for NSW

The global life sciences sector is a high-value, growth industry

The value of the global pharmaceutical market is projected to grow 38% from 2023-28

Pharmaceutical trade flows primarily from EU, US, China and Japan; FDI and deal flows focus on US, Europe and China

Investment in life sciences grew steadily over the last decade, with a rapid increase during the pandemic and slowing since

With reduced risk appetite, investors are focusing on defined/ proven products, and biotechs increasingly rely on partners to support development and commercialisation activities

Global growth is driven by new technologies and modalities

These are shifting treatment modalities and R&D, altering infrastructure needs and highlighting gaps in Australia

Regenerative Medicine

Therapies to manipulate or modify a patient's cells or genes to treat disease

Personalised & Precision Medicine

Omics technologies increasingly applied, enhancing efficiency and reducing costs

Medical Technology

Evolving with patient-specific orthopaedics and bioprinting for regenerative medicine

Advanced Technology & Computing

Convergence of AI, quantum computing and digital health transforming life sciences

There are opportunities to benefit from substantial global growth projections, focusing on new technologies and modalities, and on contract services to the life sciences industry.

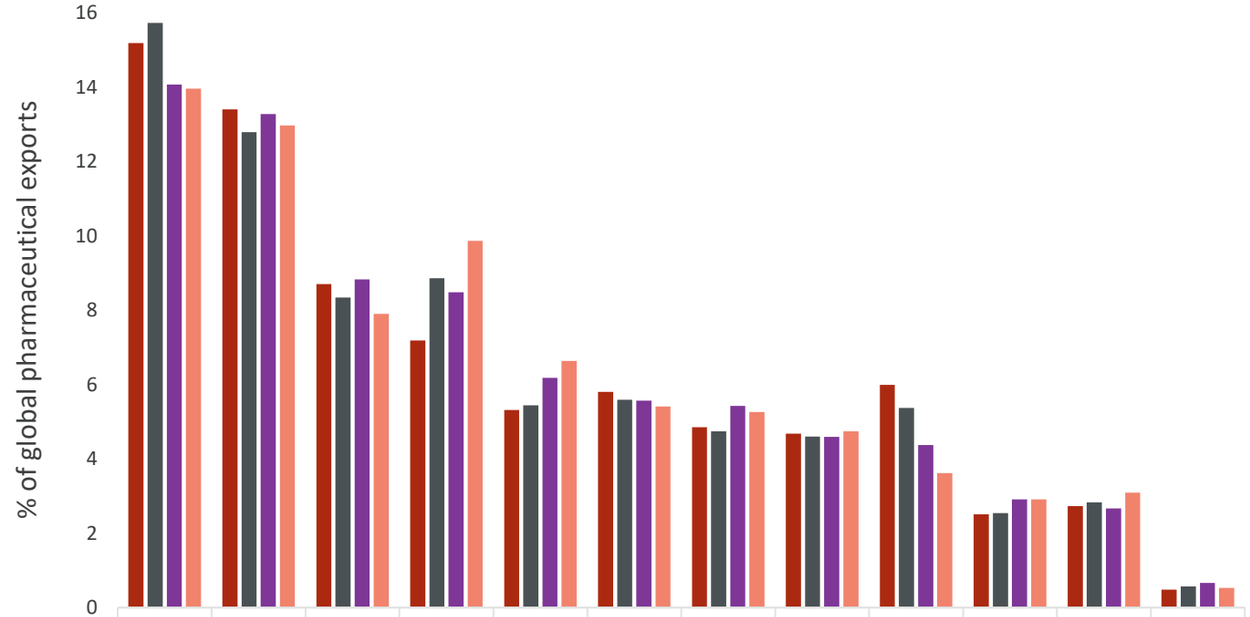
Source: IQVIA Institute, The Global Use of Medicines 2024: Outlook to 2028; AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

Pharmaceutical trade flows primarily from EU/US to EU, US, China and Japan

Australia is a net importer of pharmaceuticals

Country shares of global pharmaceutical exports (% by value)

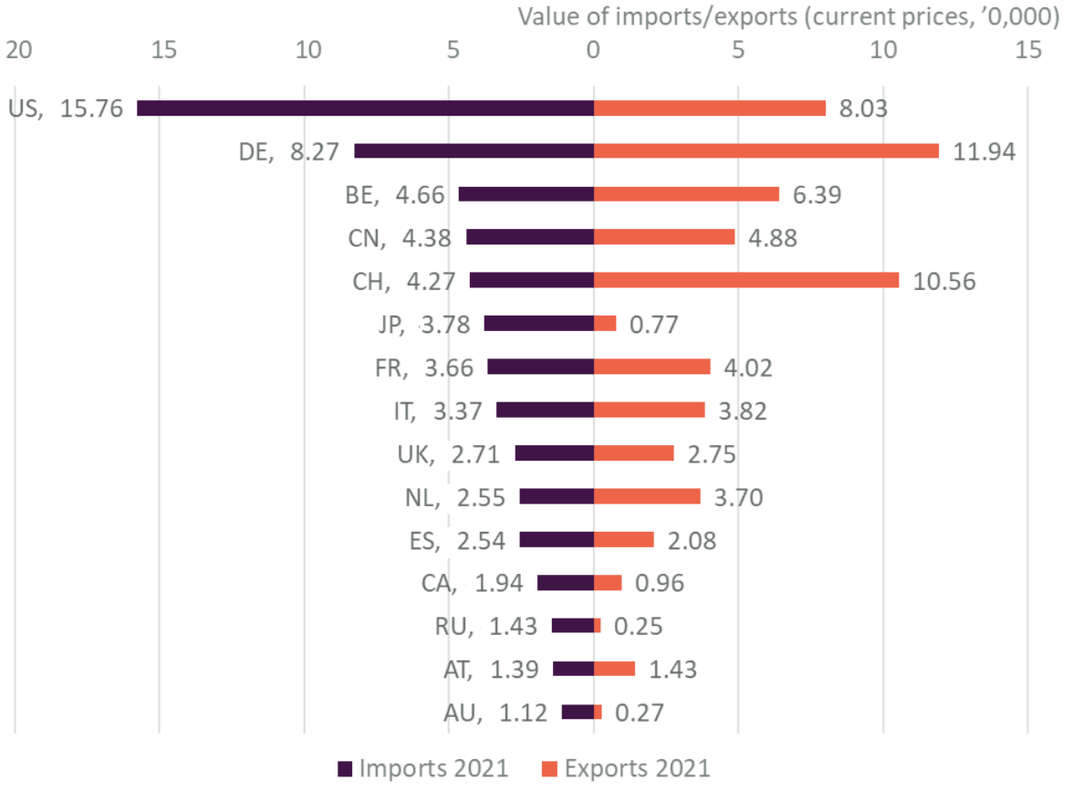
Top 10 exporters in 2019 plus China and Australia



	DE	CH	US	IE	BE	FR	IT	NL	UK	DK	CN	AU
2017	15.19	13.4	8.7	7.19	5.32	5.8	4.85	4.68	5.99	2.51	2.73	0.48
2018	15.73	12.79	8.34	8.86	5.44	5.59	4.74	4.6	5.37	2.54	2.83	0.57
2019	14.07	13.28	8.83	8.48	6.18	5.57	5.43	4.59	4.37	2.91	2.67	0.66
2020	13.96	12.97	7.9	9.87	6.64	5.41	5.26	4.74	3.62	2.91	3.09	0.53

Country shares of global pharmaceutical trade (value)

Top 15 importers in 2021

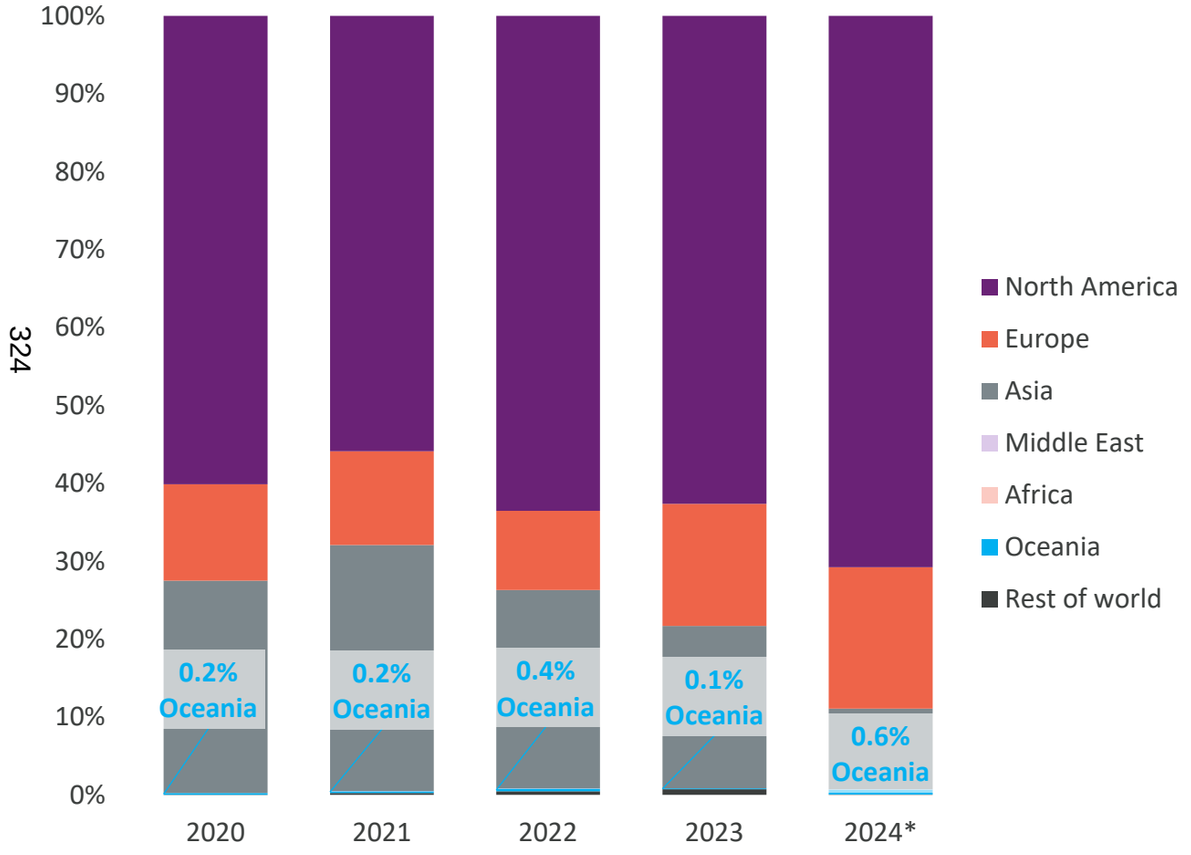


OECD MSTI Data. Note potential impact of pandemic on pharmaceutical trade in 2020/2021

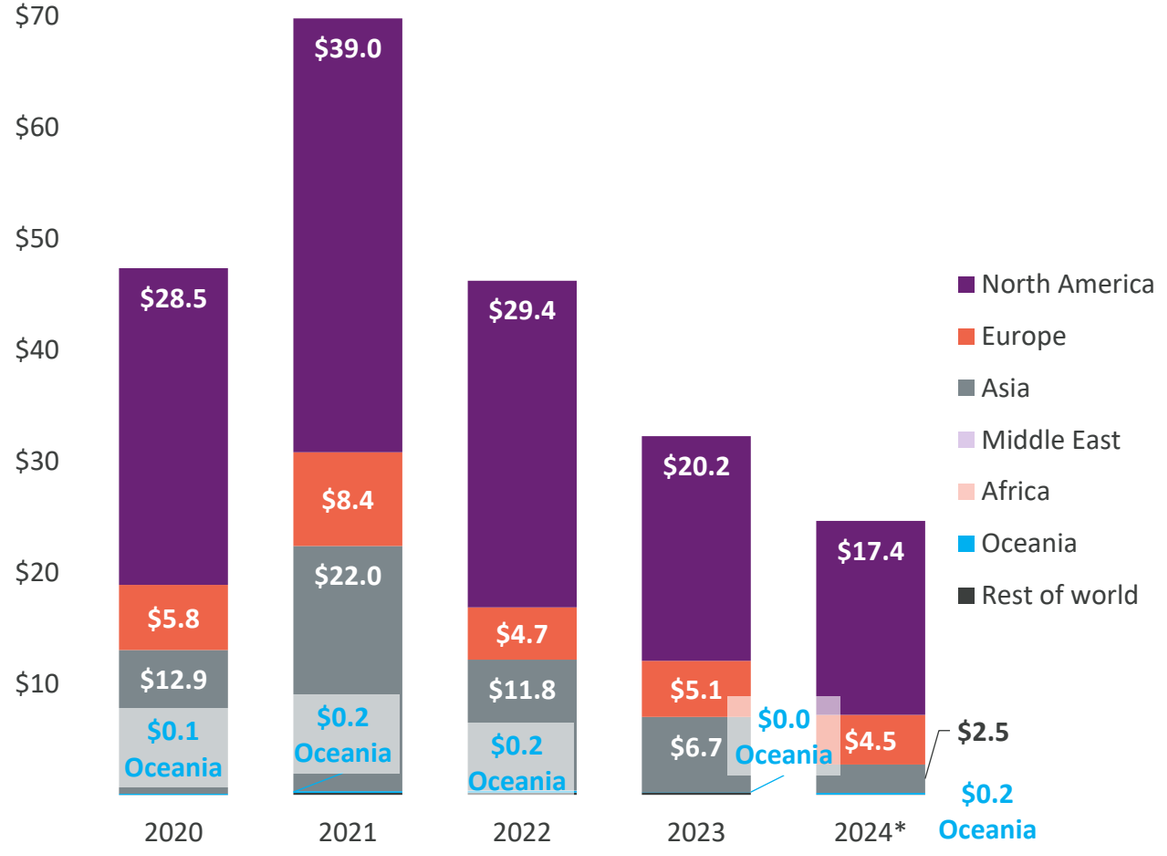
A majority of pharma VC deals occur in North America, followed by Asia

Pharma VC deals by region are generally indicative of the VC spread across the broader life sciences sector

Share of pharma VC deals value by region



Pharma VC deals value (USD$bn) by region



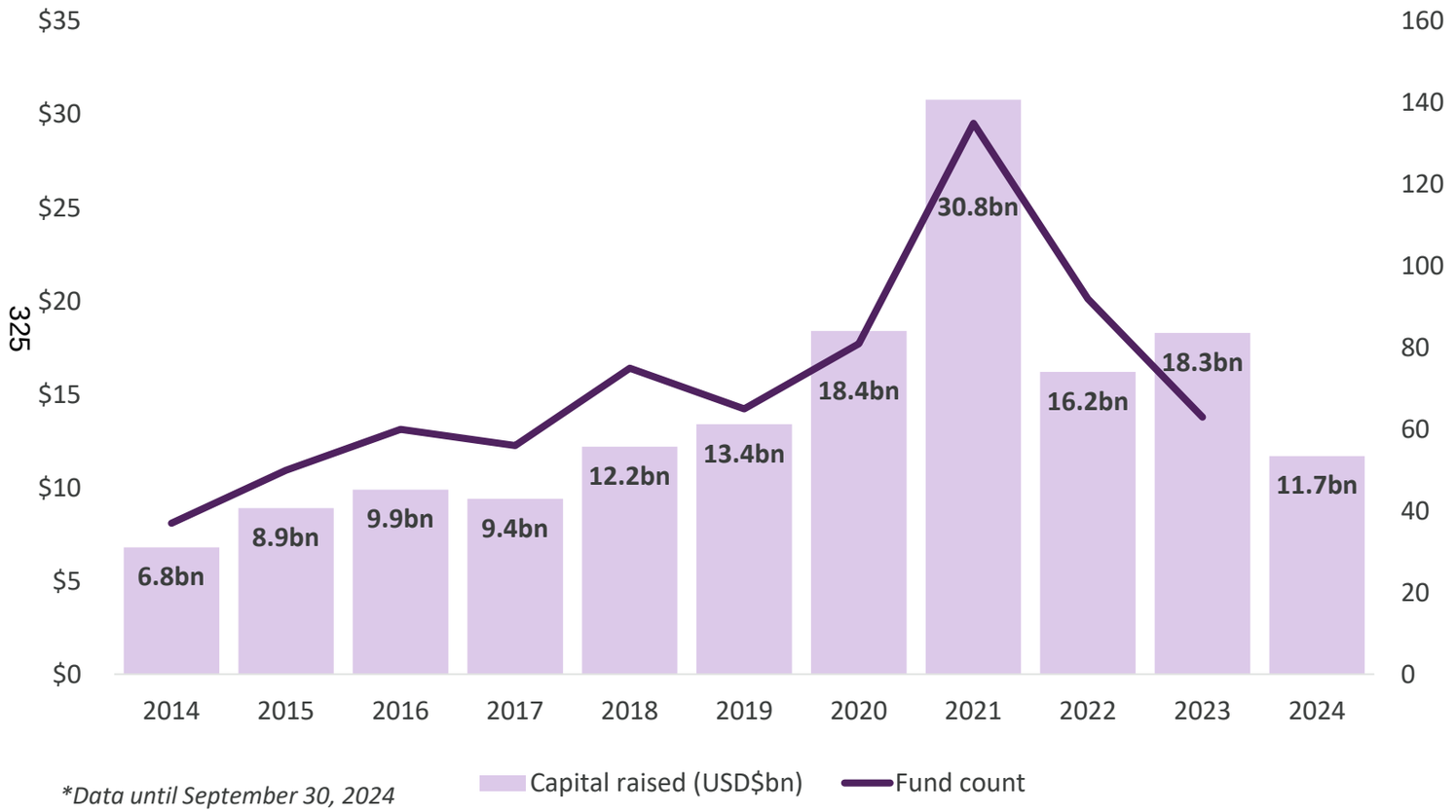
**Data until September 30, 2024*

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Investment in life sciences grew rapidly during the pandemic, and has since slowed

Increased competition from other high-growth sectors and macroeconomic pressures have constrained investments in life sciences

Global life sciences VC fundraising activity



**Data until September 30, 2024*

Globally, the sector experienced steady growth in VC activity prior to the pandemic.

Life sciences had unprecedented investment during COVID-19, driven by increased interest in vaccines, diagnostics and therapies. The sector peaked at 17.7% of all VC deals by value.

In Q3 2024, the sector's share of total deals declined to 13%, reflecting **increased competition from other sectors including AI and fintech**.

Macroeconomic pressures have driven the trend towards fewer but larger deals.

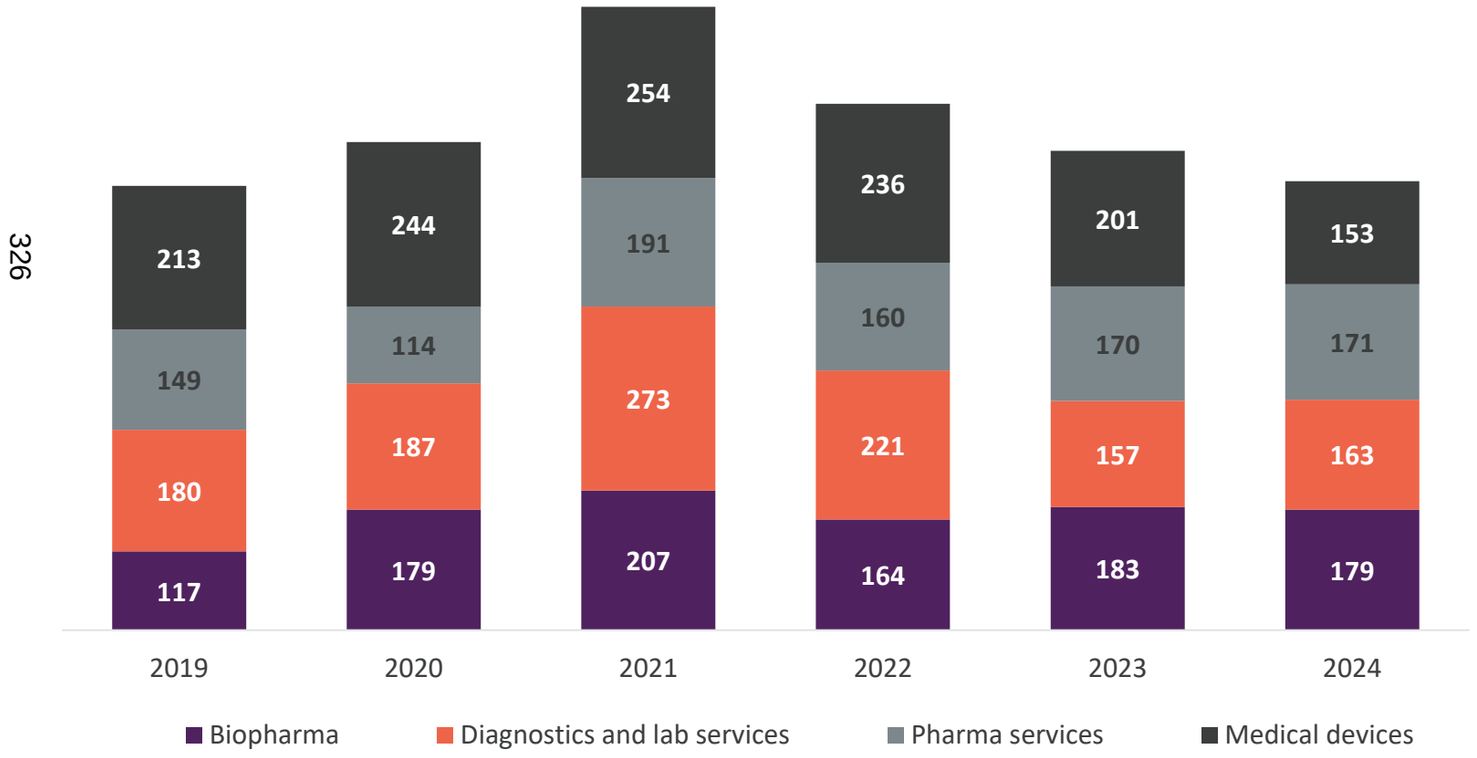
The relatively consistent high value of deals in life sciences reflects the capital intensity of research, clinical trials and manufacturing.

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Macroeconomic pressures have shifted investor preferences within life sciences

Globally, increasing costs and more conservative risk have driven investment away from early-stage biotech and medtech, towards pharma services, and other industries

Global life sciences strategic investments by subsector



Globally, ***high interest rates & inflation*** and ***slow economic growth…***

have impacted capital markets, including in life sciences by…

Increasing the cost of capital (therefore reducing investment) and *increasing development costs* (and risk of these speculative long-term investments).

Following growth in biopharma, diagnostics and medical devices during the pandemic, investors are increasingly favouring **pharma services.** Pharma services include CROs, and CDMOs as well as companies providing conmercialisation and consulting services.

Reflecting the rising costs and development challenges in biotech and medtech, investors have shifted toward late-stage opportunities

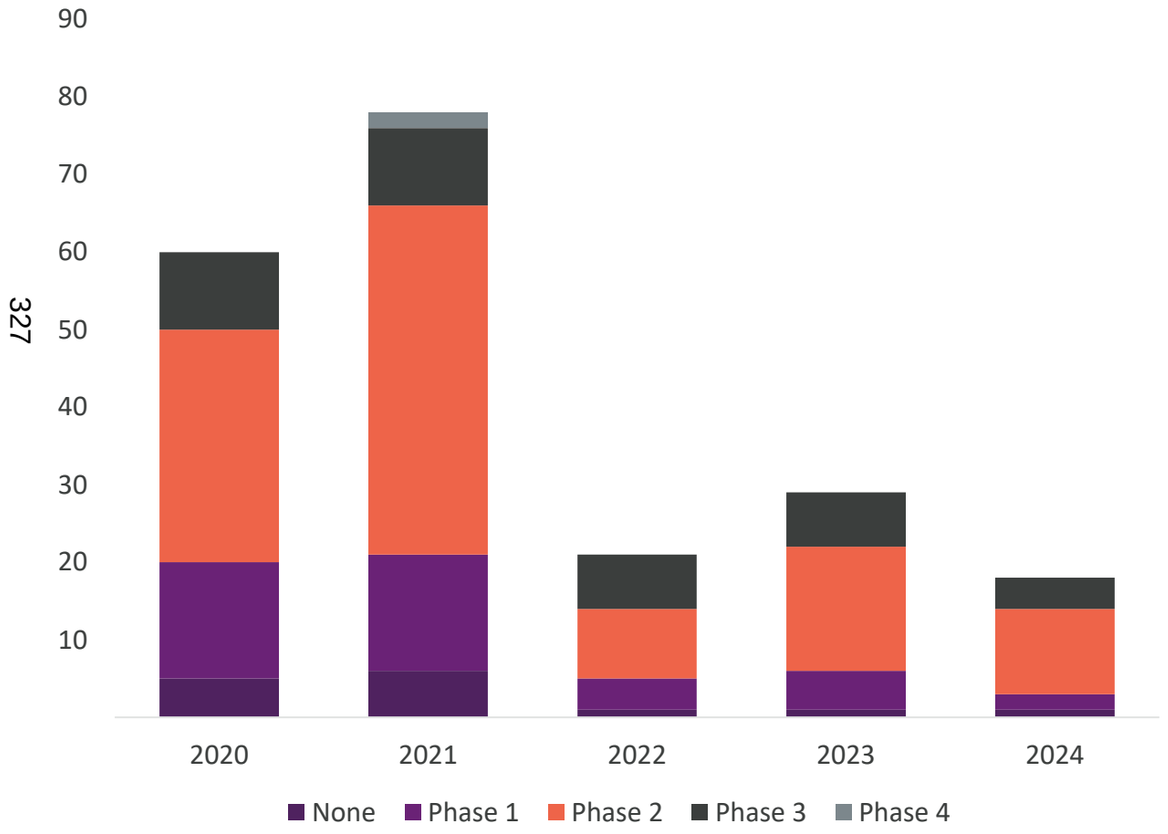
Investments in **AI-driven drug discovery**, **precision medicine**, and **digital health** are expected to dominate investment in 2025.

KPMG 2025 Healthcare and Lifesciences Outlook; Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025). CRO=contract research organisation; CDMO=contract development manufacturing organisation.

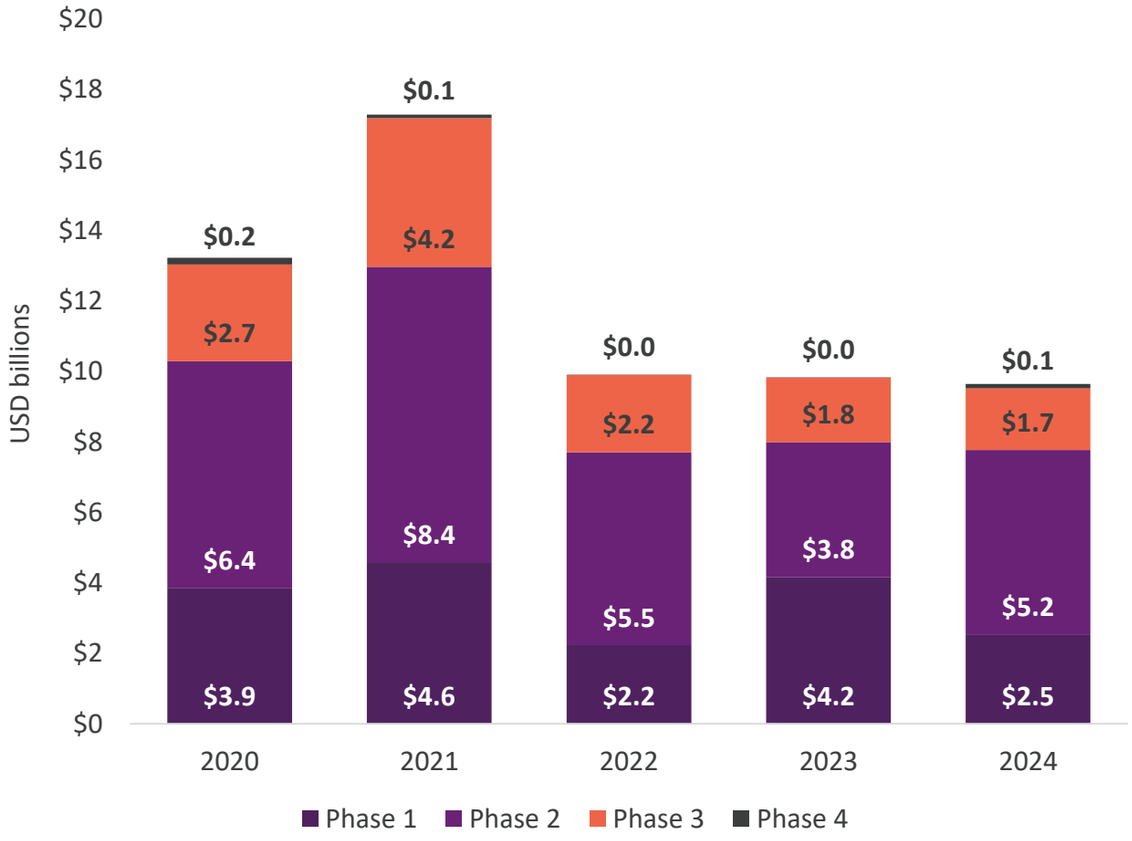
Globally, VC deals focus increasingly on later stage, less risky assets

This means that many companies are developing assets to Phase 2 or 3 before an exit

Biopharma VC IPO count by highest phase



Biopharma VC deal value (USD$bn) by highest phase



**Data until September 30, 2024*

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Global macro trends in healthcare are shaping changes in the landscape

Key trends driving the sector forward include new treatment modalities that are enabling personalised medicine, digital health and the integration of digital technologies with pharmaceutical and med tech products

Personalised and Precision Medicine

- Strong global momentum toward precision and personalised medicine, driven by increased understanding of genomics, biomarkers and individual patient variability. These approaches enable targeted treatments across a range of conditions including oncology to rare and chronic diseases.
- Global investment is accelerating, with the US, EU, and Japan, funding infrastructure and research into advanced diagnostics, biomarker testing and adaptive clinical trial designs.
- This is fueling demand for biobanking, genomic sequencing capabilities and integrated R&D precincts that can support translational research.
- Regulatory bodies are also adapting frameworks and developing guidance documents to support the cell and gene therapies, radiotheranostics and mRNA platforms, which have had significant deal activity globally.

New treatment modalities:

- Regenerative medicine (cell and gene therapies)
- Radiotheranostics
- mRNA-based therapies
- Microbiome-based therapies
- Cancer vaccines

Digital Technologies: AI & Quantum

- The expansion of digital technologies in life sciences reflects a widespread push towards data-driven healthcare systems and more efficient R&D.
- While initially limited to AI-driven drug discovery, applications are now driving innovation across the entire value chain, including clinical trials.
- Countries worldwide are prioritising investments in AI-driven infrastructure, real world evidence platforms and remote patient monitoring tools, supported by secure cloud computing and data centers.
- This convergence is also fostering cross-secotr collaborations between biotech, medtech, and technology companies.

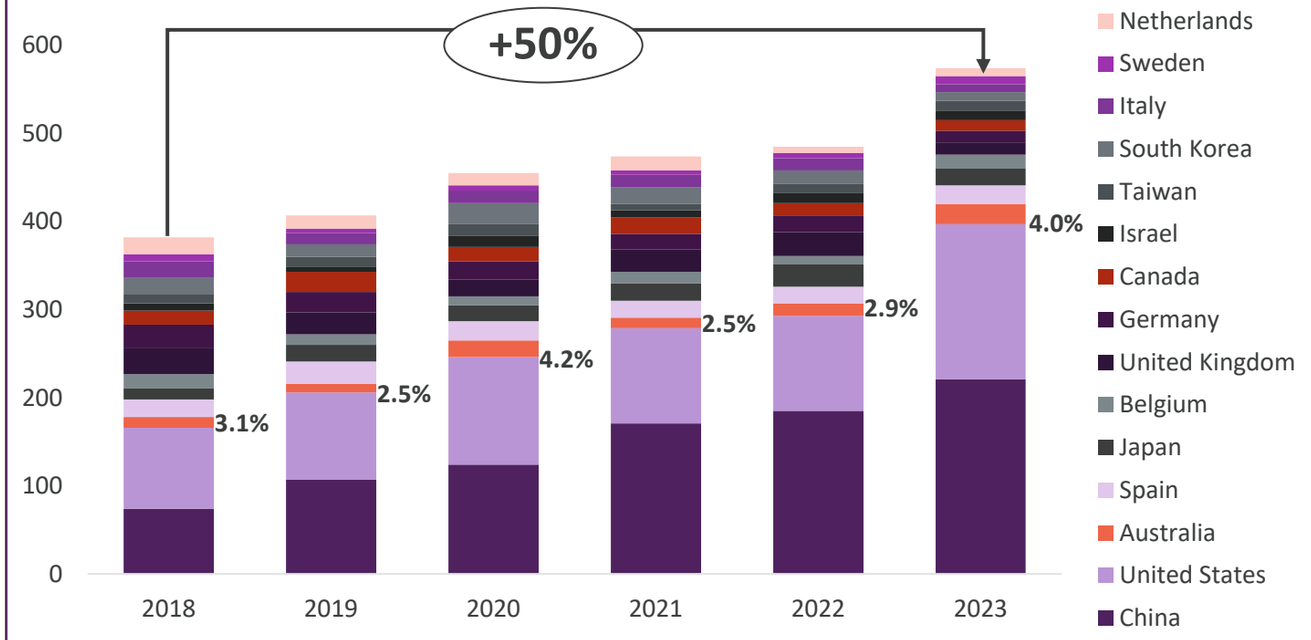
New modalities:

- AI-driven drug discovery and clinical trial patient recruitment
- Digital therapeutics
- Companion diagnostics
- Remote patient monitoring and wearables
- Digitally-enabled implantable devices
- Telehealth-enabled clinical trials

328

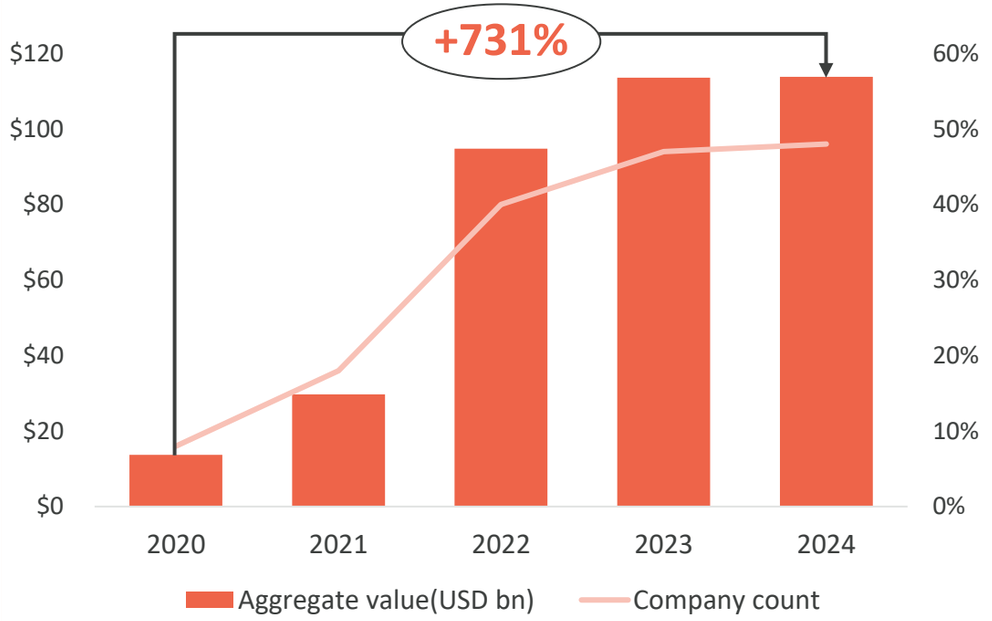
Growth in advanced therapies and digital health signal adoption of new modalities

Number of Industry Sponsored Advanced Therapy Trials



- **In 2023, cell and gene therapies accounted for 22% of total deal volume with 9 out of the 10 largest deals focused on precision medicine**.
- Although deal activity declined in 2024, strong growth in advanced therapies is still anticipated. This drives clinical trial activity, where Australia outperforms.
- While China has the highest by number, these are mostly smaller, domestic only trials.

Global Aggregate Digital Health VC Value and Count



- The digital health sector has seen rapid growth in VC funding, which has resulted in a maturing sector with many startups now positioned for transition to public markets or commercial exits.
- This subsector is anticipated to increasingly converge with biotech, medtech and delivery via wearables, AI-enabled drug discovery and clinical trials.

Global Data Advanced therapies refers to Molecule Type search criteria, cell therapy; gene therapy; gene-modified cell therapy. The analysis excluded suspended, terminated and withdrawn trials; KPMG 2025 Healthcare and Lifesciences Outlook; Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Australian Life Sciences Sector Value, Overview & Trends

Section 3

Life sciences is a growth sector that contributes strongly to the economy

The sector fuels jobs, investment and global partnerships through a highly educated and skilled workforce, access to leading infrastructure, a globally competitive clinical trials sector and the commercialisation of new medical technologies

$255bn

Value of ASX-listed life sciences industry (2024)

350,000

Jobs across the life sciences industry (2024)

4.4%

Forecast life sciences industry annual growth

23rd

Australia's Global Innovation Index R&D ranking (2024)

2,905

Life sciences organisations in the sector in 2024

$64bn

Partnership deals (domestically and internationally, 2017 to 2024)

IBISWorld Biotechnology report (2023); Australian Department of Health and Aged Care (2022); AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025); WIPO, Global Innovation Index (2024)

Australia is an important market for biomedical products and as an R&D destination

Australia is a relatively small market (globally), but has a sophisticated healthcare system and strong government support for R&D

Indicators influencing Australia's attractiveness:

Market for Biomedical Products

Population Growth: Population aged over 65 is set to almost double by 2060, driving health expenditure.

Health Spending as a Percentage of GDP: Australia is among the top 15 countries in the world in health expenditure.

Spend on Innovation: Australia is ranked 15th in OECD for the proportion of new drugs reimbursed.

Respected Regulatory System: Recognition of TGA approvals and work-sharing arrangements can enable streamlined submission across countries.

R&D Destination

R&D Expenditure and Funding: Australia has had consistent growth in health R&D expenditure, >$7bn in 2022-23. 73 biotech IPOs raised $1.55bn between 2010-2022. Biotech/medtech are among the top 3 sectors attracting VC funding.

Clinical Trials: Growing sector which attracts $1.25bn in industry expenditure.

Skilled Workforce: Australia has 109K STEM and Health graduates (2022), and 350,000 employed in life sciences (2024).

Government Support: Over $14bn in government R&D expenditure in 2024-25 including $4.2bn in R&D Tax Incentive.

IP Protection: Perceived as a market with strong IP protection for innovations.

World-Leading Institutions and Clinical Trial Capabilities: Leading universities (40) and medical research institutions (55), supporting a thriving clinical trial sector.

Research Infrastructure & Precincts: Health and innovation precincts across every major city, enabling collaboration across industry, research institutes, and universities.

Local Businesses: Strong local biotech and medtech ecosystem with 2,905 life sciences organisations, supported by research, clinical, manufacturing and commercialisation services.

TGA = Therapeutic Goods Administration

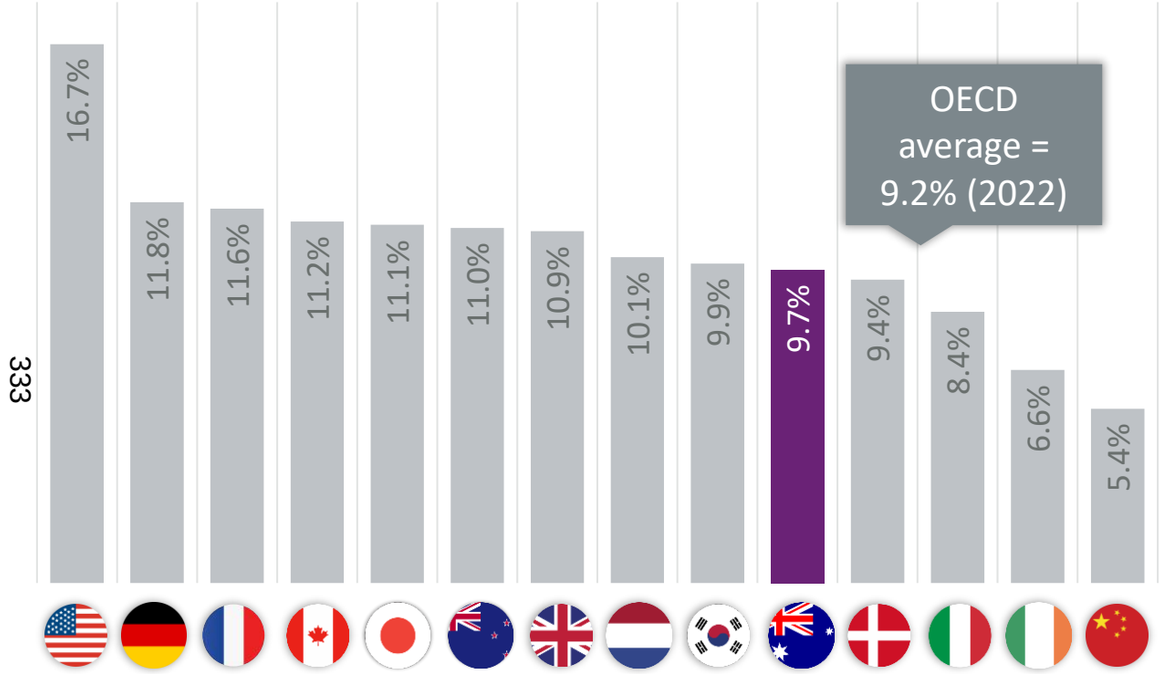
Source: AIHW, Health expenditure (2023;OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023); Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25; DISR, STEM Equity Monitor (2025)

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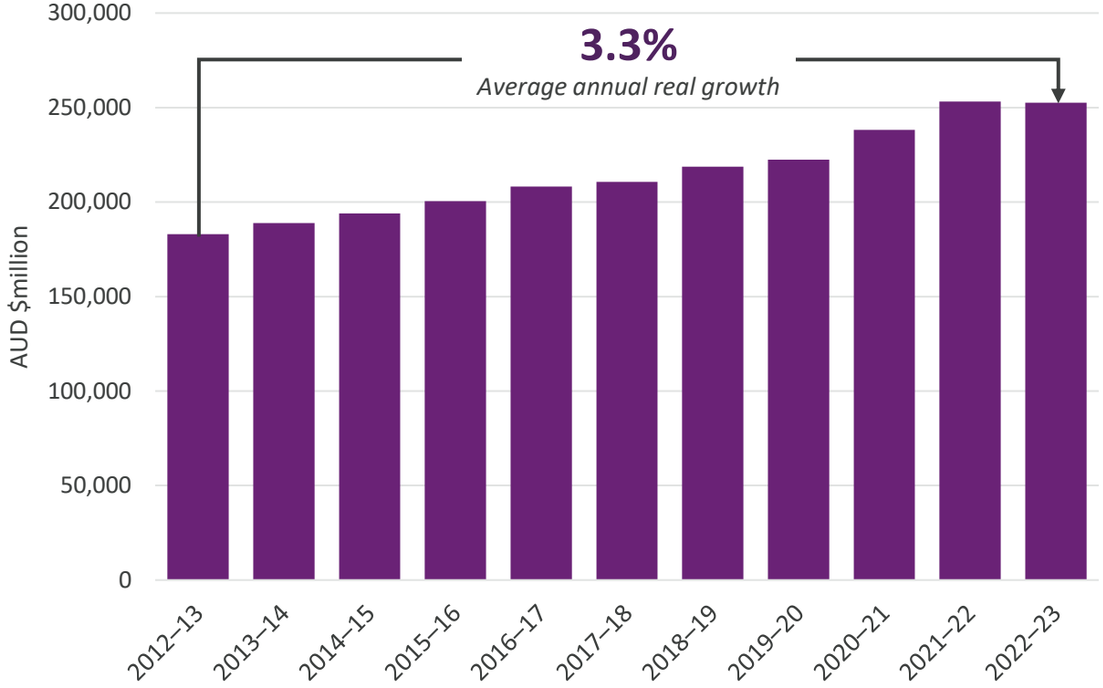
Australia is among the top 15 countries in the world in health expenditure

Australia is a smaller but important market for multinational companies to commercialise health technologies

Health spending as a % of GDP (2023 or nearest year)



Total health spending, constant prices



- In 2022, Australia's health spending as a % of GDP ranked 15th among 38 other OECD countries.
- Australia's population over the age of 65 is set to almost double by 2060, which will drive health expenditure.

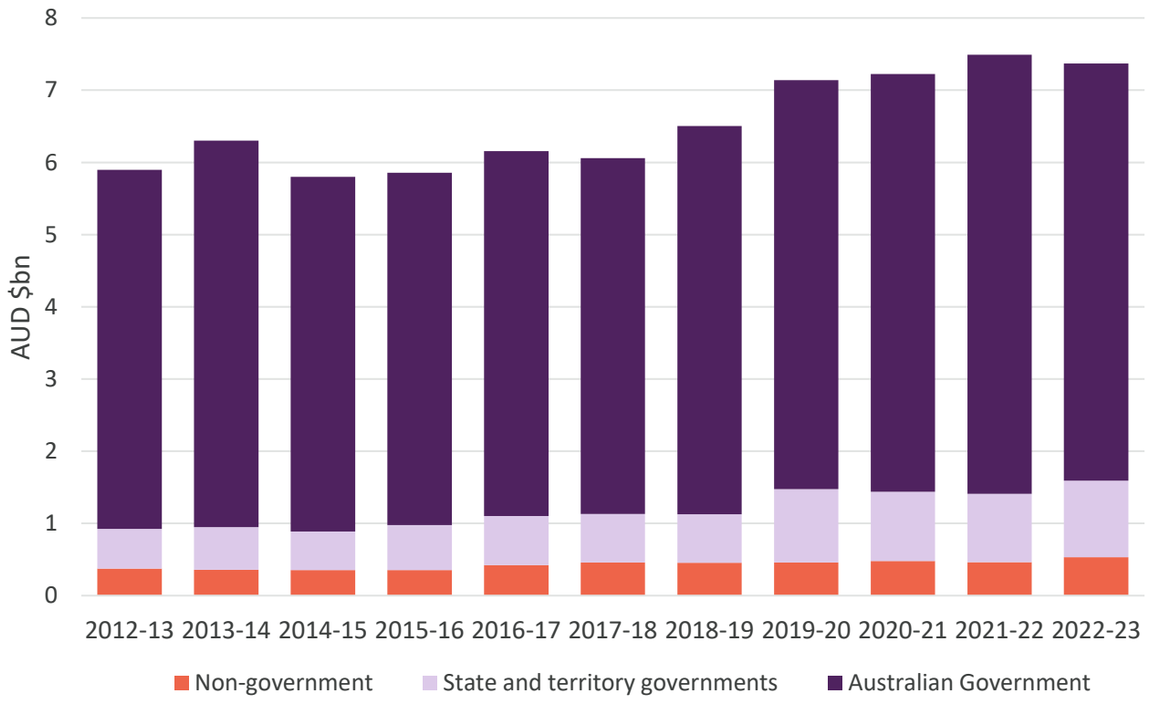
- Australia's total health expenditure per capita is expected to exceed Germany's current level by 2031-32.
- Spend on innovations is significant, with Australia ranking 15th in OECD for the proportion of new drugs reimbursed.

AIHW, Health expenditure (2023); OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023)

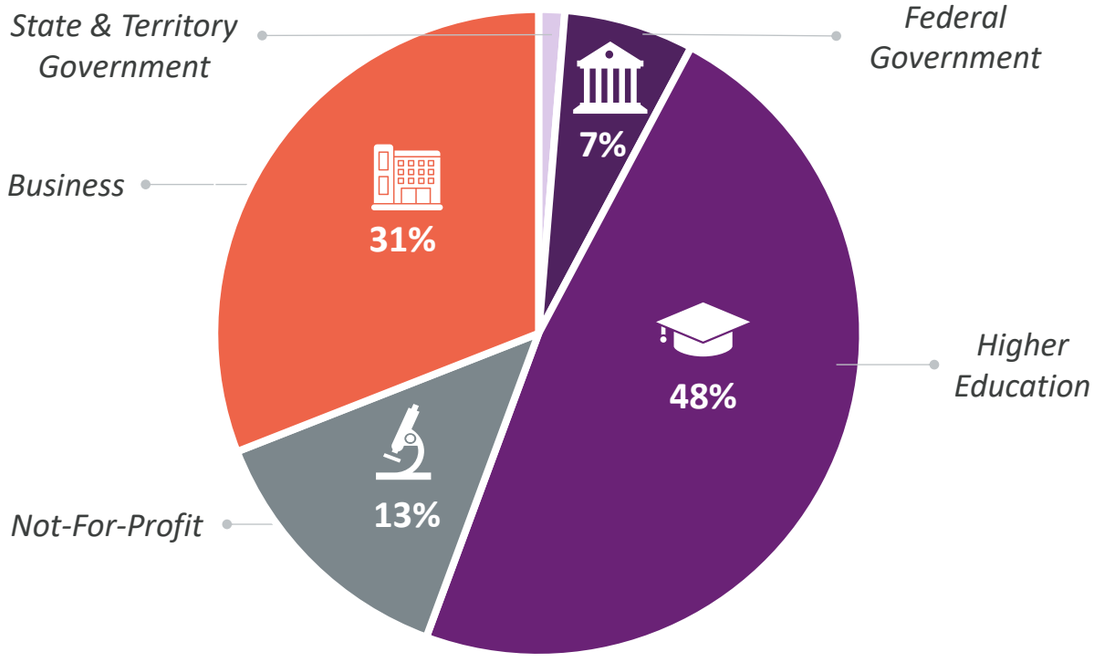
Australia invests heavily in health-related R&D, primarily funded by government

Government invests 18.7% of total R&D in health, which is predominantly performed by universities and businesses

Health-related R&D funding by source



Performance of life sciences R&D by expenditure (2022*)‡



1.7%
Australian Government: Real Growth 2012-2023

7.9%
State and Territory: Real Growth 2012-2023

3.8%
Non-Government: Real Growth 2012-2023

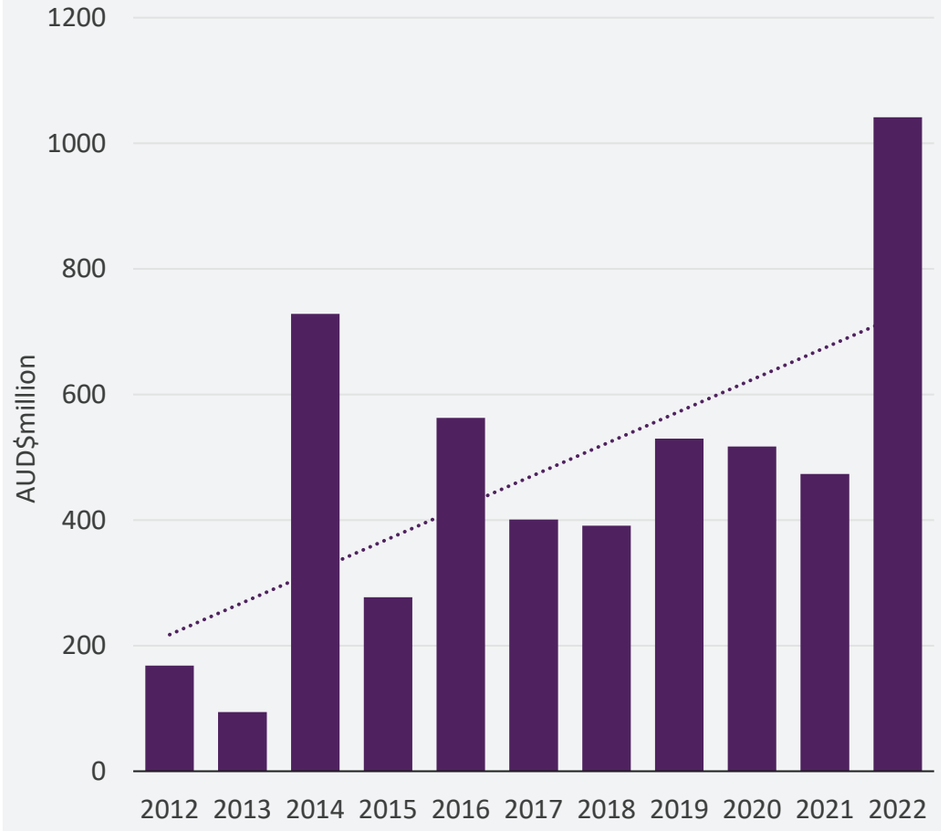
**Estimates based on Australian Bureau of Statistics (ABS) data. Government and NFP data is for 2022/23; Higher Education is for the calendar year 2022 and Business is for 2021/22.*
‡SEO of Health (by socio-economic objective) generally provides the most accurate estimate of life sciences R&D. However, the combined Fields of Research (FoR) of Biomedical and Clinical Sciences; and Health Sciences (ANZSCR 2020); is used for Business because most health and medical research in industry is classified under the SEO of Manufacturing (rather than Health).

AIHW, Health expenditure (2023); Research Australia, Australian H&MR Facts (2024)

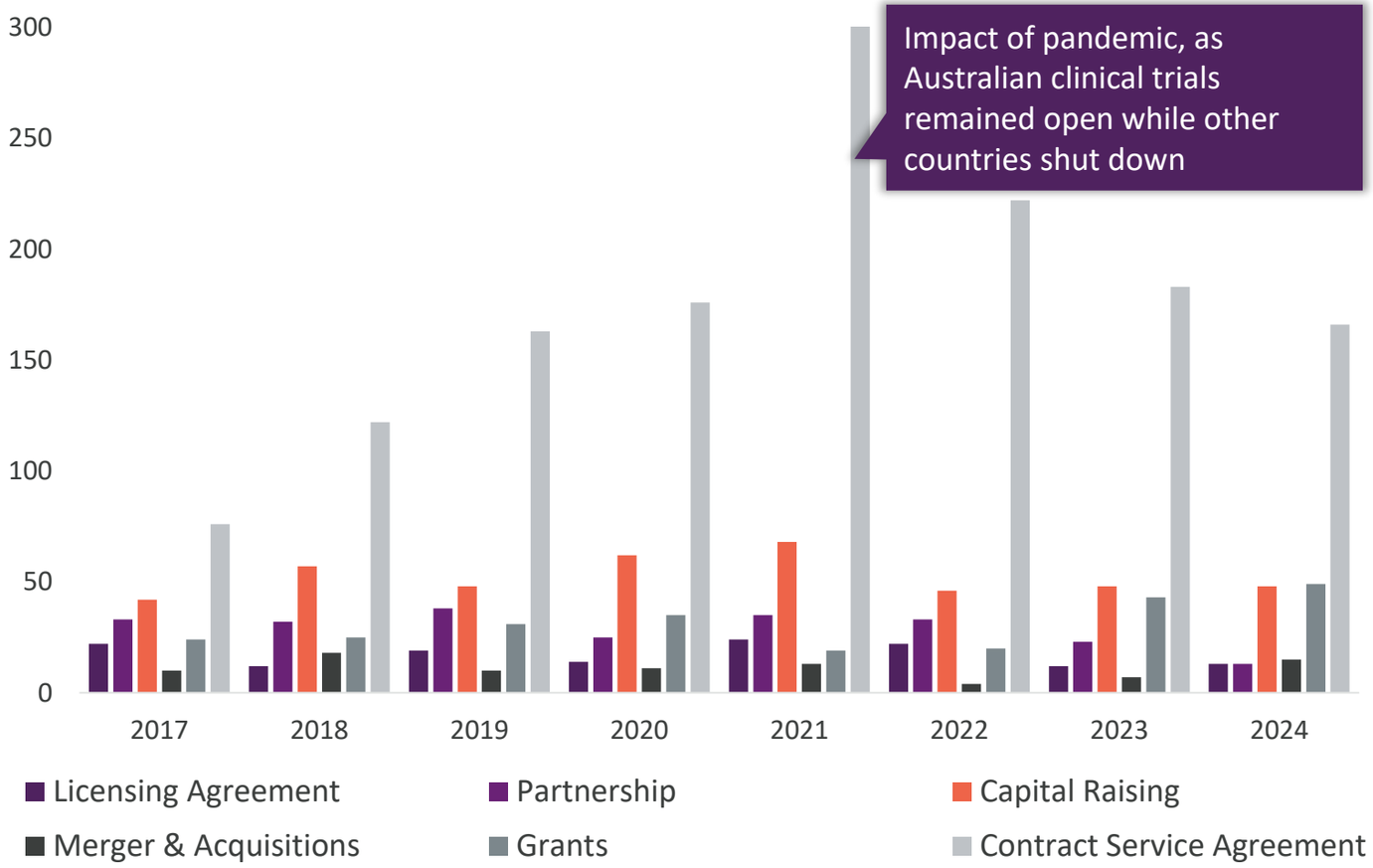
Inward FDI investments largely flow to contract services (clinical trials)

Life sciences FDI has generally grown over the past decade, which has been strongest in contract service agreements (indicative of clinical trials and manufacturing via CDMOs)

Australian life sciences FDI, estimated capital expenditure



Number of deals in Australia's pharma/biotech sector, by type



UK Life Sciences Competitiveness Dashboard (2024); AusBiotech and MTP Connect National Biotech and Medtech Development and Commercialisation Summit 2024 Discussion Paper (2024)

335

Australia's clinical trials sector is a key strength

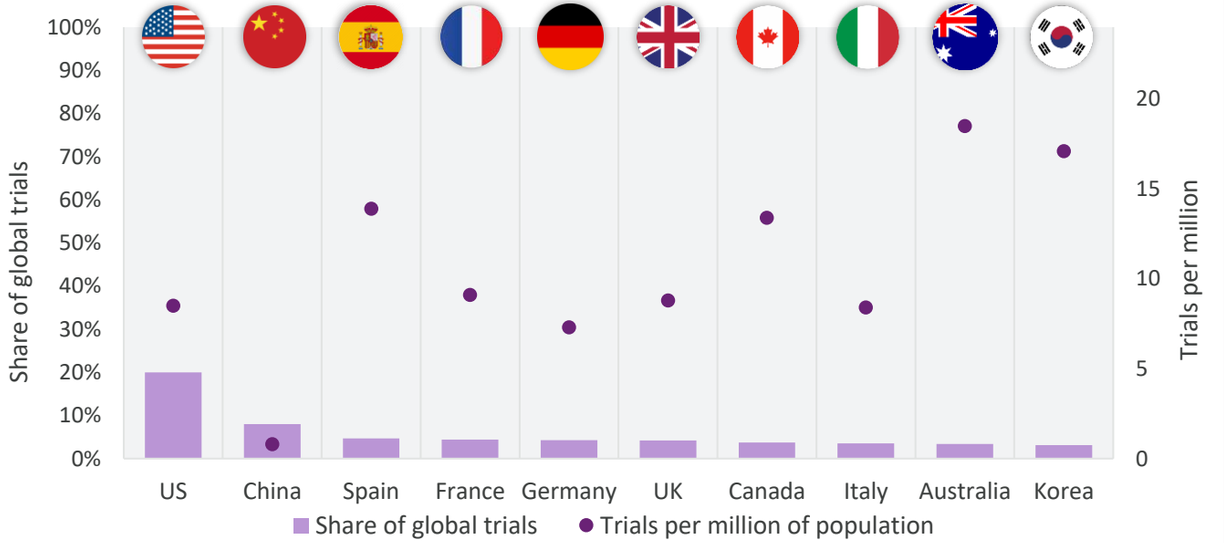
Leveraging Australia's key capabilities and competitive advantage, the sector attracts local and international companies, with $1.25bn in industry expenditure, and NSW leading in the number of clinical trials by state (31%)

Globally Competitive Sector
Australia competes with global leaders (US, EU, China) in attracting industry-sponsored trials, leading on a per capita basis.

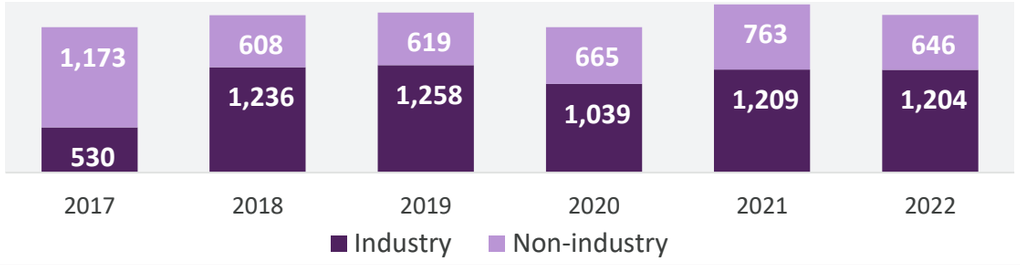
Biotech vs Medtech
Australia's clinical trials sector largely reflects drug trials, accounting for 80% of total trials in 2022.

International Sponsors
Approximately one-third of all trials initiated in Australia are industry sponsored – these are typically conducted by multinationals, with only 9% of industry sponsors headquartered in Australia.

Industry-sponsored drug and device trials per capita, 2022



Drug and devices trials started in Australia



Australia's Competitive Advantage

- Efficient CTN Scheme
- R&D Tax Incentive
- Internationally Recognised Investigators & KOLs
- High-Quality and Reliable
- Robust Infrastructure
- Diverse Population
- Proximity to Regional Markets

MTP Connect, Australia's Clinical Trials Sector Report (2024) ANZCTR Data (14 Nov 2023) and L.E.K analysis

Significant IPOs over the last decade highlight a maturing sector

Australia has fostered an increasingly commercial life sciences R&D market, with numerous successful IPOs, providing strong investor interest, robust capital markets, and a supportive ecosystem for innovation

73 IPOs for a total of $1.55bn raised from 2010-2022

Noteable companies with IPOs from 2010-2022	Base	Market Cap	Disease Area	Product Type
Imugene	Sydney, NSW	$268m	Gastrointestinal, lung, breast and brain cancers	Immuno-oncology – genetically modified viruses, cancer vaccines
Clarity Pharmaceuticals	Sydney, NSW	$1.1bn	Solid tumors, neuroblastoma and prostate cancer	Radiopharmaceuticals – specifically targeted copper theranostics
Neuren Pharmaceuticals	Melbourne, VIC	$1.67bn	Neurodevelopmental disorders and neurological diseases	Small molecule drugs
Telix Pharmaceuticals	Melbourne, VIC	$8.86bn	Prostate, Kidney, brain and blood cancers	Prostate cancer imaging agent, and cancer treatments
Opthea	Melbourne, VIC	$1.2bn	Ophthalmology	VEGF-C/D inhibitor to enhance vision and slow disease progression with retinal vascular disorders

337

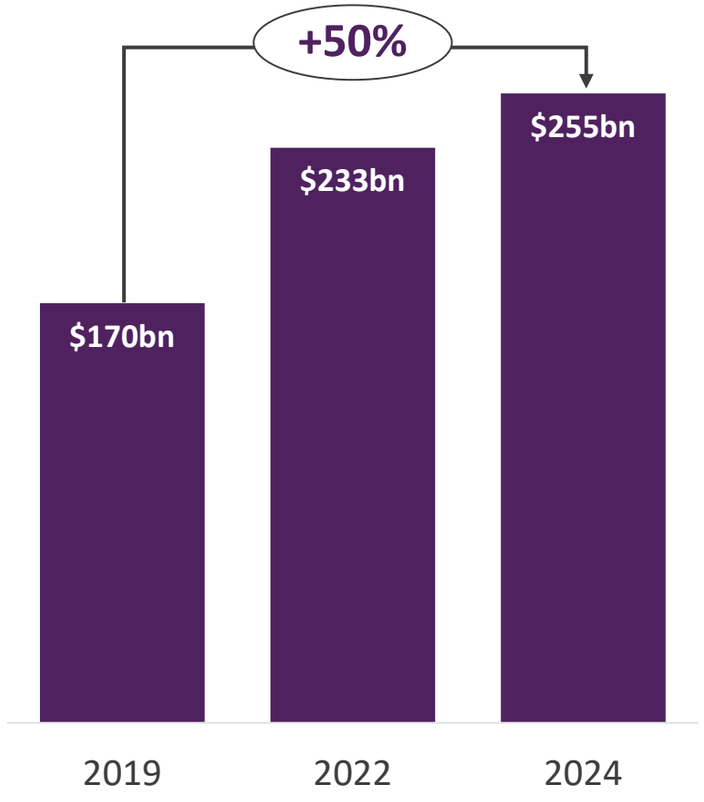
UK Life Sciences Competitiveness Dashboard (2024)

Sustained growth reflects the expanding nature of the sector in Australia

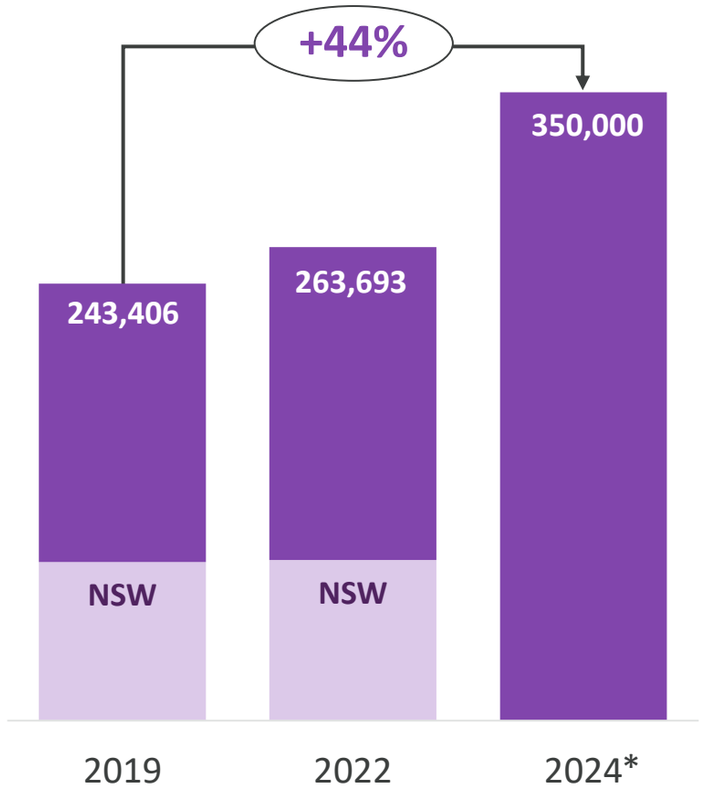
These growth fundamentals are expected to fuel demand for specialised life sciences commercial property

338

Growth in market capitalisation of ASX-listed biotechnology industry



Growth in number of employees in the life science sector



Growth in number of life science organisations



**NSW number of employees in 2024 not available.*

Source: AusBiotech Australian Biotechnology Sector Snapshot (2022), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

Biotech, pharma, medtech and digital health are all represented in Australia

Based on available data, pharma and medtech lead in IP generation, which is indicative of sector growth and potential spin outs

	Biotech	Pharma	Medtech	Digital Health	Quantum	Research & Clinical Services
Overview (AUS)	*Focused on novel treatments and diagnostics; typically high reliance on government funding, VC and partnerships.*	*Responsible for bringing new drugs to market, investing heavily in clinical trials in Australia.*	*Focused on developing and manufacturing medical devices, equipment, and diagnostics.*	*Integration of technologies to improve patient outcomes, access, and efficiency.*	*Application of quantum computing to enhance drug discovery and development.*	*Providing services for research, clinical trials and manufacturing including analytical testing and contract research.*
# of Companies (AUS)	**548** *2022*	**206** *2025*	**577** *2023*	**>513** *2022*	**16** *2020*	**146** *2025*
Growth in Total Companies	**+40%** vs 2019	Not available	**+49%** vs 2019	**+61%** vs 2020	Not available	Not available
# of Patent Applications	**3,006** *2023*	**3,945** *2023*	**3,690** *2023*	Not available	**1,694*** *2023*	N/A
Share of Total Patents in AUS	9.5%	12.5%	11.7%	Not available	5.4%	N/A

**Refers to Computer Technology patent applications*

AusBiotech Sector Snapshot (2022); ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022); MTAA The Value of MedTech Report (2024); IP Australia, Patent Report (2024), AusBiotech Australian Life Science Innovation Directory (2025); CSIRO Growing Australia's Quantum Technology Industry (2020)

Australian growth in life sciences is aligned with global growth technologies

The convergence of regenerative medicine, digital health, and advanced technology is shifting treatment modalities and the areas of life sciences R&D, changing infrastructure needs and highlighting gaps in Australia's offering

Regenerative Medicine

- Therapies manipulate or modify a patient's cells or genes to treat disease (e.g. cell and gene, stem cell therapy)
- Over 45 research centers in cell and gene therapies exist in Australia
- Complex manufacturing and supply-chain processes, requires proximity to point of care – including Royal Prince Alfred Hospital in Camperdown

Personalised & Precision Medicine

- Omics technologies (e.g. genomics, proteomics, metabolomics) increasingly applied, enhancing efficiency and reducing costs
- Require tailored equipment (e.g. for bioinformatics), AU Government support with $500m 10-year Genomics Health Futures Fund
- Emerging technologies include radiotheranostics (nuclear medicine and radiopharmaceuticals), mRNA applications beyond vaccines

Medical Technology

- Evolving with patient-specific devices for orthopaedics and bioprinting for regenerative medicine
- May require unique infrastructure including 3D printing, advanced materials labs for tissue engineering and prototyping labs
- Specialised biofabrication and manufacturing can be integrated into point-of-care facilities, like the Herston Biofabrication Institute in QLD

Advanced Technology & Computing

- Convergence of **AI, quantum computing and digital health** transforming life sciences including drug discovery, diagnostics, and patient care
- Co-location of tech hubs with life sciences precincts facilitates collaboration across these two highly innovative sectors
- AU Government released National Quantum Strategy (2023), with $101.2m over 5 years to support AI and quantum tech integration

AI = Artificial intelligence; SOC = Standard of Care

https://www.industry.gov.au/publications/national-quantum-strategy; https://www.industry.gov.au/news/investments-grow-australias-critical-technologies-industries; https://www.health.gov.au/our-work/mrff-genomics-health-futures-mission;

VC leads private investment in the sector, but there is competition from other sectors

Biotech and medtech attract a sizeable proportion of capital in Australia, compared to other sectors, however, it is insufficient for the capital needed for R&D

Aligned with the global trend, after peaking mid-COVID, Australia's medtech and biotech activity declined until 2023, amid growing competition from deep tech sectors like AI.

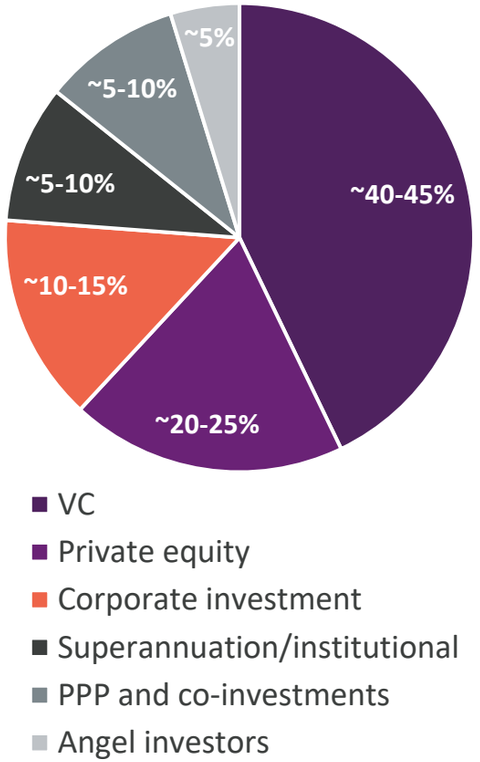
In 2024, Australian startups secured **$4.0bn across 414 deals**, an **11% increase** from 2023.

Fintech led with $947m, rebounding from a slower year, followed by Climate tech ($609m, most deals) and **Biotech/Medtech ($347m combined, 76% of all VC deals)**.

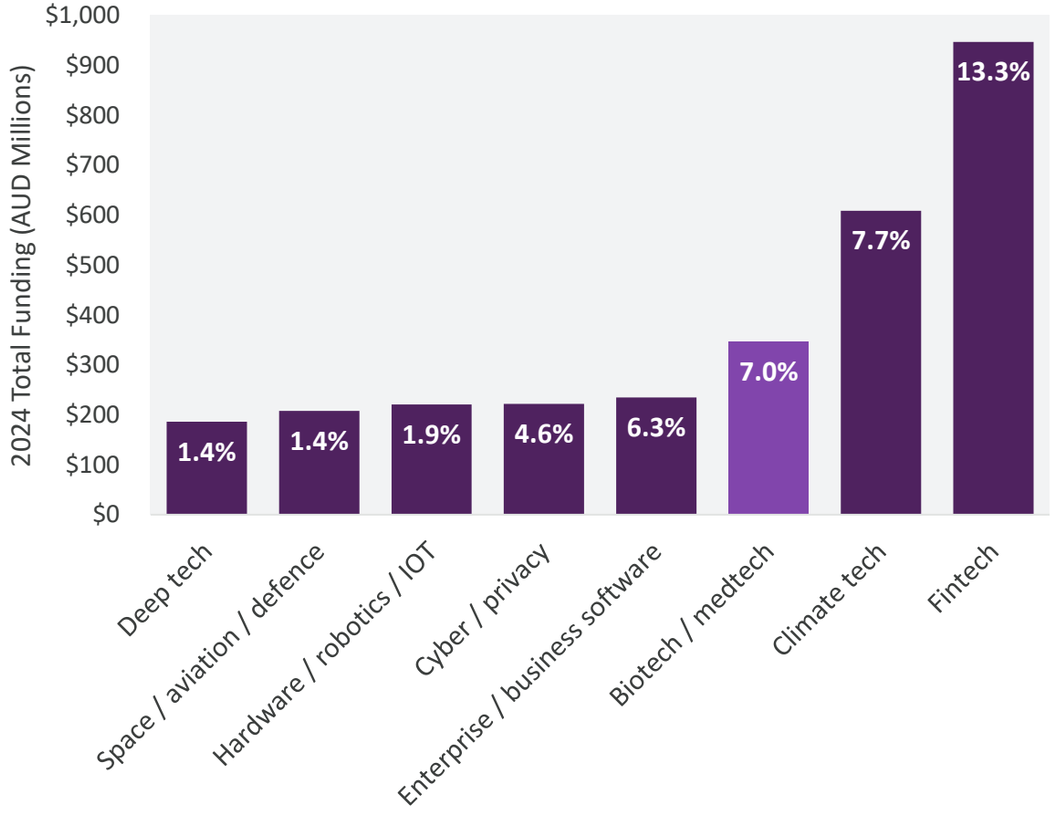
65% of VC was raised by startups based in NSW in 2024.

341

Estimated source of private investment in Australia life sciences



Australian VC investment by sector in 2024



VC = Venture capital; PPP = Public-private partnerships
https://pulse-economics.com.au/positioning-australias-life-sciences-for-global-success/; Australian Start Up Funding Report (2024)

Several life sciences-focused VC funds exist, though there is still an investment gap

There has been a recent expansion of Australian life sciences-focused funds, which have included public sector funding

Recent expansion of Australian life sciences-focused funds include:

- Brandon Capital over $1.25bn across six funds, including a sixth fund with an initial close of $270m
- Uniseed over $200m
- Breakthrough Victoria $2bn (across multiple sectors including biotech, medtech and digital health)
- Tenmile, initial $250m fund for health tech
- Tin Alley Ventures $125m funding for deep tech startups affiliated with the University of Melbourne
- ANDHealth, including the $50m CUREator+ program funded by the Australian government in partnership with Brandon Capital
- Proto Axiom, a biotech incubator with $35m in funding
- One Ventures, with $900m under management across a range of sectors including biotech, medtech and healthcare

342

Brandon Capital Announces Sixth Fund with A$270 million (US$180 million) Initial Close to Drive Life Science Innovation - Brandon Capital; $50m federal funding for BioMedTech Incubator program; Australian biotechnology incubator Proto Axiom completes initial fundraising - Proto Axiom;

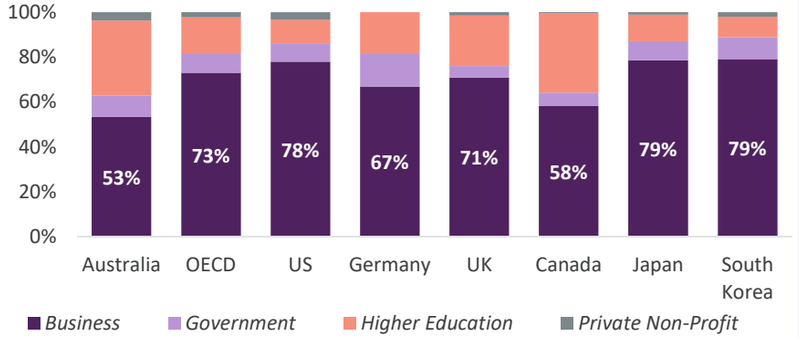
Barriers to commercialisation and translation limit Australia's ability to capitalise on investments in health and medical research

343

Private investment and partnerships are required to develop the life science ecosystem

Australia remains heavily reliant on public sector funding, with business investment in R&D (BERD) significantly lower than key competitors:

Components of Gross Expenditure on R&D in 2021



- Expanding private sector investment, such as the Life Sciences Hub (Camperdown), will be essential in developing self-sustaining innovation precincts.
- This can attract additional capital, enable collaboration, and fund specialised infrastructure otherwise cost-prohibitive, ultimately supporting commercialisation, strengthening Australia's global competitiveness and driving economic outcomes.

While gaps remain, there have been recent developments across three areas that are associated with commercialisation…

1 Access to private capital

- Australia's industry structure is dominated by small businesses (93%), many of which operate with limited cash flow, restricting the ability to invest in R&D and scale.
- Australia lags behind major global markets in access to venture capital and attracts just 3% of global life sciences FDI, which predominantly goes to contract services.
- Recent expansion of Australian life sciences-focused funds include: Brandon Capital over $1.25bn across six funds; Uniseed over $200m; Breakthrough Victoria $2bn (across multiple sectors); Tenmile estimated $250m; Tin Alley Ventures $100m; ANDHealth; Proto Axiom and One Ventures

2 Specialised infrastructure

- Access to affordable laboratory space and essential infrastructure (e.g., biobanks and advanced manufacturing) remains a key challenge.
- Recent developments include the Jumar Bioincubator (VIC), UNSW Health Translation Hub and UoS Sydney Biomedical Accelerator.
- Major investments from NSW Government intended to stimulate further activity include NSW Health Statewide Biobank, the RNA Pilot Manufacturing Facility and Viral Vector Manufacturing Facility.

3 Skilled workforce

- Australia has historically seen a steady "brain drain" of highly-skilled workers to larger, better-funded life sciences hubs in the US, Europe and Singapore.
- Development of the local life science ecosystem, including through private investment and researcher-industry partnerships, is important.
- Recent partnerships between Sanofi and QLD's Translational Research Hub and Moderna and Monash University provide opportunities to retain talent in Australia – similar partnerships in NSW are required.

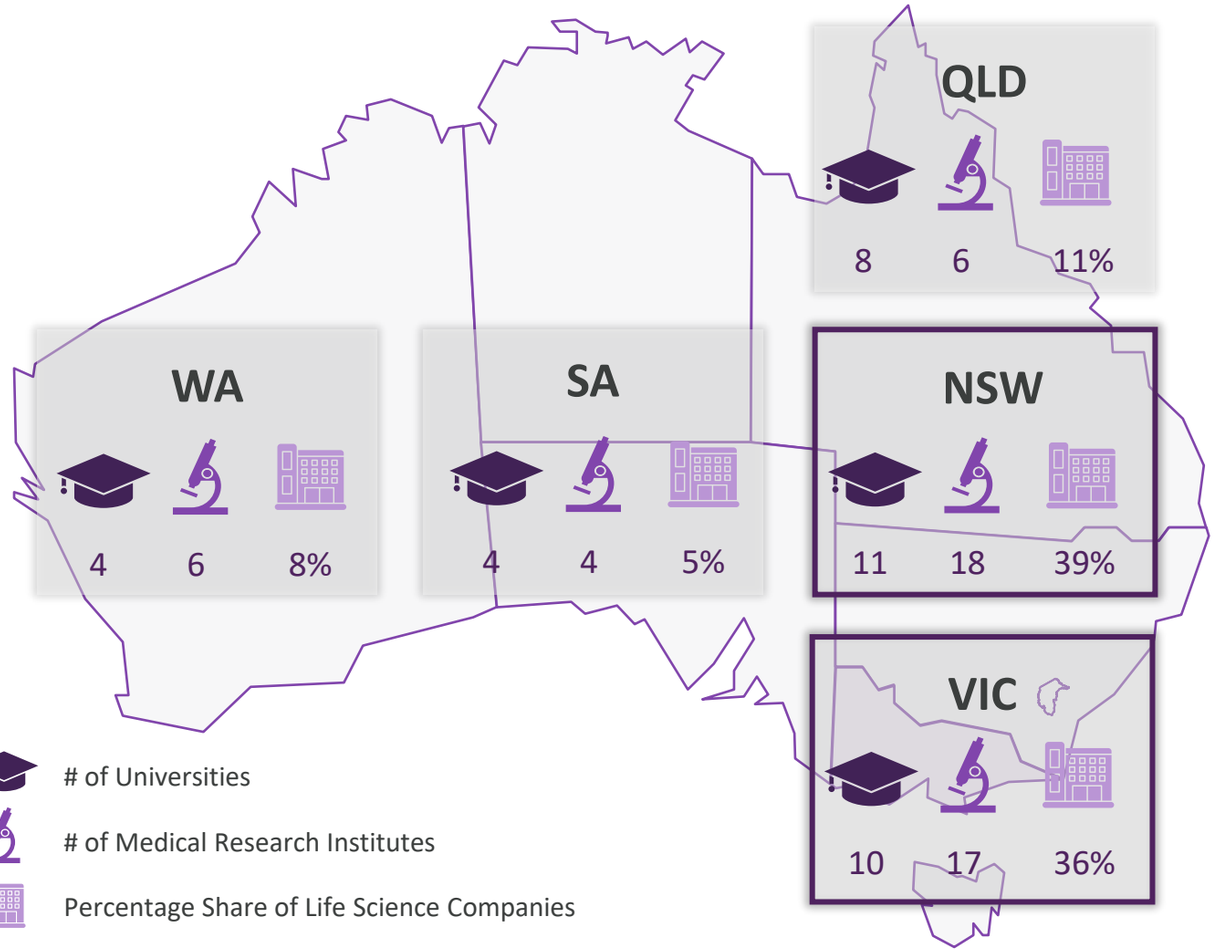
Source: Strategic Examination of R&D discussion paper; UK Life Sciences Competitiveness Dashboard (2024);

Growth Opportunities in NSW

Section 4

Australia's life science industry is geographically clustered in VIC and NSW

NSW leads Australia in the number of life science companies (39%). Proximity to leading universities and MRIs, where companies spin-out to commercialise, has contributed to the development of clusters.



Of the 2,905 life science organisations, key clusters in **Melbourne, Sydney, and Brisbane** are driving industry growth via strong academic-industry collaboration and serving as hubs for talent.

Precincts and co-location with research institutions has been recognised to accelerate innovation, supporting the development of spin-outs and commercialisation.

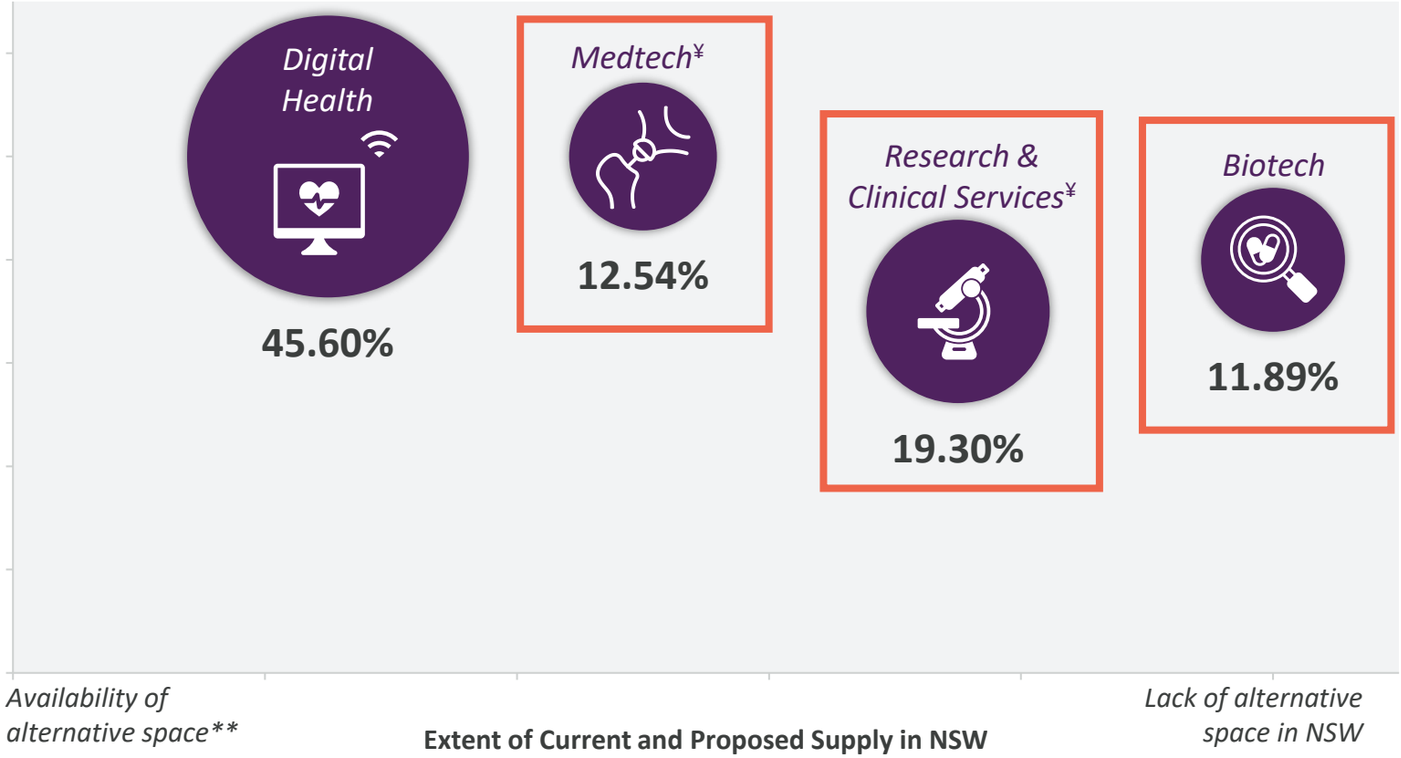
WA and SA are expanding their life sciences presence, with company growth of **149% and 113% respectively** from 2017 to 2024, driven by medtech, biotech, and clinical trials.

AAMRI Report (2024), Australian Universities (2024), IBISWorld Biotechnology report (2023), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

Key opportunities for specialised (lab) space come from growing subsectors

Biotech, research & clinical services and medtech represent key opportunities for Life Sciences Hub (Camperdown), given their requirements for lab space

Assessment of opportunity across key archetypes, bubble size indicates CAGR in NSW companies 2017-2022‡



NSW Companies	2017	2019	2022
Biotech	138	152	242
Medtech & Digital Health	104	117	187
Support Services	126	157	304
Digital Health	86 *(2020)*		182

There is no official classification for biotechnology companies in the Australian and New Zealand Standard Industry Classification, the majority of available biotechnology company data at the industry level is drawn from industry body reports, which serve as indicative measures. As such, it is inherently difficult to measure the relative concentration, success or failure of the industry in Australia.

***Factors in the existence of close substitutes for digital health and medtech;* ǂ CAGR for digital health was calculated based on 2020-2022 figures; ¥ Medtech represents medtech & digital health figures from AusBiotech; Ausbiotech reports support services which includes research & clinical services. These represent CROs, CDMOs, contract research and analytical services and lab testing) – there is potential this growth is also driven by consultancies. Lab infrastructure requirements vary across these areas, being greatest for contract research and analytical services and lab testing.

AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

Recent expansion of NSW's infrastructure signals greater opportunities to retain local companies, as well as attract global players to the region

Current & Future Supply	Two major developments in NSW will increase lab capacity, absorbing some of the demand for lab space. Six floors (10,900m^2) are currently available for lease in anticipation of the Health Translation Hub launch in mid-2025. **The planned Sydney Biomedical Accelerator incubator could serve as a future pipeline for tenants in the proposed site, rather than direct competition**, given this incubator is targeted towards early-stage startups. Assessment of their ability to fully meet demand requires qualitative market research to better understand local demand.
Existing Incubators	Sydney's main incubators with lab space are Cicada Innovations and Macquarie University Deep Tech Incubator. Cicada currently caters to early-stage tech and life sciences companies, however the extent of currently available lab space in this site is unknown.
Demand Decision Factors	Consideration needs to be given to how the type of products or various disciplines within the major subsectors influences the facility they will choose. With the current low availability of wet lab spaces for early-stage companies in Sydney, companies have limited choices in where they can locate their R&D operations. If there is greater supply and a range of options, different companies may choose different lab/incubator facilities based on the support provided for their particular therapeutic area.
Tenant Selection	Commercial for-profit operators do not appear to curate their tenants based on therapeutic area. Although, Cicada Innovations and Jumar Bioincubator selectively curate tenants based on therapeutic areas and strategic alignment (or other company attributes).

347

NSW lags other states for dedicated commercial life science laboratory space

Investment in NSW is catching up to Victoria, which is home to a similar proportion of Australian life sciences companies

STATE	LIFE SCIENCE PRECINCT / HUB	DEDICATED COMMERCIAL LIFE SCIENCES LABORATORY SPACE
NSW	Tech Central Precinct, Camperdown	✓ Planned in Sydney Biomedical Accelerator (SBA)
NSW	Macquarie Park Innovation District (MPID)	✓
NSW	Westmead Health & Innovation Precinct	✓
NSW	Randwick Health and Innovation Precinct	✗ Planned in UNSW Health Translation Hub
NSW	Liverpool Innovation Precinct	✗
NSW	UNSW Torch Innovation Precinct	✗
NSW	Hunter Health and Innovation Precinct	✗
NSW	nandin Innovation Centre (ANSTO)	✓
VIC	Melbourne Biomedical Precinct, Parkville	✓
VIC	Monash Science Technology Research and Innovation Precinct (STRIP)	✓
VIC	Western Centre for Health, Research and Education	✗
VIC	La Trobe Research and Innovation Precinct	✓
QLD	Gold Coast Health and Knowledge Precinct	✓
QLD	Boggo Road Innovation Precinct	✓
QLD	Herston Health Precinct	✓
QLD	QLD Biosciences Precinct	✗
SA	Adelaide BioMed City	✓

ANSTO = Australian Nuclear Science and Technology Organisation
Biointelect analysis based on publicly available information

348

Biointelect

Emerging private investments around Australia complement public spaces

Financial drivers are different across these major investors and aim to attract different types of tenants

Government and Not-for-Profit

Macquarie University Deep Tech Incubator *Macquarie Park Innovation District*	Macquarie University ($7m) Investment NSW ($3.5m)
Sydney Biomedical Accelerator Tech Central Precinct (Camperdown)	NSW Government ($150m) University of Sydney SLHD Sydney Local Health District ($25m) Philanthropy ($20m)
Melbourne Connect *Melbourne Biomedical Precinct*	VIC Government University of Melbourne
Monash Innovation Labs *Monash STRIP*	VIC Government Monash University
LaTrobe University Bio Innovation Hub *La Trobe Research and Innovation Precinct*	VIC Government ($8m) La Trobe University
Cohort Innovation Space *Gold Coast Health and Knowledge Precinct*	QLD Government
Translational Research Institute Incubator *Boggo Road Innovation Precinct*	QLD Government ($100m) Australian Government ($140m) QUT ($25m), UQ ($10m) Atlantic Philanthropies ($50m)

Private Investment

Cicada Innovations *Tech Central Precinct*	Private investment NSW Government
HealthTech Hub, Innovation Quarter (iQ) *Westmead Health & Innovation District*	Charter Hall Group ($67m) Western Sydney University Investment NSW ($7.8m)
Yild Technical Spaces *Norwest, Sydney*	Private investment
Health Translation Hub *Randwick Health & Innovation Precinct*	ISPT, HESTA, UniSuper and Plenary Group ($600m)
Area53 *Sydney and Melbourne*	Private investment ($1.5bn domestic and international)
Jumar Bioincubator *Melbourne Biomedical Precinct*	CSL, WEHI and University of Melbourne ($45m over 10 years) Breakthrough VIC ($25m)
CoLabs *Proximal to Melbourne Biomedical Precinct and Monash STRIP*	Private investment (including Spirit Super, Ethical Property Australia) VIC Gov ($800k)

Note: This list of laboratory infrastructure is not exhaustive

Biointelect

Most private investments in life sciences hubs also receive public support

Joint public-private goals include research translation and commercialisation, leveraging public support to generate sustainable new businesses

DESCRIPTION, YEAR OPENED	PRECINCT	MODEL/RATIONALE	PRIORITY SUBSECTOR(S) & WET AND/OR DRY LABS
Jumar Bioincubator *35,000m² (building)* *2024*	Melbourne Biomedical Precinct	• Support biotech commercialisation through co-location with CSL and precinct • Operation outsourced to Cicada Innovations	 • 25 self-contained labs (24–90m²) in PC2 facility • Cleanroom space
Melbourne Connect *2021*	Melbourne Biomedical Precinct	• Increase research infrastructure and promote STEM industries • Primarily occupied by University of Melbourne faculty	 • Customised dry labs • Shared engineering maker space (1,138m²)
Monash Innovation Labs *2023*	Monash STRIP	• Provide lab space for early-stage Monash University spin-outs	All • 8 purpose-built labs (31–101m²)
LaTrobe University Bio Innovation Hub *2024*	La Trobe Research and Innovation Precinct	• Provide lab space for biotech and agritech industry and LaTrobe spin-outs	 • Up to 12 PC2 labs (20–60m²), fit-out at companies' own expense
CoLabs *1,100m²* *2021*	Proximal to Melbourne Biomedical Precinct	• **For-profit provider** of labs for lease by the week or month using a members' model and no lock in contracts	All • Fully equipped PC1 and PC2 labs • Engineering and fabrication lab
Cohort Innovation Space *2,500m²* *2019*	Gold Coast Health and Knowledge Precinct	• Rental labs available for startup companies to accelerate commercialisation • Operation outsourced to CoSpaces	 • Partially fitted-out PC1 an PC2 labs (82–164m²)
Translational Research Institute Incubator *2012*	Boggo Road Innovation Precinct	• Increase research infrastructure and promote researcher and clinician collaboration across partners • Operation via founding partners' joint venture	 • 5 cleanrooms • Customisable PC2 laboratories • Clinical manufacturing

Biointelect analysis based on publicly available information; this list is not exhaustive, additional incubators will be assessed in the Final Report: Bio21 Incubator, Aikenhead Centre for Medical Devices (ACMD)

CONFIDENTIAL



There is limited, but expanding commercial lab space in NSW life science precincts

Sydney Biomedical Accelerator and UNSW Health Translation Hub (both under development) will increase supply in NSW

	DESCRIPTION, YEAR OPENED	PRECINCT	RATIONALE	PRIORITY SUBSECTOR(S) & WET AND/OR DRY LABS
EXISTING	**Macquarie University Deep Tech Incubator** *2017*	Macquarie Park Innovation District *905,000m²*	• Support early-stage Macquarie University spin-outs and industry	• Co-share lab space based on individual benches
EXISTING	**Cicada Innovations** *2024*	Tech Central Precinct	• **Run as a for-profit model** based on sustainability – any profit reinvested back in the company	• Modifiable wet labs (including PC2) and cleanrooms • Shared design and prototyping spaces
EXISTING	**Sydney Knowledge Hub** *2019*	Tech Central Precinct (Camperdown)	• Support early-stage University of Sydney spin-outs	• Hardware lab for engineering and fabrication including 3D printers, CNCs, electronics and general tools
EXISTING	**Yild Technical Spaces**	Not located in a precinct (Norwest, Sydney)	• **For-profit provider** – rental model for co-share lab infrastructure	• Fully equipped PC2 labs (11–60m²) • ISO Grade 5 cleanrooms (150m²)
PROPOSED	**Sydney Biomedical Accelerator** *36,000m², ~800 researchers* *TBD – 2028*	Tech Central Precinct (Camperdown)	• Support early-stage University of Sydney spin-outs • Promote industry engagement and research commercialisation	• Wet labs (specifics unknown) • Prototyping facility • Biobank and GMP cleanrooms • Clinical trials / health clinic • Computing and bioinformatics
PROPOSED	**Health Translation Hub** *35,600m²* *TBD – 2025*	Randwick Health & Innovation Precinct	• Support UNSW research • Promote industry engagement and research commercialisation	• Faculty and teaching spaces • Research labs (specifics unknown) • Health clinics

Biointelect analysis based on publicly available information

Biotech · Medtech · Digital health · Pharmaceutical · Research & clinical services · Agritech · Quantum

With growth in the sector, NSW has scope to increase lab infrastructure



Assessment of supply focused on life sciences-focused lab infrastructure for companies within precincts, with a particular focus on availability in NSW, VIC and QLD



At the precinct level, benchmarking highlighted NSW lags other states for dedicated commercial life science laboratory space



There are direct competitors vs public-supported incubators, where financial drivers are likely to be different and may aim to attract different types of tenants

352



Other states have increased supply of commercial life sciences lab infrastructure



Comparatively, current limited commercial lab space currently exists in NSW life science precincts

- Sydney Biomedical Accelerator and UNSW Health Translation Hub (more than 10,900m^2 available) will increase supply in NSW



Expansion of NSW's infrastructure signals a commitment to retaining local companies and attracting global players to the region

https://www.healthtranslationhub.com.au/

Government Policy Alignment

Section 5

NSW Govt supports precincts to stimulate economic growth and R&D commercialisation

The Australian and NSW Governments have demonstrated commitments to life sciences through sustained policies and investments

Australia's innovative life sciences industry delivers significant value to the economy

- Life sciences has a high R&D intensity which fuels economic growth from activities across the value chain
- The return on investment from medical research to the economy has been estimated at $3.90 per dollar invested (2018)
- State-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

The Australian Government has demonstrated enduring cross-party commitment to life sciences over the past 100 years

1985
Research & Development Tax Incentive (RDTI)

1990
Cooperative Research Centre Grants (CRC)

1992
National Health & Medical Research Council (NHMRC) Act

2004
National Collaborative Research Infrastructure Strategy (NCRIS)

2015
Medical Research Future Fund (MRFF)

NSW Government's focus for life sciences is driving economic growth, leadership in innovation and healthcare advancement

- NSW continues to invest significantly in health/research infrastructure
- Government is currently driven to improve NSW's innovation performance, relative to other states and globally

>$5bn
in life sciences infrastructure

$3.4bn
for capital works in 2024-25 budget

Health and innovation precincts have been identified as an opportunity to address Australia's commercialisation challenges

- Precincts generate economic and social returns
- Private investment makes critical contributions to life sciences and precinct developments, contributing to precinct maturity

sanofi — *Translational Research Institute (QLD)*

moderna — *mRNA Manufacturing facility & Regional Research Centre for Respiratory Medicines and Tropical Diseases (VIC)*

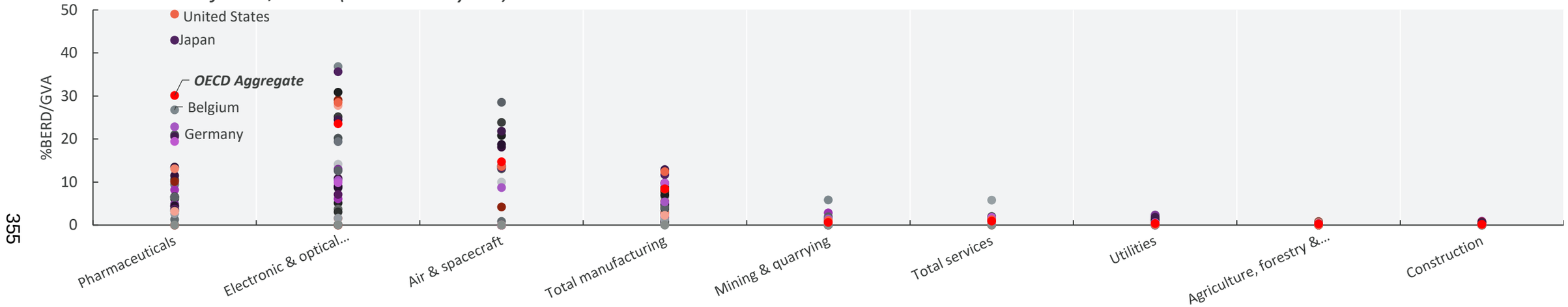
Plenary — *UNSW Health Translation Hub (NSW)*

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25;

Life sciences has a high R&D intensity which fuels economic growth

The R&D intensity of the pharmaceutical industry reflects the significant capital investment required to develop high-value medicines and vaccines

BERD as a share of GVA, 2019 (or nearest year)



Importance of R&D activity to long-term economic performance

R&D

Intentional investment in R&D and development now, to create a permanent, higher future permanent stream of economic outcomes.

Capital investment

The benefits of innovation R&D are incorporated into the economic factors of production, including capital stock.

Enhanced economic productivity

The innovative benefits are incorporated into economic factors of production, consequently increasing total factor productivity (TFP).

Increased economic growth

Increased economic activity leading to greater gross domestic product (GDP and per capital income).

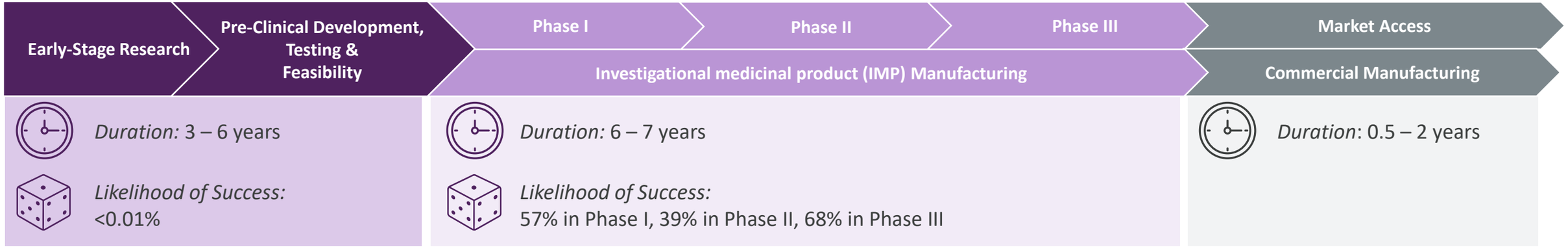
BERD = Business expenditure on R&D; GVA = Gross value added

OECD Health at a Glance 2023 – Analytical Business Enterprise R&D (ANBERD), Structural Analysis (STAN) and System of National Accounts (SNA) databases

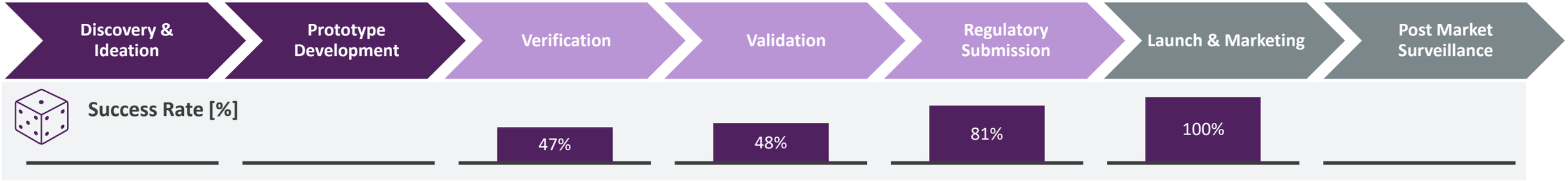
There are a range of R&D activities across the value chain

The capital-intensive nature of the life sciences sector is driven by high development costs and significant failure risks; R&D investment across phases is underpinned by investment in R&D infrastructure

BIOTECH & PHARMA



MEDTECH



International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), The Pharmaceutical Industry and Global Health, Facts and Figures (2022); Makower, J., Meer A., Denend, L. FDA Impact on U.S Medical Technology Innovation: A Survey of over 200 Medical technology companies. MedTech Europe. November 2010.; Sertkaya, A., Jessup, A., DeVries, R. Cost of developing a therapeutic complex medical device for the U.S market. Prepared for Harvard Center for Risk Analysis. September 2019

The Australian Government has demonstrated enduring cross-party commitment to life sciences through sustained policy and investment over the past 100 years

The Federal Government has provided consistent funding across more than 8 departments, 14 portfolios and 151 programs, with an estimated $14.4 billion for investment in 2024-25

Key long-term policies include:

1926	1985	1990	1992	2004	2015	2023
Science Industry Endowment Fund	Research & Development Tax Incentive (RDTI)	Cooperative Research Centre Grants (CRC)	National Health & Medical Research Council (NHMRC) Act	National Collaborative Research Infrastructure Strategy (NCRIS)	Medical Research Future Fund (MRFF)	National Reconstruction Fund

357

Significant federal investments ongoing in 2024/2025:

$15bn
National Reconstruction Fund

Stimulate priority industries, including medical science and diversify industrial capacity

$1.5bn
Medical Science Co-Investment Plan

Support infrastructure, manufacturing and growth of innovative companies

$20bn
Medical Research Future Fund

Support biomedical research that delivers national health priorities and economic returns

$4.2bn
R&D Tax Incentive

Stimulate additional R&D and IP generation in Australia, across all industries

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25

NSW Government's key focus for life sciences is increasing economic growth, leadership in innovation and healthcare advancement

These priorities leverage NSW strength in research, infrastructure and innovative health solution development to attract investment, generate jobs and maximise partnerships

Precincts	Establishing globally significant Health and Innovation Precincts that co-locate health services, laboratories, universities and MRIs.
Translation	Accelerating translation by enhancing capabilities in the development, translation and manufacturing of advanced therapeutics.
Clinical Trials	Growing clinical trial competitiveness with a focus on efficient start up and innovative models such as adaptive clinical trials.
Manufacturing	Growing local manufacturing to build sovereign capability and supply chain resilience.
Preparedness	Promoting health system readiness and workforce development.

Key Government bodies include:

NSW Health Office of Health and Medical Research (OHMR) supports research, translation and commercialisation through a range of programs, including *clinicalTrialsNSW* (enables clinical trial capacity, capability and collaboration)
Health Infrastructure – delivers infrastructure solutions and services, oversees the planning, design and construction of health capital works >$10M in NSW

Office of the Chief Scientist & Engineer (OSCE): Four distinct functions including the provision of independent advice, management of the NSW Research Attraction and Acceleration Program (RAAP), industry development including administration of key commercialisation programs (Biosciences Fund, Small Business Innovation and Research Program) and science outreach and education.

Promotes investment in various sectors, including health sciences, technology, and advanced manufacturing through grants and programs.

Relevant NSW Government web pages and policy documents; https://www.health.nsw.gov.au/about/nswhealth/Pages/structure.aspx; https://www.chiefscientist.nsw.gov.au/about; https://www.investment.nsw.gov.au/

NSW is an economic powerhouse of Australia's life sciences sector, driving national growth and global investment

8,484,400

Residents, highest population in Australia (30 June 2024)

>89,500

People employed in NSW life sciences sector (2022)

$35.1bn

Health spend in 2024-25 Budget

$700bn

Largest state economy in Australia (larger than Singapore and Malaysia)

55%

of Australia's life sciences organisations are in NSW

2 of top 20

global universities in NSW, with 6 ranked in global top 200

> "**NSW is 5th in the world for biotech capabilities**, in the **top 10 destinations globally for clinical trials**, and home to **55% of Australia's medtech and biotech companies**. I welcome you to explore, partner and do business with our outstanding health and medical research sector."
>
> **The Hon. Ryan John Park MP**
> **NSW Minister for Health, NSW Minister for Regional Health**
> *NSW Prospectus: A focus on research, develop and grow for BIO 2024 (June 2024)*

> "Our state hosts **50 pharmaceutical companies, 400 biotechnology companies and 500 medical technology companies**, more than 100 of which are listed on the ASX. **Australia has the 12th largest pharmaceutical sales market in the world** and the **2nd largest in the Asia–Pacific**."
>
> **The Hon. David Harris MP**
> **NSW Minister for Medical Research**
> *NSW Prospectus: A focus on research, develop and grow for BIO 2024 (June 2024)*

NSW Government, Health Prospectus for BIO (2024); ABS, National, state and territory population (2024); AusBiotech Sector Snapshot (2022)

NSW's policy landscape for innovation and life sciences has shifted following change of government in 2023

Although NSW has historically invested strongly in innovation, the change in Government ushered in significant realignments to funding programs, reflecting the greater emphasis on advanced manufacturing, job creation, and targeted infrastructure

Key NSW Government policies and pathways include:

20-year NSW R&D Roadmap	NSW Innovation Blueprint (In Development)	NSW Health & Medical Research Strategy	NSW Industry Development Framework	State Significant Development (SSD) Pathway
Provides long-term direction for research capabilities in areas like health, medtech, AI, and sustainability.	Boosting well-paying jobs and productivity through "frontier sectors" such as quantum computing, AI, data, cyber, advanced manufacturing—and by extension, life sciences.	Strengthen collaboration among hospitals, universities, and industry to accelerate medical research, translation, and commercialisation.	Stimulate growth across priority sectors in NSW. It aims to create jobs, attract investment, and foster industry resilience, with life science/medtech featuring prominently.	Streamlines planning approvals for large projects with major economic or social impact (e.g. precinct expansions).

360

Notable recent/ongoing investments:

$160m

Medical Research Support Program

Develop state-wide capacity for health and medical research

$8m

Medical Devices Fund (annual)

$70m since 2013 to support medical device development

$8m

Quantum Computing Commercialisation Fund (2022-23)

Single-round, tech development & commercialisation program

In 2023, over $227 million in industry/innovation grants were paused or reviewed, part of a broader effort to reduce state spending by $13 billion.

Fewer broad-based innovation programs remain, with the **Future Economy Fund partially reprofiled** and some grants (e.g., **MVP Ventures**) continuing on smaller scales.

NSW continues to invest significantly in health/research infrastructure despite cutbacks in general innovation grants

Despite scaled-back innovation grants, NSW invests heavily in critical health/research facilities, building the foundational capacity needed for a thriving life sciences sector

>$5bn

in life sciences infrastructure

$3.4bn for capital works in 2024-25 budget

Provide the essential infrastructure – labs, clinical research spaces, manufacturing facilities, and ecosystem support—that enable the sector to grow

Key Relevant Investments	
>$3bn	Developing Westmead over the next 10 years
>$1.5bn	Randwick Health & Innovation Precinct (co-investment with UNSW)
$835m	John Hunter Health & Innovation Precinct ($498.2 over 4 years in the 2024-25 Budget)
$214m	RNA Pilot Manufacturing Facility ($95m for facility and $119m for R&D)
$160m	Medical Research Support Program
$143m	Sydney Biomedical Accelerator
$134m	Viral Vector Manufacturing Facility (VVMF)
$12m	NSW Health Statewide Biobank

> I am particularly interested in how governments can promote more interaction between different parts of the innovation ecosystem to overcome knowledge barriers and drive collaboration.
> I believe that we have the people, institutions and competitive edge to close that gap. What is missing perhaps is better drive and better collaboration between the sectors to close this gap.
> **Place-based approaches such as innovation districts are one way to achieve this.**

Anoulack Chanthivong (Nov 2023)
Minister for Better Regulation and Fair Trading, Minister for Industry and Trade, Minister for Innovation, Science and Technology, Minister for Building, and Minister for Corrections

https://www.hinfra.health.nsw.gov.au/projects/project-search/john-hunter-health-innovation-precinct; https://rhip.org.au/; https://www.investment.nsw.gov.au/focus-sectors/health-and-life-sciences/#:~:text=The%20NSW%20Government%20is%20targeting,vector%20manufacturing%20facility%20in%20Westmead.; https://thepolicymaker.jmi.org.au/harnessing-research-and-innovation-to-secure-nsws-future/

Strategic investment into life sciences is noted across most major Australian States

Each major state has established significant funding programs with sustained cross-party support, demonstrating long-term commitment to life sciences infrastructure and research capabilities

South Australia and **Western Australia** have invested significantly through major infrastructure projects while also providing ongoing operational and research funding to support commercialisation and industry growth.

Key policies

- SA's Innovation Places Leadership Framework 2024-2034
- WA Health and Medical Research Strategy 2023-2033

Recent investment

$1.8b

WA Future Health Research & Innovation Fund

Funding for research and advancing infrastructure

The Victorian government have invested an estimated **$4 billion in infrastructure and capabilities over the past 20 years** in science, technology, innovation and medical research, with a significant proportion directed to life sciences.

Key policies

- Health and Medical Research Strategy 2022-2032
- Made in Victoria: 2030 Manufacturing Statement

Recent investment

$350m

Victorian Higher Education State Investment Fund

Supports capital works, including for the life science infrastructure

The Queensland Government has accelerated investments in developing the local sector, with **bi-partisan support and funding for developing innovation precincts**.

Key policies

- Queensland Innovation Precincts and Places Strategy 2022-2032
- Research Strategy 2032

Recent investments

$26m

Research Infrastructure Co-investment Fund

$53m

Quantum & Advanced Technologies Strategy

Including $28.1m Quantum and Advanced Technologies Commercialisation Infrastructure Program

362

https://www.vic.gov.au/victorian-higher-education-state-investment-fund; https://science.desi.qld.gov.au/industry/funding/ricf; https://fhrifund.health.wa.gov.au/; https://www.health.wa.gov.au/~/media/Corp/Documents/Reports-and-publications/Strategies/State-Health-and-Medical-Research-Strategy.pdf; AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020)

NSW Government is currently driven to improve NSW's innovation performance relative to other states and globally

The 2024 NSW Innovation & Productivity Scorecard highlighted gaps in converting innovation into economic impact, presenting an opportunity for infrastructure investment that enhances commercialisation, industry collaboration and scale-up support

The Scorecard highlighted the need for **stronger policy intervention to drive economic growth**

"Right now, NSW is not performing as well as it could in this global innovation market because **it is not an environment that actively supports long-term success and prosperity.**"

George Peppou (2025)
Founder and CEO of Vow and project champion of the Innovation and Productivity Council

The NSW Innovation Blueprint, was recently released, acknowledging NSW's comparative strengths in life sciences and highlighting targeted investments in areas such as clinical trials infrastructure, while seeking to embed innovation more broadly across government policy and economic development.

Key focus areas include:



- Strengthening the innovation ecosystem (startups, R&D, industry linkages)
- Scaling local businesses & commercialisation pathways
- Attracting private investment & VC funding
- Bridging university-industry collaboration gaps
- Developing talent & skills in emerging tech sectors

The ***NSW Health Research and Innovation Strategy 2025-2030*** was also recently released, highlighting statewide precincts and place-based initiatives as a strategic focus

"There is no shortage of reports and metrics that show NSW – and Australia as a whole – don't rank well in comparison to some of our peers in terms of converting innovation inputs into tangible benefits for people and the economy...
…. Digging a bit deeper, our innovation inputs, which include tertiary education and R&D, are ranked 16th, whereas our innovation outputs, which include knowledge impact and diffusion, are ranked 30th. What does it say about some of our institutional components when there is such difference between us and our advanced trading partners? **This can and must change.**"

Anoulack Chanthivong (Nov 2023)
Minister for Better Regulation and Fair Trading, Minister for Industry and Trade, Minister for Innovation, Science and Technology, Minister for Building, and Minister for Corrections

https://www.startupdaily.net/topic/the-nsw-parliament-voted-to-force-the-government-reveal-documents-on-the-innovation-blueprint-startups-have-been-waiting-18-months-to-see/; https://www.nsw.gov.au/sites/default/files/2024-02/innovation-blueprint-summit-discussion-paper_1.pdf; https://thepolicymaker.jmi.org.au/harnessing-research-and-innovation-to-secure-nsws-future/; https://www.health.nsw.gov.au/research/Publications/research-and-innovation-strategy.pdf

Health and innovation precincts have been identified as an opportunity to address Australia's challenges research commercialisation

Australia has long faced challenges in commercialising R&D and innovation…

Despite ranking in the top 10 for the Global Innovation Index, Australia falls to **30th for outputs from research.**

Access to capital is the number one barrier to commercialisation – with Australia capturing only 3% of life sciences foreign direct investment in 2022.

Limited infrastructure, loss of talent and industry-partnerships further slow commercialisation.

Recently the Australian Government launched a strategic review of Australia's R&D system…

The independent expert panel is assessing ways to:

- Strengthen collaboration between research and industry.
- Improve translation of research into commercial outcomes.
- Align R&D investments with national priorities to enhance economic resilience.
- Boost Australia's overall R&D intensity and drive greater private sector investment.

This review will shape policies to boost Australia's R&D and innovation.

Innovation precincts are increasingly recognised for their role in addressing this challenge…

Both Australian and international evidence on innovation precincts highlights their success in encouraging increased **collaboration** across **researchers, clinicians**, and **industry partners**, fostering **innovation**, **knowledge transfer**, and **commercialisation.**

Precincts also act as magnets for industry seeking partnerships or regional expansion.

The Advanced Manufacturing Parliament Inquiry highlighted their value and role for private co-investment…

> "The Committee would like to acknowledge and emphasise the often-unsung initiatives that are seeking to address commercialisation challenges in Australia. **Collaboration and co-funding have resulted in many success stories** and will, **if consistently maintained over time, provide a way to bridge the 'valley of death' from idea to commercial reality.**"

Australian Parliamentary Inquiry into Developing Advanced Manufacturing in Australia (2023)
Chapter 4 – Commercialisation and Collaboration

AusBioech National Biotech and Medtech Development and Commercialisation Summit Discussion Paper (2024); Australian Parliament. Sovereign, Smart, Sustainable: Driving Advanced Manufacturing in Australia. House of Representatives Standing Committee on Industry, Science and Resources (2023).

Almost all states have major health and life science precincts and hubs

These precincts are increasing in both number and scale across Australia, with several emerging developments in each state

Western Australia

ESTABLISHED

- Western Australia BioZone
- Queen Elizabeth II Medical Precinct
- Joondalup Health Innovation Hub

EMERGING

- WA Life Sciences Innovation Hub
- Murdoch Health and Knowledge Precinct

Queensland

ESTABLISHED

- Herston Health Precinct
- QLD Bioscience Precinct

EMERGING

- Boggo Road Innovation Precinct
- Gold Coast Health and Knowledge Precinct

New South Wales

ESTABLISHED

- Macquarie Park Innovation District
- Westmead Health Precinct
- **Tech Central (Camperdown)**
- Liverpool Innovation Precinct

EMERGING

- Randwick Health and Innovation Precinct
- STEMM Precinct (Newcastle)

South Australia

ESTABLISHED

- Adelaide BioMed City
- Tonsley Innovation District
- Technology Park Adelaide

EMERGING

- Flinders University Urban Village

Victoria

ESTABLISHED

- Melbourne Biomedical Precinct, Parkville
- Monash Science Technology Research and Innovation Precinct (STRIP)

EMERGING

- Western Centre for Health, Research and Education
- La Trobe Research and Innovation Precinct

CBRE Research: A new era of growth in life sciences (2023)

365

Biointelect

Governments invest in precincts for the economic and social returns they generate

A 2018 analysis estimated the return on investment from medical research to be $3.90 per dollar invested, however state-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

R&D investment, including in precincts, generates a wide range of benefits and positive spillovers into the Australian economy and broader healthcare sector

Sector Benefits
- Innovation and knowledge spillovers
- Improved research translation
- Improved infrastructure
- Enhanced talent expertise and upskilling

Patient Benefits
- Reduced burden of disease
- Access to innovative treatments
- Improved patient outcomes

Australian Research Profile
- Global reputation
- Additional inward investment
- Talent attraction

Economic Activity
- Increased GDP
- Sector Growth
- IP generation

Job Creation
- Job creation
- High-skill opportunities

Healthcare Costs
- Avoided costs for the healthcare system
- Improved standard of care

Multipliers
- Indirect job creation
- Increased demand through income
- Productivity increases and workforce participation

Macquarie Park Innovation District (MPID; NSW)

$13.6bn
GDP in 2023

133+
Startups since 2017

60,000
Jobs

Monash Technology Precinct (VIC)

$9.4bn
Generated to VIC economy each year

123+
Startups

Gold Coast Health and Knowledge Precinct (QLD)

$3.4bn
Value add to QLD economy

15,000
Workers

$250m
Private development

KPMG, The Economic Impact of Medical Research in Australia (2018), Macquarie University Incubator, Report Card (2023); https://www.connectmpid.com.au/about-macquarie-park; https://www.statedevelopment.qld.gov.au/team-qld/innovation-and-infrastructure#

Private investment is a key factor contributing to precinct development

While government and non-profits have driven Australia's life sciences precinct expansion, private investment could elevate these precincts into self-sustaining ecosystems

State governments primarily drive precinct development given alignment with many of their primary responsibilities – land planning, infrastructure investment and economic development.

Role can include:

- Co-fund existing innovation and infrastructure to attract anchors
- Provide grants for precincts
- Supportive land use planning and zoning
- Utilising land ownership assets
- Supportive macroeconomic policies and programs
- Engaging with stakeholders and the community – investment in placemaking



Despite Australia's dependence on government for precincts, the **private sector is critical in precinct development and maturity** – this includes venture capital, private equity, real estate partners and life science industry companies.

The Federal government plays a critical role in fostering the underlying business and innovation environment to support innovation precincts:

- Protecting IP
- Support for innovation (e.g., grants)
- Reducing investment barriers
- Enhancing tax environment

Federal government has also directly provided substantial investment in life science precincts, although this traditionally appears to have been haphazard.

Universities are key drivers behind innovation precincts often acting as anchors to attract other institutions, health services and private companies. Universities can play a role through investments in infrastructure, entrepreneurship programs, and talent development.

NSW Innovation and Productivity Council, NSW Innovation Precincts (2018); https://smart-societies.com/2020/12/02/australias-healthcare-innovation-precincts-as-competitive-advantage/; https://www.aph.gov.au/Parliamentary_Business/Committees/House/Industry_Science_and_Resources/AdvancedManufacturing/Report/Chapter_4_-_Commercialisation_and_collaboration

Case study: growing private sector involvement signals precinct maturity

MaRS Discovery District illustrates how government is often essential in the early stages of innovation precincts – providing infrastructure, funding and support, which as the precinct evolves can crowd in private sector investment

Phase 1

MaRS' inception included **government support**, creating a deliberate collaboration among the **University of Toronto** and MRIs, including dense clustering strategies, strategic relocation of R&D functions, reconfiguration of real estate assets, and integration of research and entrepreneurship.

Phase 2

Government support extended into a second phase with a long-term view, when the Ontario provincial government strategically relocated **Public Health Ontario's** Toronto laboratory into the precinct. This decision helped anchor the growth of MaRS and strengthened the province's public health infrastructure. The government further bolstered the precinct by establishing a new **Institute of Cancer Research** within MaRS.

After establishing itself as a leading innovation hub, the MaRS precinct has benefitted from substantial private investment – there are now over **1,400 science and tech companies**. This included a collaboration with MaRS, Johnson & Johnson and the government to develop the JLABs incubator for biotechnology.

Phase 3

MaRS' third growth phase includes **public and private anchor tenants** (labs, universities and spin-outs), as well as **residential developments**.



NSW Innovation and Productivity Council, NSW Innovation Precincts: Lessons from international experience (2018)

All major precincts appear to have been supported by federal and/or state governments

Infrastructure within precincts typically involve federal and/or state funding, with mechanisms including direct grants, City Deals, land use planning, direct government commissioning and via universities and research institutes or hospitals



Melbourne Biomedical Precinct

Australian Institute for Infectious Disease (AIID)

- $245m — VIC government
- $150m — University of Melbourne, the Doherty Institute and the Burnet Institute



Adelaide BioMed City

- $80m — South Australian immunoGENomics Cancer Institute
- $68m
- $44m — South Australian Health and Medical Research Institute second site (SAHMRI II)



Gold Coast Health and Knowledge Precinct

- $154m — *RDX Life Sciences Centre at Lumina:* Economic Development Queensland and Northwest Healthcare Properties



Tech Central Innovation Precinct

- $48m — Establishing Tech Central
- $750m — Royal Prince Alfred Hospital Redevelopment
- $1.5bn — Atlassian Headquarters



Westmead Health &Innovation District

- $1bn — Redevelopment of Westmead Health Precinct
- $67m — Charter Hall Group: Innovation Quarter

RANDWICK HEALTH & INNOVATION PRECINCT

The future of lifelong health

Randwick Health & Innovation Precinct

- $720m — Randwick health redevelopment
- $100m — Sydney Children's Hospital & Minderoo Children's Comprehensive Cancer Centre
- $50m

Federal government *State government* *Private* *Universities and not-for-profits*

Parliament of Australia, Inquiry into Developing Advanced Manufacturing in Australia (2023); Press Releases of various investments

369

Biointelect

Public-private partnerships are attracting large-scale manufacturing projects to AUS

These projects drive long-term industry commitments that boost employment and economic activity, as well as strengthen local R&D and commercialisation through collaboration

moderna

- The **Australian Government**, **Victorian Government** and **Moderna** entered a 10-year partnership to accelerate mRNA research, translation and manufacturing.
- **$2bn** population-scale mRNA Manufacturing facility in Melbourne (within the Monash Technology Precinct) and Moderna's Regional Research Centre for Respiratory Medicines and Tropical Diseases.

Under the agreement, the Federal government will provide **preferential purchasing** for vaccines manufactured at the site, acting as a participation target.

SANOFI

- Agreement between between **Sanofi**, the **University of Queensland (UQ)**, **Griffith University** and the **Queensland Government.**
- **$280m** Translational Science Hub located across Queensland, utilising the laboratories and infrastructure of the UQ, Griffith University and the Translational Research Institute (TRI).

This investment in QLD was made despite Sanofi's Australian headquarters being located in Macquarie Park, NSW.

vaxxas

Government funding supported Vaxxas' Brisbane production facility:

- Australian government's Modern Manufacturing Initiative ($4.4m and $8.2million
- QLD government co-investment and operational support, as well support from Brisbane City Council.

"Together this assistance has **allowed Vaxxas to develop its facility on home soil instead of being built overseas**."

370

https://djsir.vic.gov.au/mrna-victoria/manufacturing/population-scale-mrna-manufacturing; https://statements.qld.gov.au/statements/96732; Parliament of Australia, Inquiry into Developing Advanced Manufacturing in Australia (2023)

Co-investment models are increasingly used and indicate precinct maturity

Government and not-for-profit funding, along with institutional backing, real estate partners and property developers are accelerating the development of leading biotech and medtech hubs and precincts

SITE, YEAR & SIZE	FUNDING MODEL	KEY INFRASTRUCTURE
CSL Global Headquarters, *2024*  35,000m^2 17 floors	**Public, Private and Not-for-Profit ($65m)** • CSL, Australia's largest biotechnology company • Breakthrough VIC, Victorian government's venture capital fund ($25m) • Walter & Eliza Hall Institute (WEHI) • University of Melbourne	**Anchor Tenant:** CSL Office Spaces: ~60% R&D Laboratories: ~30% Retail & Amenities: ~10% **Incubator:** Jumar Bioincubator (2 floors)
Translational Research Institute, *2024*  32,000m^2 8 floors ~1,000 researchers	**Public, Private and Not-for-Profit ($356m)** • QLD Government ($100m) • Australian Government ($140m) • Queensland University of Technology (QUT) ($25m) • University of Queensland ($10m) • Atlantic Philanthropies ($50m) • Subsequent Sanofi investment (Translational Science Hub, see page 70)	**Anchor Tenant:** Researchers from Partner Institutions: UQ, QUT, Mater Medical Research Institute, Princess Alexandra Hospital **Industry/Incubator:** TRI Incubator
Health Translation Hub, *approx. 2025*  35,600m^2 15 floors	**Private ($600m)** • Co-investment led by Plenary Group, real estate developer and investor • Investment partners include property fund manager, ISPT and super funds, HESTA and UniSuper, who collectively hold 33.3%	**Anchor Tenant:** UNSW (65% for 20-years) **Industry:** Anticipated remaining 35% (6 floors, 10,900m^2 are currently available for lease)

HDR Analysis, Life Sciences Hub (2024); https://massdesigngroup.org/sites/default/files/multiple-file/2017-11/Purpose%20Built_Translational%20Research%20Institute.pdf; https://randwickcampusredevelopment.health.nsw.gov.au/projects/health-translation-hub

Appendices

1 – Life Sciences Hub (Camperdown): Tenant Archetypes & Needs

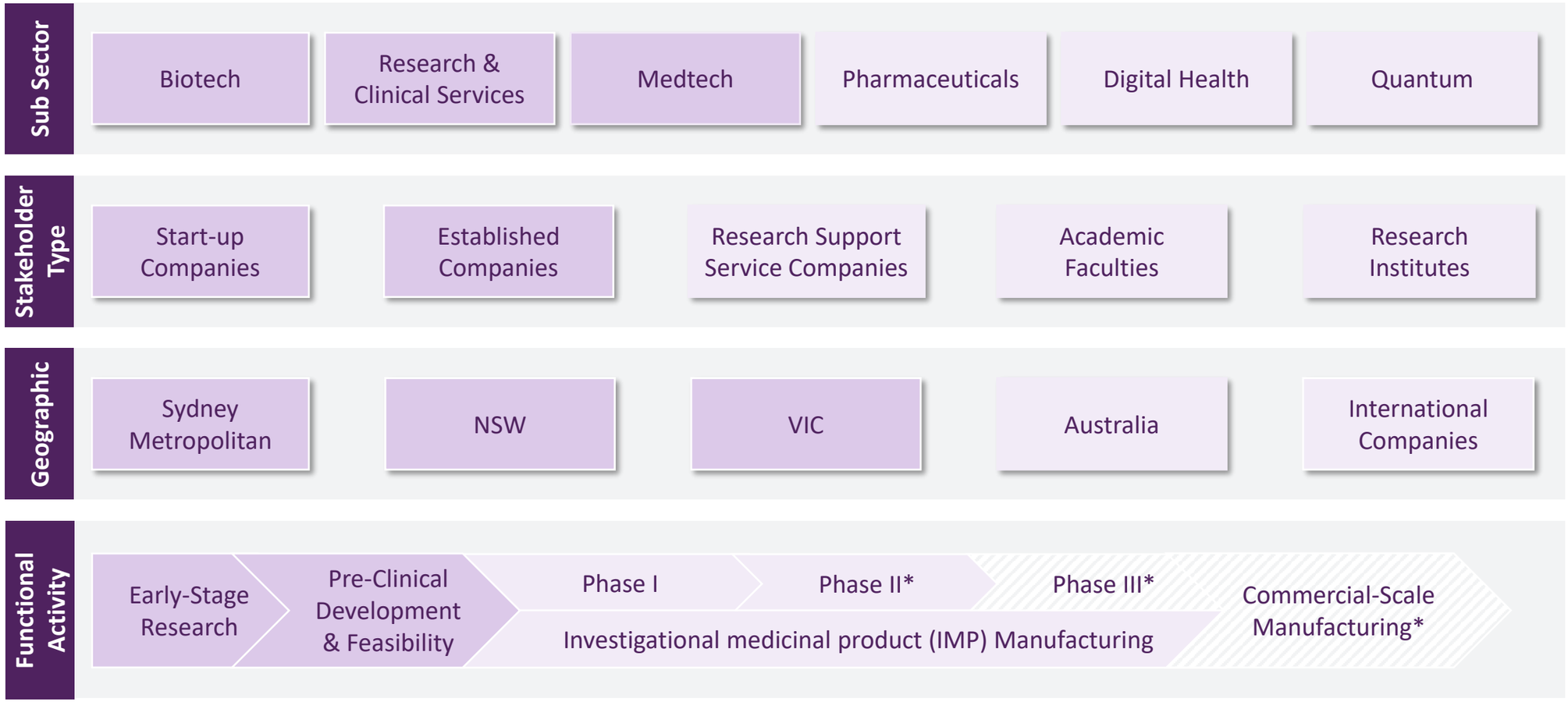
2 – Structure of Australia’s Life Sciences Industry

Life Sciences Hub (Camperdown): Tenant Archetypes & Needs

Appendix 1

There are a range of potential life sciences tenants for the Life Sciences Hub

Prioritised analysis of potential tenant archetypes focused on the key differentiator of this proposed site: the provision of life sciences-specific laboratory infrastructure



374

There are a range of potential tenants for the Life Sciences Hub (Camperdown)

Infrastructure needs and availability of supply differ significantly across the subsectors and tenant archetypes

	Biotech	Research & Clinical Services*	Australian-based Pharmaceutical Companies	Multi-National Pharmaceutical Companies	Medtech	Digital Health	Quantum
Companies in AUS	**548** *2022*	**146** *2022*	**120** *2025*	**86** *2025*	**577** *2023*	**>513** *2022*	**16** *2022*
Anticipated Infrastructure Needs	• Fitted-out PC1 and PC2 wet labs • Shared labs with specialist equipment (e.g., microscopy) • Facility management • Coworking, offices, meeting rooms	• Customisable wet labs • Cleanrooms for clinical manufacturing (GMP required for Phase 2 beyond) • Health clinics/ patient facilities • Coworking, offices, meeting rooms	• Fully customisable wet labs (PC1 and PC2) • Fully customisable GMP cleanrooms for clinical manufacturing • Private offices, meeting rooms	• Private offices, meeting rooms	• Fitted-out shared prototyping and fabrication labs (e.g., 3D printing, electronics) • Private offices, meeting rooms	• Private offices, meeting rooms • Access to dedicated data centres with AI/ML processing capabilities • Regulatory-compliant cloud storage for patient data	
Key Camperdown/ Tech Central Value Elements	• Affordable local infrastructure • Proximity to parent institutions – USYD, SBA and RPAH • Talent attraction	• High-quality local infrastructure • Colocation with leading RPAH and potential customers • Integration with clinical trial units and biobanks	• Colocation with collaborators - USYD, RPAH, clinical trial sites • Connectivity and proximity to CBD	• Connectivity and proximity to CBD • Access to potential research partnerships	• Affordable local infrastructure • Proximity to parent institutions - USYD, SBA and RPAH • Talent attraction	• Proximity to RPAH, UTS and USYD • Colocation with tech companies	

Research & clinical services represent CROs, CDMOs, contract research and analytical services and lab testing. Lab infrastructure requirements vary across these areas, being greatest for contract research and analytical services and lab testing. *Anticipated infrastructure needs reflect the general requirements of each subsector; however, they will vary depending on the specific product and company. Therefore, qualitative market research of potential tenants is recommended for validation.*

RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator

375

Biotech companies require highly specialised and costly laboratory infrastructure

These companies typically require certified wet labs with specialist equipment in fit-for-purpose, compliant facilities

Biotech

548
companies (2022)



113*
NSW companies (2025)

Example Tenants:

- *TroBio Therapeutics*
- *Syntara Limited*
- *Thrombio*
- *NeuClone*
- *Anthrocell*
- *Cambium Bio*

Key Archetype Issue

- Specialised laboratories are crucial for biotech R&D but are often **cost prohibitive for early-stage biotech** companies.
- Early-stage biotechs typically prefer leasing a lab space that is already fitted-out given time-consuming nature of fit-out

Potential Value of Proposed Site

- Availability of affordable local infrastructure could reduce the need for companies to relocate to other states or internationally, **retaining economic value and innovation**.
- **Co-location with commercialisation advisory**, **researchers, the Sydney Biomedical Accelerator and support services** can be attractive to support translation.
- Proximity to collaborators and **core research facilities** within research institutes and universities.
- **Access to specialised and skilled researchers,** this site would provide an attractive CBD location, proximal to potential talent source organisations (e.g., universities, research institutes).
- Ability for inbound biotechs to access Australian incentives including R&D Tax Incentive.

Accredited Labs: PC2, GMP

- Typically, **PC1 labs** with some requirement for **PC2 labs**.
- Most biotech companies will outsource manufacturing, so **Good Manufacturing Practice (GMP)** compliance is likely not required, unless clinical trial manufacturing is being undertaken in-house.

Specialised Build, Equipment & Waste

- **Containment measures** and **efficient waste disposal** systems are required for hazardous chemicals and biological materials.
- **Specified lighting**, **ventilation**, and suitable **floor-to-floor height** are important for compliance.
- Shared access to tissue culture, flow cytometry, bacterial shared and lamina flow, PC2 wash up room.
- **Facility management** can help reduce significant R&D costs.

**Based on AusBiotech Australian Life Science Innovation Directory (2025)*

Biotech and medtech have distinct infrastructure needs; bioprinting bridges both

Biofabrication and biomaterials are emerging fields that could present a key opportunity for the Life Sciences Hub (Camperdown)

MAXONIQ

MAXONIQ is ***medtech company*** which uses 3D printing to treat end-stage bone and joint conditions.

MAXONIQ is located on a dedicated floor **within Melbourne Connect** in the Melbourne Biomedical Precinct.

- Private office space within an innovation building
- Custom dry labs for prototyping

This location may have been driven by:

- Proximity to St Vincent's Hospital and University of Melbourne
- Reduced rent with ability to scale with additional floors

Tetratherix™

Tetratherix™ has developed a novel injectable biomaterial under investigation for a range of diseases and use cases.

Tetratherix™ initially was located at Cicada Innovations in Eveleigh, however have since moved to a commercial space in Alexandria.

- Their current Alexandria site was an empty warehouse, which they converted in an ISO 13485 certified clean-room/ sterile production facility.
- Preclinical studies currently appear to be outsourced to research institutes and contract research organisations across Australia, not conducted in-house.

This location may have been driven by:

- Ability to obtain affordable warehouse space, suitable for customisation

Potential Opportunity: Bioprinting and Tissue Engineering

Biofabrication and biomaterials represent a unique and diverse field of research which combines principles of biomedical engineering and medical devices, with biology, medicine, and pharmaceuticals. As a result, R&D, manufacturing and subsequently, infrastructure, span both areas of biotech and medtech.

These needs vary based on the type of product, but may include;

- PC1 or PC2 labs (for bioprinting and tissue culture)
- Dry labs (for additive manufacturing)
- Facilities suitable for a quality overlay of ISO 13485 (for medical devices)
- GLP and/or GMP

https://www.cicadainnovations.com/incubator/residents; https://www.linkedin.com/feed/update/urn:li:activity:6944518958133719040/; https://tetratherix.com/; https://advanced.onlinelibrary.wiley.com/doi/full/10.1002/adhm.202201714

Tech Central precinct has existing value for medtech companies

Medtech is one of the 7 existing growth industries Tech Central focuses on

Medtech

577
companies (2023)

378

Example Tenants:

- *Baymatob*
- *Seer Medical*
- *Atomo Diagnostics*
- *Saluda Medical*
- *SDIP Innovations*
- *ENVision Medical Devices*
- *AthroLase*

Key Archetype Issue

- *Early-Stage:* Access to specialised, high-cost equipment, such as CNC machines, 3D printers, and spectrometers can be cost prohibitive for early-stage medtech companies.
- *Established Device Companies:* Need for office space for to support Australian sales and distribution operations.

Potential Value of Proposed Site

- NSW location, which is recognised as a medtech leader.
- Access to **affordable shared infrastructure** and equipment and proximity to University of Sydney core research facilities could reduce development costs.
- Integration with local hospitals can support clinical engineering and translation.
- **Co-location with commercialisation advisory, researchers, the Sydney Biomedical Accelerator and support services** can be attractive to support translation.

Quality Management

- Medtech companies typically operate under a Quality Management System (QMS) to demonstrate safety and performance. Infrastructure and processes should be considered for their ability to show compliance with ISO 13485 for medical devices.

Dry Labs & Equipment

- **Shared prototyping space** for device development and testing to accommodate various disciplines including machining, software integration and rapid manufacturing.
- **Fit out** with shared equipment including hand tools, 3D printers, CNC machines and electronics.
- **Dedicated areas for PCB design and assembly** which require specific controls for working with these components.
- **Dedicated and customisable dry labs** for production of early-stage prototypes and small-batch devices, including suitable build for assembly areas
- Areas for or access to **sterilisation** which could include autoclaves, dry heat sterilisers, hot isostatic press, etc.

MTAA The Value of MedTech Report (2023)

Accredited, high-quality labs are required for research & clinical service providers

Facilities must support diagnostics, genomic sequencing, pathology, and clinical trial testing in compliant and controlled settings

Research & Clinical Services



146
companies (2022)



42*
NSW companies (2025)

Example Tenants:
- *360 Biolabs*
- *PPD Australia*
- *PAREXEL*
- *Resolian*
- *Catalent*

Key Archetype Issue

- Demand for high-quality research services, including genomic sequencing and specialised testing for clinical trials, continues to grow as precision medicine and advanced therapies progress.
- These companies rely on access to **leading, accredited lab infrastructure** that provides high-quality research and testing for their clients.

Potential Value of Proposed Site

- Access to high-quality local infrastructure could improve the **cost competitiveness** of these services.
- Integration with local hospitals can support these services and translation of genomics and precision medicine.
- **Proximity to clinical trial units** and **biobanks** enables streamlined sample processing and real-time data integration, reducing turnaround times.
- **Co-location with potential clients** such as biotechs, academic faculties and pharmaceutical companies.

Accredited Labs: GLP, NATA, ISO 17025

- Design compliance with **biosafety regulations** (e.g., PC2/PC3 containment for infectious disease research).
- Compliance with **Good Laboratory Practice (GLP)** for pre-clinical research and **National Association of Testing Authorities (NATA)** or **ISO 17025** for testing services.

Specialised Build & Equipment

- ***Tissue Culture:*** Dedicated lab areas with biosafety cabinets, CO_2 incubators, and controlled air filtration.
- ***Genomic Sequencing:*** Next-generation sequencing (NGS), PCR platforms, and high-throughput bioinformatics infrastructure.
- ***Pathology & Biobanking:*** Advanced histopathology and microbiology laboratories with controlled sample storage (e.g., liquid nitrogen and ultra-low temperature (-80°C) freezers)
- ***Cleanrooms:*** ISO-classified cleanrooms for biological materials and cell therapies.
- ***Cloud*** computing infrastructure for genomic sequencing, bioinformatics and automated environments for conducting experiments remotely.

**Based on AusBiotech Australian Life Science Innovation Directory (2025)*

Australian-based pharma companies typically require R&D infrastructure

AU-based* Pharma

120
companies (2025)

380

Example Tenants:
- *Minomic*
- *Recce Pharmaceuticals*
- *Clarity Pharmaceuticals*
- *Imugene*
- *AdvanCell Isotopes*
- *QBiotics Group*
- *Starpharma*
- *Respirion Pharmaceuticals*

Key Archetype Issue

- **High cost of commercial-scale** infrastructure for research, offices and manufacturing.
- **Limited current access** to pilot-scale manufacturing facilities for early-stage and mid-sized pharmaceutical companies in Australia.

Potential Value of Proposed Site

- **Co-location with collaborators** at leading research institutes, universities and hospitals within the Camperdown precinct.
- Attractiveness of **proximity to clinical trial sites** and investigators.
- *For pharmaceutical companies with **cell and gene therapy candidates**,* ease of transport to major hospitals, in particular the Royal Prince Alfred Hospital, would be key for logistics and supply chain.
- **Central location** to attract talent.

Office and Working Space

- **Private office and meeting room** space for regulatory, quality, business development (BD), commercial and management.
- Flexibility to **increase occupancy** as the company scales and increases in-house capacity, may be a key value attribute (shift away from outsourcing/consulting services).

Accredited Labs: PC2, GMP

- **GMP certified** cleanrooms for clinical manufacturing.
- **Flexible PC2 labs** accredited by **Office of the Gene Technology Regulator** (OGTR), and potentially **PC3 labs** for infectious disease-focused pharmaceutical companies.
  - Companies would likely want these spaces to be customised, rather than fitted out.
  - Ability to increase GMP cleanroom and wet lab space as the company scales and increases batch sizes would likely be advantageous.
- **Dedicated quality control labs** and quality assurance space
- Access to stability testing and storage facilities, likely not shared.

**Headquartered in Australia*
GlobalData search of Australian Public and Private Companies, Parent or Independent, with Highest Drug Development Stage ≥ Phase 2

AU-based pharmaceutical companies likely require lab space, whereas MNCs typically only require corporate office space in Australia

CLARITY PHARMACEUTICALS

Clarity Pharmaceuticals is an ***AU-based pharma company*** with clinical stage radiopharmaceutical platform products for oncology.

Clarity is located **within Cicada Innovations**' Eveleigh site for deep tech residents (biotech, digital health, agritech, climate and energy, space).

- Office space within an innovation building
- Presumed wet labs for R&D

This location may have been driven by:

- Central location to attract talent & proximity to Camperdown precinct
- Incubator and commercialisation support programs (by Cicada Innovations)
- Low-cost rent with ability to scale with flexible and custom space

starpharma

Starpharma is an ***AU-based pharma company*** with a pipeline of candidates leveraging their proprietary dendrimer platform.

Starpharma is based in Abbotsford, Victoria in a **private commercial office** and lab building.

- Wet labs for R&D, in-process reaction monitoring and QC release
- **GMP cleanroom** with TGA licence for clinical manufacturing
- Private office space

This location may have been driven by:

- Private space
- Adequate land/building size for specialised labs and GMP cleanrooms
- Parking for staff members

Cicada Innovations; https://starpharma.com/

Multi-national pharma in NSW have limited R&D facilities, but can act as important anchors for partnerships

Multi-National Pharma

86
companies (2025)

382

Example Tenants:
- *AbbVie*
- *Apotex*
- *AstraZeneca*
- *Takeda*
- *Boehringer Ingelheim*
- *Johnson & Johnson*
- *Merck Sharp & Dohme*
- *Roche*
- *Teva Pharma*

Key Archetype Issue

- Need for office space for affiliates to support APAC operations, including clinical trials, research partnerships and commercial activities.

Potential Value of Site

- **Central location** to attract talent.
  - In recent years, many multi-national pharma companies have relocated to Sydney CBD to attract talent
- A **strategic APAC affiliate** with access to leading clinical trial sites and networks.
- Co-location with University of Sydney and UTS, as well as research institutes for **potential research partnerships and collaborations**.
- Ability to access **Australian incentives** including R&D Tax Incentive.

Corporate Office Space

- Majority of infrastructure required will be **corporate office** space for commercial, regulatory and market access teams.
- This office space will most likely need to be dedicated floors to minimise commercial conflicts and manage expectations regarding confidentiality.

NSW has a higher concentration of multi-national pharma companies compared to other states. There could be a potential opportunity to target these as major tenants in the Camperdown site, acknowledging that they would likely have limited lab infrastructure needs.





GlobalData search of Australian Public and Private Companies, Subsidiary, with Highest Drug Development Stage ≥ Phase 2, Company Drug Count ≥ 8
**This list of logos is not exhaustive*

Digital health and quantum have fewer physical lab requirements, the site's location in Tech Central has a strong value proposition

Digital Health



>513
companies (2022)

383

Example Tenants:
- *Vively*
- *Harrison.ai*
- *Perx Health*
- *Kali Healthcare*
- *Cardihab*
- *Metabolic Health Solutions*

Quantum/ Deep Tech



14
companies (2020)

Example Tenants:
- *ARIA Research*
- *Quantium*
- *Q-Ctrl*
- *Sydney Quantum Academy*
- *Silicon Quantum Computing*
- *Quantum Brilliance*

Key Archetype Issue

- Access to affordable and scalable co-working/office space.

Value of Proposed Site

- Colocation with leading tech companies and supporting services including Atlassian and Sydney Quantum Academy.
- Proximity to research collaborators within University of Sydney and UTS.
- Proximity to clinicians to facilitate collaboration to solve real-world health challenges.

Office Space & Infrastructure

- Majority of infrastructure required will be **coworking and/or private office** space for commercial, regulatory and market access teams.
- Robust data infrastructure including cloud computing, and secure data privacy, particularly relating to patient data and complying with Privacy Act 1988, and GDPR laws.
- Dry labs for quantum computing including vibration-controlled environments.

Quantum Applications

- Quantum sensors can enable early disease detection through their use in diagnostics and AI.
- Quantum computers can support accelerated drug development through quantum chemistry simulation – this can identify lead compounds and optimise their binding affinity.

Note: We propose to validate these needs prior to finalisation of this draft report. GDPR = General Data Protection Regulation
CSIRO Growing Australia's Quantum Technology Industry (2020); Quantum Computing's Role In Developing New Pharmaceuticals

Structure of Australia's Life Sciences Industry

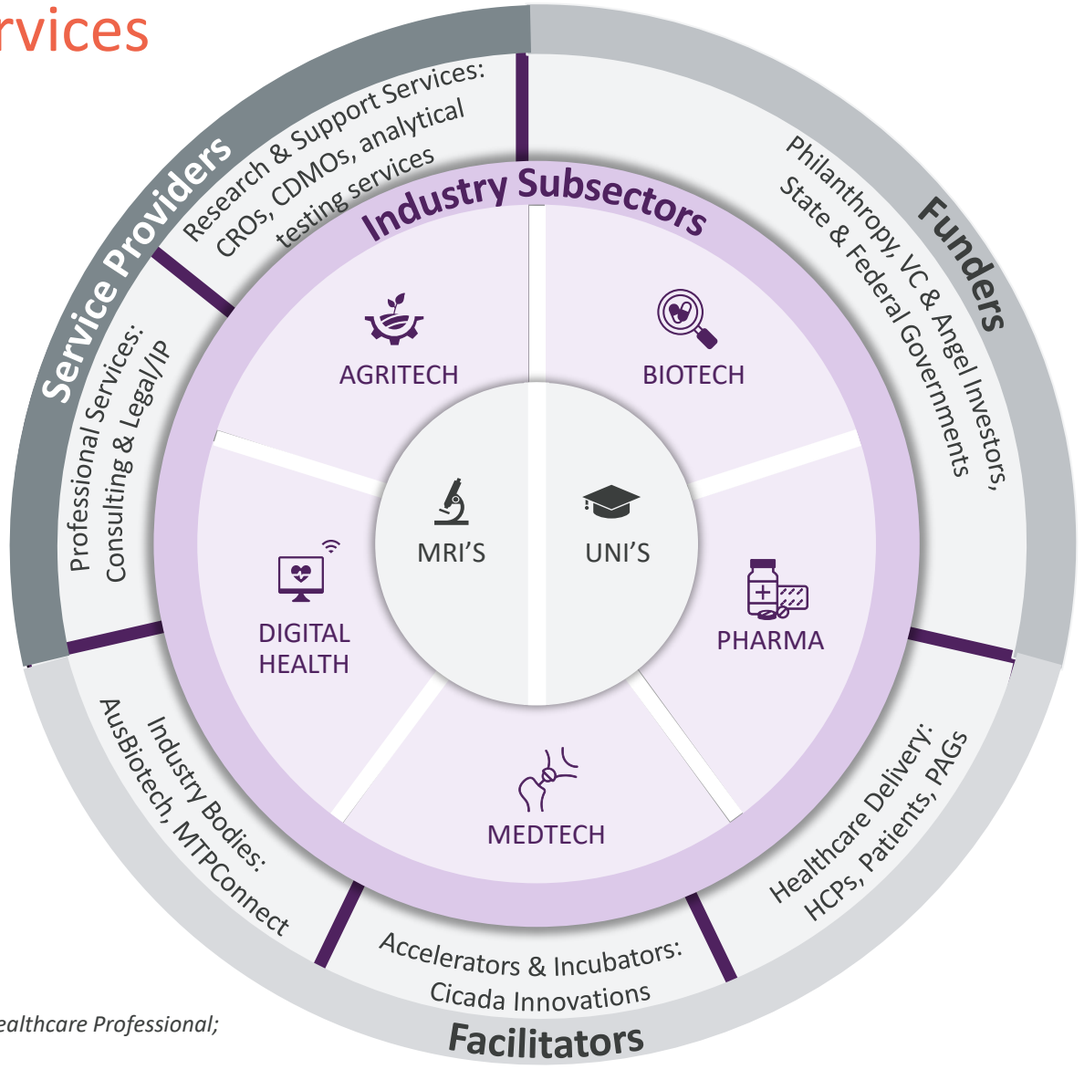
Appendix 2

Australia's life sciences sector is a complex ecosystem spanning multiple subsectors, underpinned by strong research and support services

Australia's life sciences sector is underpinned by strong research capabilities with **world-class universities, medical research institutes (MRIs), and hospitals**. These institutions often act as anchors within health and life sciences precincts, both attracting and enabling research and commercialisation.

The industry is **funded** by strong government support, including grants, R&D tax incentives, and precinct-based investments. Increasing private sector investment and global partnerships support commercialisation, though challenges remain in scaling and retaining local IP.

Industry bodies such as AusBiotech and MTPConnect play an important role in advocacy, policy development, and industry coordination, while **accelerators and incubators**, including ANDHealth and Cicada Innovations, provide support for startups through mentorship, funding, and commercialisation pathways.



CRO = Clinical Research Organisation; CDMO = Clinical Development and Manufacturing Organisation; VC = Venture Capital; HCPs = Healthcare Professional; PAGs = Patient Advocacy Groups; IP = Intellectual Property

Life sciences is an innovative growth industry in Australia with significant opportunity

The sector fuels jobs, investment and global partnerships through a highly educated and skilled workforce, access to leading infrastructure, a globally competitive clinical trials sector and the commercialisation of new medical technologies

$255bn

Value of ASX-listed life sciences industry (2024)

350,000

Jobs across the life sciences industry (2024)

4.4%

Forecast life sciences industry annual growth

23rd

Australia's Global Innovation Index R&D ranking (2024)

2,905

Life sciences organisations in the sector in 2024

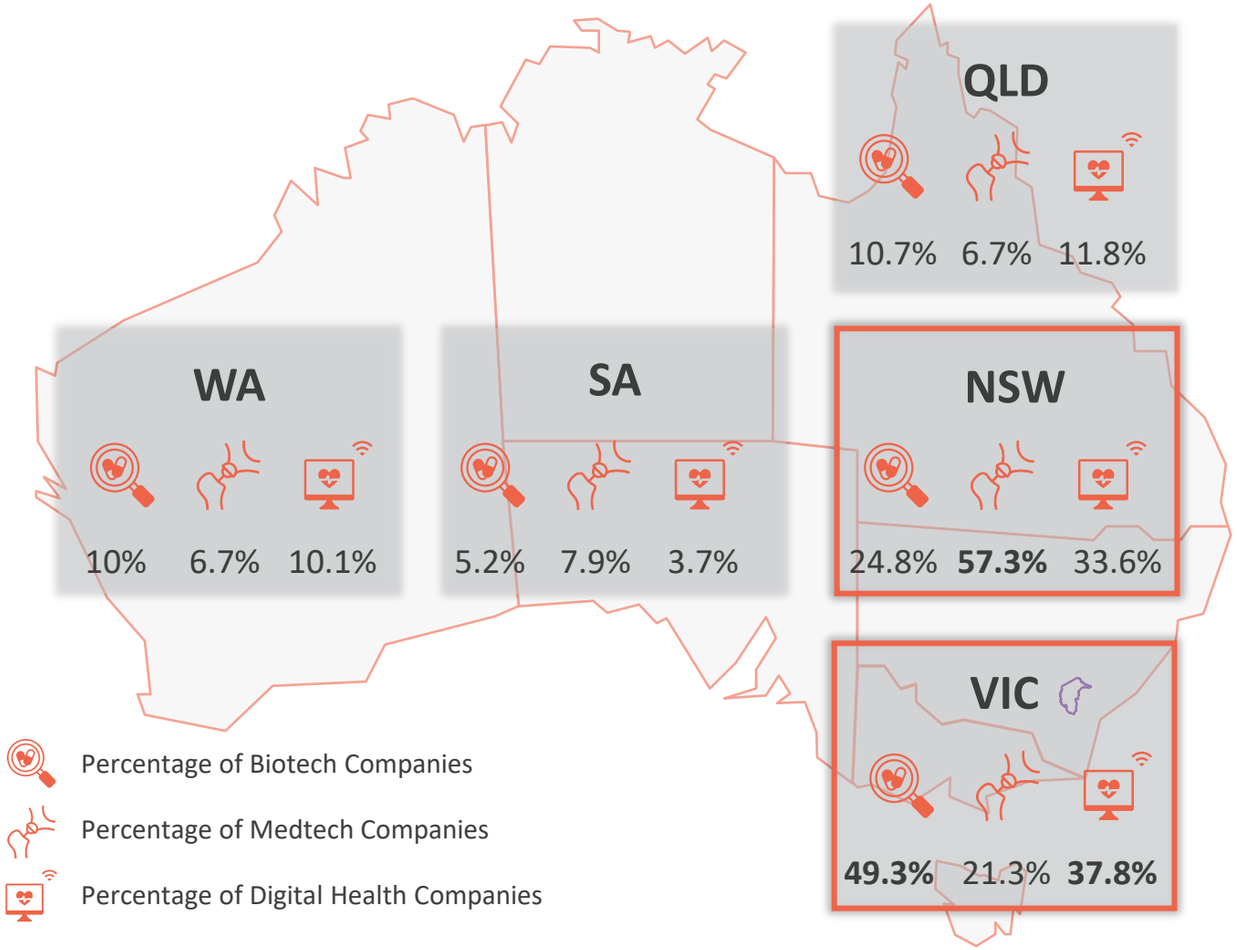
$64bn

Partnership deals (domestically and internationally, 2017 to 2024)

IBISWorld Biotechnology report (2023); Australian Department of Health and Aged Care (2022); AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025); WIPO, Global Innovation Index (2024)

Of the major subsectors, NSW leads in the number of medtech companies

Of these medtech companies, around 50% are Australian parent organisations (as opposed to multi-national subsidiaries)



56.2% of all medtech companies in Australia originated as **startups or spin-outs**, with 5.7% spun-out of universities.

49.4% of all companies are Australian-only or headquartered organisations – indicating the **strength of the local industry**

+112% NSW led the expansion in the number of **digital health companies**, with an increase of 112%, between 2020 to 2022, as compared to +45% in VIC.

61.7% While VIC leads in attracting biotechs, NSW has the highest density of **multi-national (MNC) pharmaceutical companies** at 61.7%, compared to VIC at 30.9%.

GlobalData Companies (Public, Private, Independent, Parent or Joint Venture); ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022); MTAA The Value of MedTech Report (2024)

This report is a **draft** summary of analysis undertaken by Biointelect Pty Ltd in respect of Life Sciences Precincts relating to the Life Sciences Hub (Camperdown) (Subject Matter). This report has been prepared at the request of and for the sole benefit of Wentworth Capital (Spark Sub Trust)(Client) and may not be relied upon by any other person.

This report has been prepared solely for the purpose of assisting the Client in its consideration of life science precincts and Life Sciences Hub (Camperdown) opportunity. It is limited in scope, and relies on financial and other information provided to us by or on behalf of the Client together with other publicly available information.

The completeness, accuracy or authenticity of that information has not independently verified by Biointelect.

This report should not be treated as a substitute for advice on matters of specific concern to the Client and is given as of 13 June 2025.

Attachment A4

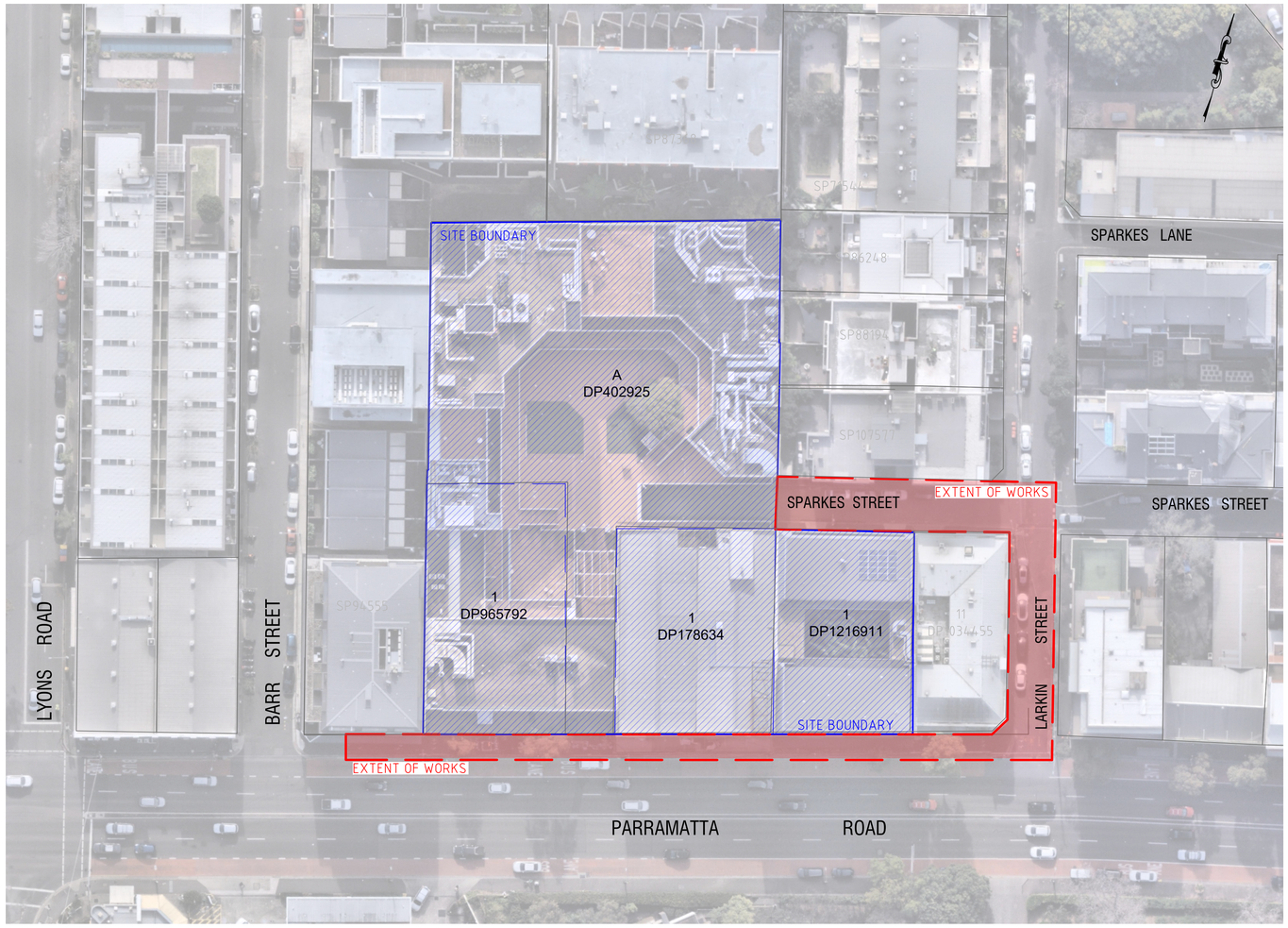
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88-94 PARRAMATTTA ROAD, CAMPERDOWN

TOPOGRAPHIC SURVEY

SUBSURFACE UTILITY INVESTIGATION



LOCALITY & SHEET LAYOUT

NOT TO SCALE

SURVEY NOTES:

1. THIS SURVEY HAS BEEN UNDERTAKEN FOR DETAIL AND LEVEL PURPOSES FOR LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 AND LOT 1 DP1216911 AND IS LIMITED TO THE EXTENDS OF SURVEY AS NOTED ON THIS DRAWING. THIS SURVEY SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING TOPOGRAPHIC SURVEY DRAWING, REFERNCE 124308-SU-DT-001.
3. DRAWING IS INTENDED TO BE READ IN DIGITAL CAD (DWG) FORMAT. INFORMATION HAS BEEN OMITTED FROM THE PDF VERSION FOR CLARITY. REFER TO ACCOMPANYING DWG FORMAT VERSION FOR ADDITIONAL DETAIL AND INFORMATION.
4. DATE OF SURVEY: 24 JULY 2024

SUBSURFACE UTILITY INVESTIGATION NOTES:

5. CRUX SURVEYING HAS INVESTIGATED AND MARKED AND SURVEYED UTILITIES WITHIN THE AREA SHOWN ON THIS PLAN ONLY AS SPECIFIED BY THE CLIENT. ALL UTILITIES FOUND HAVE BEEN REFERENCED TO THE RELATIVE UTILITY OWNERS DIAGRAMS. OTHER UTILITIES MAY EXIST IN THIS AREA THAT WERE NOT FOUND AND/OR ARE NOT SHOWN ON UTILITY OWNERS DIAGRAMS.
6. ALL SERVICES HAVE BEEN MARKED IN ACCORDANCE WITH THE AUSTRALIAN STANDARD OF UTILITY CLASSIFICATION AS5488. UTILITY LINES SHOWN ON THESE PLANS ARE INTERPOLATED BETWEEN POINTS THAT HAVE BEEN LOCATED BY UTILITY DETECTION METHODS AND SURVEYED ON SITE BY CRUX.
7. SOME PITS AND SERVICE LIDS WERE INACCESSIBLE (EG COVERED OR FULL OF DEBRIS) AT THE TIME OF SURVEY WHERE NOTED ON THE PLAN. THESE SERVICES WERE NOT ABLE TO BE INVESTIGATED.
8. ALL REDUCED LEVELS OF SERVICES SHOWN ARE TO THE TOP OF SERVICE, UNLESS OTHERWISE NOTED EG. INVERT LEVEL (IL)
9. NO POT HOLING OR NON-DESTRUCTIVE DIGGING (NDD) HAS BEEN UNDERTAKEN. NDD MUST BE UNDERTAKEN PRIOR TO ANY CONSTRUCTION OR EXCAVATION TO CONFIRM THE LOCATION AND LEVEL OF UTILITIES.
10. ELECTRONIC DETECTION MUST NOT BE THE SOLE METHOD USED TO DETERMINE UTILITY LOCATIONS FOR CONSTRUCTION PURPOSES. THE ELECTRONIC SUB-SURFACE MEASUREMENTS ARE INDICATIVE ONLY AND MUST BE PROVEN BY PHYSICALLY SIGHTING THE ASSET.
11. LOCATING ACCURACY IS DEPENDANT UPON THE PIPE/CABLE TYPE, ITS DEPTH, AND THE PREVAILING SOIL TYPE. IN MOST SITUATIONS THE PLAN POSITION WILL BE ACCURATE TO WITHIN +/- 300MM, AND THE DEPTH TO WITHIN +/- 500MM AS PER AUSTRALIAN STANDARD AS5488. SIGNIFICANT OUTLIERS DO OCCUR, IN PARTICULAR FOR DEPTH MEASUREMENTS.
12. ELECTROMAGNETIC (EM) LOCATION CAN ONLY ACCURATELY TRACK METALLIC PIPES. PLASTIC, CONCRETE, ASBESTOS OR EARTHEN-WARE PIPES CANNOT BE TRACKED UNLESS THEY HAVE A TRACER WIRE ATTACHED TO THEM. EVEN IF A TRACER WIRE IS ATTACHED, THE ACCURACY OF THE TRACE CAN BE LIMITED, AS THE SIGNAL TENDS TO "JUMP" TO BETTER CONDUCTORS IF THEY ARE IN CLOSE PROXIMITY. IT CAN BE DIFFICULT TO TRACK PIPES AND CABLES UNDER HEAVILY REINFORCED CONCRETE SLABS AS THE SIGNAL TENDS TO "JUMP" ONTO THE REBAR.
13. GROUND PENETRATING RADAR (GPR) LOCATING CAN TRACK NON METALLIC PIPES. THE EFFECTIVENESS OF GPR LOCATING IS HIGHLY DEPENDENT UPON THE SOIL TYPE. IT IS GENERALLY VERY EFFECTIVE IN SANDY SOILS, BUT CAN HAVE LIMITED EFFECTIVENESS IN VERY HEAVY CLAY SOILS. GPR SIGNALS CAN FAIL TO PENETRATE THROUGH REINFORCED CONCRETE SLABS. HIGHLY SALINE ENVIRONMENTS CAN ALSO AFFECT SIGNAL PENETRATION
14. EXPERIENCE AROUND THE WORLD HAS SHOWN THAT THE "BEST PRACTICE" USING EM/GPR EQUIPMENT IN COMBINATION SHOULD RESULT IN DETECTION RATES OF 80-95%. WE CANNOT GUARANTEE THAT WE WILL LOCATE ALL MAINS/SERVICES ON A JOB SITE.

SUBSURFACE UTILITY QUALITY LEVELS:

SUBSURFACE UTILITY INFORMATION (SUI) AS5488 LOCATION CLASS LABELLING UTILITY INFORMATION BY A CLASSIFICATION CODE ALLOWS THE USER OF THIS INFORMATION TO UNDERSTAND CLEARLY HOW THE INFORMATION WAS COLLECTED AND THEN PLACE AN APPROPRIATE AMOUNT OF RELIANCE ON IT. PROJECT RISKS RELATED TO UNDERGROUND UTILITIES CAN THEN BE PROPERLY MANAGED.

QUALITY LEVEL A (QL-A): INFORMATION IS THE HIGHEST POSSIBLE LEVEL OF ACCURACY AND IS OBTAINED BY EXPOSING THE UNDERGROUND UTILITY USING A NON-DESTRUCTIVE EXCAVATION (POT HOLING) TECHNIQUE. THE VERTICAL INFORMATION FOR THIS LOCATING METHOD IS TO THE TOP OR SHALLOWEST PART OF THE LOCATED SERVICE. THE 3D LOCATION IS RECORDED BY SURVEY AS AN X, Y, Z COORDINATE.

QUALITY LEVEL B (QL-B): INFORMATION IS COLLECTED BY DESIGNATING THE HORIZONTAL AND VERTICAL LOCATION OF UNDERGROUND UTILITIES BY USING ELECTROMAGNETIC PIPE AND CABLE LOCATORS, SONDES OR FLEXI-TRACE, GROUND PENETRATING RADAR AND ACOUSTIC PULSE EQUIPMENT. THIS IS THE MOST COMMON FORM OF UTILITY LOCATING AND ALTHOUGH AN X, Y AND Z AXIS CAN BE ESTABLISHED IT IS NOT ALWAYS ENTIRELY ACCURATE DUE TO DIFFERING ELECTROMAGNETIC FIELDS, SOIL CONDITIONS AND MULTIPLE BANKS OF CABLES AFFECTING THE LOCATING SIGNAL.

QUALITY LEVEL C (QL-C): INFORMATION IS COLLECTED BY CORRELATING THE SURVEY OF VISIBLE UTILITY SURFACE FEATURES SUCH AS MARKER PLATES OR WATER HYDRANTS AND ACQUIRED DIAL-BEFORE-YOU-DIG PLANS TO "DRAW" A STRING WHICH SHOWS THE APPROXIMATE POSITION OF SERVICES. THIS METHOD DOES NOT USUALLY SHOW MULTIPLE BANKS OF CABLES AND DOES NOT ALWAYS SHOW THREE DIMENSIONAL INFORMATION. ELECTRONICALLY TRACED LOCATE MARKS WITH POOR SCRATCHY SIGNALS ARE REPRESENTED AS QL-C.

QUALITY LEVEL D (QL-D): INFORMATION IS THE MOST BASIC LEVEL OF UTILITY LOCATIONS USING ONLY INFORMATION BASED ON EXISTING DIAL-BEFORE-YOU-DIG PLANS AND BY MEASURING BOUNDARY OFFSETS ETC. THIS METHOD OF UTILITY LOCATIONS SHOULD ALWAYS BE TREATED AS AN INDICATION OF THE PRESENCE OF A SERVICE ONLY AND SHOULD NOT BE USED FOR DESIGN. GPR SCANS ARE ALSO REPRESENTED AS QL-D AS THE GPR IMAGE CANNOT BE CONFIRMED TO IT'S ORIGIN POINT. DEPTHS ON GPR SCAN MUST BE TREATED AS INDICATIVE ONLY.

THESE NOTES FORM AN INTEGRAL PART OF THE PLAN AND SHOULD ALWAYS BE SHOWN

SERVICE LOCATING ABBREVIATIONS

iL	DENOTES	INVERT LEVEL
ø	DENOTES	DIAMETER
OBV	DENOTES	OBVERT LEVEL
UTL	DENOTES	UNABLE TO LOCATE
UTO	DENOTES	UNABLE TO OPEN
EOT	DENOTES	END OF TRACE
(B)	DENOTES	QUALITY LEVEL B
(C)	DENOTES	QUALITY LEVEL C
(D)	DENOTES	QUALITY LEVEL D

LEGEND

B	DENOTES	BOLLARD	H	DENOTES	HYDRANT
RL	DENOTES	REDUCED LEVEL		DENOTES	STOP VALVE (WATER)
	DENOTES	SIGNPOST	H	DENOTES	GAS MARKER
	DENOTES	GATE		DENOTES	STOP VALVE (GAS)
TW	DENOTES	TOP OF WALL		DENOTES	GRATED DRAINAGE PIT
TK	DENOTES	TOP OF KERB		DENOTES	DRAINAGE PIT
IK	DENOTES	INVERT OF KERB		DENOTES	DRAINAGE MANHOLE
	DENOTES	COMMS PIT	K0	DENOTES	KERB OUTLET
com	DENOTES	COMMS SERVICE OVERHEAD	DP	DENOTES	DOWNPIPE
	DENOTES	SEWER MANHOLE	UN	DENOTES	UNIDENTIFIED PIT
IL	DENOTES	INVERT LEVEL	U	DENOTES	UNIDENTIFIED SERVICE
IP	DENOTES	SEWER INSPECTION OPENING	ELP	DENOTES	ELEC POLE
SE	DENOTES	SEWER MISC	E	DENOTES	ELEC PILLAR
	DENOTES	STOP VALVE (SEWER)		DENOTES	ELEC CABLE OVERHEAD

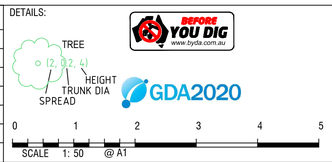
UTILITIES LINESTYLE LEGEND

	ELECTRICAL	ELECTRICAL [HIGH VOLTAGE]	ELECTRICAL [LOW VOLTAGE]	FUEL	COMMUNICATIONS	WATER
	E	E(HV)	E(LV)	FU	C	W
QL-B	E-(B)	E(HV)-(B)	E(LV)-(B)	FU-(B)	C-(B)	W-(B)
QL-C	E-(C)	E(HV)-(C)	E(LV)-(C)	FU-(C)	C-(C)	W-(C)
QL-D	E-(D)	E(HV)-(D)	E(LV)-(D)	FU-(D)	C-(D)	W-(D)

	DRAINAGE	DRAINAGE [SUBSOIL]	GAS	SEWER	UNIDENTIFIED
	D	SS	G	S	UN
QL-B	D-(B)	SS-(B)	G-(B)	S-(B)	UN-(B)
QL-C	D-(C)	SS-(C)	G-(C)	S-(C)	UN-(C)
QL-D	D-(D)	SS-(D)	G-(D)	S-(D)	UN-(D)

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:



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VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	2.5m (MAJOR) 0.5m (MINOR)
DRAWING SCALE:	1:50 @A1

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DRAWN: NR APPROVED: SRA

88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 1 OF 8 | ©

CRUX Drg No: 124308-SU-SUI-001 | REV. A

Plot Size: A1

No.96
CONCRETE & METAL CLAD
MULTI-STOREY BUILDING
METAL AND CONCRETE ROOF

MULTI-STOREY BUILDING
METAL & CONCRETE ROOF

GRAVEL ROOF
RL32.71

No.92-94
RENDER AND BRICK
MULTI-STOREY BUILDING
METAL & CONCRETE ROOF

No.96
CONCRETE & METAL CLAD
MULTI-STOREY BUILDING
METAL AND CONCRETE ROOF
ROOF RL41.45

AWNING ABOVE
AWNING ABOVE
AWNING ABOVE
AWNING ABOVE
AWNING ABOVE
AWNING ABOVE

PARAPET RL38.48
PARAPET RL33.48

(A)
(B)
(C)

PAVED AREA
RENDERED PIER
METAL AWNING ABOVE
ELEC PIT LV
ELEC PIT LV
ELEC PIT LV
SUBSTATION BELOW
(A) & (B)
BALUSTRADE
STAIRS
BALUSTRADE
COMMS PIT
BITUMEN PATH
SANDSTONE KERB & GUTTER

EXTENT OF WORKS
EXTENT OF WORKS

SHEET 3 ADJOINS

Ø125 GALV IRON
P100 AARNET
NY110 210kPa
2xDBLV
12xE80 BANK
5xDB HV
300 CICL
(FROM DPR)
UNDERTIED
2xP125 HV
1xDB
1xDB
Ø125 GALV IRON
12xE80 BANK
9xP150 2xP50 HV
P35
6xEW80
6xEW80
2xP100
P100 AARNET
NY110 210kPa
5xDB HV
300 CICL
P100 AARNET
Ø125 GAL
Ø100 PV

PARRAMATTA ROAD

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:
TREE
(2, 02, 4)
HEIGHT
TRUNK DIA
SPREAD
BEFORE YOU DIG www.byda.com.au
GDA2020
0 1 2 3 4 5
SCALE 1: 50 @ A1

SEE SHEET 1 FOR NOTES

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ORIGIN:	PM56548 RL23.655
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DRAWING SCALE:	1:50 @A1

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DRAWN: NR APPROVED: SRA

88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 2 OF 8 | ©
CRUX Drg No: 124308-SU-SUI-001 | REV. A

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Plot Date: 26/08/24 - 09:28
100mm AT FULL SIZE
361

Plot Size: A1

BUILDING ABOVE

GROUND FLOOR WALKWAY

No.92-94
RENDER AND BRICK
MULTI-STOREY BUILDING
METAL & CONCRETE ROOF

No.88-90
BRICK & RENDER
3 STOREY BUILDING
METAL ROOF

No.88-90
BRICK & RENDER
3 STOREY BUILDING
METAL ROOF

ELEC PIT LV

(B)

BALUSTRADE

STAIRS

RENDERED PIER

PAVED AREA

PARAPET RL34.70

PARAPET RL34.78

EXTENT OF WORKS

EXTENT OF WORKS

CONC DRIVEWAY

Ø125 GALV IRON

Ø100 PVC

1xDBLV

NY110 210kPa

P35 PVC

6xEW80

6xEW80

2xP100

P100 AARNET

P100 AARNET

P100 AARNET

P100 AARNET

1xDB

P30

12xE100 BANK

5xDB HV

5xDB HV

1xDB

P30

UNIDENTIFIED (FROM GPR)

UNIDENTIFIED (FROM GPR)

300 CICL

Ø300 CONC

Ø300 CONC

9xP150 2xP50 HV

PARRAMATTA ROAD

SHEET 2 ADJOINS

SHEET 4 ADJOINS

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:

TREE
(D, D2, H)
HEIGHT
TRUNK DIA
SPREAD

BEFORE YOU DIG www.byda.com.au

GDA2020

0 1 2 3 4 5
SCALE 1: 50 @ A1

SEE SHEET 1 FOR NOTES

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ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	2.5m (MAJOR) 0.5m (MINOR)
DRAWING SCALE:	1:50 @A1

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P (02) 8582 2300

SURVEYED: AG/KS/MT CHECKED: KPU
DRAWN: NR APPROVED: SRA

88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 3 OF 8 | ©

CRUX Drg No: 124308-SU-SUI-001 | REV. A

100mm AT FULL SIZE

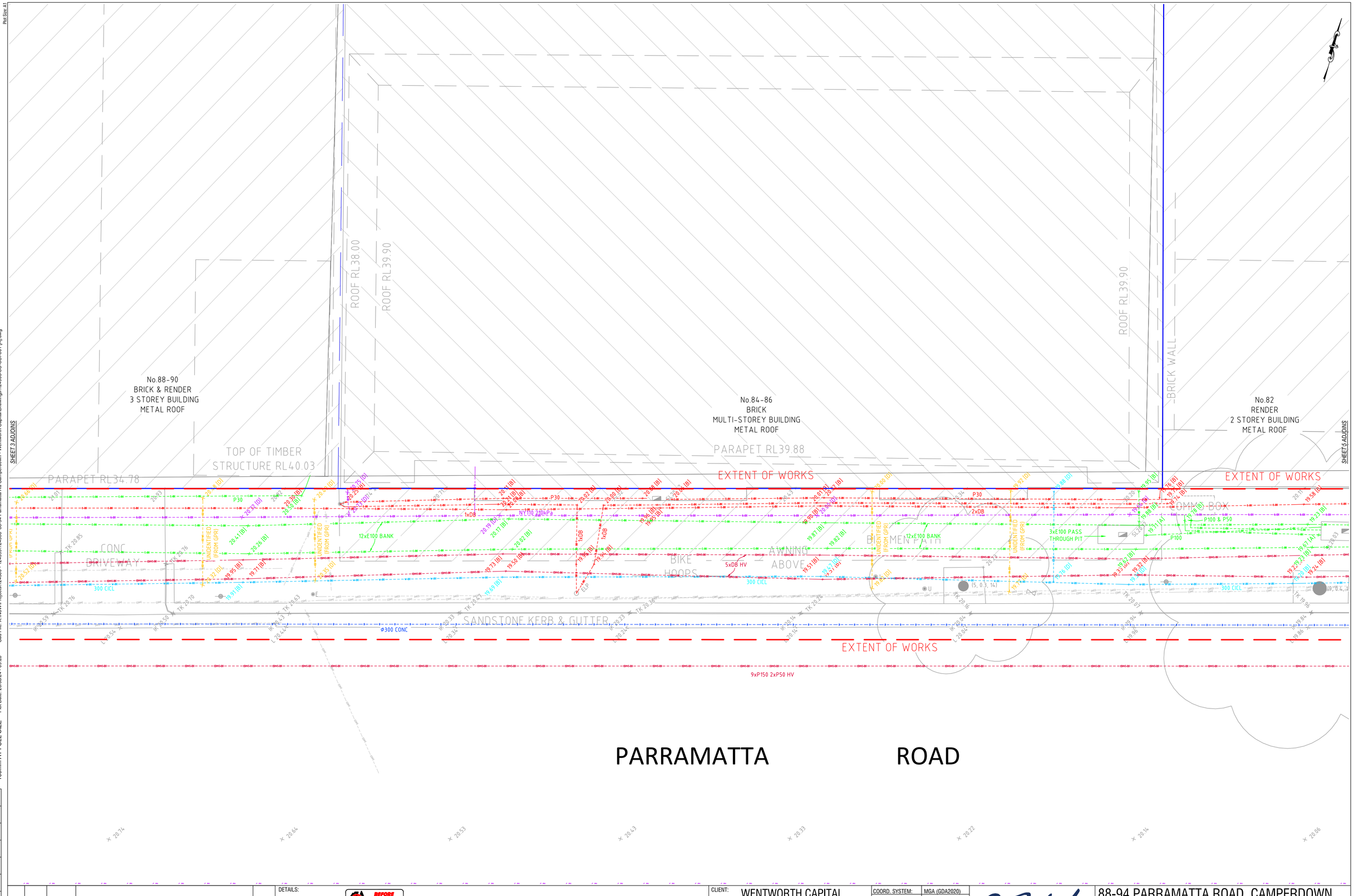
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Plot Size: A1
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100mm AT FULL SIZE

393



A	NR	24/08/2024	FOR INFORMATION	SRA
REV.	BY	DATE	DESCRIPTION	APPD.

DETAILS:



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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	2.5m (MAJOR) 0.5m (MINOR)
DRAWING SCALE:	1:50 @A1

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DRAWN: NR APPROVED: SRA

88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 4 OF 8 | ©

CRUX Drg No: 124308-SU-SUI-001 | REV. A

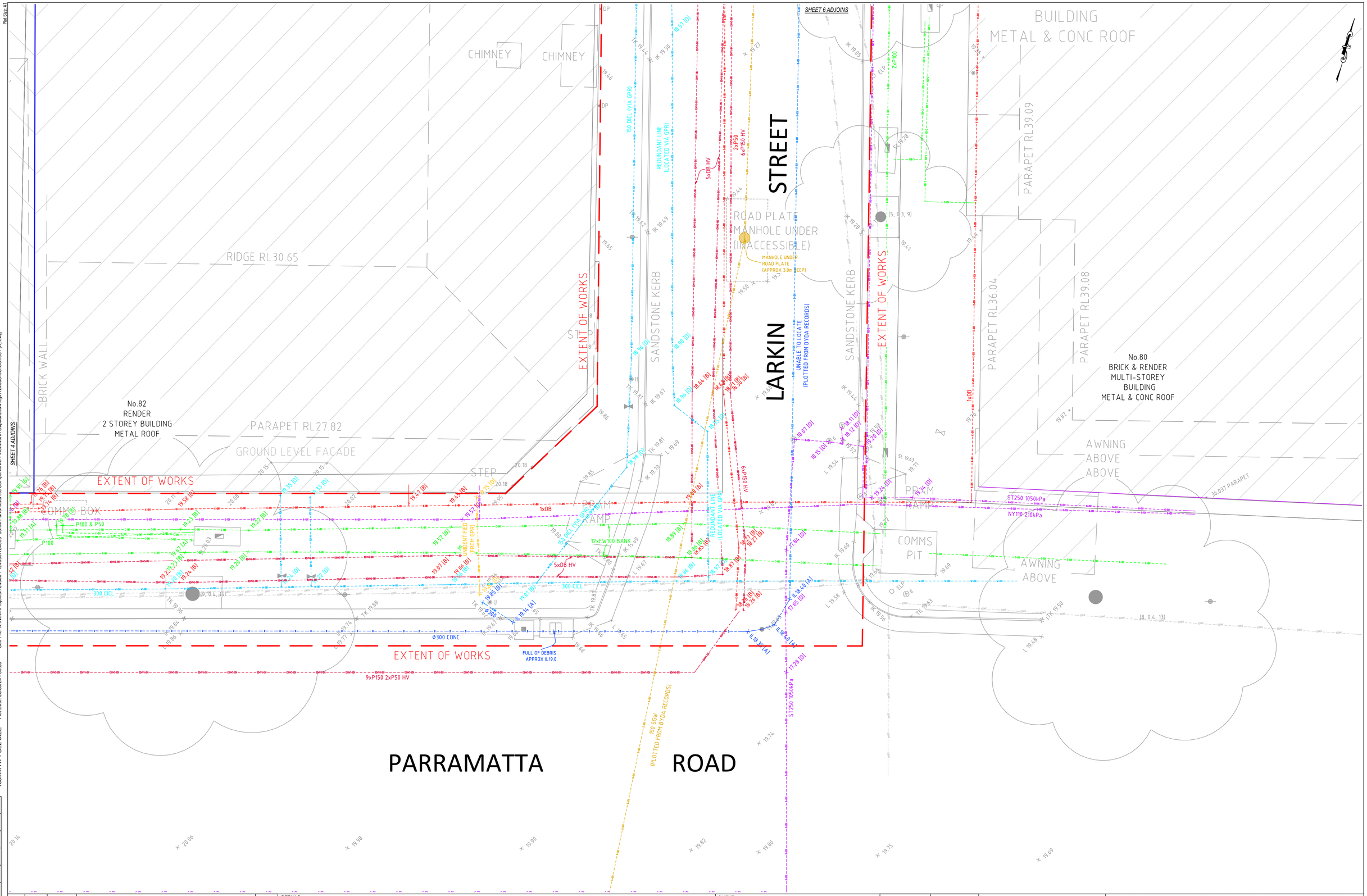
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Plot Date: 26/08/24 - 09:28

100mm AT FULL SIZE

394



REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:

BEFORE YOU DIG www.byda.com.au

TREE
(2, 0.2, 4)
HEIGHT
TRUNK DIA
SPREAD

GDA2020

0 1 2 3 4 5
SCALE 1: 50 @ A1

SEE SHEET 1 FOR NOTES

CLIENT: WENTWORTH CAPITAL

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION SHEET 5 OF 8 ©

CRUX Drg No: 124308-SU-SUI-001 REV. A

Plot Size: A1
100mm AT FULL SIZE
Plot Date: 26/08/24 - 09:29
Cad File: X:\NSW\Projects\124300 - 124399\124308 88-94 Parramatta Rd Camperdown - Wentworth Capital\Drawings\124308-SUI-001 [A].dwg

SHEET 8 ADJOINS

SANDSTONE KERB
CONC DRIVEWAY
BITUMEN PATH
EXTENT OF WORKS
PARAPET RL27.60
No.82
RENDER
2 STOREY BUILDING
METAL ROOF
CHIMNEY
GROUND LEVEL FACADE
STAIRS
RIDGE RL30.67
PARAPET RL27.44
LARKIN STREET
SANDSTONE KERB
BITUMEN PATH
UNIDENTIFIED (FROM GPR)
2xP50 6xP150 HV
5xDB HV
P100
2xP100
1xDB
PRAM RAMP
BALCONY ABOVE RL35.44
PARAPET RL36.56
No.80
BRICK & RENDER
MULTI-STOREY
BUILDING
METAL & CONC ROOF
RIDGE RL30.65
PARAPET RL39.07
150 SGW
DP 1034455
455
1
DP178740

SHEET 5 ADJOINS

SEE SHEET 1 FOR NOTES

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:
TREE (2, 0.2, 4)
HEIGHT
TRUNK DIA
SPREAD
BEFORE YOU DIG www.byda.com.au
GDA2020
0 1 2 3 4 5
SCALE 1: 50 @ A1

CLIENT: WENTWORTH CAPITAL

COORD. SYSTEM:	MGA (GDA2020)
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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 6 OF 8 | ©

CRUX Drg No: 124308-SU-SUI-001 | REV. A

Plot Size: A1
396
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Plot Date: 28/08/24 - 09:29
100mm AT FULL SIZE

PLANT AND SERVICES

No.92-94
RENDERED MULTI-STOREY BUILDING
'MEDICAL FOUNDATION BUILDING'

RENDERED WALL PARAPET RL33.15

PARAPET RL33.15

STAIRS

GRAVEL ROOF RL22.78

COURTYARD APPROX. 20.33

PARAPET

FLAT ROOF RL35.86

No.23
BRICK AND RENDER
MULTI-STOREY BUILDING
CONCRETE & METAL ROOF

STEP

DOOR

RENDERED WALL

GARDEN

STAIRS

RENDERED WALL

EXTENT OF WORKS

UNIDENTIFIED (FROM GPR)

BITUMEN PATH

SANDSTONE KERB

SANDSTONE KERB &

UNABLE TO TRACE BEYOND PIT (CONTINUES WESTWARD TO BASEMENT CARPARK)

UNABLE TO OPEN PIT

UTO

Ø375 CONC

EXTENT OF WORKS

SPARKES STREET

150 SGW

P100 PVC

P100

P150

RAMP

DOOR

SANDSTONE KERB

BITUMEN PATH

CONC DRIVEWAY

SANDSTONE KERB

BITUMEN PATH

CONC DRIVEWAY

CONC DRIVEWAY

SANDSTONE K

SHEET 8 ADJOINS

OP OF BUILDING
WALL RL34.66

STEP

EXTENT OF WORKS

GROUND LEVEL FACADE

PARAPET RL39.91

ROOF RL38.03

GUTTER RL35.66

No.88-90
BRICK & RENDER
3 STOREY BUILDING
METAL ROOF

PARAPET RL37.02

PARAPET RL37.02

ROOF RL38.08

ROOF RL39.93

GROUND LEVEL FACADE

GROUND LEVEL FACADE

No.84-86
BRICK
MULTI-STOREY BUILDING
METAL ROOF

GROUND LEVEL FACADE

GROUND LEVEL FACADE

No.82
RENDER
2 STOREY BUILDING
METAL ROOF

GROUND LEVEL FA

RIDGE RL30.67

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:

TREE
(2, 0.2, 4)
HEIGHT
TRUNK DIA
SPREAD

BEFORE YOU DIG www.byda.com.au

GDA2020

0 1 2 3 4 5
SCALE 1: 50 @ A1

SEE SHEET 1 FOR NOTES

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

STATUS: FOR INFORMATION | SHEET 7 OF 8 | ©

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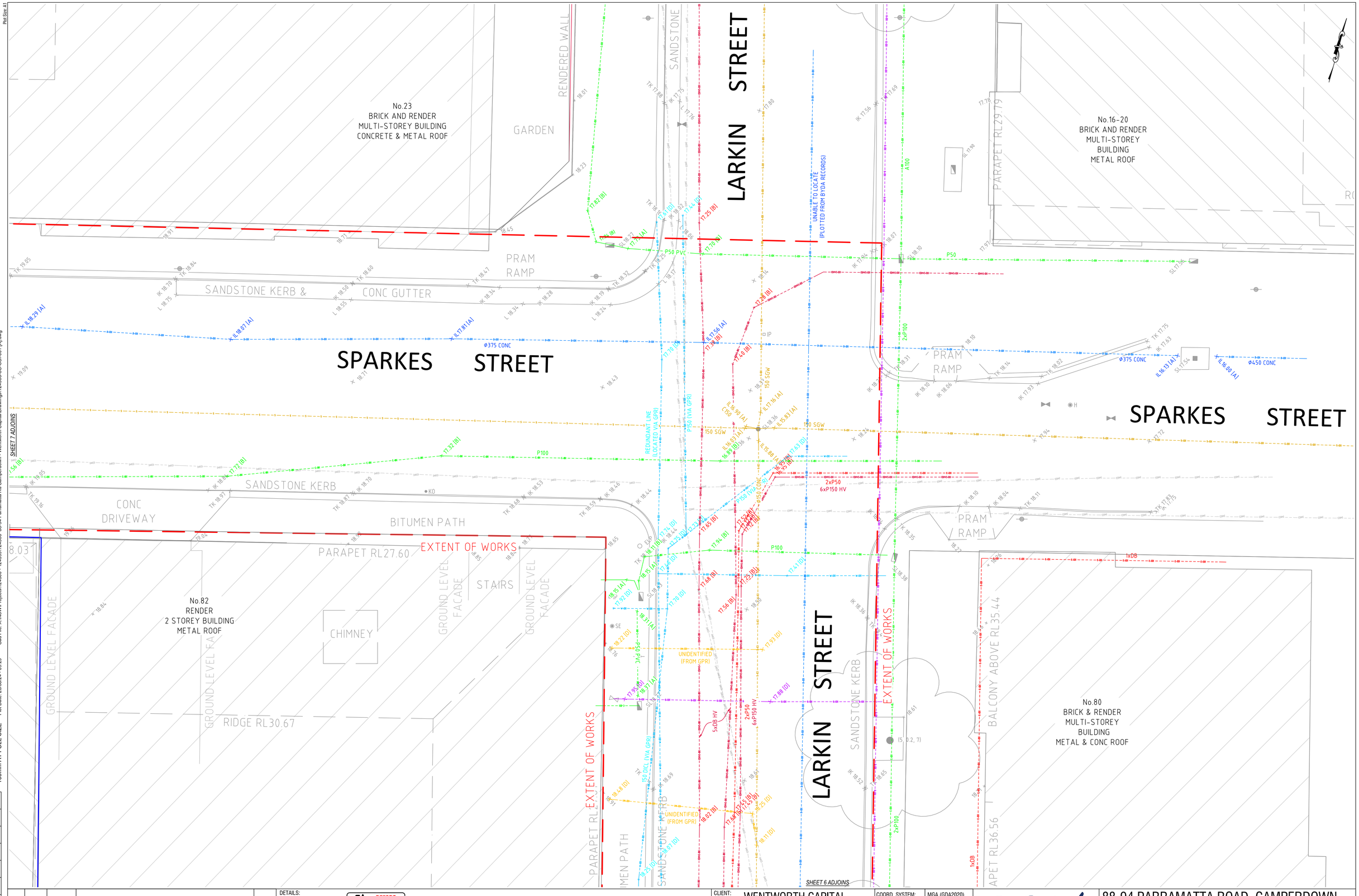
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Plot Date: 26/08/24 - 09:29

100mm AT FULL SIZE

397



REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	24/08/2024	FOR INFORMATION	SRA

DETAILS:

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TREE (2.0, 2.4) HEIGHT TRUNK DIA SPREAD

GDA2020

0 1 2 3 4 5

SCALE 1: 50 @ A1

CLIENT: WENTWORTH CAPITAL

COORD. SYSTEM:	MGA (GDA2020)
ORIGIN:	PM56548
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DRAWING SCALE:	1:50 @A1

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
TOPOGRAPHIC SURVEY
SUBSURFACE UTILITIES INVESTIGATION (SUI)

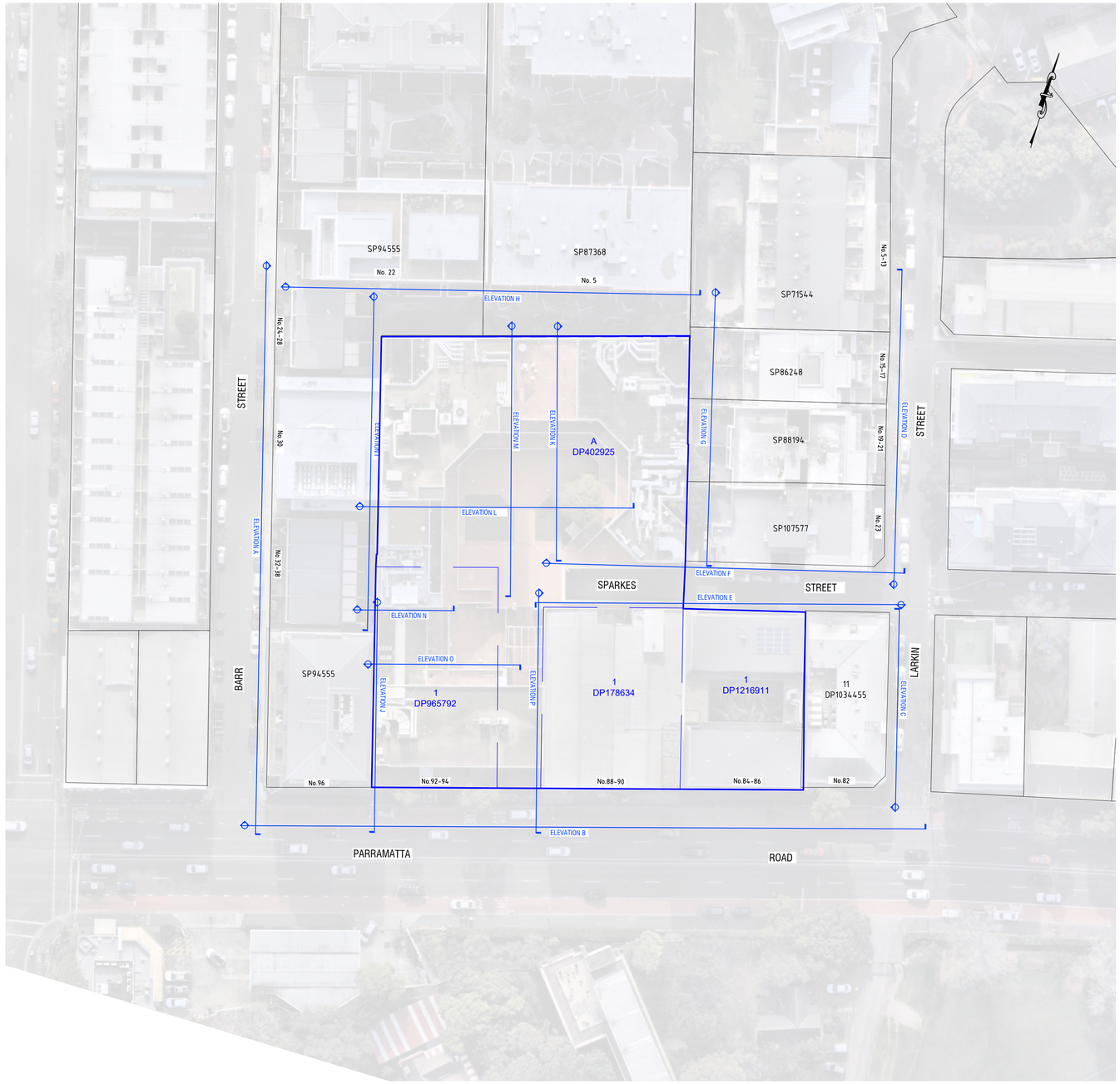
STATUS: FOR INFORMATION | SHEET 8 OF 8 | ©

CRUX Drg No: 124308-SU-SUI-001 | REV. A

Plot Size: A1

88-94 PARRAMATTTA ROAD, CAMPERDOWN

BUILDING ELEVATIONS



LOCALITY MAP & SHEET LAYOUT

SCALE 1:500

SHEET INDEX

1	COVER SHEET	
2-3	ELEVATION A	BARR STREET EASTERN ELEVATIONS
4-5	ELEVATION B	PARRAMATTA ROAD NORTHERN ELEVATIONS
6	ELEVATION C	LARKIN STREET WESTERN ELEVATIONS
7	ELEVATION D	LARKIN STREET WESTERN ELEVATIONS
8	ELEVATION E	SPARKES STREET SOUTHERN ELEVATIONS
9	ELEVATION F	SPARKES STREET NORTHERN ELEVATIONS
10	ELEVATION G	LARKIN STREET EASTERN BUILDING ELEVATION
11	ELEVATION H	BARR STREET SOUTHERN BUILDING ELEVATION
12	ELEVATION H	PYRMONT ROAD SOUTHERN BUILDING ELEVATION
13	ELEVATION I	BARR STREET WESTERN ELEVATIONS
14	ELEVATION J	BARR STREET EASTERN BUILDING ELEVATION
15	ELEVATION K	COURTYARD WESTERN BUILDING ELEVATION
16	ELEVATION L	COURTYARD SOUTHERN BUILDING ELEVATION
17	ELEVATION M	COURTYARD EASTERN BUILDING ELEVATION
18	ELEVATION N	COURTYARD SOUTHERN BUILDING ELEVATION
19	ELEVATION O	COURTYARD NORTHERN BUILDING ELEVATION
20	ELEVATION P	COURTYARD WESTERN BUILDING ELEVATION

SURVEY NOTES :

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ACCOMPANYING DETAIL SURVEY DRAWING (124308-SU-DT-001) & UNDERGROUND UTILITIES SURVEY (124308-SU-SUI-001)
2. LIMITED DATA IS SHOWN IN THESE DRAWING FOR CLARITY REFER TO THE ACCOMPANYING POINT CLOUD DATA & REVIT MODEL FOR FURTHER DETAILS
3. DATE OF SURVEY: 09 AUGUST 2024

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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ORIGIN:	PM56548 RL23.655
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DRAWING SCALE:	

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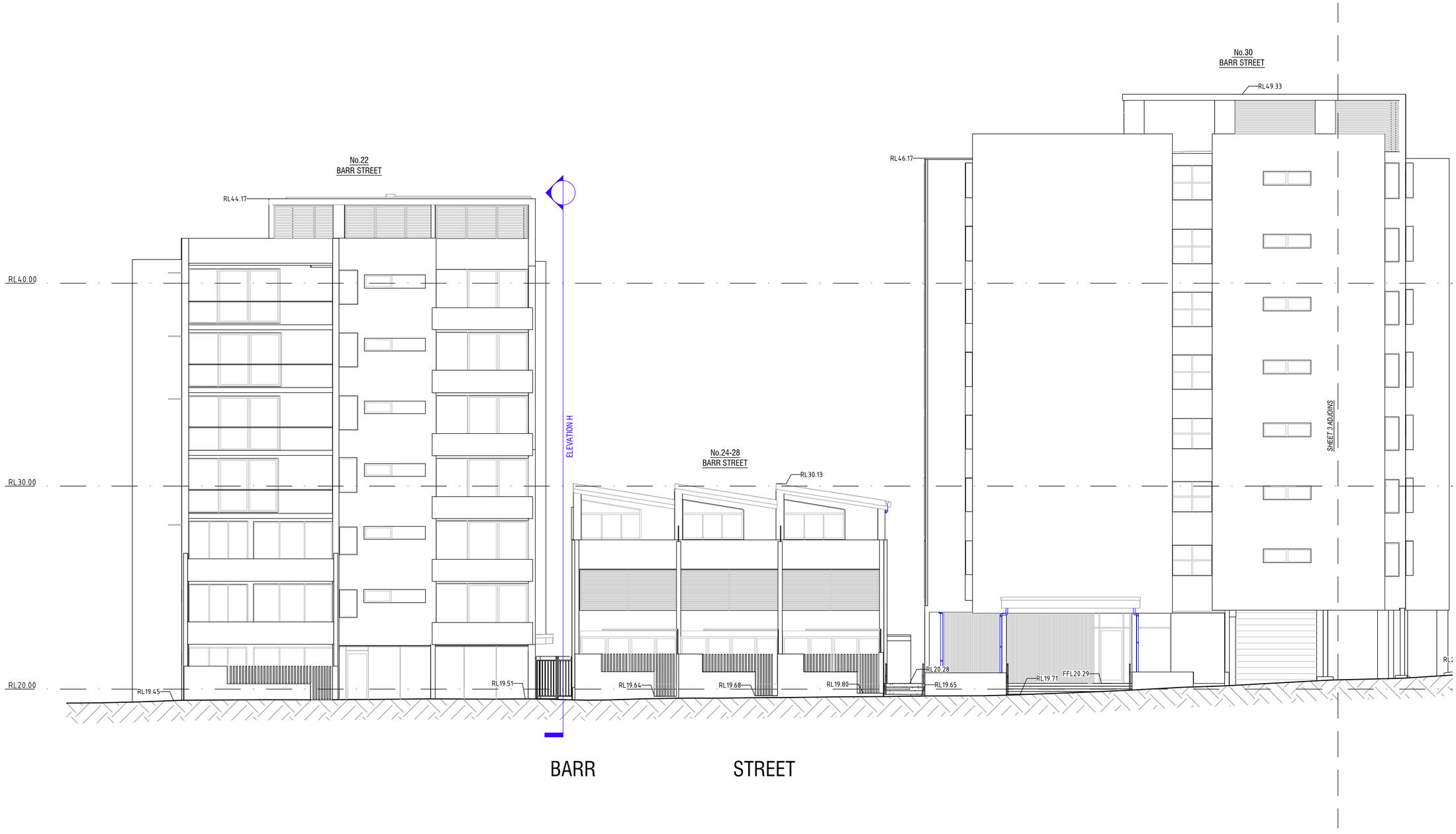
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 1 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE
399



ELEVATION A

BARR STREET
EASTERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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DRAWING SCALE:	

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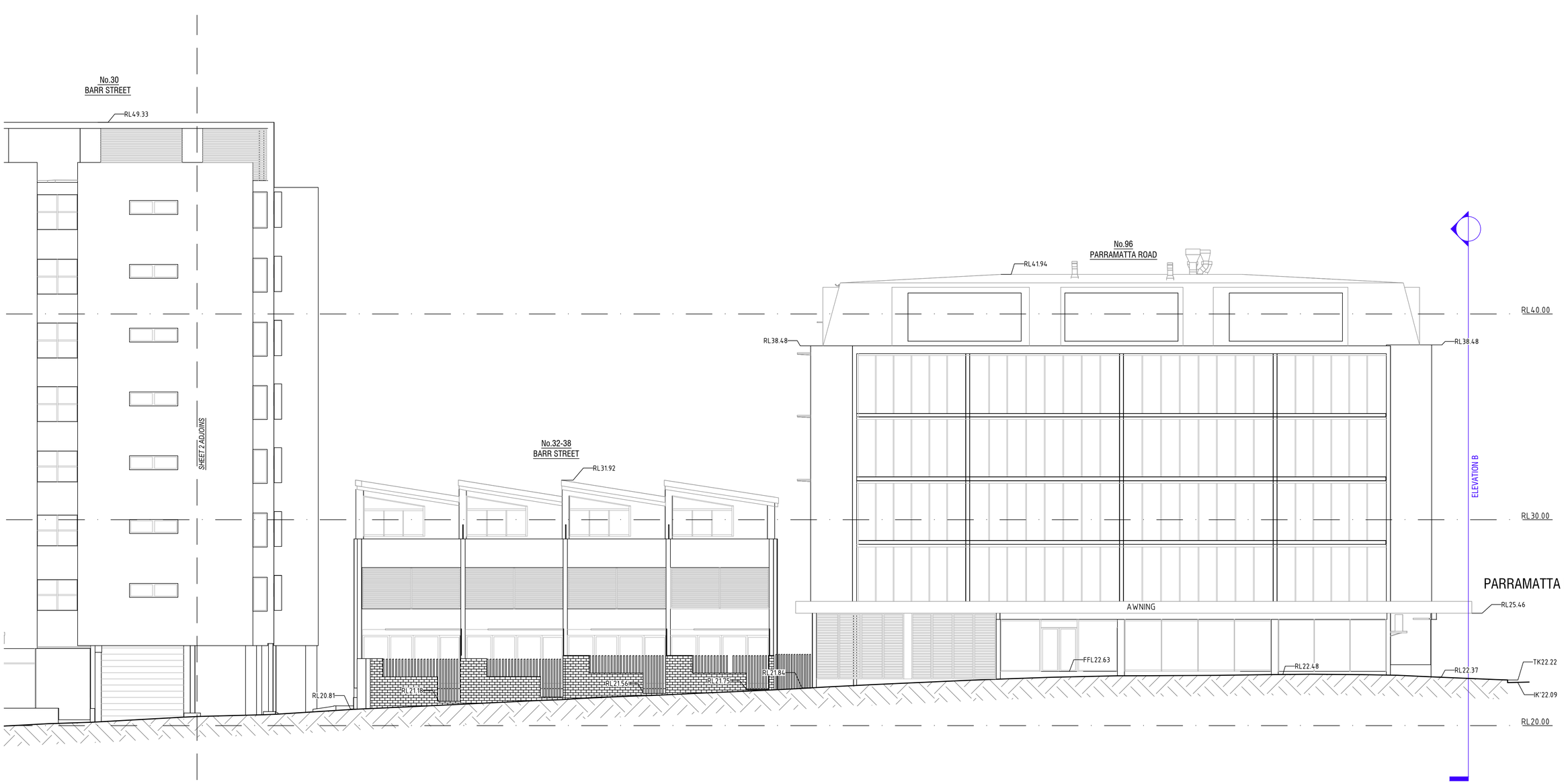
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 2 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002(A)-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE
400



ELEVATION A

BARR STREET
EASTERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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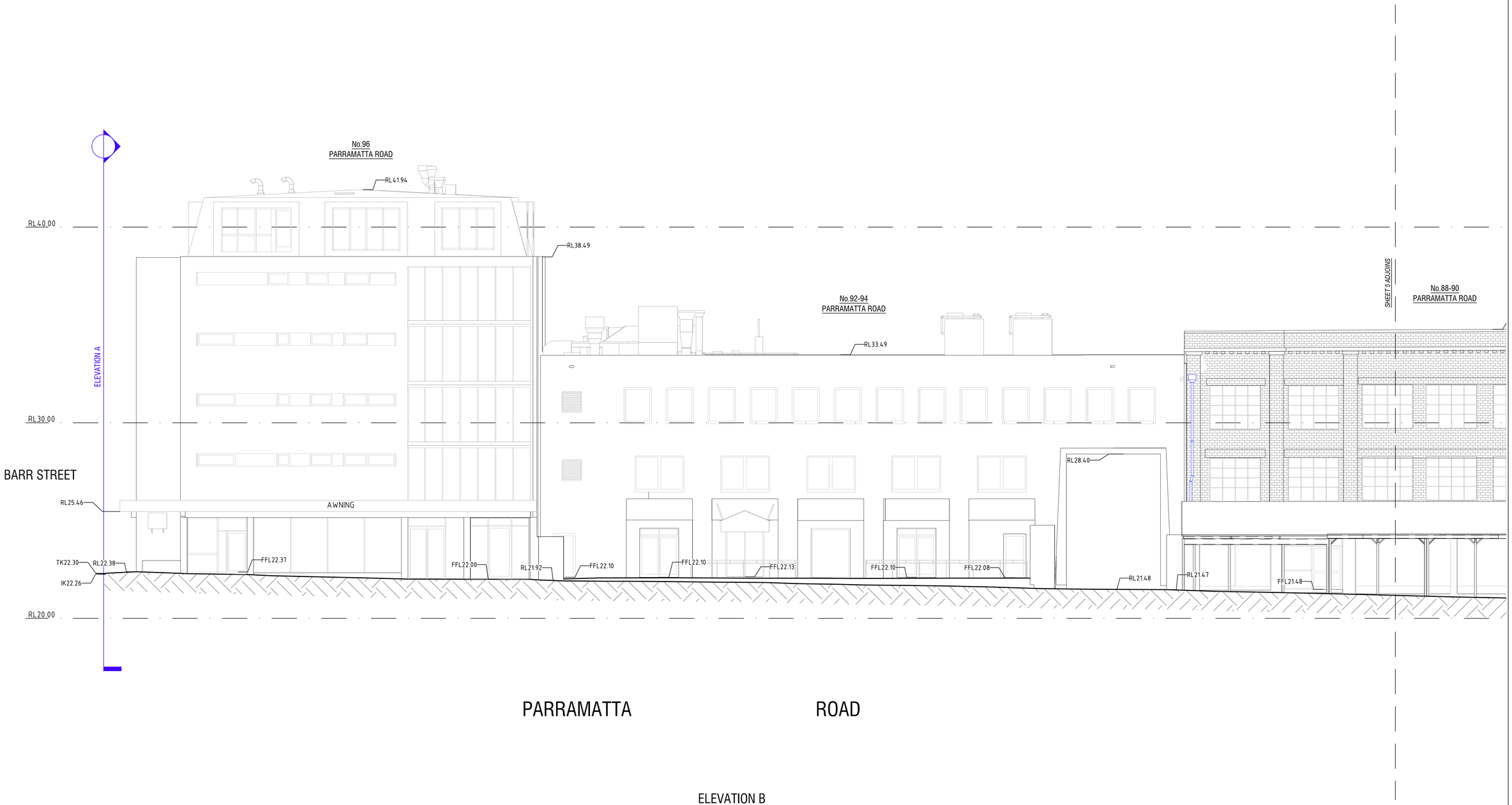
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 3 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
401
Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002[A]-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE



ELEVATION B

PARRAMATTA ROAD
NORTHERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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DRAWING SCALE:	

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DRAWN: NR APPROVED: SRA

88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 4 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
402
Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002[A]-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE



ELEVATION B
PARRAMATTA ROAD
NORTHERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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DRAWING SCALE:	

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DRAWN: NR APPROVED: SRA

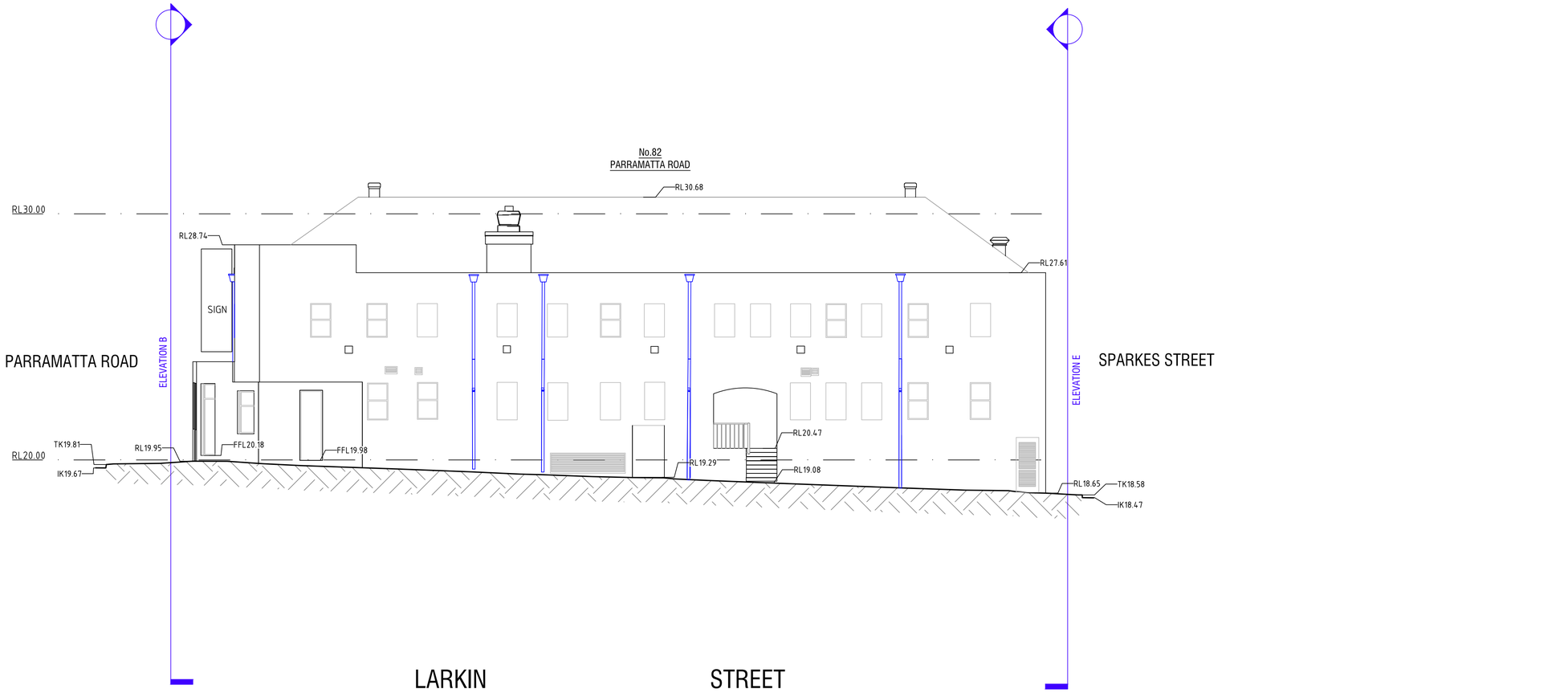
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 5 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

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Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE



ELEVATION C

LARKIN STREET
WESTERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

CLIENT: WENTWORTH CAPITAL

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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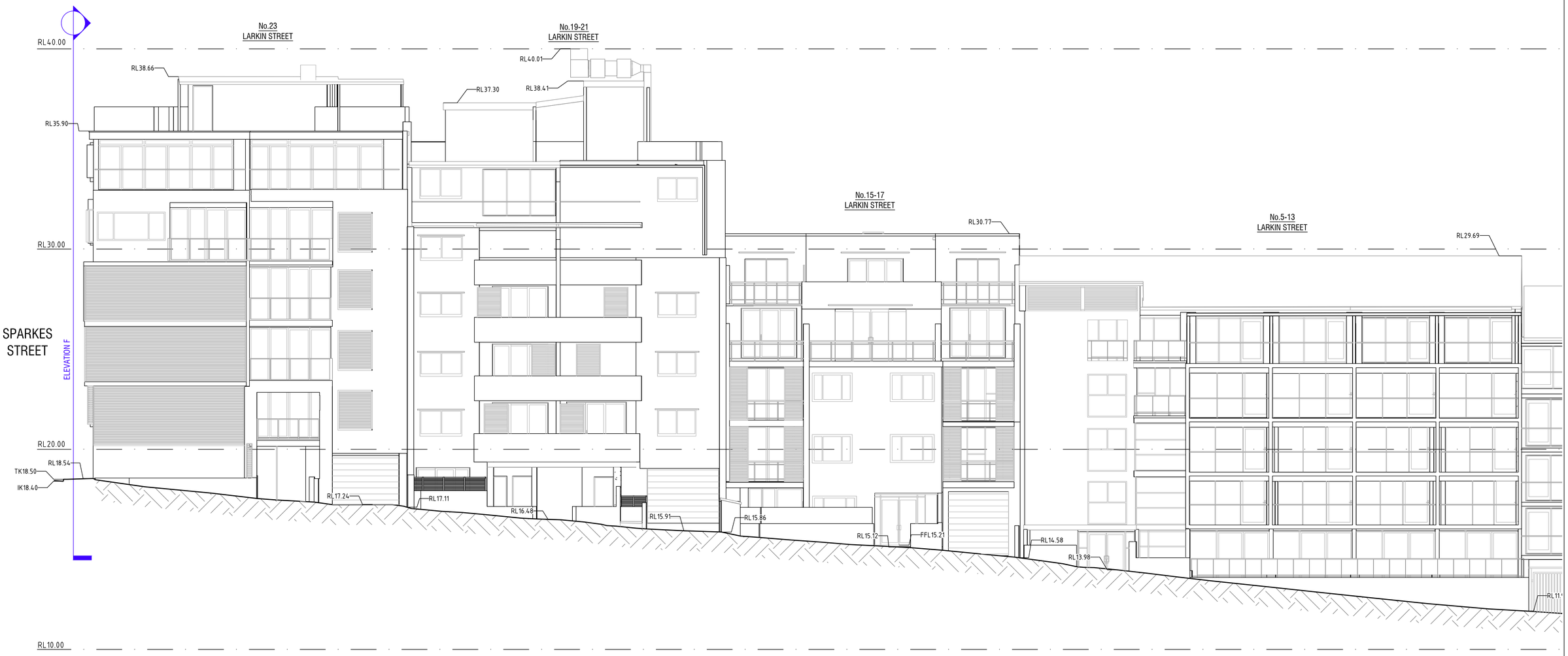
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 6 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE
404



ELEVATION D

LARKIN STREET
WESTERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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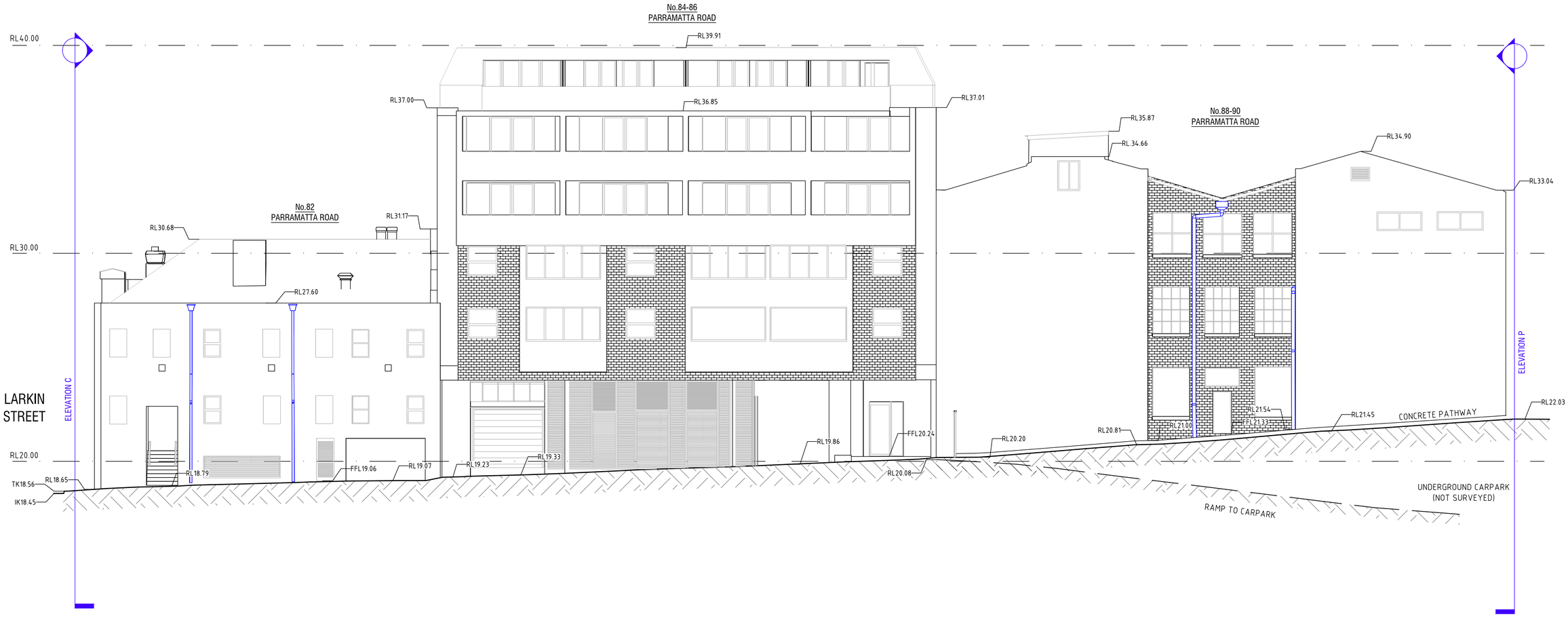
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 7 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002(A)-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:14
100mm AT FULL SIZE



ELEVATION E

SPARKES STREET
SOUTHERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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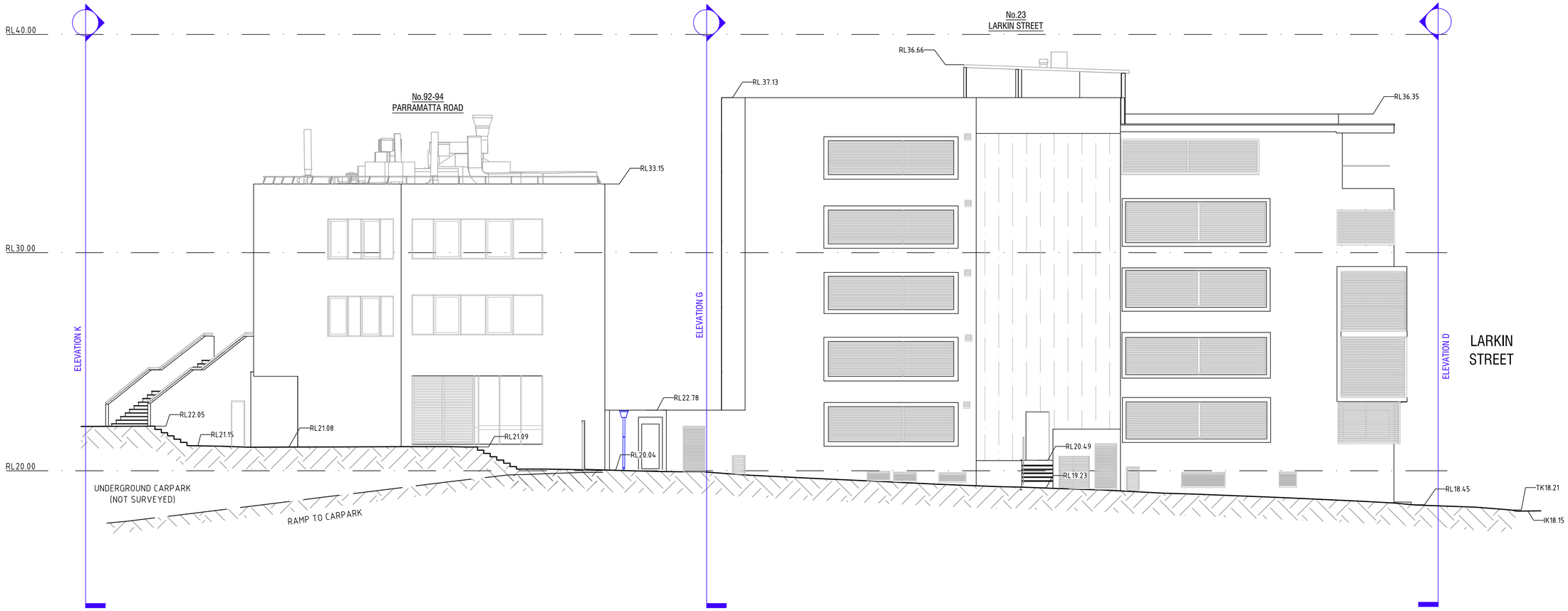
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 8 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
406
Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002[A]-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION F

SPARKES STREET
NORTHERN ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

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ORIGIN:	PM56548
COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 9 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION G

No.23-5 LARKIN STREET
WESTERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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DRAWN: NR APPROVED: SRA

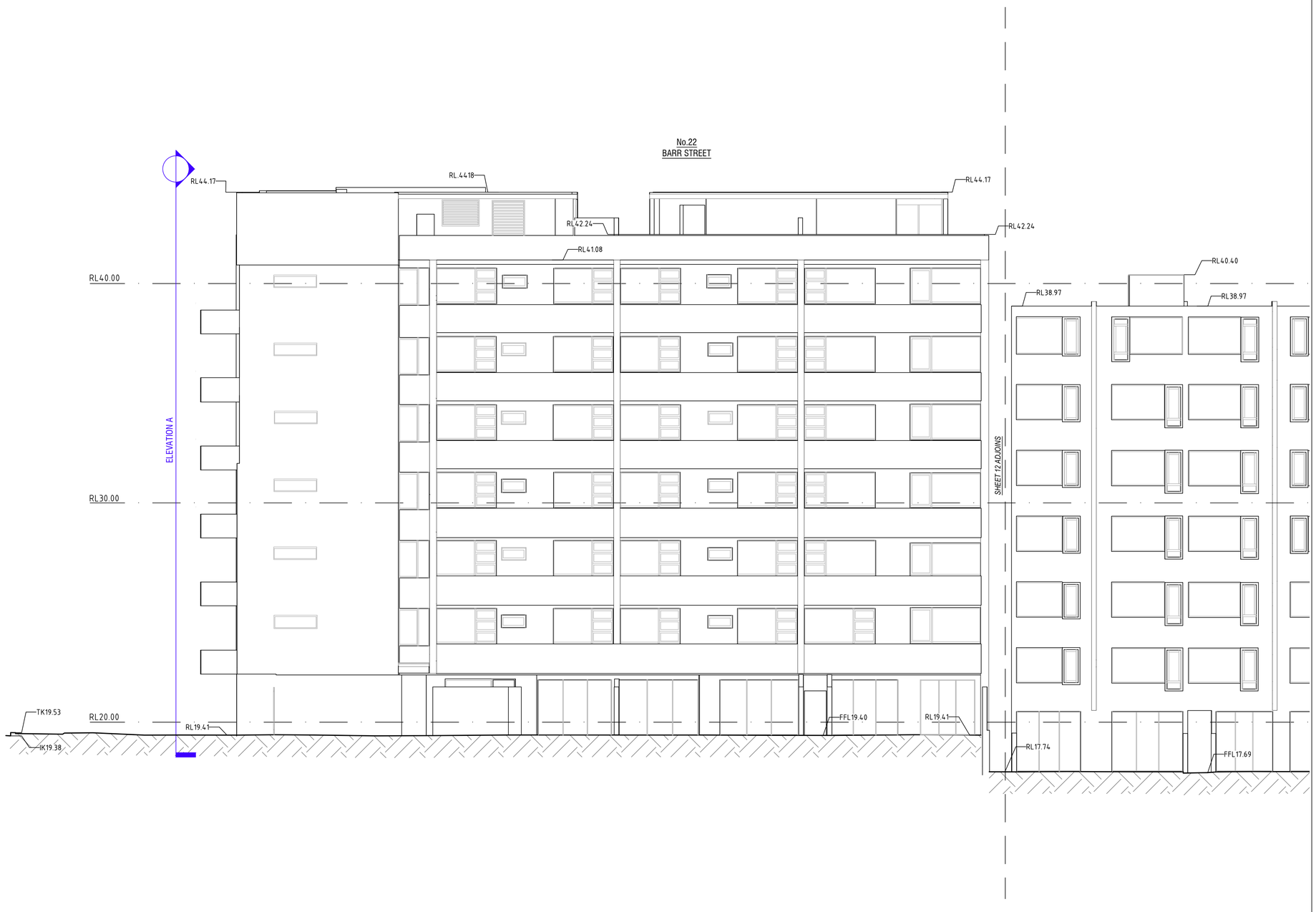
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 10 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE
408



ELEVATION H

No.22 BARR STREET
SOUTHERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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ORIGIN:	PM56548
COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 11 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002[A]-Elevations flattened.dwg
Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION H

No.5 PYRMONT ROAD
SOUTHERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

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0 20 40 60 80 100
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ORIGIN:	PM56548
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ORIGIN:	PM56548 RL23.655
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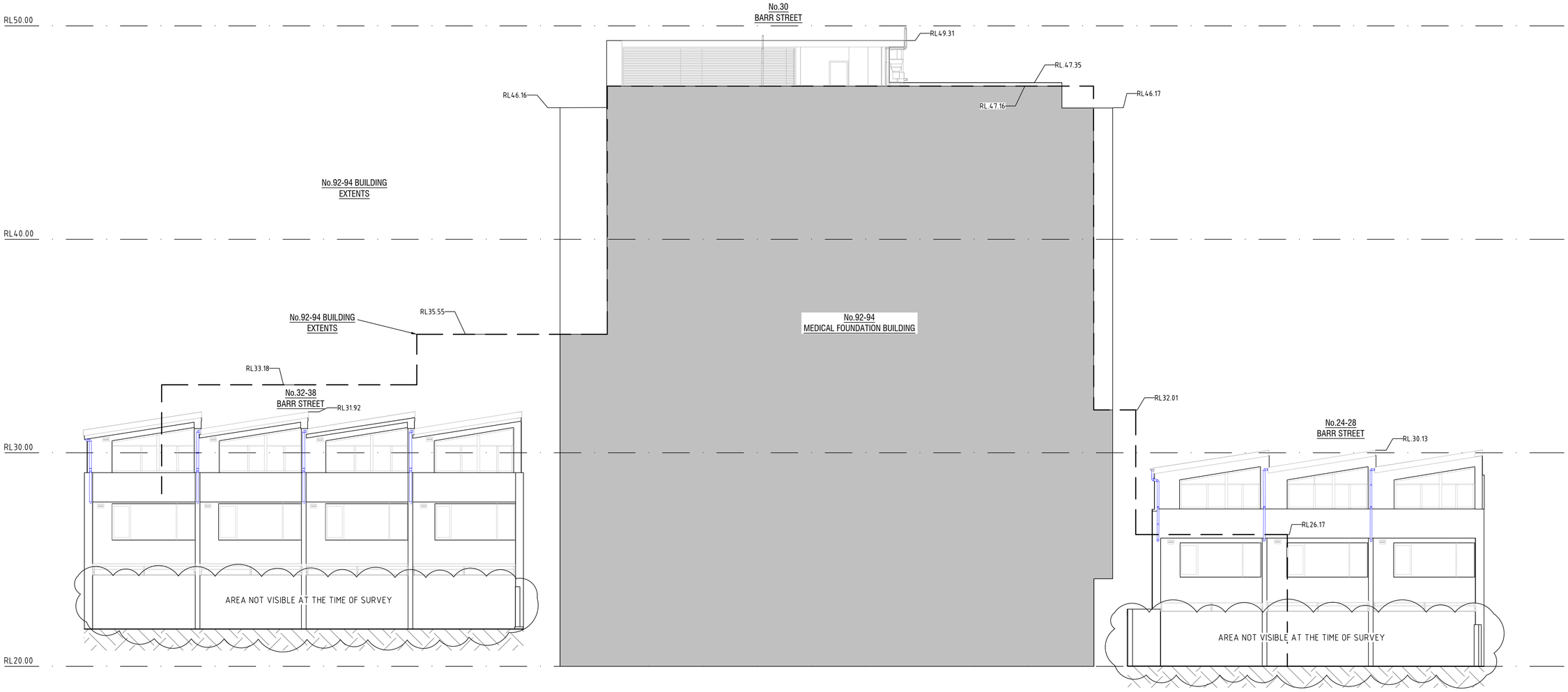
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 12 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
410
100mm AT FULL SIZE
Plot Date: 20/09/24 - 17:15
Cad File: C:\DATA\124308 88-94 Parramatta Road, Camperdown\Autocad\124308-SU-DT-002[A]-Elevations flattened.dwg



ELEVATION I

PARRAMATTA ROAD BUILDINGS No.24-38
EASTERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

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VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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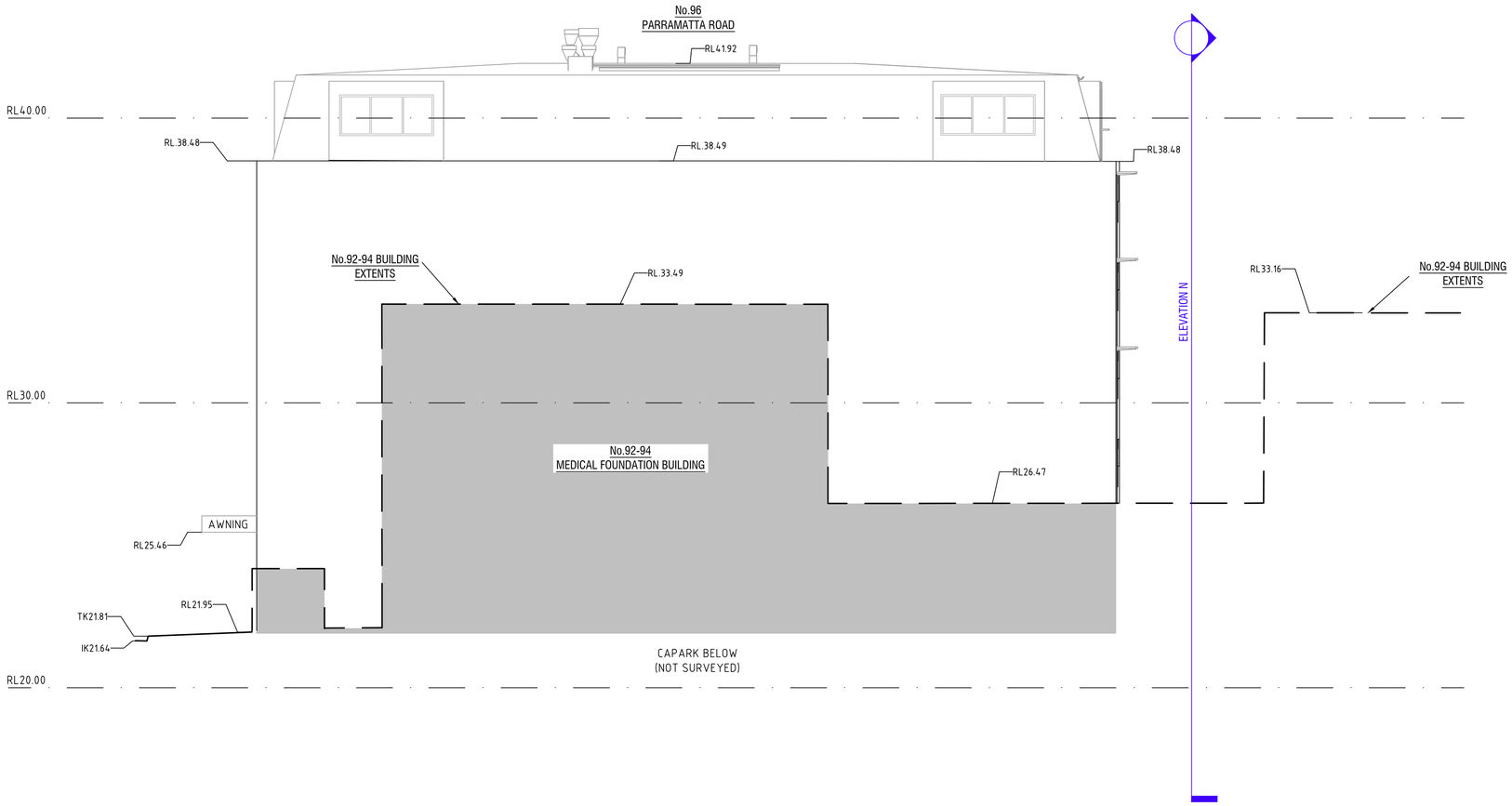
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 13 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION J

PARRAMATTA ROAD BUILDING No.96
EASTERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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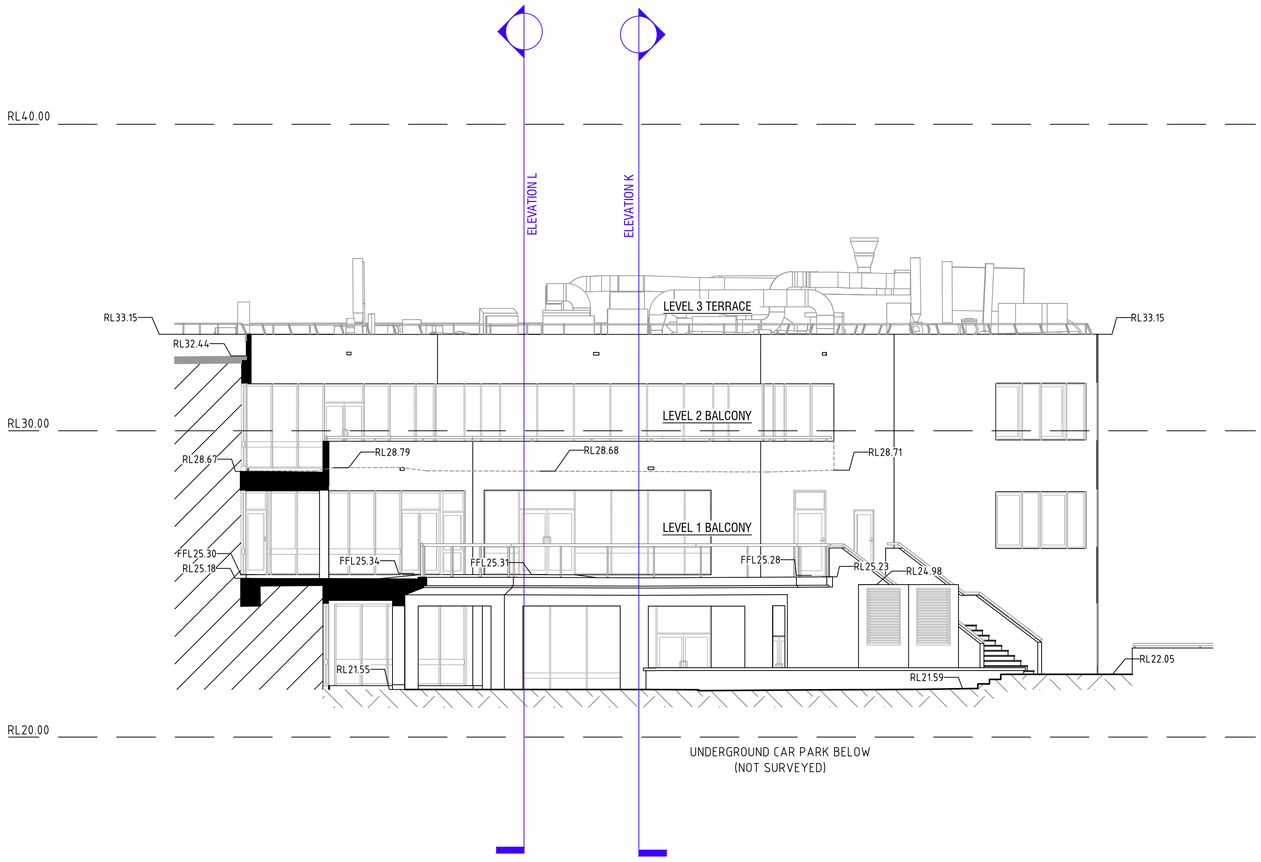
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 14 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION K

No.92-94 PARRAMATTA ROAD
WESTERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

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SCALE 1: 1000 @ A1

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DRAWING SCALE:	

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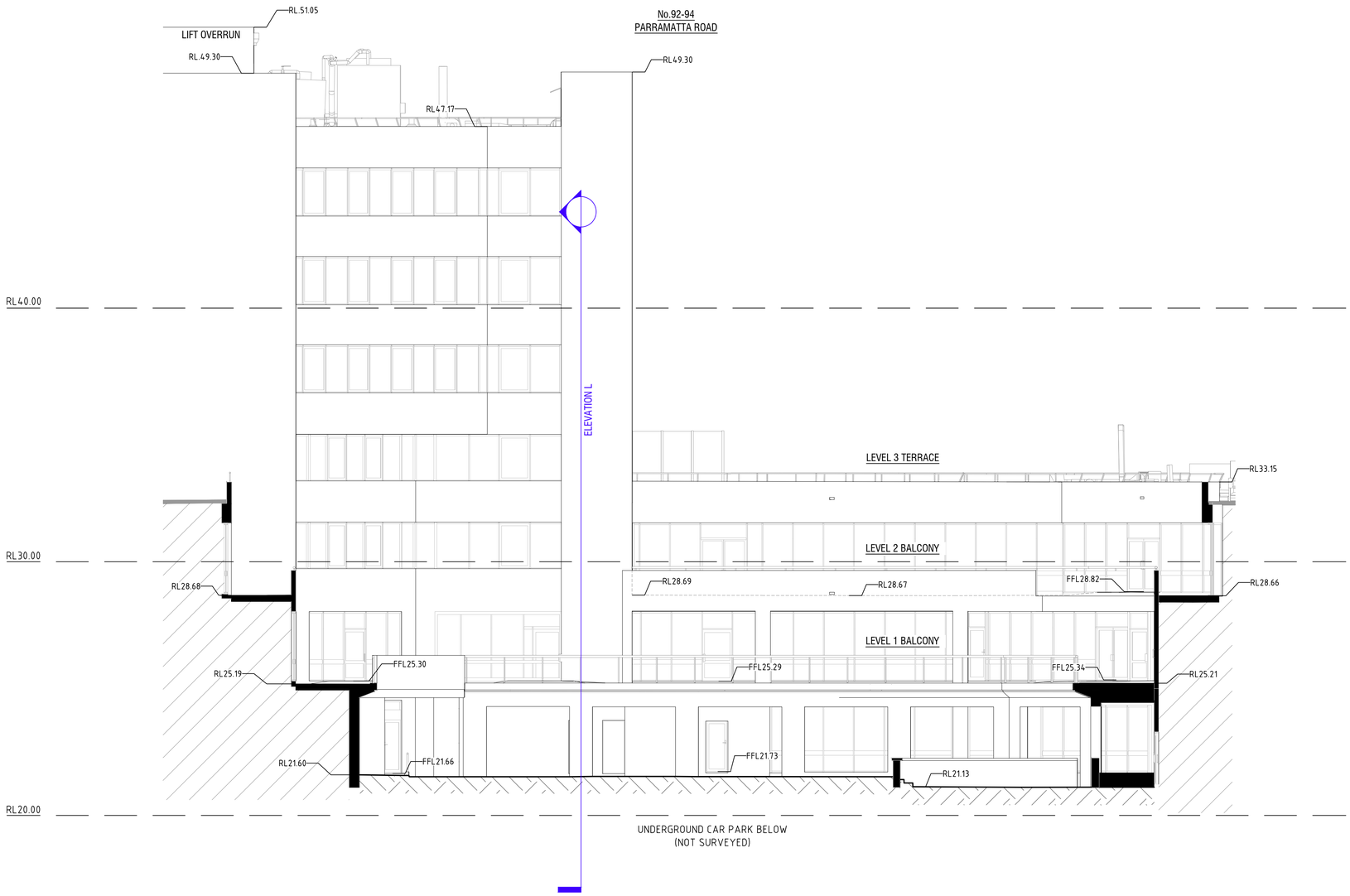
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 15 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION L

No.92-94 PARRAMATTA ROAD
SOUTHERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

GDA2020

0 20 40 60 80 100

SCALE 1: 1000 @ A1

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VERTICAL DATUM:	AHD
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CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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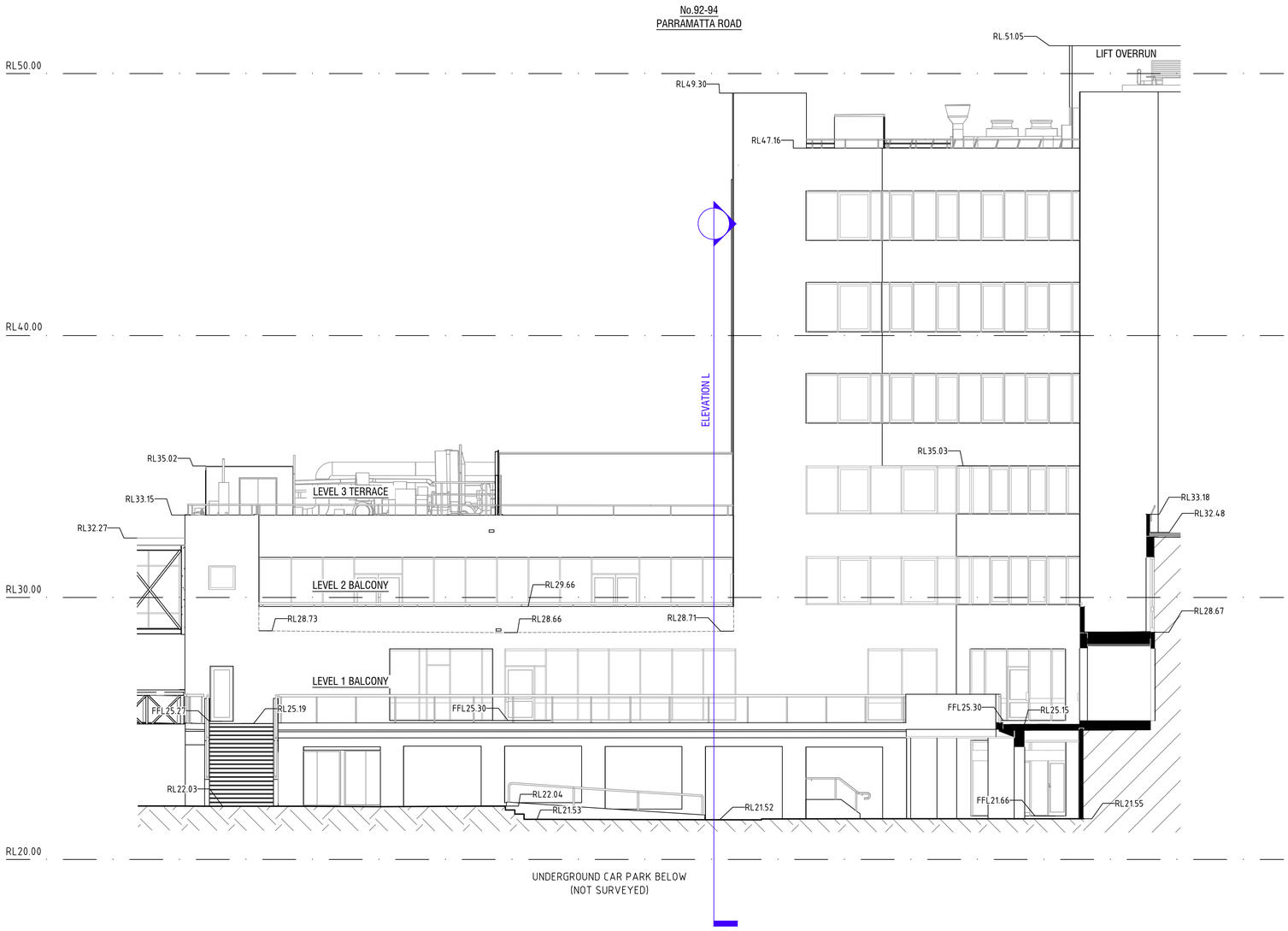
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 16 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
414
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION M

No.92-94 PARRAMATTA ROAD
EASTERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

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0 20 40 60 80 100
SCALE 1: 1000 @ A1

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COORDINATES:	E 331 592.572 N 6 249 015.400
VERTICAL DATUM:	AHD
ORIGIN:	PM56548 RL23.655
CONTOUR INTERVAL:	N/A (MAJOR) N/A (MINOR)
DRAWING SCALE:	

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DRAWN: NR APPROVED: SRA

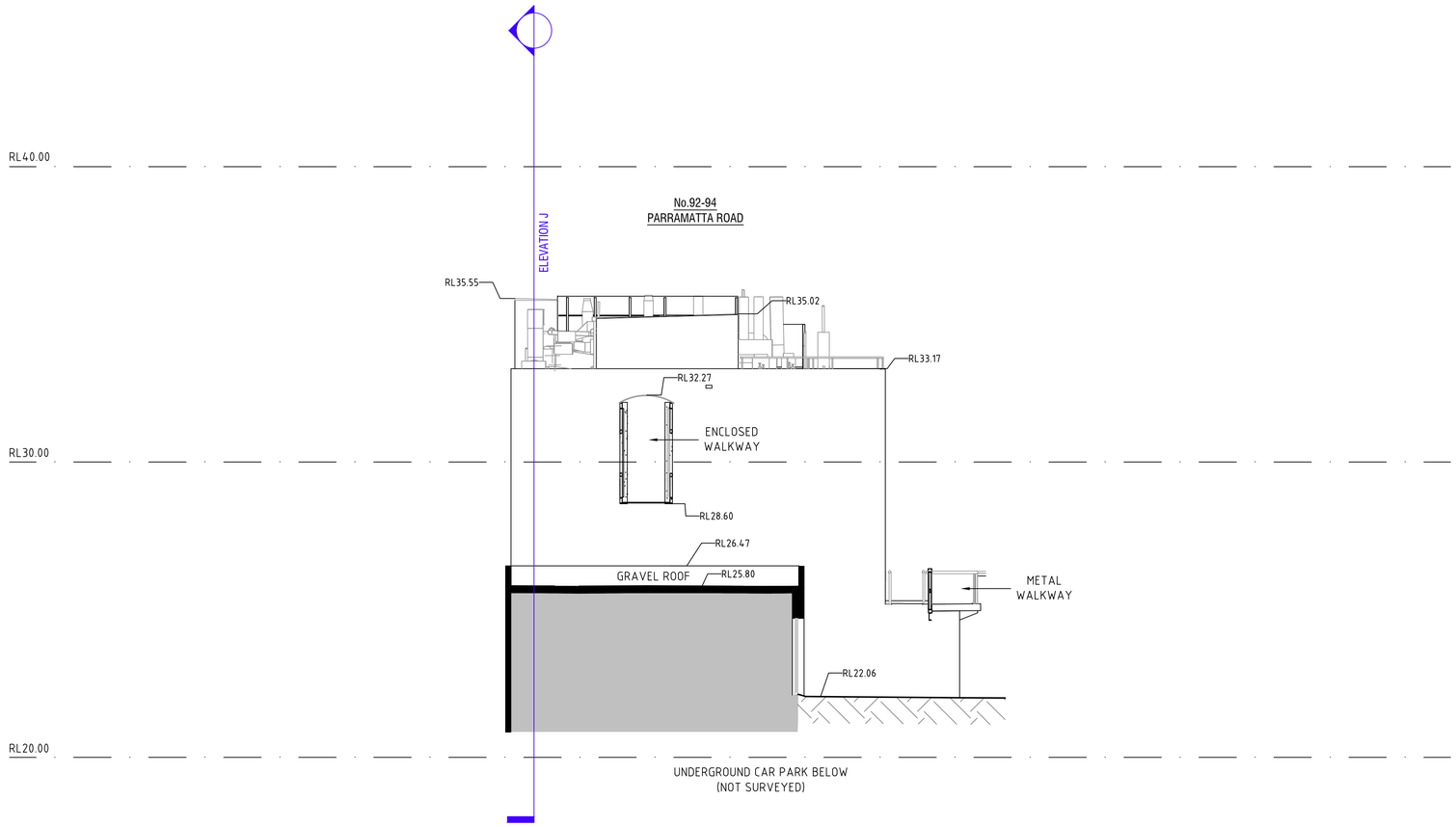
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

STATUS: FOR INFORMATION | SHEET 17 OF 20 | ©

CRUX Drg No: 124308-SU-DT-002 | REV. A

Plot Size: A1
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Plot Date: 20/09/24 - 17:15
100mm AT FULL SIZE



ELEVATION N

No.92-94 PARRAMATTA ROAD
SOUTHERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

REV.	BY	DATE	DESCRIPTION	APPD.
A	NR	20/09/2024	FOR INFORMATION	SRA

DETAILS:

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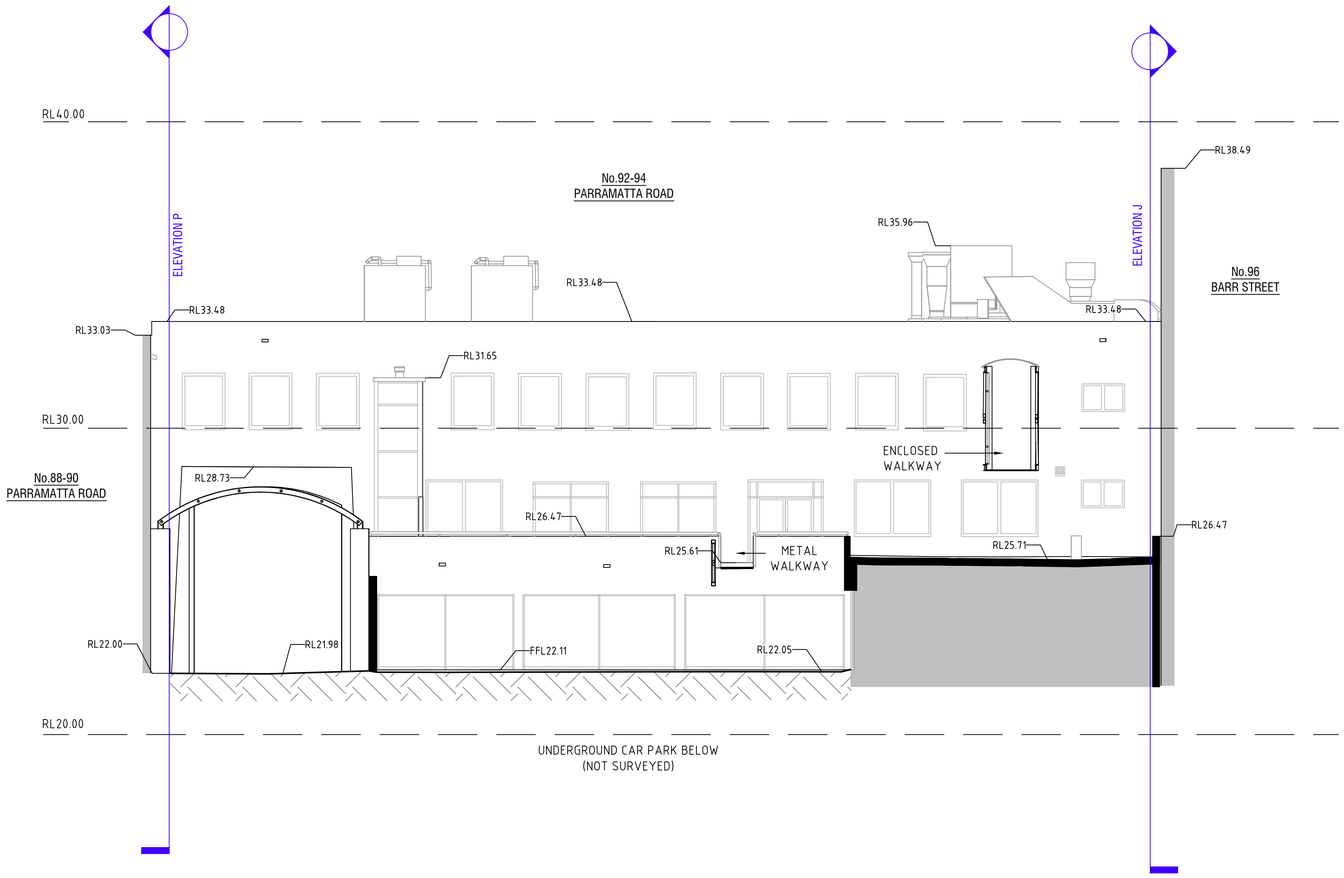
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

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ELEVATION O

No.92-94 PARRAMATTA ROAD
NORTHERN BUILDING ELEVATION

SEE SHEET 1 FOR NOTES AND LEGEND

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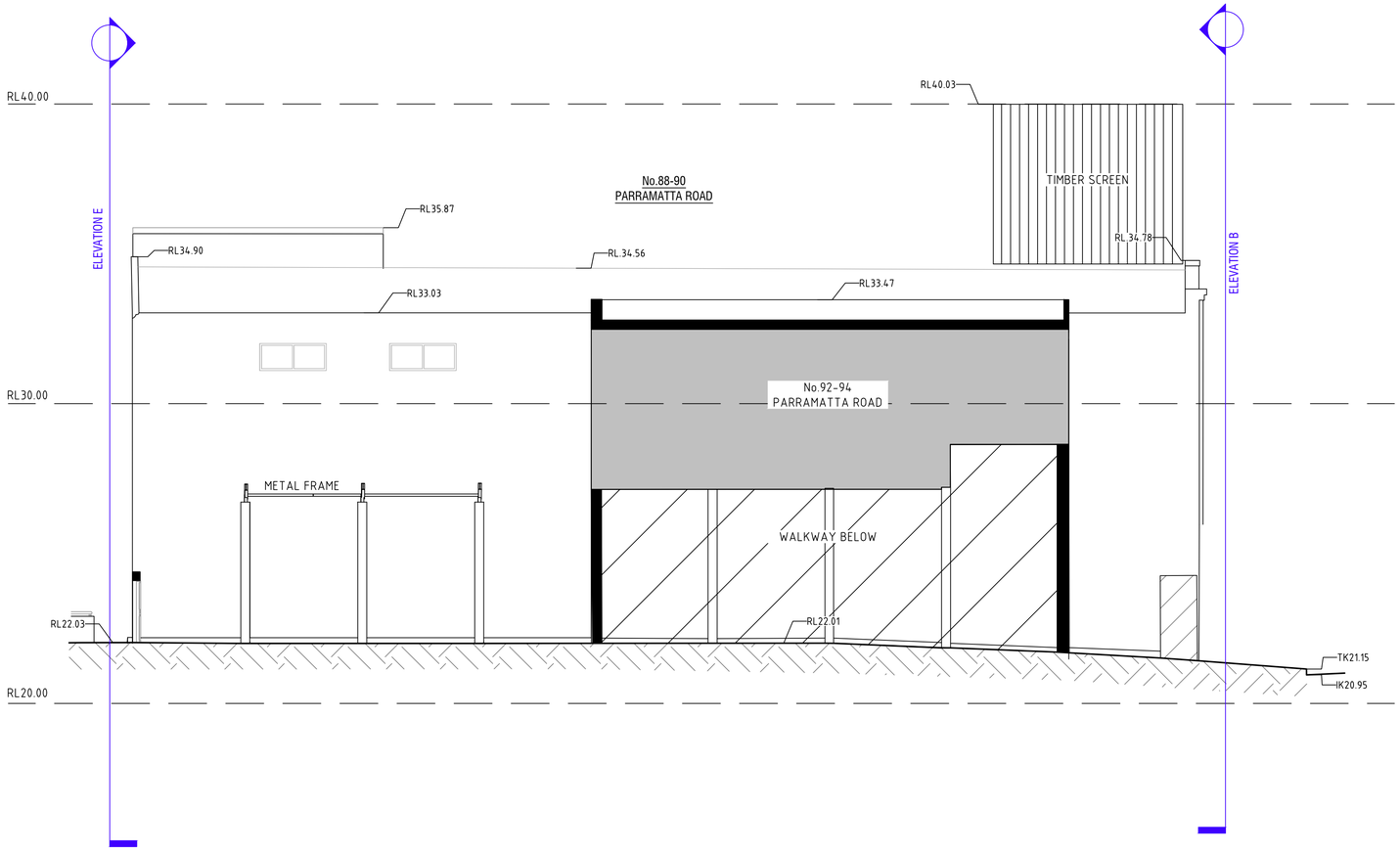
88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
BUILDING ELEVATIONS

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ELEVATION P

No.88-90 PARRAMATTA ROAD
WESTERN BUILDING ELEVATION

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88-94 PARRAMATTA ROAD, CAMPERDOWN

88-94 PARRAMATTA ROAD, CAMPERDOWN NSW 2050
LOT 1 DP965792, LOT A DP402925, LOT 1 DP178634 & LOT 1 DP1216911
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Attachment A5

Site specific Development Control Plan as suggested by proponent

Site-specific Development Control Plan

84-94 Parramatta Road, Camperdown

Submitted to City of Sydney
on behalf of Wentworth Capital

Prepared by Colliers Urban Planning

17 February 2026 | 2240137



'Gura Bulga'

Liz Belanjee Cameron

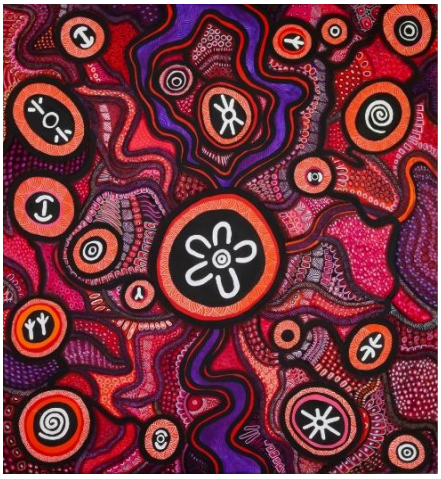
'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.



'Dagura Buumarri'

Liz Belanjee Cameron

'Dagura Buumarri' – translates to Cold Brown Country. Representing Victoria.



'Gadalung Djarri'

Liz Belanjee Cameron

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Colliers Urban Planning acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We pay our respects to their Elders past and present.

In supporting the Uluru Statement from the Heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

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This document has been prepared by		**This document has been reviewed by**	
Noa Galapo, Ella Coleman	17 February 2026	Andrew Duggan	17 February 2026

Version No.	**Date of issue**	**Prepared by**	**Approved by**
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Contents

Explanatory Note 4

1.0 Background 4

1.1 Land to which this chapter applies 4

1.2 Relationship to other chapters of the DCP 4

2.0 Objectives 5

3.0 Provisions 6

3.1 Land Uses 6

3.2 Built form 6

3.3 Warehouse Retention 8

3.4 Public Domain 8

3.5 Access and parking 8

3.6 Design Excellence 8

Figures

Figure 1 Land application map 4

Figure 2 Building Envelope Massing 7

Figure 3 Building Envelope Setbacks 7

Explanatory Note

The following objectives and provisions apply to the site at 84-94 Parramatta Road, Camperdown, being Lot 1 DP 1216911, Lot 1 DP 178634, Lot A DP 402925, and Lot 1 DP 965792. The site-specific provisions of the *Sydney Local Environmental Plan 2012 – 84-94 Parramatta Road, Camperdown* apply. All other relevant provisions of the Sydney DCP 2012 apply. The provisions of this section prevail in the event of any inconsistency.

1.0 Background

1.1 Land to which this chapter applies

This chapter of the Development Control Plan (**DCP**) applies to development within the boundaries of the Site as shown in **Figure 1** below.



Figure 1 Land application map

Source: Nearmaps

1.2 Relationship to other chapters of the DCP

All other relevant provisions of the Sydney DCP 2012 apply. The provisions of this section prevail in the event of any inconsistency.

2.0 Objectives

The following principles outline the desired future character for the Site:

- To transform the site into a high-quality life sciences facility to further advance and complement the uses within the Camperdown-Ultimo Health and Education Precinct
- To ensure that the building is of an appropriate bulk and scale for its Camperdown location.
- To create a high quality urban outcome that:
  - Maintains and protects sunlight to adjoining residents and public spaces so that they are safe and comfortable for people and residents.
  - Manages wind impacts of the future development on streets and other spaces so that they are safe and comfortable for people.
  - Ensures that the building podium responds appropriately to the existing streetscape, particularly the character of Parramatta Road.
  - Ensures the new development provides appropriate setbacks above the street frontage while responding to the surrounding context.
  - Ensures the historically significant portions of the warehouse at 88-90 Parramatta Road are retained, celebrated and sensitively integrated with a holistic redevelopment of the site.
  - Achieves unity in design though connecting the tower and podium as a single readable piece of architecture.
- To define a building massing envelope which will allow for a fit-for-purpose life sciences building with suitable floor plates that respond to the various specific needs of a high technology industry, whilst allowing sufficient flexibility within a building envelope to for diversity in an architectural design competition.
- To provide for predominantly commercial employment activities on site, supported by a range of complementary uses which activate the public domain and contribute to the changing character of Camperdown.
- To ensure the location, size and design of vehicle access minimises pedestrian and vehicle conflicts and disruption of traffic on public roads.
- To provide a process for achieving design excellence and establishment for targets which will contribute to delivering best practice sustainability.

3.0 Provisions

3.1 Land Uses

1) The land uses on the site are to include a mix of life sciences (high technology industry) and ancillary uses, such as retail.
2) Retail and science on display opportunities at the ground floor are to activate the Parramatta Road frontage.
3) Residential land uses are also permitted on 84-86 Parramatta Road.

3.2 Built form

1) The building heights are to be consistent with **Figure 2 Building Envelope Massing** for 84-94 Parramatta Road Camperdown.
2) The building setbacks are to be consistent with **Figure 3 Building Envelope Setbacks** for 84-94 Parramatta Road Camperdown.
3) The floor-to-floor heights of laboratory spaces at any life sciences (high technology industry) use on the site are required to be at least 4.5m to accommodate for the required mechanical plant to support the use.
4) The envelope identified in **Figure 2 Building Envelope Massing** is the maximum permissible extent of the built form, and the final building design must be appropriately massed within that envelope, inclusive of the following key components:
    a. Building chamfering to accommodate for the sun plane protection panel to ensure solar access is available to the neighbouring residential dwellings
    b. Retention of the warehouse at 88-90 Parramatta Road.

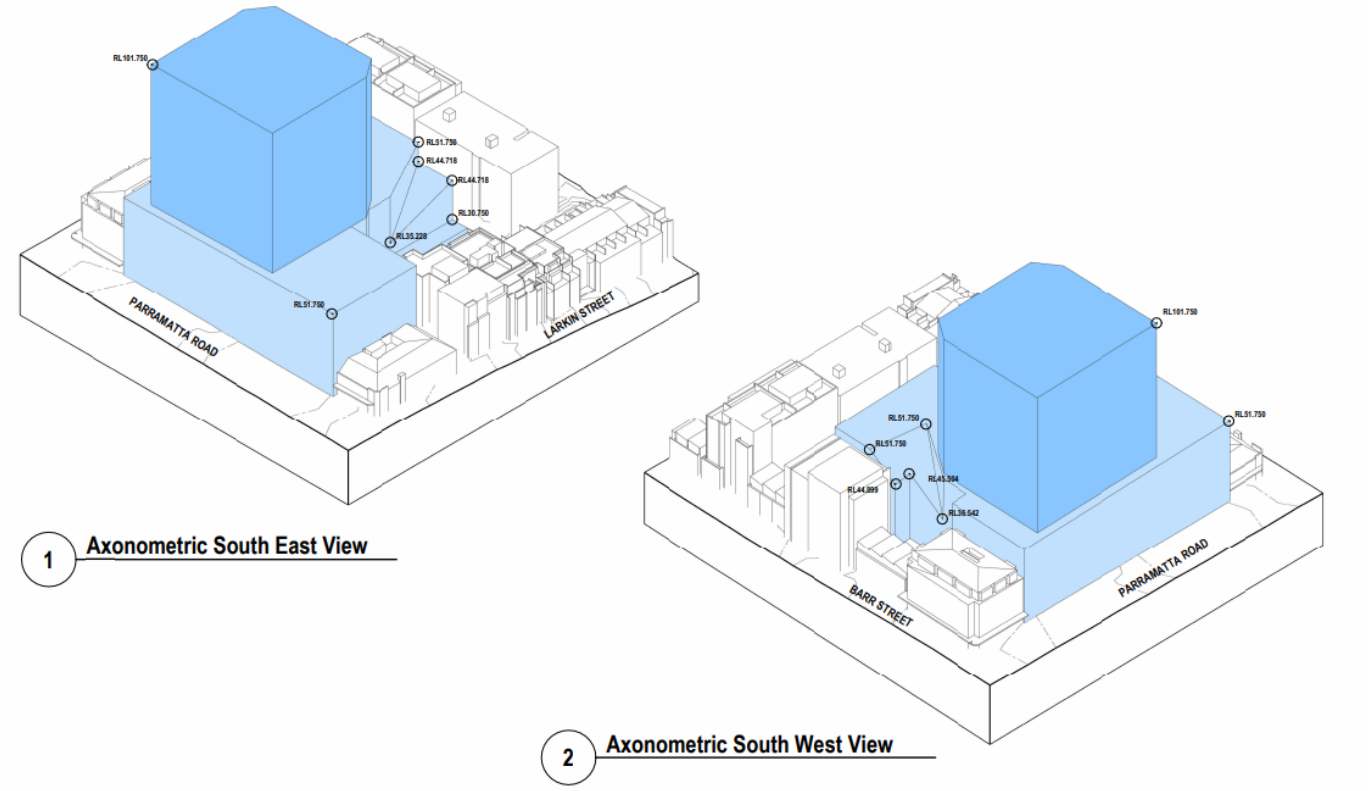


Figure 2 Building Envelope Massing

Source: HDR Architects

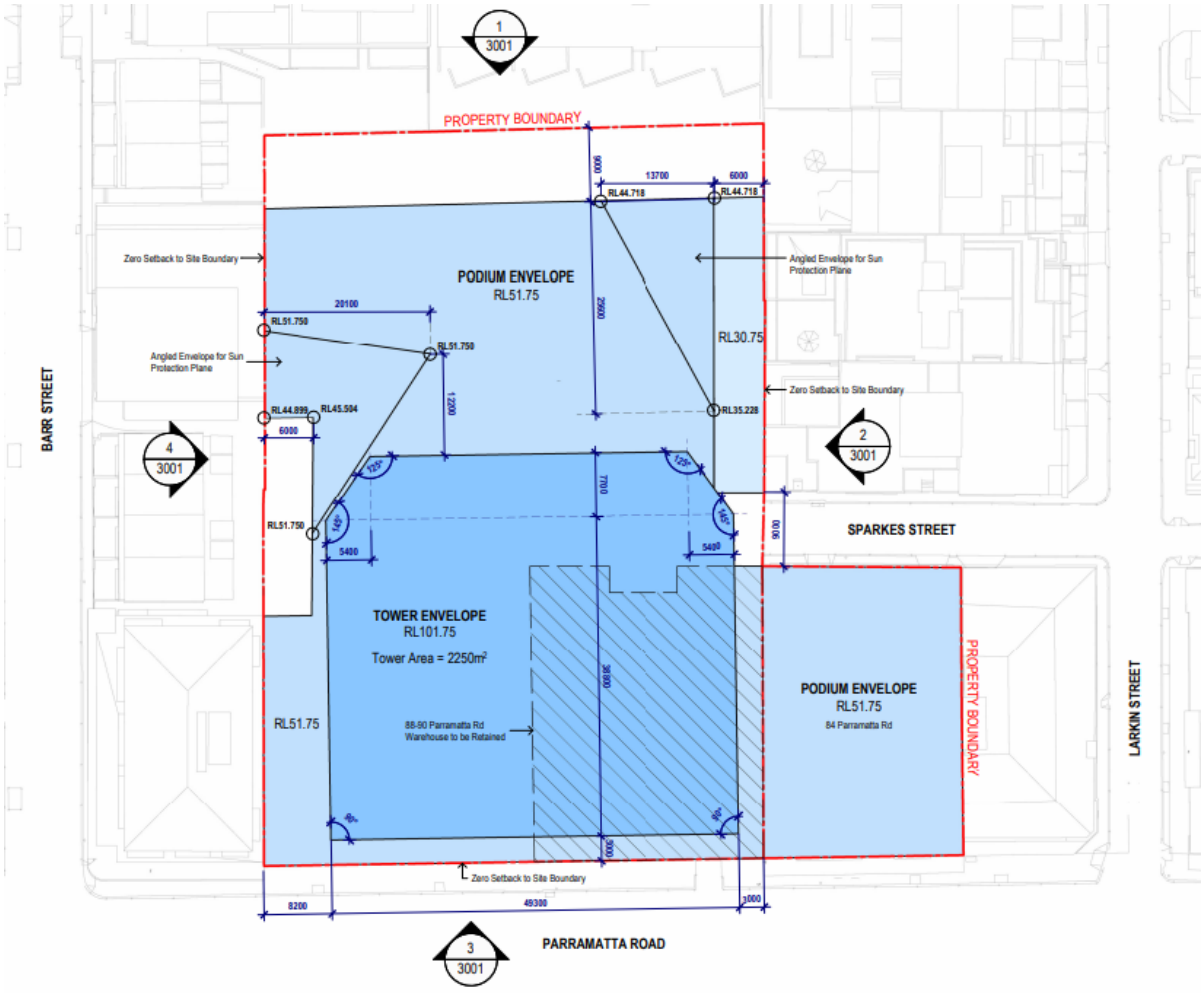


Figure 3 Building Envelope Setbacks

Source: HDR Architects

3.3 Warehouse Retention

1) Investigation into the retention of the warehouse at 88-90 Parramatta Road is to be undertaken, and as much of the building, façade and structure as possible is to be retained, subject to consideration of structural requirements, building condition and constructability.
2) The warehouse should be integrated into the building fabric of the research facility.
3) The podium should form an appropriate and respectful architectural relationship with the warehouse.
4) Activation of the warehouse building at 88-90 Parramatta Road should be explored, including potential opportunities for 'science on display' uses.
5) Set back any new tower elements to conserve the roof form and maintain legibility of the Inter-war building from Parramatta Road and key view corridors, where possible.
6) Locate structural supports in the eastern and western zones of the warehouse at 88-90 Parramatta Road to avoid impact to significant interiors, and concrete demolition/adaptive reuse in key existing modified areas for services and access, where possible.
7) Retain original northern and southern windows at upper levels of the warehouse to support both the historic values of the warehouse, as well as environmental performance objectives.

3.4 Public Domain

1) Landscape and public domain should consider the opportunities to incorporate Connecting with Country
2) Landscaped open space with adequate deep soil is to be provided at the rear of the site (northern boundary).
3) Sparks Street is to be interpreted through the site as a visual and internal pedestrian connection.
4) Landscaping on the site is to utilise a species mix of environmentally and culturally significant plants that reflect the surrounding wetlands, grasslands, scrub, and forests.
5) Any landscaping on the site is to support the precinct's educational and science focus by raising awareness among employees, students, and residents of culturally significant edible and medicinal plants used by Indigenous Australians, and their relevance to contemporary practices in education, food, and medicine.
6) The landscaping of the site is to establish a clear and legible pedestrian network throughout the campus and to building entries.
7) Thoughtful landscape material selection to facilitate intuitive and safe way-finding across the external spaces of the site.
8) A diverse range of landscape spaces are to be provided that support active recreation in addition to quiet, passive engagement.

3.5 Access and parking

1) Vehicular access, basement parking and service entry points are to be provided from the Sparkes Street entrance to the site.
2) A Traffic Management Plan is to accompany any future Development Application and must include an assessment of potential traffic and safety measures, service vehicle movements to the site and timing of deliveries. This plan must include detail on:
    a. Laboratory gas delivery inclusive of cryogenic liquid, due to the truck length requirement and access limitations of Sparkes Street
3) Loading, storage, refuse areas and building services should be integrated into the building design to minimise the visual impact to public areas.

3.6 Design Excellence

1) An invited architectural design competition is to be undertaken in accordance with Clause 6.21 of the Sydney Local Environmental Plan 2012, Clause 3.3 of the Sydney DCP 2012 and the City of Sydney Competitive Design Policy.
2) The competition is to include a minimum of three (3) invited competitors that must satisfy the following eligibility requirements:
    a. A Competitor may be a single person or firm, or a number of firms working in partnership, constituted of a principal/lead architect supported by an executive architect(s).

b. Invited Competitors are to have demonstrated capabilities in design excellence by being the recipient of an Australian Institute of Architects architecture award or commendation or, in the case of international competitors, the same with their equivalent association.
c. Each Competitor 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.
d. A minimum of 50% of invited Competitors must be Australian based architects.
e. The selection of Competitors should include a mix of emerging and established architectural practices.
f. Proven capability and experience in health-related and/or research facilities.

3) The jury is to comprise a total of three (3) members. In the following composition:
   a. One (1) member nominated by GANSW.
   b. One (1) member nominated by the City of Sydney.
   c. One (1) member nominated by the Proponent.
4) Further to the above the Jury is to have a gender representation target ratio of 40% male, 40% female and 20% any gender.
5) Any additional floor space pursued for the building demonstrating design excellence under Clause 6.21(D), is to be accommodated within the building envelope shown within **Figure 2 Building Envelope Massing**

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Attachment A6

Design excellence strategy

Design Excellence Strategy

Competitive Design Process

84 - 94 Parramatta Road, Camperdown

Submitted to City of Sydney
on behalf of Wentworth Capital

Prepared by Colliers Urban Planning

25 February 2026 | 2240137



'Gura Bulga'

Liz Belanjee Cameron

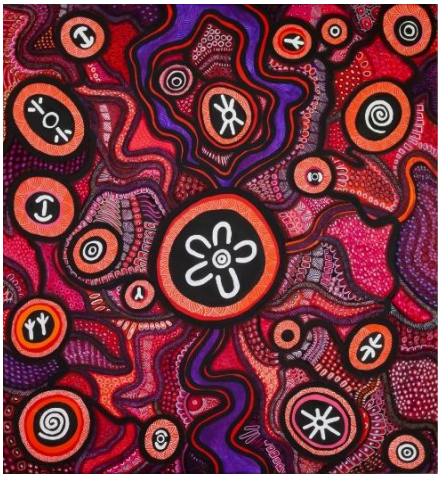
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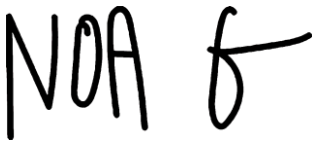
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Noa Galapo, Ella Coleman	25 February 2026	Andrew Duggan	25 February 2026

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Contents

1.0 Introduction 4

1.1 Overview 4

1.2 Project description 4

1.3 Background and planning context 5

1.4 Objectives of the Design Excellence Strategy 6

1.5 Key stakeholders 6

2.0 Design Excellence Strategy 8

2.1 Location and extent of the competitive design process 8

2.2 Type of competitive design process to be undertaken 9

2.3 Competitive Design Brief 9

2.4 Selection of competitors 10

2.5 Establishment of the Jury 10

2.6 Technical Advisors 11

2.7 Impartial Observers 11

2.8 Jury decision 12

2.9 Competitive Design Report 12

2.10 Proposed allocation of up to an additional 10% building height and floor space 12

2.11 Ecologically sustainable development targets 12

3.0 Design integrity 13

3.1 Lead Design Architect 13

3.2 Design Integrity Panel 13

Figures

Figure 1 Site aerial – The location and extent of the competitive design process 8

Tables

Table 1 Summary of roles and responsibilities of key stakeholders 6

Table 2 Lot details 8

Table 3 Draft competition program 9

Table 4 Competitive Design Brief – Annotated table of contents 10

1.0 Introduction

1.1 Overview

This Design Excellence Strategy has been prepared by Colliers Urban Planning on behalf of Wentworth Capital (on behalf of Spark Sub TC) (the Proponent) under a long-term ground lease from University of Sydney as a landowner. This Strategy establishes a framework for design excellence in the delivery of a life sciences research facility and associated retail and educational uses, at 84-94 Parramatta Road, Camperdown (the site).

Wentworth Capital, under a long-term ground lease from University of Sydney as a landowner, envisions creating a world-class life sciences and mixed-use campus upon the site. The proposal aims to establish Camperdown as Sydney's premier biomedical hub, centred around top-tier life science facilities. The site will be integrated and complement the larger University of Sydney life science and innovation ecosystem and will enhance the existing research facilities and strategic infrastructure currently being developed by the University, including the Sydney Biomedical Accelerator, as well as the Royal Prince Alfred (RPA) Hospital redevelopment.

Clause 6.21C(1) of the *Sydney Local Environmental Plan 2012* (Sydney LEP) refers that development consent must not be granted unless, in the opinion of the consent authority, the proposed development exhibits design excellence. Clause 6.21(2) lists the matters the consent authority must have regard to in considering whether a development exhibits design excellence. Clause 6.21D requires that development must undertake a competitive design process on land outside of Central Sydney which will have a height above ground level (existing) greater than 25m, or development having an estimated development cost (EDC) of more than $100 million.

Development at the site will be for a health research facility with an EDC of more than $30 million, and will therefore be State Significant Development (SSD) in accordance with clause 14, Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021*.

In accordance with the Government Architect NSW's *Design Competition Guidelines* (GA Guidelines) and clause 2 of the draft *City of Sydney Competitive Design Policy* (amended June 2025) (the draft Policy), this Design Excellence Strategy defines:

- the location and extent of the competitive design process.
- the number and type of competitive design process to be undertaken;
- the number of designers involved in the process;
- whether the competitive design process is pursuing additional floor space, additional building height, or both; and
- target benchmarks for ecologically sustainable development.

1.2 Project description

The development will propose a new life science and mixed-use campus, and will include:

- Health research facility, comprising spaces such as:
  - Laboratories including dry labs, wet labs, specialised labs and incubator labs.
  - Write-up spaces.
  - Conference spaces.
  - Office and education spaces.
- Ground floor active use opportunities, such as:
  - Science on display.
  - Retail premises.
  - Food and drink premises.
- Additional stories for services apartments at 84 Parramatta Road (Veriu site).

1.3 Background and planning context

Planning Proposal

This Design Excellence Strategy supports a Planning Proposal which seeks to introduce new floor space ratio (FSR) and height of buildings development standards for the site. Collectively, these proposed amendments will unlock additional floor space that will be used to enable the development of a purpose-built life sciences research facility and other associated uses, consistent with the vision of the Tech Central and the Camperdown Health, Education and Research Precinct. The proposed amendments to the Sydney LEP 2012 will enable the redevelopment of the site into a vibrant precinct that will co-locate education, research and other suitable co-located land uses to support the purpose-built facility.

Specifically, the Planning Proposal seeks the following amendments:

- A new maximum building height of part 80m, part 30m.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1.
- A new site-specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional floorspace for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- The requirement to retain the existing warehouse at 88-90 Parramatta Road.
- Amendments to the *Sydney Development Control Plan 2012* (Sydney DCP 2012) to address site-specific outcomes.

The Planning Proposal and draft Sydney DCP 2012 amendments envisage a podium and tower envelope that can accommodate a building envelope that is inclusive of the 10% additional building height and floor space.

To ensure that the development of the site proceeds in a timely manner, it is envisaged that the competitive design process will begin as soon as practical after the post-exhibition endorsement of the Planning Proposal by the Central Sydney Planning Committee and the endorsement of the Competitive Design Process Brief by the GANSW, in consultation with stakeholders.

Sydney Local Environmental Plan and Development Control Plan - Policy and Housekeeping Amendments (LEP/DCP Update)

The City of Sydney (the City) has publicly exhibited an update to its planning framework, proposing changes to Sydney LEP 2012, Sydney Development Control Plan 2012, and to the City's Competitive Design Policy. Of particular relevance, the proposed amendment to clause 6.21D(3) of the Sydney LEP 2012 and the draft Policy allows the consent authority to consider granting an additional amount of building height, floor space, or both up to 10% of the maximum permissible to a development that is the result of a competitive design process and exhibits design excellence

Connecting with Country Approach

There are a number of identified potential opportunities for a Connecting with Country approach at the site. Approaches include celebrating the site as a place of knowledge and learning, interpreting the original walking track between Sydney and Parramatta, and improving ecological function, deep soil, tree canopy and water management.

The University of Sydney's Walanga Wingara Mura Design Principles is a guiding document that informs the integration of Aboriginal and Torres Strait Islander cultures, world views and practices into the physical design of university buildings. At a future detailed design stage, the proponent will demonstrate alignment with the principles in the document, with opportunities for integration in the physical built form and in the public art commissioned for the development.

1.4 Objectives of the Design Excellence Strategy

The objectives of this strategy are to:

- Establish a methodology for the Proponent to implement a competitive design process for the redevelopment of the subject site, in accordance with the GA Guidelines.
- Ensure that the competitive design process works within the framework of this approved Design Excellence Strategy.
- Confirm the number of design practices to participate in the competitive design process and how these will be selected.
- Establish the process for the selection of a competition jury.
- Set out the approach for establishing a Competitive Design Brief that ensures:
  - The Proponent's objectives are balanced with the consent authority's design excellence requirements.
  - The achievement of design and architectural diversity.
  - The alignment of the project design with key local and State policies, such as *Better Placed* and the *Connecting with Country Framework*.
  - Procedural fairness for competitors.
- Target benchmarks for ecologically sustainable development, in alignment with the ESD Report
- Ensure that design excellence integrity is continued in the subsequent detailed development proposal through construction phase to completion of the project.
- Explain the requirements of the design integrity phase.

1.5 Key stakeholders

The key stakeholders in the competitive design process are outlined in **Table 1**.

Table 1 Summary of roles and responsibilities of key stakeholders

Stakeholder	Role and Responsibilities
The Proponent Wentworth Capital (under a long-term ground lease from University of Sydney as a landowner)	Wentworth Capital is the Proponent of the competitive design process. Wentworth Capital will lead the competition process and are responsible for: • Ensuring the competition proceeds in accordance with the GA Guidelines and the draft Policy. • Engaging and directing the Competition Manager. • Procuring and overseeing technical advice to Competitors and the Jury. • Funding the competition.
The Competition Manager Colliers Urban Planning	The Proponent have appointed Colliers Urban Planning as the Competition Manager. The Competition Manager will coordinate the competition process, guide the Proponent, and provide advice and services in relation to each stage. The Competition Manager will: • Prepare the Design Excellence Strategy and Competitive Design Brief. • Prepare a list of professional appointments including the Jury and Technical Advisors appropriate for the competition, as required. • Engage with DPHI, GANSW and the City of Sydney as required. • Manage responses to questions from the design team during the competition process. • Prepare the Competitive Design Report for the Jury to endorse and sign.
Assessing and/or Consent Authority Department of Planning, Housing and Infrastructure	The Department of Planning, Housing and Infrastructure will be the assessing and/or consent authority of the future SSD Application(s). The competitive design process will be overseen by an impartial observer appointed by DPHI (Social and Infrastructure Assessments Team) and may be present during the progress session and presentation day.

Stakeholder	Role and Responsibilities
Government Architect NSW	As the project will be SSD, GANSW will administer the competitive design process. This includes: • Reviewing and endorsing the Design Excellence Strategy and Competitive Design Brief. • Nominating one member of the Jury, who will also be the Jury Chair. • Post competition, endorsing the overall competition to confirm it has met the requirements of the competitive design process. • The competitive design process will be overseen by an impartial observer appointed by GANSW.
Council City of Sydney	The site is located within the City of Sydney Local Government Area (LGA). As the local Council, the City of Sydney will: • Be responsible for nominating one member of the Jury. • Nominate an impartial observer/s to oversee the competition process.

2.0 Design Excellence Strategy

2.1 Location and extent of the competitive design process

The competition site is at 84-94 Parramatta Road, Camperdown, as shown at **Figure 1**. The site consists of four lots and is legally described as detailed in **Table 2**. The site's area is 6,194m^2, has an approximate 85 metre frontage to Parramatta Road, an approximate 25 metre frontage to Sparkes Street, and is irregular in shape.

Of note, the existing warehouse building at 88-90 Parramatta Road is proposed to be retained as a requirement of the Planning Proposal. The building is a historic, Inter-war warehouse structure that was likely previously used as a showroom to house vehicles in the 1940s, and then as a shop and office space with various tenancies until 2017. The warehouse has been vacant from 2017.

The site is directly opposite to the University of Sydney's main campus. As identified within the Greater Sydney Regional Plan, the site is located in the Eastern Economic Corridor, with Camperdown described as a Health, Education and Research Precinct within Tech Central. In addition, the site is identified within the Camperdown Precinct of the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS).

Table 2 Lot details

Address	Legal description	Site area
84 Parramatta Road	Lot 1 DP 1216911	839m^2
88-90 Parramatta Road	Lot 1 DP 178634	977m^2
92-94 Parramatta Road	Lot A DP 402925	3,320m^2
	Lot 1 DP 965792	1,064m^2

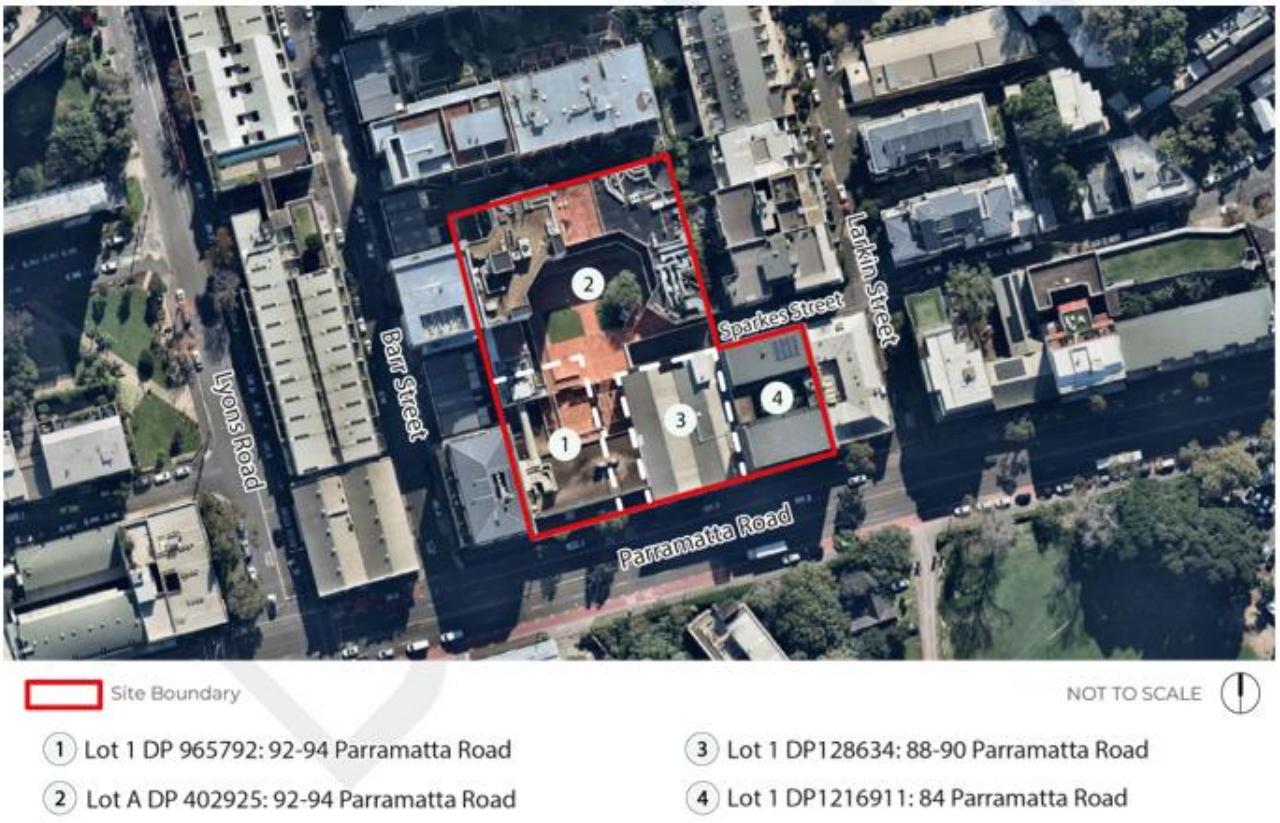


Figure 1 Site aerial – The location and extent of the competitive design process

Source: Nearmap annotated by Colliers Urban Planning

2.2 Type of competitive design process to be undertaken

The development is required to undertake a competitive design process in accordance with clause 6.21D of the Sydney LEP 2012. The Proponent has elected to conduct a single **'Invited' Architectural Design Competition** in accordance with the GA Guidelines and supported by the draft Policy. The process is to be undertaken prior to the lodgement of the SSD Application for the redevelopment of the site, as envisaged in the Planning Proposal.

The competitive design process will comprise a single-stage competition with the following key components:

- An initial Competitor briefing.
- A 6-week working time for Competitors to prepare design proposals in response to the brief.
- A progress session where Competitors are able to attend a session with Technical Advisors to seek high level technical and planning compliance matters only.
- Final submissions and presentations by Competitors to the Jury.
- Jury deliberations with selection of a winning proposal.

A draft competition program is provided in **Table 3**.

Table 3 Draft competition program

Week	Description / Milestone
Pre-commencement	• GANSW endorsement of the Design Excellence Strategy. • GANSW endorsement of the Competitive Design Brief, including the evaluation criteria.
Weeks 1-6 (6 weeks)	• An initial Competitor briefing, including site visit. • Working time (6 weeks). • Progress session with Technical Advisors and the Proponent. • Final submissions by Competitors to Competition Manager.
Week 7-8 (2.5 weeks)	• Undertake technical review of final submissions and issue to the Jury. • Jury briefing.
Week 9	• Technical Advisor presentations. • Competitor final presentations. • Jury deliberations.
Total: 9 weeks	
After completion	• Preparation of the Competitive Design Report and endorsement by the Jury. • Design integrity.

2.3 Competitive Design Brief

The Competitive Design Brief will be prepared by the Proponent's Competition Manager and in accordance with the City's *Model Competitive Design Process Brief*. The Proponent will seek endorsement from GANSW, as well as feedback from other stakeholders during the preparation of the Competitive Design Brief. In establishing the Competitive Design Brief, the Proponent will ensure that:

- All details regarding the conduct of the competitive design process are contained with the Competitive Design Brief, including procedural fairness for Competitors.
- The evaluation criteria and associated weightings are clearly defined and agreed in the Competitive Design Brief.
- The planning context and relevant development controls will be clearly defined in the Competitive Design Brief.
- The objectives and aspirations of the project are expressly stated in the Competitive Design Brief.
- The Competitor's fees are clearly defined.
- The Competitive Design Brief and appended documents are reviewed and endorsed in writing by GANSW prior to its distribution to Competitors, the Jury and Technical Advisors.

An annotated table of contents for the Competitive Design Brief is outlined in **Table 4**.

Table 4 Competitive Design Brief – Annotated table of contents

Section	Content
1. General information	Outline of the purpose and timing of the competitive design process, and an overview of the project.
2. Site description and context	Description of the site and the surrounding context.
3. Planning context and controls	Outline of the strategic and statutory planning framework, including the Sydney LEP 2012 as proposed to be amended by the Planning Proposal.
4. Design objectives and controls/guidance	Explain the planning and design objectives of the project, including the Connecting with Country Framework.
5. Technical objectives	Explain the technical objectives and considerations of the project, including the commercial objectives as they relate to the project budget.
6. Competition procedures	Set out the procedural matters of the competitive design process, including the responsibilities and obligations of the Proponent, Jury and the Technical Advisors; the role of DPHI, GANSW, the City of Sydney; the basis for participation; and the intent of the design integrity phase.
7. Submission requirements	Outline of the documentation to be provided in each Competitor's submission.

2.4 Selection of competitors

A minimum of **three (3) invited competitors**. The selection of the invited Competitors will be shortlisted and determined by the Proponent. The final invited Competitors will be selected in consultation with GANSW.

The invited Competitors will be required to satisfy the following eligibility requirements:

- A Competitor may be a single person or firm, or a number of firms working in partnership, constituted of a principal/lead architect supported by an executive architect(s).
- Invited Competitors are to have demonstrated capabilities in design excellence by being the recipient of an Australian Institute of Architects architecture award or commendation or, in the case of international competitors, the same with their equivalent association.
- Each Competitor 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.
- A minimum of 50% of invited Competitors must be Australian based architects.
- The selection of Competitors should include a mix of emerging and established architectural practices.
- Proven capability and experience in health-related and/or research facilities.

Competitors are encouraged to include:

- A balanced gender mix within each design and leadership team.
- Aboriginal and/or Torres Strait Islander peoples.
- People who are culturally diverse.
- People with a disability.

2.5 Establishment of the Jury

The Jury will comprise a total of **three (3) members** in the following composition:

- One (1) member nominated by GANSW.

- One (1) member nominated by the City of Sydney.
- One (1) member nominated by the Proponent.

Further to the above the Jury is to have a gender representation target ratio of 40% male, 40% female and 20% any gender.

A detailed set of obligations will be provided in the Competitive Design Brief for the Jury, but in general, they are to:

- Represent the public interest.
- Be appropriate to the type of development and context of the site.
- Include persons who have expertise and experience in the design and construction professions and industry.
- Include a majority of registered architects with urban design and architectural expertise and experience.

The Chair of the Jury will be nominated by GANSW and will have expertise in architectural design and be a recognised advocate of design excellence.

2.6 Technical Advisors

Technical Advisors will be appointed by the Proponent for the duration of the competitive design process. The role of Technical Advisors may include:

- Provide technical information and input into the Competitive Design Brief and/or supporting technical briefs.
- Provide guidance to the Competitors as instructed.
- Review Competitor's work-in-progress material and provide clarification in the progress session.
- Assess the final submissions against the evaluation criteria and requirements of the Competitive Design Brief.
- Following an assessment on the final submissions, present to the Jury on their relevant disciplines.

The Proponent shall engage Technical Advisors to provide high-level review and assistance to the Jury in the assessment of final submissions. Technical Advisors are to strictly limit advice to technical and compliance matters pertaining to their professional discipline only and refrain from commenting on matters outside their remit.

Technical Advisors will issue advice through the Competition Manager. The Competition Manager will distribute advice to Competitors and the Jury as required. The role of each Technical Advisor will be defined in the Competitive Design Brief.

Technical Advisors may also be called upon to provide advice, post competition, in the design integrity phase.

2.7 Impartial Observers

A number of stakeholders will be invited to attend and observe the key milestones of the competition. These stakeholders include:

- GANSW and Department of Planning, Housing and Infrastructure: GANSW and DPHI (Social and Infrastructure Assessments Team) will each nominate an impartial observer/s.
- City of Sydney Council: The City will nominate an impartial observer/s.

Further, the role of the impartial observer is to verify that the competitive design process has been followed appropriately and fairly. The observer/s will be invited to attend all meetings involved with the competitive design process and design integrity process, and is to be provided reasonable notice of all meetings.

The attendance of impartial observers throughout the Jury's deliberations will be at the discretion of the Jury Chair.

2.8 Jury decision

The Jury will select a winning competitor based on an assessment of their final submission against the weighted evaluation criteria presented in the Competitive Design Brief. The Jury's decision will be via a majority vote. The Jury must evaluate a minimum of three (3) competitive submissions and make every effort to arrive at a consensus in the selection of a winner. If, in the opinion of the Jury, key design issues require further resolution before a decision can be made, the Jury may recommend that design amendments be made to up to two (2) of the final submissions.

The primary function of the Jury Chair is to ensure that the deliberations proceed in a fair and orderly manner.

The Jury decision will not fetter the discretion of the consent authority in its determination of any subsequent SSD Application(s) associated with the site/proposal that is the subject of this competitive design process.

2.9 Competitive Design Report

Following the presentation day and Jury deliberations, a Competitive Design Report will be prepared by the Competition Manager on behalf of the Jury. The Competitive Design Report will contain findings and recommendations of the Jury. An assessment of each entry against the evaluation criteria provided within the Competitive Design Brief, and input from the Proponent and Technical Advisors, will be appended to the Competitive Design Report as required.

The Competitive Design Report will include the Jury's rationale for the choice of the winning design, outlining how in the opinion of the Jury, the scheme is capable of achieving design excellence. The Competitive Design Report will identify the qualities and attributes that must be retained to achieve design excellence, and also include any further recommended design amendments relevant to the scheme's capability of achieving design excellence and the requirements of the Competitive Design Brief.

2.10 Proposed allocation of up to an additional 10% building height and floor space

The future SSD Application will seek up to an additional 10% building height and floor space in accordance with draft amendment to clause 6.21D of the Sydney LEP 2012.

2.11 Ecologically sustainable development targets

The Competitive Design Brief will require ecologically sustainable development (ESD) targets to be considered for the future development as set out below:

- Retention and adaptation of the existing warehouse results in reduce embodied carbon and maintains the current street character.
- Targeting of a 5-star Green Star rating ensures the future development is Net Zero ready.
- Best practice procurement and management will be embedded via Green Star rating.

A Green Star rating of 5-stars is to be targeted, integrating the following criteria into the building design:

- Commitment to 100% renewable electricity purchase for base building requirements.
- Commitment to 100% renewable energy for all non-electric energy, base building and tenant requirements.
- 20% reduction in annual energy use relative to benchmark building performance.
- 20% reduction in upfront carbon emissions relative to benchmark building design.
- Offset of all scope one emissions.

ESD targets and sustainability initiatives will be carried through the competition phase, design development, construction, and through to completion of the project to deliver an exemplar of ESD.

3.0 Design integrity

3.1 Lead Design Architect

The architect of the winning scheme, as selected by the Jury, will be appointed by the Proponent as the Lead Architect for the subsequent SSD Application and will perform this role until completion of the project. Where the winning architect is a consortium, partnership or other joint authorship, each must retain representation and a leadership role in all processes following.

To ensure design continuity and excellence of the winning scheme is maintained throughout the development process, the role of the Lead Architect will include at a minimum the following:

- Preparation of the architectural documentation for a detailed SSD Application for the winning design.
- Preparation of the architectural documentation for a Construction Certificate.
- Preparation of the architectural documentation for contract documentation.
- Provide a lead role in ensuring design integrity is maintained.
- Maintain design continuity during the construction phases through to completion of the project.
- Provide any documentation required by the consent authority verifying the design intent has been achieved at completion.
- Representing the project in meetings with or reviews by the DPHI, GANSW, the City, as well as other stakeholders and the community, as required.

The Lead Architect may work in association with other architectural practices but is to retain a leadership role over design decisions.

3.2 Design Integrity Panel

Following the competitive design process, the original Jury members will form the Design Integrity Panel (DIP). The DIP will ensure that the design integrity of the winning scheme has been maintained, and that specific requirements as identified in the Competitive Design Report have been addressed. The DIP will reconvene to review the design at the following stages:

- Prior to the lodgement of any SSD Application, providing sufficient time to allow for meaningful input by the DIP on design development.
- During the assessment of the SSD Application as deemed necessary by the consent authority.
- If required, prior to the submission of any modifications to an SSD Development Consent.
- Prior to an application for a Construction Certificate (if deemed necessary by the DIP or consent authority).
- If required throughout the detailed design process by the consent authority or if requested by the Proponent.

Each meeting of the DIP is to be documented within a report or minutes. At each milestone, certification is required confirming that the design retains, or is an improvement upon, the design excellence qualities exhibited in the competition winning scheme.

The DIP will take the place of any separate design review panel (such as the State Design Review Panel (SDRP)).

All costs of DIP meetings will be borne by the Proponent. Secretariat services will also be provided by the Proponent.

Should a member of the DIP not be available to participate in future design integrity process reviews, the original agency who nominated them shall propose a replacement. Any replacement must be approved by the consent authority. At least three (3) members (or their alternatives) are required to form a quorum for the DIP, which will be responsible for ongoing design reviews.

Note. For private projects on private land, the SDRP is required to review such projects with an estimated development cost threshold of $100 million. However, SDRP reviews are not required if it is part of an endorsed alternative to a competitive design process.

Should the SDRP threshold change or be removed for private projects on private land, and this project would no longer have ordinarily triggered the threshold for an SDRP review, then section 3.2 of this Strategy would no longer apply. This would have the effect of removing the requirement for a DIP.

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Attachment A7

Transport impact assessment
Life sciences development

ARUP

Wentworth Capital

88-94 Parramatta Road, Camperdown

Transport Impact Assessment – Life Sciences

Reference: 304985-00

Rev 03 | 24 September 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 304985-00

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Contents

1.	Introduction	1
1.1	Background	1
1.2	Proposal overview	1
1.3	Purpose of this report	1
2.	Existing transport environment	2
2.1	Site location	2
2.2	Road network	2
2.3	Traffic survey and data	3
2.4	Traffic demand profile	4
2.5	Peak hour	5
2.6	2026 survey factoring up	5
2.7	Walking environment	5
2.8	Cycling environment	6
2.9	Public transport	8
2.10	Travel behaviour	12
3.	Proposed development	14
3.1	Site layout	14
3.2	Site access	16
3.3	Vehicle parking	19
3.4	Loading dock	20
3.5	Bicycle parking and End of Trip Facilities	21
4.	Transport impact assessment	22
4.1	Trip generation	22
4.2	Servicing trip generation	24
4.3	Vehicle trip distribution	25
4.4	Traffic modelling	28
4.5	On-street parking impacts	31
4.6	Impacts on Walking, Cycling and Public Transport	35
4.7	Recommendations	35
5.	Outline Framework Travel Plan	36
5.1	Objectives	36
5.2	Potential measures	36
5.3	Monitoring and review	39
6.	Framework Construction Traffic Management Plan (CTMP)	40
6.1	Traffic management objectives	40
6.2	Traffic management principles	40
6.3	Existing user group hierarchy	41

6.4 Governance 41
6.5 Proposed working hours 41
6.6 Truck routes and controls 41
7. Conclusion 42

Tables

Table 1: Traffic survey and data summary 3
Table 2: Weekday peak hours and traffic demand at intersections 5
Table 3: Bus routes and frequency 10
Table 4: Existing mode share for SA2 (Glebe/Forest Lodge and Newtown/Camperdown/Darlington) 13
Table 5: Proposed Area Schedule (Gross Floor Area [GFA]) 14
Table 6: Maximum car parking 19
Table 7: Minimum cycle parking rates 21
Table 8: Building capacity benchmark and estimate 22
Table 9: Proposal total estimated vehicle trips 23
Table 10: Existing site estimated vehicle trips 23
Table 11: Net additional trips and direction by direction 24
Table 12 Service vehicle trips 24
Table 13: Proportion of AM trips traveling to Site 26
Table 14: Proportion of PM trips leaving the Site 27
Table 15: Key intersections for assessment 28
Table 16: Intersection performance indicators (TfNSW) 29
Table 17: SIDRA results 30
Table 18: Comparison of modelled delays on key local streets and legs 31
Table 19: Inbound swept paths 32
Table 20: Outbound option 1: No impact to parking 33
Table 21: Outbound option 2: Moderate impact to parking 33
Table 22: Outbound option 3: Most impact to parking, possible footpath widening 34
Table 23: Summary of outbound option impacts 34

Figures

Figure 1: Site location 2
Figure 2: Key intersections surveyed 4
Figure 3: Hourly traffic demand profile 4
Figure 4: Walking accessibility 6
Figure 5: Cycling network (source: City of Sydney) 7
Figure 6: Cycling accessibility 7
Figure 7: Public transport accessibility (source: City of Sydney LEP) 8
Figure 8: Public transport accessibility – AM (Arriving at the Site at 9am) 9
Figure 9: Public transport accessibility – PM (Departing from the Site at 5:30pm) 9
Figure 10: Bus routes 10
Figure 11: Proposed site layout 15

Figure 12: Pedestrian and cycling access 16
Figure 13: Vehicle access 17
Figure 14: Basement Substation with Access Hatch (Extracts from Basement) 18
Figure 15: Basement Substation with Access Hatch and Crane Access (Extracts from Ground) 18
Figure 16: Proposed basement level car parking 19
Figure 17: Loading dock 21
Figure 18: AM inbound routes from the development 25
Figure 19: PM outbound routes from the development 26

Appendices

Appendix A A-1
SIDRA Modelling A-1

Appendix B B-1
Basement Swept Paths B-1

Appendix C C-1
On-street Swept Paths C-1
C.1 Option 1 paths C-2
C.2 Option 2 paths C-3
C.3 Option 3 paths C-4
C.4 Turn out to Parramatta Road paths C-5

Appendix D D-1
Stick diagrams D-1

1. Introduction

1.1 Background

This Transport Impact Assessment is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction of a new site-specific Floor Space Ratio (FSR) and Height of Buildings development standard to enable up to 6.5:1 floor space ratio for non-residential uses, for the purpose of a life sciences research facility and ancillary uses at 88–94 Parramatta Road, Camperdown.

1.2 Proposal overview

This Planning Proposal seeks approval for amendments to the Floor Space Ratio (FSR) and Height of Buildings development standards under the Sydney Local Environmental Plan 2012 to facilitate a life sciences development at 88–94 Parramatta Road, Camperdown (the Site).

The Proposal includes a purpose-built life sciences research facility and ancillary uses, supported by life science office space, conference and retail uses. The Proposal also includes retention and adaptive reuse of the existing warehouse at 88–90 Parramatta Road and site-specific amendments to the Sydney Development Control Plan 2012 to guide future built form and public domain outcomes.

1.3 Purpose of this report

The purpose of this report is to support the Planning Proposal. The report summarises the existing transport conditions and assesses the likely traffic on the surrounding road network during the operation of the Proposal.

This report also assesses the internal traffic network within the Site, including access arrangements, internal circulation and loading dock operations. In addition, an outline Framework Travel Plan (FTP) and a framework Construction Traffic Management Plan (CTMP) will also be included as individual chapters in this report. The FTP is provided to support sustainable travel behaviours to and from the Proposal. The CTMP will establish the objectives and principles of traffic management during construction.

2. Existing transport environment

This section of the report details the existing transport network surrounding the development Site.

2.1 Site location

The Site is located at 88-94 Parramatta Road, Camperdown within the City of Sydney (CoS) Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes. The site's locational context is shown at Figure 1.

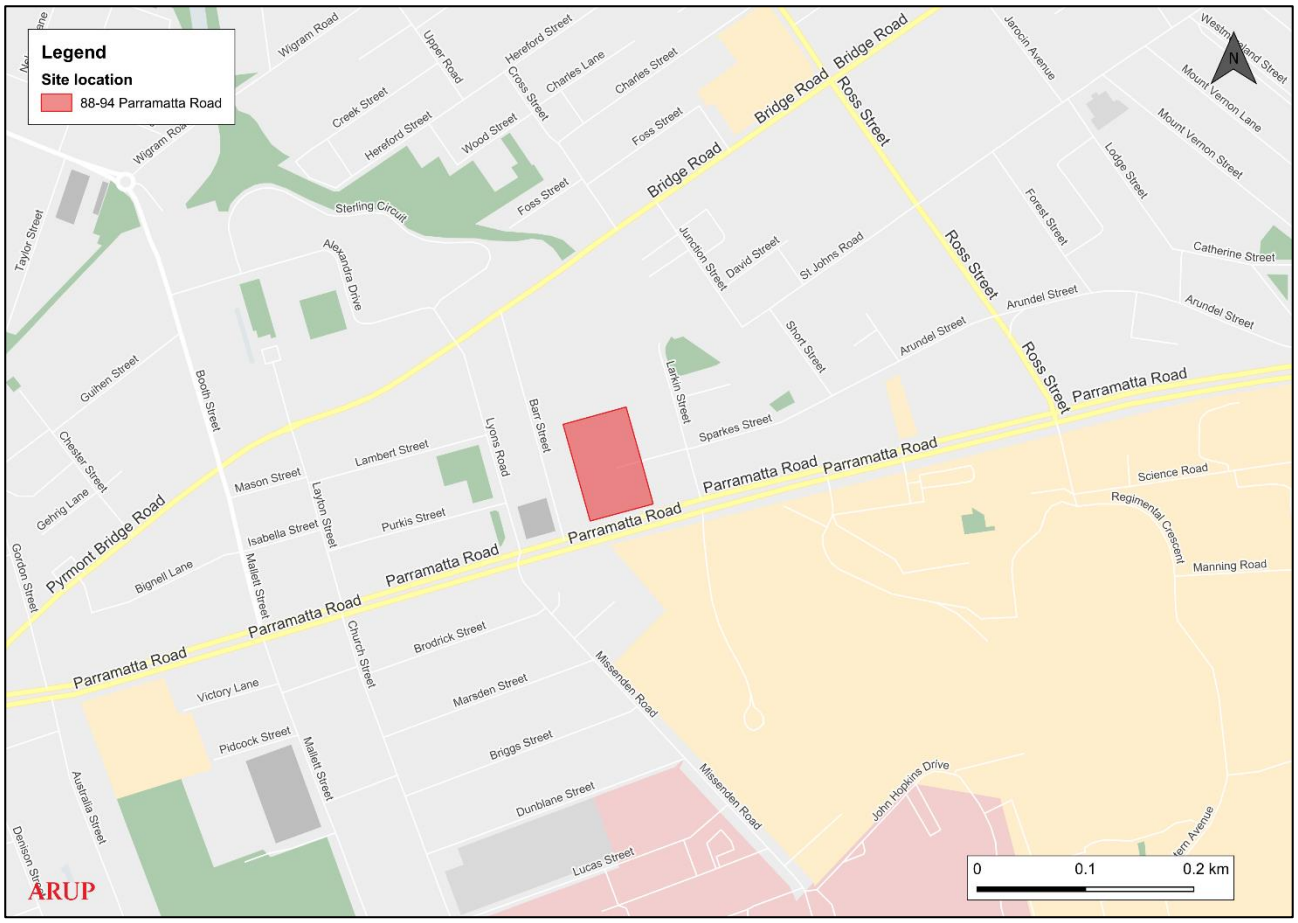


Figure 1: Site location

2.2 Road network

2.2.1 Parramatta Road

Parramatta Road is a major arterial road that runs in an east-west direction along the southern boundary of the Site. It is a two-way road generally configured with three lanes in each direction inclusive of kerbside bus lanes. The section of Parramatta Road that runs past the Site is subject to a posted speed limit of 60km/h and has parking restrictions during bus lanes hours of operation from 6am to 10am and 3pm and 7pm weekdays.

2.2.2 Ross Street

Ross Street runs in a north-south direction approximately 350m to the east of the Site. It is a two-way road generally configured with one lane in each direction with kerbside car parking provided for permit holders

on the eastern side of the road between Parramatta Road and St Johns Road and both sides of the road between St Johns Road and Bridge Road. This section of Ross Street provides a highway frontage to residential and commercial properties and is subject to a 50km/h posted speed limit.

2.2.3 Bridge Road

Bridge Road is a two-way road that runs in a northeast to southwest direction approximately 130m to the north of the Site. The section of road that runs to north of the Site is generally configured with one lane in each direction with on-street segregated cycle lanes on both sides of the road. This section of Bridge Road is a designated clearway with parking restrictions on both sides of the road and a posted speed limit of 40km/h.

2.2.4 Sparkes Street

The existing vehicular access to the Site is from Sparkes Street. Sparkes Street is a local road that runs in an east-west direction between the eastern boundary of the Site and Short Street. Sparkes Street is intersected by Larkin Street. The section of Sparkes Street between the Site access and Larkin Street is a two-way road with parking and stopping restrictions on the southern side of the road. On-street parking on the northern side of the road reduces the effective carriageway width to approximately 3.5 metres, which limits the ability for two vehicles to pass simultaneously.

2.3 Traffic survey and data

Comprehensive and extensive traffic survey data were collated and analysed as part of the study, which are summarised in Table 1.

Table 1: Traffic survey and data summary

#	Data type	Specification	From	Use case
1	Intersection turn count	• Intersection: (1) Parramatta Road / Missenden Road / Lyons Road intersection (2) Parramatta Road / Western Avenue / Ross Street intersection (3) Bridge Road / Ross Street intersection • Date: 26 November 2024 • Time: o AM (7:00 am - 10:00 am), o PM (4:00 pm - 7:00 pm) • Vehicle type: cars, rigid trucks, articulated trucks, buses, and pedestrians • Data interval: 15-minute	Matrix	Identify peak hours, and traffic volume inputs into SIDRA modelling
		• Intersection: (4) Parramatta Road / Larkin Street intersection (5) Sparkes Street / Larkin Street intersection (6) Ross Street / Arundel Street intersection • Date: 2 July 2026 • Time: o AM (6:00 am - 10:00 am), o PM (3:00 pm - 7:00 pm) • Vehicle type: cars, rigid trucks, articulated trucks, buses, and pedestrians • Data interval: 15-minute	Trans Traffic Survey	Identify peak hours and traffic volume inputs into SIDRA modelling. Additional intersections as requested by CoS.
2	Crash history data	Vehicle crashes during 2020–2024 within the study area	TfNSW Open Data Hub	Review road safety aspects and identify crash trends

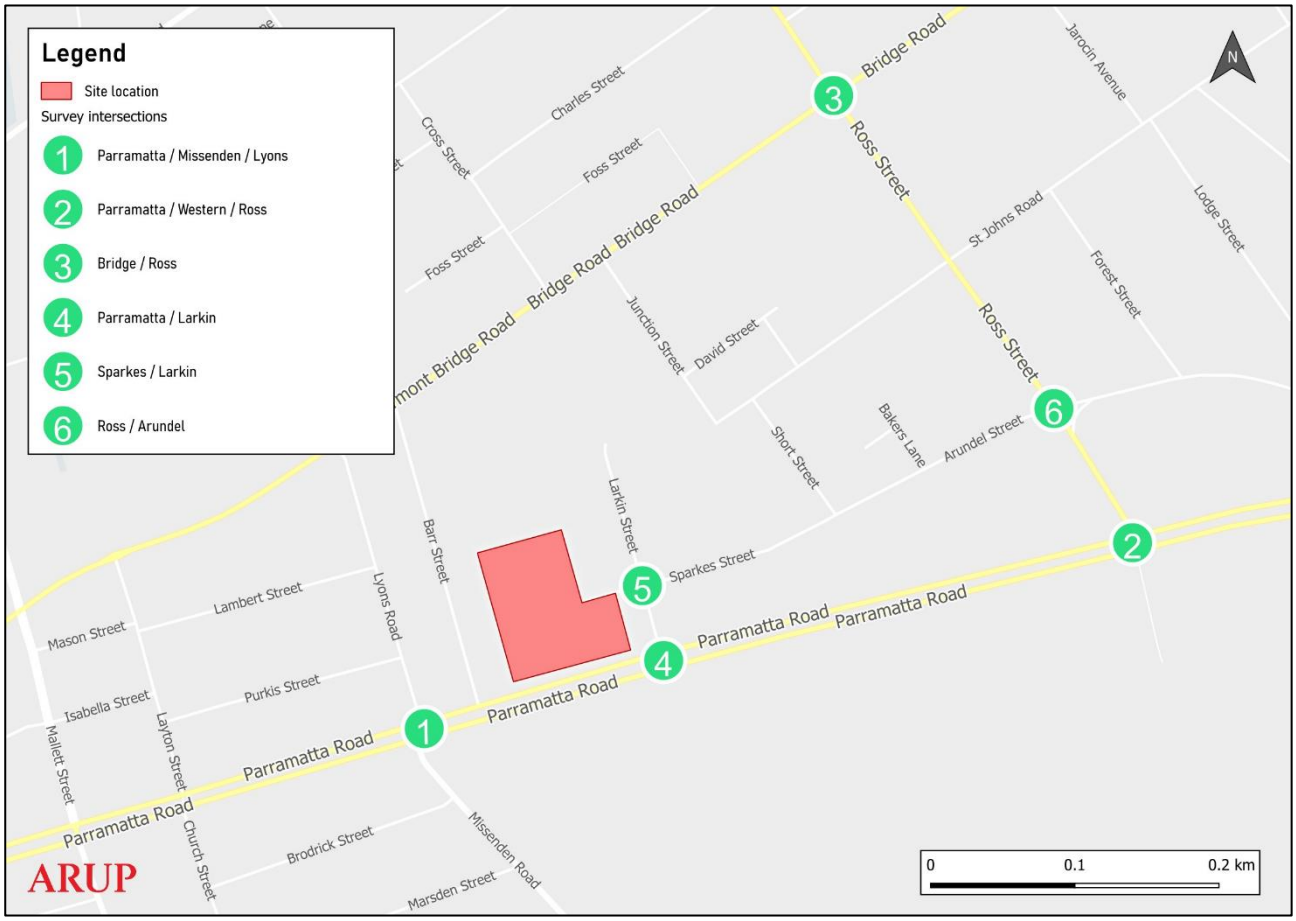
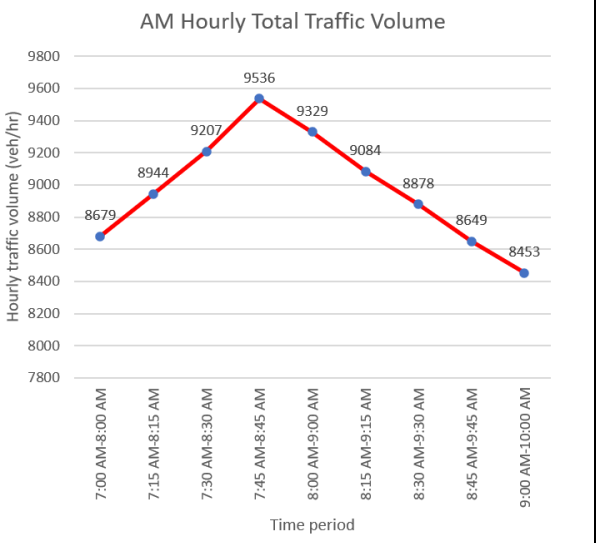


Figure 2: Key intersections surveyed

2.4 Traffic demand profile

The hourly traffic volumes for the three signalised surveyed intersections, gathered from the turn count survey, are summarised in Figure 3 for the morning (AM) and evening (PM) survey periods.

AM survey period (7:00 am - 10:00 am)	PM survey period (4:00 pm - 7:00 pm)



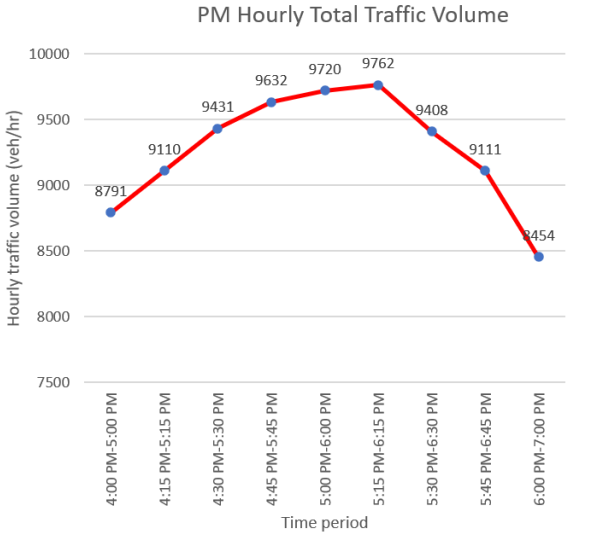


Figure 3: Hourly traffic demand profile

2.5 Peak hour

Based on the traffic demand profiles in Figure 3, the weekday peak hours were identified as:

- AM peak hour: 7:45 am – 8:45 am,
- PM peak hour: 5:15 pm – 6:15 pm.

SIDRA models were developed for these hours as they represent the critical network delay and degree of saturation (DoS) mainly with respect to the dominant through movements on Parramatta Road.

The associated total traffic volumes for each intersection are summarised in Table 2.

Table 2: Weekday peak hours and traffic demand at intersections

Intersection		Total traffic volume at intersection	
		AM (7:45 am – 8:45 am)	PM (5:15 pm – 6:15 pm)
(1)	Parramatta Road / Missenden Road / Lyons Road intersection	3,883 vehicles	3,758 vehicles
(2)	Parramatta Road / Western Avenue / Ross Street intersection	3,586 vehicles	3,741 vehicles
(3)	Bridge Road / Ross Street intersection	2,067 vehicles	2,263 vehicles
(4)	Parramatta Road / Larkin Street intersection	3,183 vehicles	3,165 vehicles
(5)	Sparkes Street / Larkin Street intersection	87 vehicles	79 vehicles
(6)	Ross Street / Arundel Street intersection	774 vehicles	885 vehicles

2.6 2026 survey factoring up

The July 2026 traffic surveys were undertaken during the NSW school holiday period. To account for potentially lower traffic volumes, the eastbound and westbound through movements along the Parramatta Road were compared between the 2026 data Parramatta Road / Larkin Street and the 2024 data at Parramatta Road / Missenden Road and Parramatta Road / Ross Street.

The comparison confirmed that 2026 school holiday traffic volumes were lower than the 2024 school-day traffic volumes. Accordingly, the following weighted average uplift factors were derived and applied to the July 2026 survey data to better represent typical weekday traffic conditions and maintain consistency with the November 2024 survey dataset.

- AM peak uplift factor: +11%
- PM peak uplift factor: +12%

2.7 Walking environment

The walking accessibility of the Site is very good due to its location in an urban setting close to Sydney CBD. Most roads in the surrounding area have footpaths on both sides, and intersections have pedestrian facilities for crossing.

A walking accessibility assessment for the 10, 15 and 20-minute walking catchments has been undertaken and is shown in Figure 4. Within the 10-minute catchment, there are ten bus routes, with eight of them stopping on Parramatta Road, at the bus stop directly outside the Site. One additional bus route is accessible within the 15-minute walking catchment. To the north two light rail stops along the L1 line are accessible within the 20-minute walking catchment, as well as an additional seven bus routes. The train stations that service the T2 and T3 lines are just outside the 20-minute walking catchment.

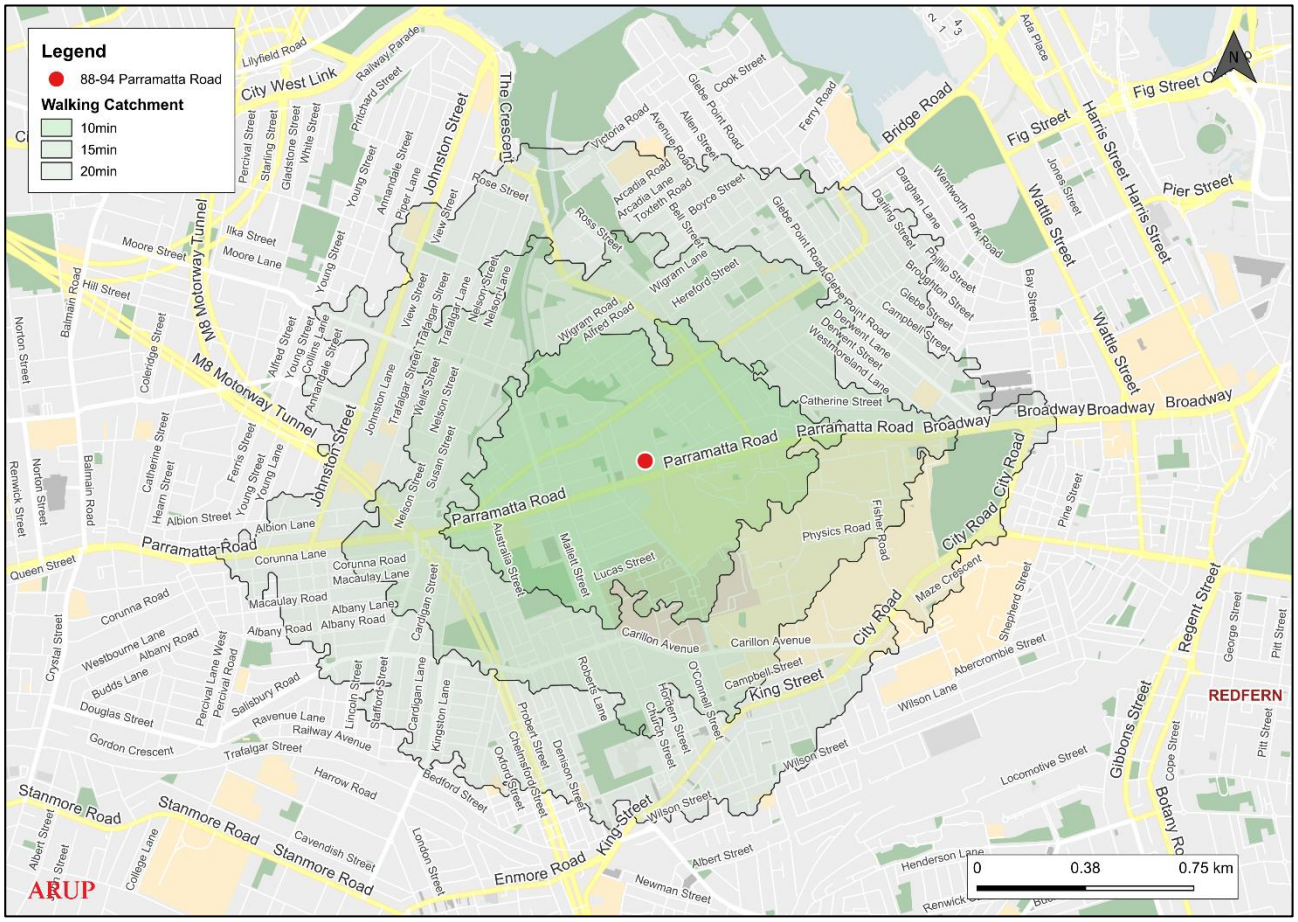


Figure 4: Walking accessibility

2.8 Cycling environment

The cycling accessibility of the Site is good due to its location in an urban setting and the presence of separated and shared use cycleways and paths as shown in Figure 5. Parramatta Road does not have any cycling infrastructure located along it. However, Bridge Road to the north has a separated off-road cycleway which connects into a network of off-road shared paths to the north of the Site.

A cycling accessibility assessment has been undertaken for the 10, 20 and 30-minute cycling catchments as shown in Figure 6. Four train stations and three light rail stops are located within the 10-minute cycling catchment. These train stations service the T2 and T3 rail lines and offer connections to the Sydney CBD and other key centres within Greater Sydney. The light rail stops services the L1 line connecting the Central Station to Dulwich Hill. Leichhardt, Chippendale and Stanmore are also a 10-minute cycle from the Site. Within the 20-minute catchment, additional train lines are accessible, such as the T1, T4, T8 and T9 as well as the new Metro line. Surry Hills, Balmain, Alexandria and Ashfield are all reachable within a 20-minute cycle. The Sydney CBD, Rosebery, Ashbury and Drummoyne are within a 30-minute cycle from the Site.

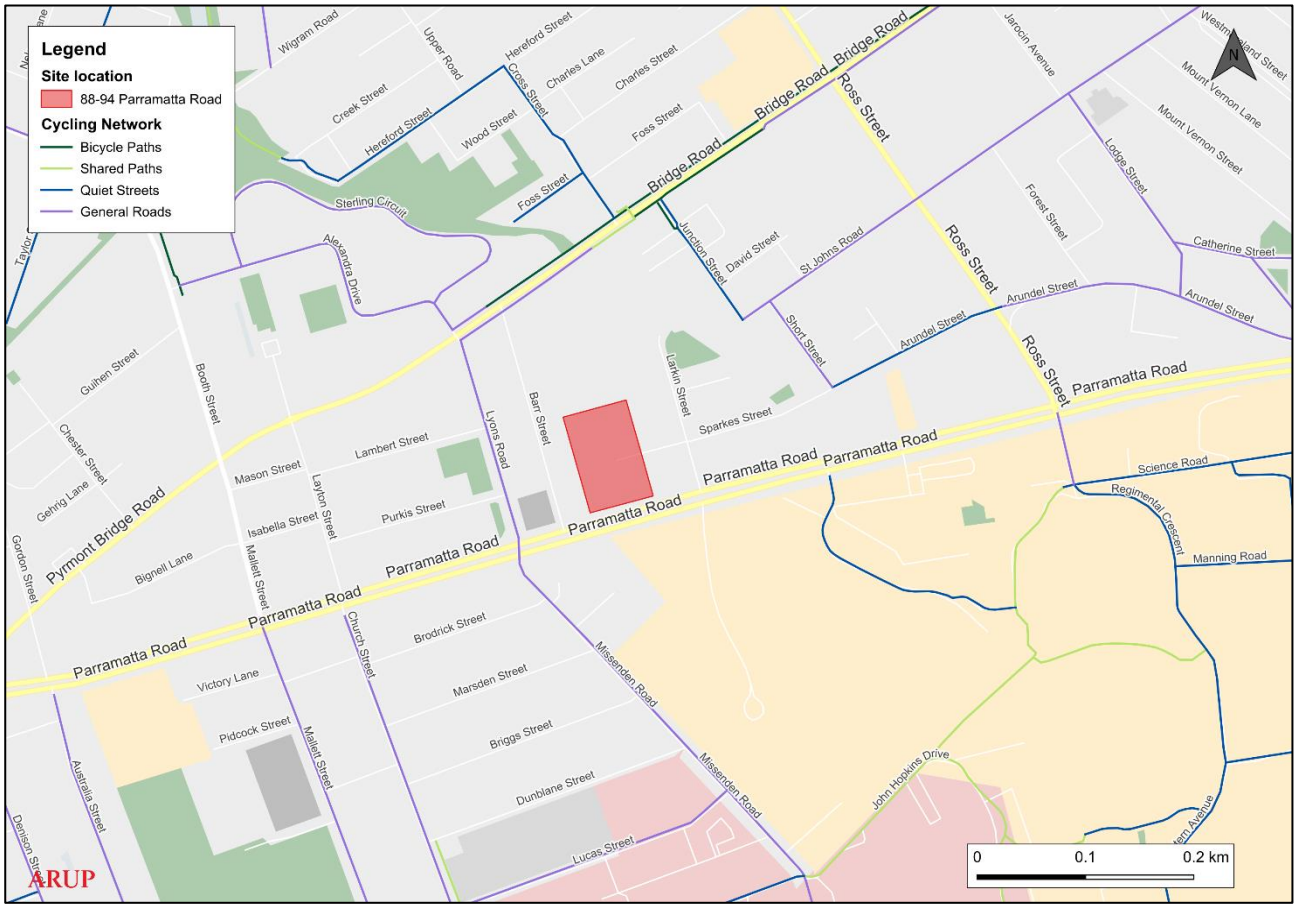


Figure 5: Cycling network (source: City of Sydney)

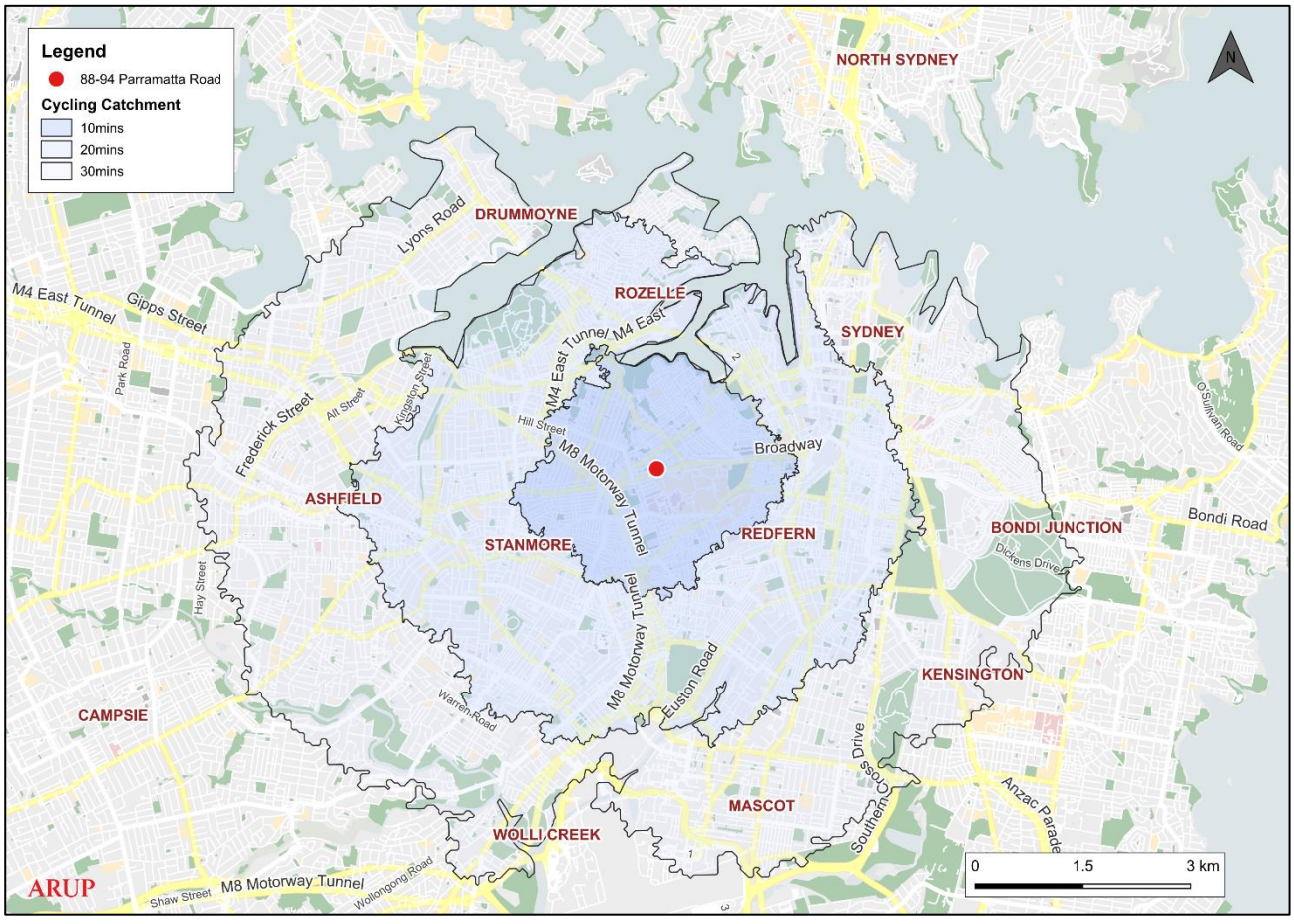


Figure 6: Cycling accessibility

2.9 Public transport

The Site is well connected to metropolitan Sydney as well as Greater Sydney via public transport. City of Sydney has categorised the Site's public transport accessibility as Category D, which is the highest level of accessibility. The train routes that service nearby stations mentioned in Section 2.7 and Section 2.8, stop at many stations around Sydney and most train lines are accessible with just one transfer. Bus services available on Parramatta Road and King Street connect the Site with other inner-city regions of Sydney.

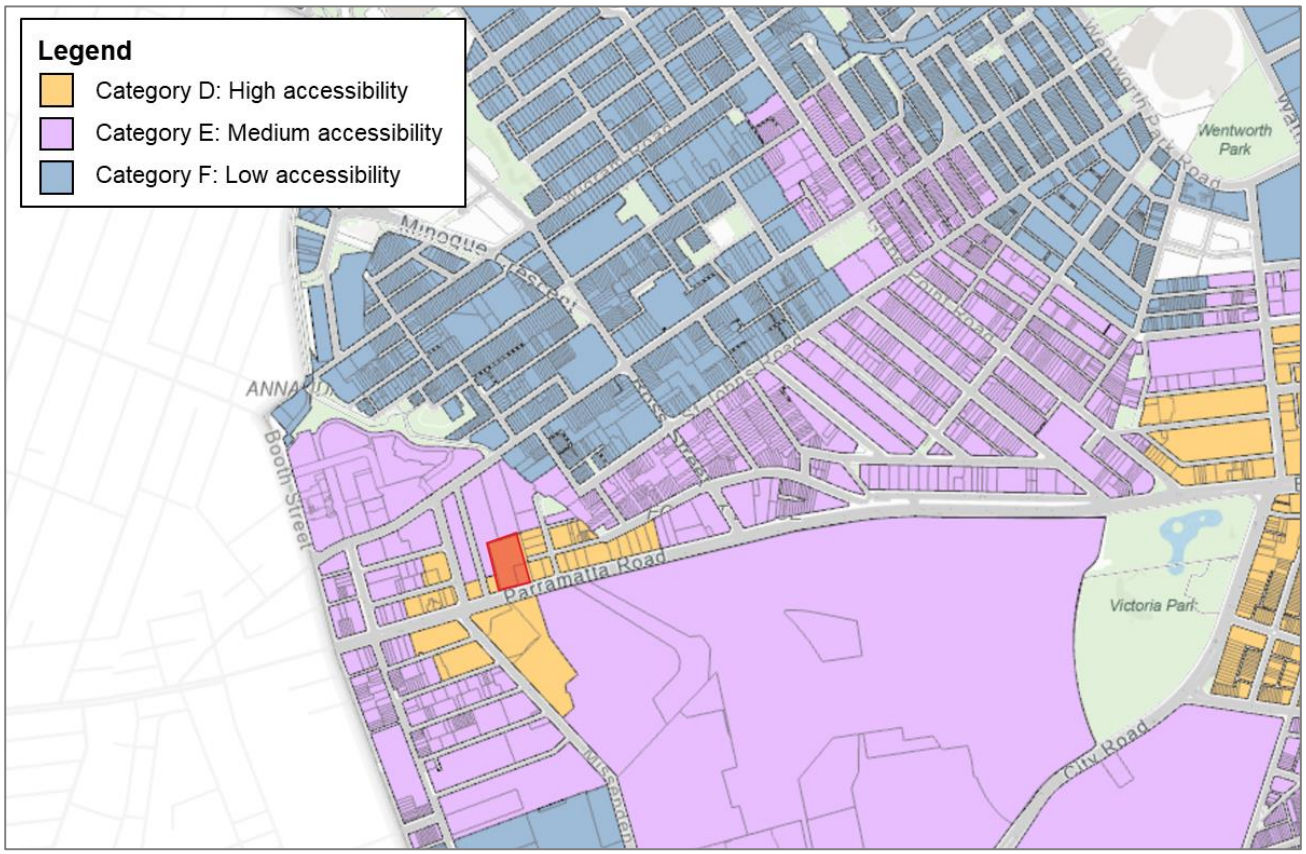


Figure 7: Public transport accessibility (source: City of Sydney LEP)

A public transport accessibility assessment has been undertaken for the AM (arriving at 9:00 am) and PM (departing at 5:30 pm) for the 15, 30, 45 and 60-minute catchments as shown in Figure 8 and Figure 9.

Public transport options available allow users to travel to/from as far as the likes of Parramatta, Chatswood and Revesby within 60 minutes. The inner city is mostly within the 45-minute catchment.

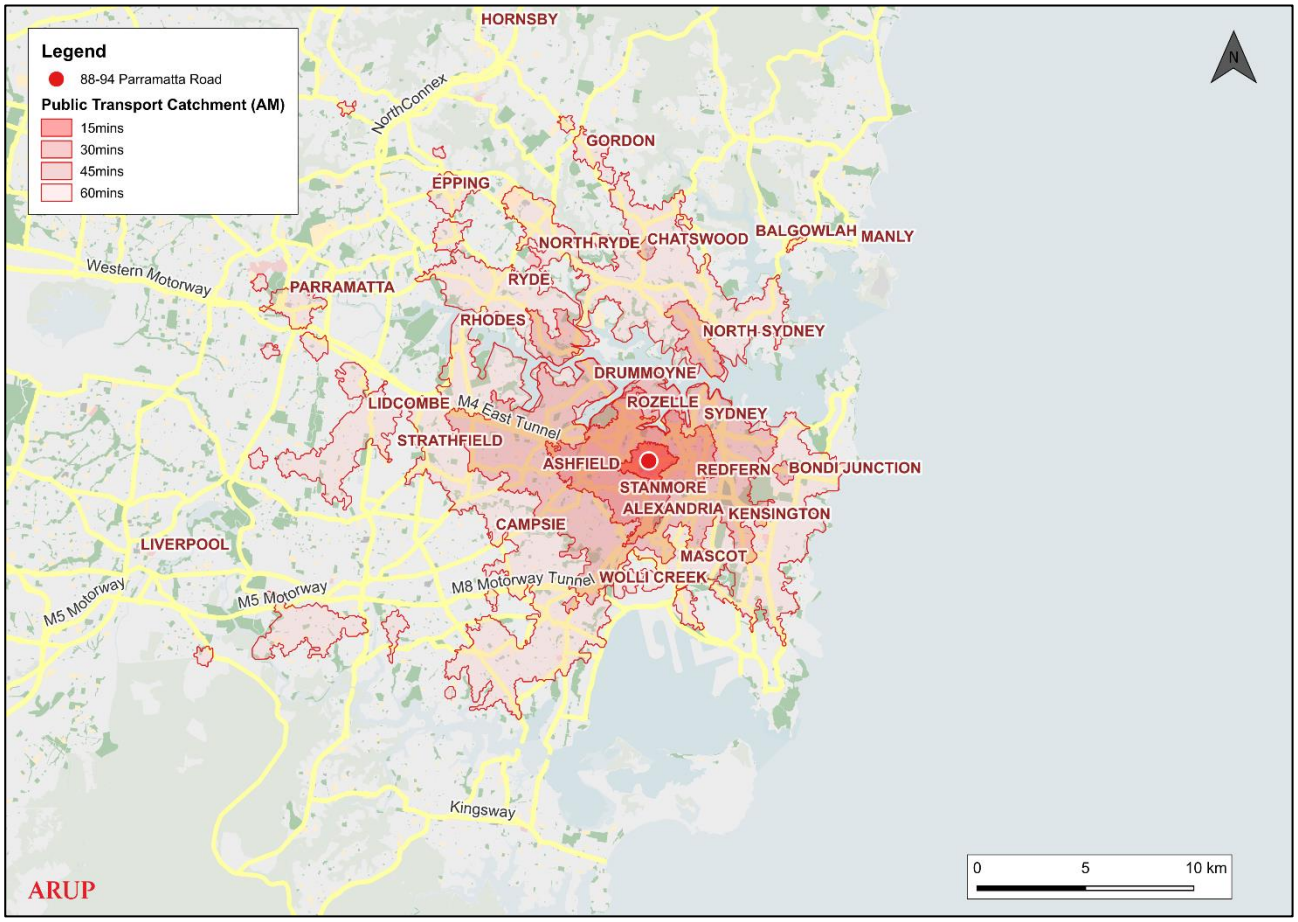


Figure 8: Public transport accessibility – AM (Arriving at the Site at 9am)

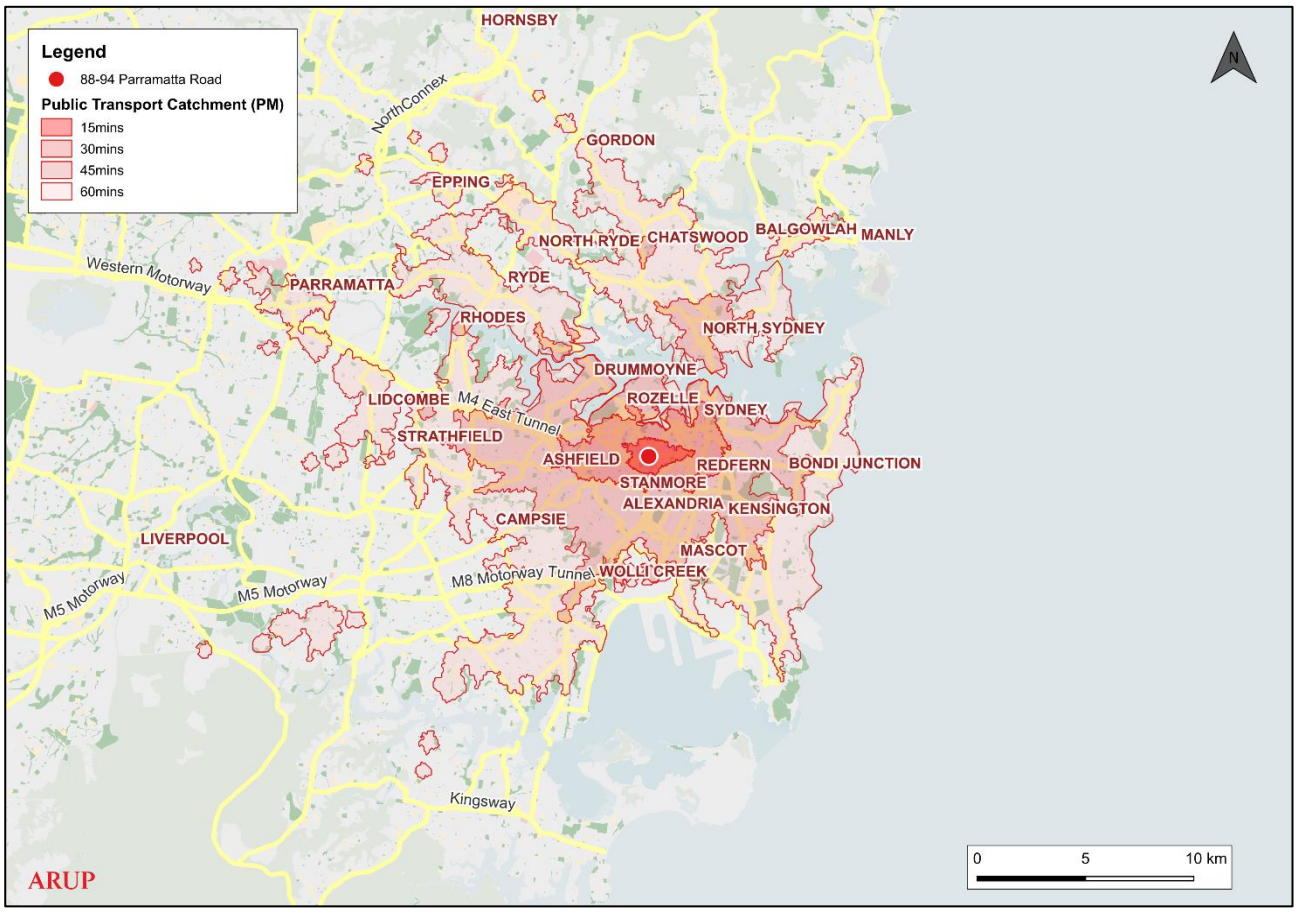


Figure 9: Public transport accessibility – PM (Departing from the Site at 5:30pm)

2.9.1 Bus

The Transdev John Holland bus routes service the roads surrounding the Site with the main routes located on Parramatta Road, King Street and Glebe Point Road. These services are shown in Figure 10 and summarised in Table 3.



Figure 10: Bus routes

Bus routes located within a 20-minute walk of the Site are summarised in Table 3, together with their respective service frequencies. These routes typically operate at least hourly between 6am and 9pm on weekdays and between 8am and 6pm on Saturdays and Sundays.

Table 3: Bus routes and frequency

Route	Description	Closest stop	Walk time to stop	AM Peak Frequency	PM Peak Frequency
352	Marrickville Metro to Bondi Junction	King Street	15 mins	2 Inbound 2 Outbound	2 inbound 3 Outbound
370	Coogee to Glebe Point	King Street/Glebe Point Road	15 mins	6 Inbound 9 Outbound	12 Inbound 7 Outbound
412	Campsie to City Martin Place via Earlwood & Dulwich Hill	Parramatta Road	5 mins	3 Inbound 4 Outbound	2 Inbound 3 Outbound
413	Campsie and Central Pitt Street	Parramatta Road	5 mins	5 Inbound 2 Outbound	3 Inbound 4 Outbound

Route	Description	Closest stop	Walk time to stop	AM Peak Frequency	PM Peak Frequency
422	Kogarah to Central Pitt Street	Parramatta Road	5 mins	4 Inbound 4 Outbound	4 Inbound 4 Outbound
423	Kingsgrove to City Martin Place	King Street	15 mins	6 Inbound 5 Outbound	14 Inbound 10 Outbound
423X	Earlwood Shops to Martin Place	King Street	15 mins	1 Inbound	2 Outbound
426	Dulwich Hill to City Martin Place	King Street	15 mins	4 Inbound 2 Outbound	4 Inbound 4 Outbound
428	Canterbury to City Martin Place	King Street	15 mins	6 Inbound 4 Outbound	4 Inbound 6 Outbound
428X	Canterbury Station to Martin Place	King Street	15 mins	3 Inbound	3 Outbound
430	Sydenham to Central Railway Square (Loop Service)	King Street	15 mins	3 Inbound	3 Inbound
431	Glebe Point to City Martin Place	Glebe Point Road	15 mins	6 Inbound 6 Outbound	5 Inbound 6 Outbound
433	Balmain Gladstone Park to Central Pitt Street	Minogue Crescent	12 mins	8 Inbound 5 Outbound	5 Inbound 6 Outbound
438X	Canterbury to City Martin Place	Parramatta Road	5 mins	10 Inbound 6 Outbound	6 Inbound 9 Outbound
440	Bondi Junction to Rozelle	Parramatta Road	5 mins	10 Inbound 5 Outbound	6 Inbound 5 Outbound
461X	Burwood to City Domain	Parramatta Road	5 mins	6 Inbound 5 Outbound	4 Inbound 6 Outbound
469	Marketplace Leichhardt to Glebe (Loop Service)	Ross Street	10 mins	3 Inbound	3 Inbound
470	Lilyfield to City Martin Place	Ross Street	10 mins	10 Inbound 6 Outbound	7 Inbound 8 Outbound
480	Strathfield to Central Pitt Street via Homebush Road	Parramatta Road	5 mins	3 Inbound 3 Outbound	2 Inbound 8 Outbound
483	Strathfield to Central Pitt Street via South Strathfield	Parramatta Road	5 mins	4 Inbound 2 Outbound	4 Inbound 3 Outbound

2.9.2 Light Rail

The Site is not currently served directly by light rail. The closest light rail station is Glebe Station located 1.5km (a 20-minute walk) northeast from the Site. Glebe Station is part of the L1 light rail line which connects Dulwich Hill and Central Station at a service frequency of every 6 minutes during the weekday peak, 10 minutes during weekday off peak and 15 minutes on Saturdays.

Glebe Station is accessible from the Site via the 440 and 469 bus routes which both stop on Glebe Point Road within 260m walk from the light rail station.

The ALTRAC consortium has proposed a new light rail line from Parramatta Road to Green Square via Central Station. The proposed 11km route would run along Parramatta Road and Broadway, passing through Central Station and various stops along the route, before terminating at Green Square Station. If delivered, the project would significantly improve public transport within the local area and provide an alternative option to access the Site from Sydney CBD.

On 24 June 2024, City of Sydney confirmed its support for the project and committed to working with the NSW Government and other stakeholders to accelerate the planning, consultation and delivery of the project as soon as possible[1].

2.9.3 Train

The nearest train station to the Site is Macdonaldtown Station which is located approximately 1.6km (a 23-minute walk) south of the Site, or a 10-minute cycle. Macdonaldtown Station is served by T2 train services which connect Parramatta to Sydney CBD via Strathfield every 8-15 minutes during peak hours. The Station is also served infrequently by T3 Liverpool and Inner West Line services.

Further from the Site, there are options for alternative rail lines. Erskineville Station is located approximately 400m south of Macdonaldtown Station and 2km south of the Site. This station is served by Sydney Trains T8 Airport and South services which connect Sydenham and Campbeltown to Sydney CBD every 15 minutes during peak hours.

2.9.4 Metro

While the Site is not directly served by Sydney Metro, Metro services can be accessed from Central Station approximately 2.3km to the east of the Site (10-minute cycle). Central Station is served by the Metro M1 line which connects Tallawong to Sydenham via Sydney's CBD with services running every 4 minutes during peak hours. This line will eventually continue directly to Bankstown via the converted T3 line to metro services.

Central Station is accessible from the Site via multiple bus routes that operate along Parramatta Road and Broadway, including the 422, 412, 413 and 483. These services stop on Pitt Street within 150m of Central Station.

2.10 Travel behaviour

Australian Bureau of Statistics (ABS) 2016 Census data has been used to understand travel. The existing mode share for the Site was calculated using the 2016 Journey to Work Census data for two Statistical Area Level 2 (SA2) Glebe/Forest Lodge and Newtown/Camperdown/Darlington, with resultant mode shares presented below in Table 4.

2016 Census data was used to approximate the existing mode share. The more recent 2021 Census data was not used due to the significant impact on movement during the COVID-19 pandemic.

[1] https://meetings.cityofsydney.nsw.gov.au/ieDecisionDetails.aspx?AIId=17932

Table 4: Existing mode share for SA2 (Glebe/Forest Lodge and Newtown/Camperdown/Darlington)

Mode	Mode share 2016
Private vehicle	44%
Rail	24%
Bus	14%
Walk	13%
Bicycle	3%
Motorcycle	1%
Ferry	<1%
Other	<1%

The most common mode of transport is private vehicle followed by public transport. Due to the large area of the two SA2s used the mode share may not be exactly representative of the Site. The Site has a Public Transport Accessibility Level Category D, as shown in Figure 7, which is the highest level. The surrounding area surrounding the Site is Category E or F. This would indicate that the Site has better access to Public Transport than the rest of the SA2's and the public transport mode share is likely higher than what is shown in Table 4.

3. Proposed development

This section describes the proposed development including proposals for pedestrian, cycle and vehicular access as well as cycle and car parking facilities.

3.1 Site layout

With regard for the increased floor space ratio and height, the reference scheme considers a new life science and life science education buildings the Planning Proposal intends to increase floor space ratio and height to enable a new Life Science Hub.

The Proposal involves the construction of a new Life Science building and Life Science Office and Education building, and a small amount of retail. The Proposal includes three basement levels, two for parking and one loading dock. The Site will be accessed from the east via Sparkes Street.

The Site is currently zoned for mixed use - MU1. The area surrounding the Site is zone for infrastructure – SP2 to the south and mostly residential - R1 to the north. The Site is currently a university building with research labs and workspaces. A schedule of the proposed land uses and floor areas can be seen in Table 5.

Table 5: Proposed Area Schedule (Gross Floor Area [GFA])

Level	Office	Life Science
	GFA	GFA
Ground	550m^2	2,205m^2
Level 1	1476m^2	1,280m^2
Level 2	1116m^2	1,600m^2
Level 3	922.5m^2	1,200m^2
Level 4	765m^2	1,600m^2
Level 5	765m^2	1,800m^2
Level 6	765m^2	1,800m^2
Level 7	287.5m^2	1,800m^2
Level 8	-	1,800m^2
Level 9	-	1,800m^2
Level 10	-	1,800m^2
Level 11	-	1,800m^2
Level 12	-	1,800m^2
Level 13	-	1,800m^2
Level 14	-	1,800m^2
Level 15	-	1,800m^2
Total	**6,647m2**	**27,685m^2**

The proposed layout for the Site is shown in Figure 11.

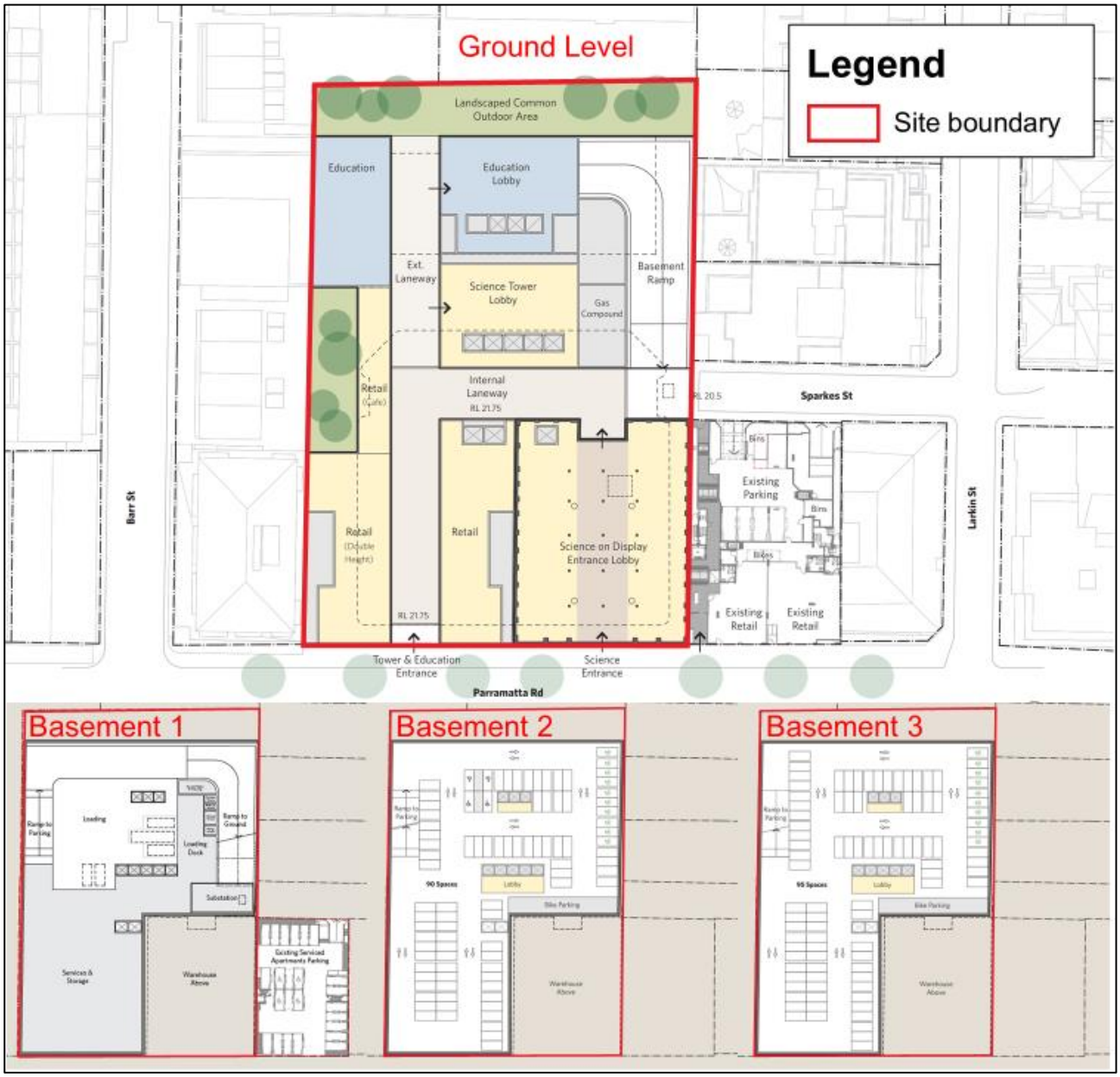


Figure 11: Proposed site layout

3.2 Site access

The following sub-sections detail the key principles of the pedestrian, cycling and vehicular movement and access strategy for the proposed development.

3.2.1 Pedestrian and cycling access

The pedestrian and cyclist access points for the Site are shown in Figure 12.

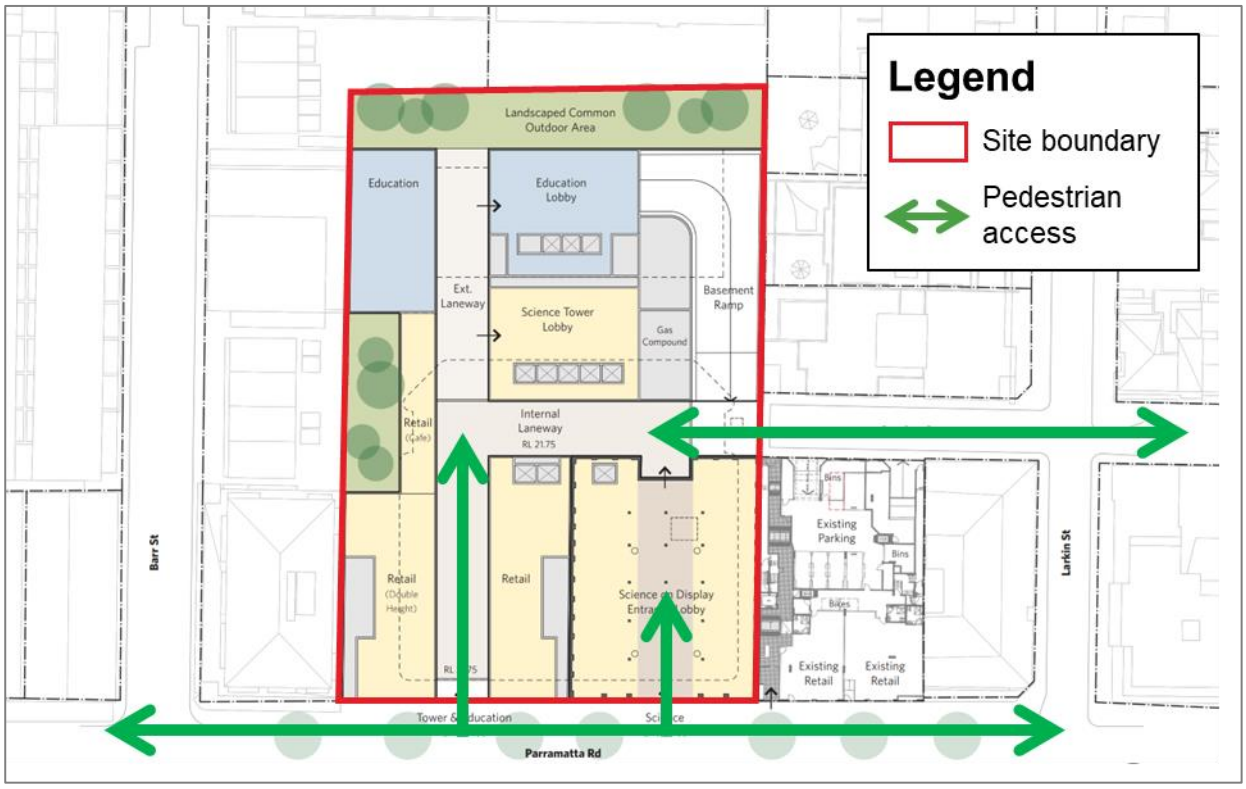


Figure 12: Pedestrian and cycling access

The main pedestrian access points to the Site are proposed from Parramatta Road with an entrance that provides access to the education building via an internal laneway and a dedicated science entrance that facilitates access to the lobby for the life sciences building.

3.2.2 Vehicle access

The proposed development site has been designed to accommodate vehicle movements associated with car parking, delivery and servicing activities. Access to basement level car parking and loading dock is proposed to be from Sparkes Street, as shown in Figure 13.

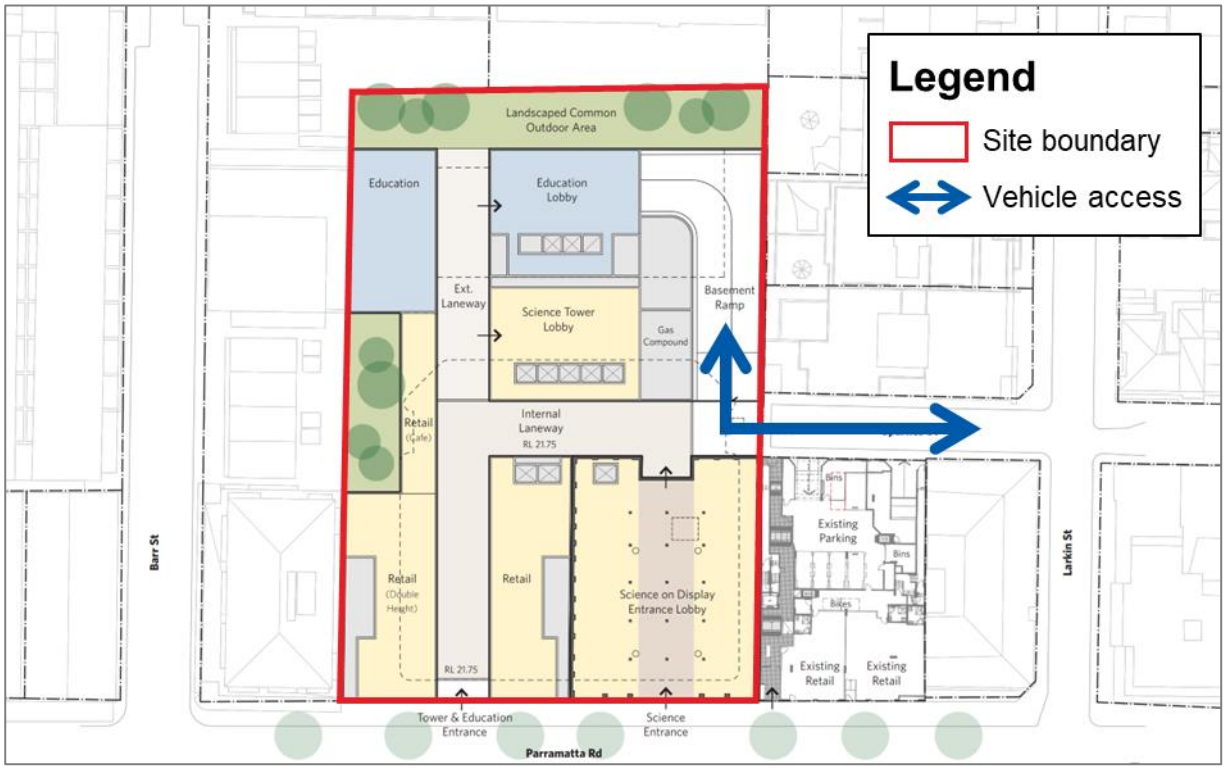


Figure 13: Vehicle access

3.2.3 Utilities access

3.2.3.1 Laboratory gases

Cryogenic gas is required for laboratory activities at the proposed development. Delivery and servicing activities associated with laboratory gases are proposed to take place on Sparkes Street adjacent to the proposed basement ramp access.

Laboratory gas deliveries would be undertaken using an 8.8 m Medium Rigid Vehicle (MRV).

BOC has confirmed that the proposed liquid nitrogen and liquid carbon dioxide storage vessels can be serviced using its smaller delivery vehicles. BOC has also confirmed that an 8.8 m entrance allowance would accommodate the vehicle used to deliver gas cylinders. Further details regarding the proposed storage volumes, delivery vehicles and BOC correspondence are provided in the *Utility Services Review – Technical Memo, Rev F*, dated 15 September 2026.

Delivery and servicing activities associated with laboratory gases would occur from Sparkes Street. Swept-path analysis that demonstrates the vehicle movements through the surrounding street network and at the site access for the 8.8 m MRV is provided in Appendix C, whereas the key findings of the analysis are discussed in Section 4.5.

This will need to be managed in liaison with the 84 Parramatta Road serviced apartments where possible.

Basement access is expected to be unavailable during delivery periods and therefore traffic management will be required.

3.2.3.2 Electrical services

A 3x1500kVA triplex transformer chamber substation is to be installed to supply the proposed development in consultation with local power supply authority Ausgrid. The substation is proposed to be installed at basement level with equipment access from ground level via an equipment access hatch, as shown in Figure 14 and Figure 15. Traffic management will be required on Sparkes Street to manage vehicle movements to and from the Site during the servicing and replacement of substation equipment. As the replacement of substation equipment occurs infrequently, the impact is deemed to be insignificant.

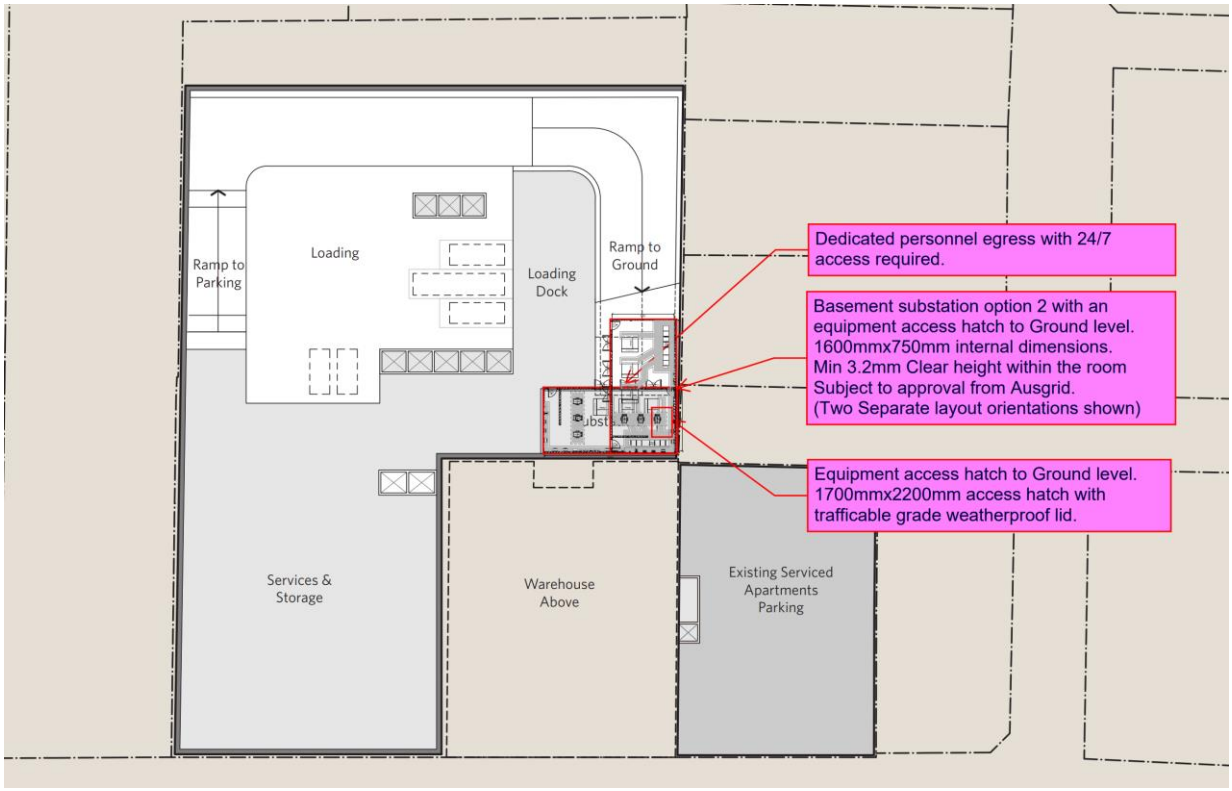


Figure 14: Basement Substation with Access Hatch (Extracts from Basement)

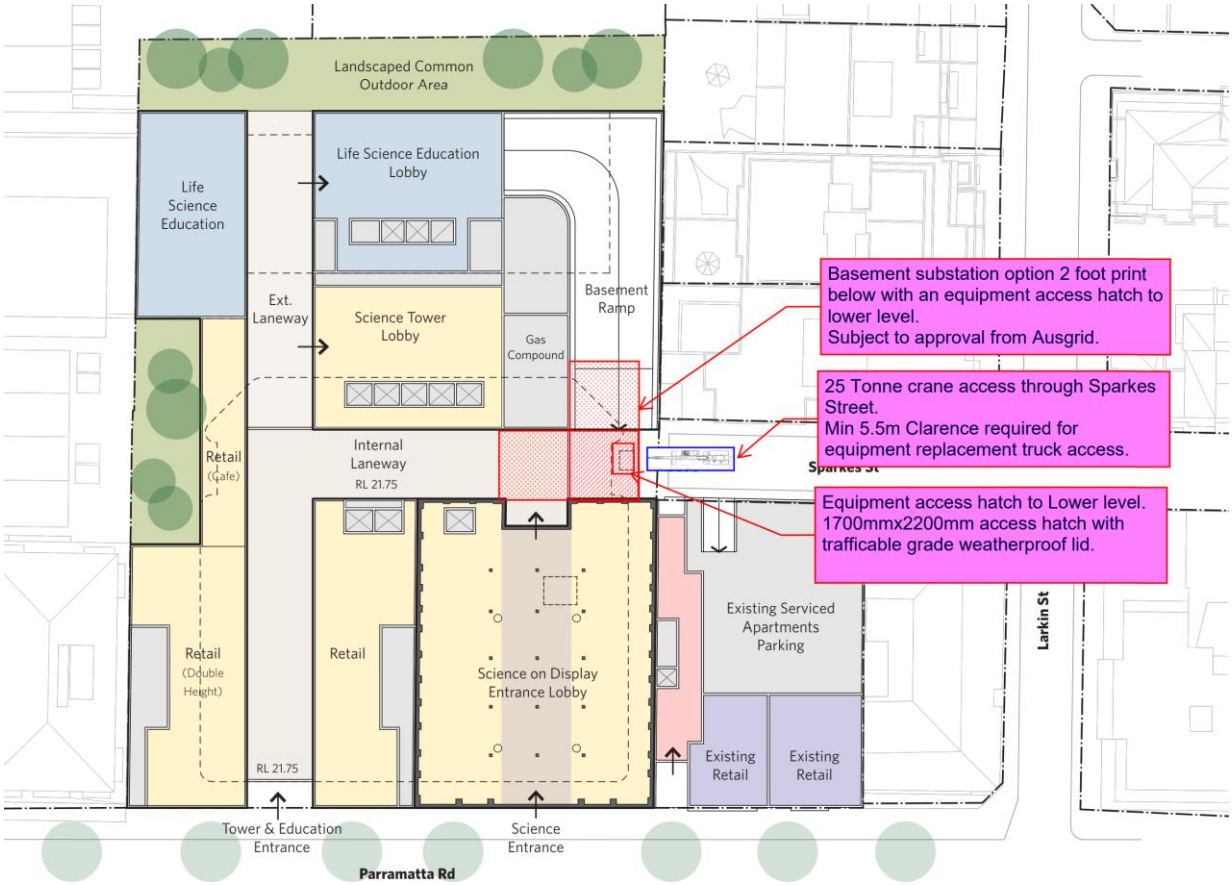


Figure 15: Basement Substation with Access Hatch and Crane Access (Extracts from Ground)

3.3 Vehicle parking

CoS Local Environmental Plan (LEP) sets out car parking rates for developments within CoS Local Government Area (LGA), within Appendix C – Parking Rates Update (December 2024).

A parking rate for Life Sciences is not provided in the LEP. Therefore, it has been assumed that the industrial rate applies, given that life sciences is a form of high technology industry. It is important to note that the rate for industrial is also being updated as part of the amendments. The maximum parking provision for the development has been calculated using both sets of rates and is detailed in the Table 6.

Table 6: Maximum car parking

Land use	GFA (m2)	CoS LEP Amendments	
		Rate	Spaces
Life Science (Industrial)	27,685m^2	1 per 150m^2	185 spaces
Life Science (Office)	6,647m^2	M=(GxA)/(75xT)	14 spaces
Total		**199 spaces**	

A total of 185 car parking spaces is proposed to be provided over two basement levels, as shown on Figure 16. The proposed basement level car parking will replace 77 existing car parking spaces associated with the University life sciences buildings. The net increase in proposed car parking at the Site is therefore 108 spaces.

As the proposed 185 car parking spaces have not been assigned to specific land uses yet, these spaces have been pro-rated to land uses based on CoS LEP Amendments maximum car parking in Table 6.

A total of 10 EV spaces has been provided on basement level 2.

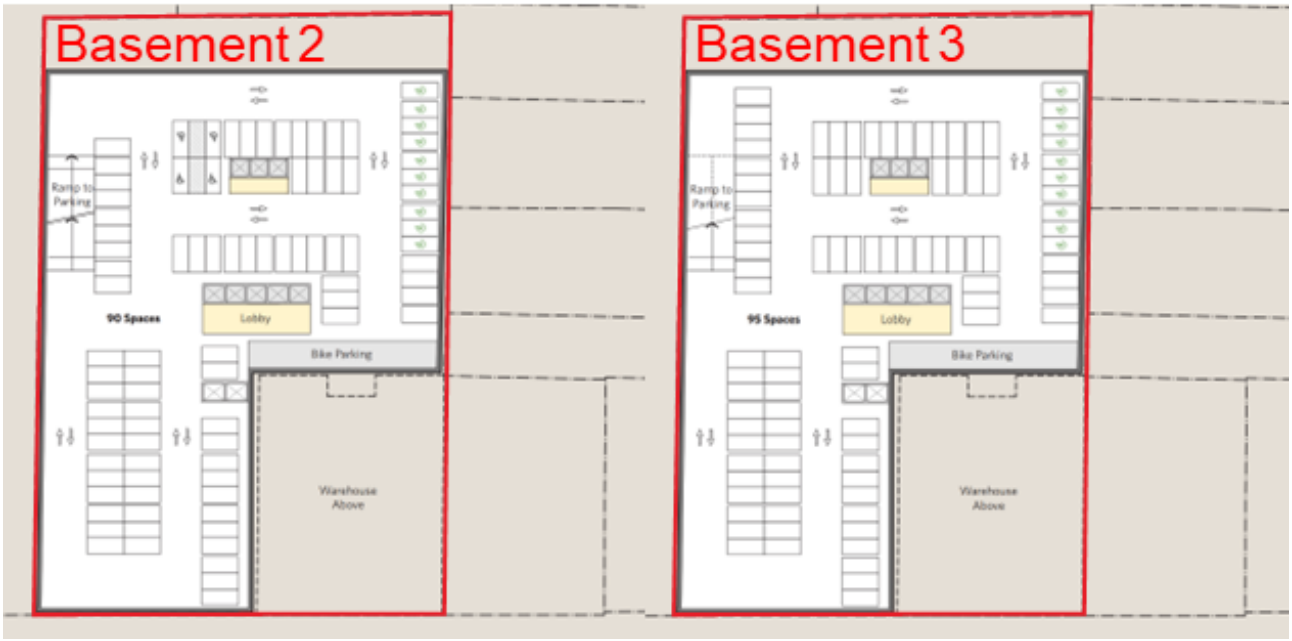


Figure 16: Proposed basement level car parking

3.4 Loading dock

It is proposed that delivery and servicing activities for the development will take place within the Basement 1 loading dock, accessed from Sparkes Street.

The loading dock is proposed to contain five loading bays, comprising one bay suitable for a 9.8 m waste vehicle, two bays suitable for 8.8 m Medium Rigid Vehicles (MRVs), and two bays suitable for 6 m Small Rigid Vehicles (SRVs).

A 9.8 m rear-lift waste collection vehicle was adopted as it represents a common commercial waste vehicle type, specifications were taken from Veolia's brochure[2].

City of Sydney DCP (2012) requires the following minimum servicing requirements for service vehicle parking for new developments:

- Commercial premises
  - 1 space per 3,300sqm GFA, or part thereof, for the first 50,000sqm
- The total requirement identified above may be reduced for developments with GFAs in excess of 50,000sqm where it can be demonstrated to the satisfaction of the consent authority that:
  - The proposed uses are complementary in terms of servicing demand; and
  - At least one space per tenancy for business owners is provided.

Five servicing bays are provided in total, with at least one space per tenancy for business owners is provided. Detailed servicing trip generation is provided in Section 4.2 to support the provision of 5 bays.

The loading dock has been designed such that vehicles will be able to access and exit in forward gear. Servicing and delivery activities would be managed to avoid simultaneous movements by the 8.8 m MRV and 9.8 m waste vehicle, minimising potential conflicts at the bend in the basement ramp. The loading bays can be seen in Figure 17.

The associated swept path analysis of vehicles manoeuvring within the loading dock has been undertaken and is contained in Appendix B.

The impacts of the proposed 8.8 m MRVs and 9.8 m waste vehicle on the surrounding local street network, are assessed via swept paths analysis in Section 4.5.

[2] https://www.anz.veolia.com/sites/g/files/dvc2011/files/document/2024/07/Veolia_Equipment%20Matrix%20Brochure_05-23.pdf

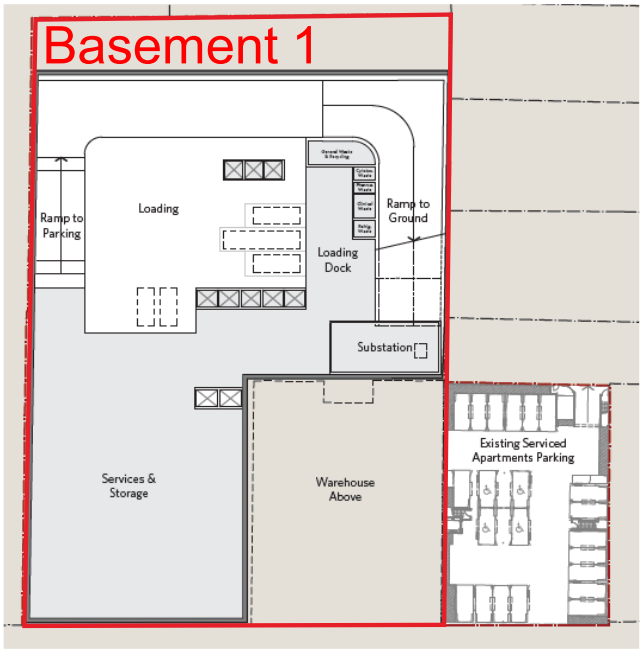


Figure 17: Loading dock

3.5 Bicycle parking and End of Trip Facilities

The provision of good quality bicycle parking will be incorporated into the development. The DCP provides guidance on the provision of bicycle facilities to support sustainable travel outcomes. The bicycle parking provision of the development will meet the number of spaces required and will be located in the southeast corner of basements 2 and 3.

Table 7: Minimum cycle parking rates

Land use	Quantum	Rate		Requirement	
		Resident / Employee	Visitor	Resident / Employee	Visitor
Life science (industrial)	27,685m^2	1 per 10 staff (966 FTE)	-	97	-
Life science Education (Office)	6,647m^2	1 per 150m^2 GFA	1 per 400m^2 GFA	44	17
Total				c. 141	17

4. Transport impact assessment

4.1 Trip generation

As there are no published trip generation rates specifically for life sciences developments within the TfNSW Guide to Traffic Generating Developments 2002 (GTGD), a first-principles approach has been adopted to estimate vehicle trip generation associated with the Proposal. The methodology has been informed by two comparable developments within the Camperdown health and innovation precinct:

- Children's Medical Research Institute (CMRI) Gene Technologies Building, documented in the Transport Impact Assessment (March 2025)
- Sydney Biomedical Accelerator (SBA), documented in the Sydney Biomedical Accelerator Transport Impact Assessment (October 2023).

Both developments comprise specialised biomedical and life sciences research facilities with a comparable mix of laboratory, research, teaching and supporting workspace functions to those proposed at the Site.

4.1.1 Building capacity estimation

The benchmark assessments were reviewed to establish the relationship between gross floor area (GFA) and building capacity. As shown in Table 8, building capacity ratios were derived for the CMRI and SBA benchmark developments and blended to establish an adopted benchmark rate. This rate was then applied to the Proposal's GFA to estimate the building capacity adopted for traffic demand calculations.

Table 8: Building capacity benchmark and estimate

Item	GFA	Building capacity	Building capacity ratio
CMRI Gene Technologies Building	27,692m²	770 persons	1 person / 36m²
Sydney Biomedical Accelerator	37,400m²	1,953 persons	1 person / 19m²
Adopted blended benchmark rate	—	—	1 person / 28m²
Proposal	34,332m²	1,246 persons	1 person / 28m²

The existing development is estimated to accommodate approximately 82 workers, as identified in the Economic Impact Assessment prepared for the Proposal. This existing building capacity has been considered when estimating the net increase in person-based travel demand associated with the Proposal.

4.1.2 Staff arrival profile

The CMRI travel survey data was reviewed to understand the distribution of staff arrivals and departures throughout the day. The survey identified the busiest arrival and departure hours within the daily profile and the proportion of total daily movements occurring during those periods.

The survey data indicates that:

- the busiest arrival hour accommodated approximately 51% of total daily staff arrivals; and
- the busiest departure hour accommodated approximately 44% of total daily staff departures.

These arrival and departure profiles were adopted as the basis for estimating peak-hour occupant movements associated with the Proposal.

4.1.3 Network peak hour adjustment

The proposed life sciences development is expected to operate over an extended period between approximately 7:00 AM and 7:00 PM, with arrivals and departures occurring throughout the day rather than being concentrated within a traditional office peak period.

For context, the CMRI arrival and departure profiles identify the busiest staff arrival and departure hours for that development. However, these periods are not expected to directly align with the assessed road network peak hours of 7:45 AM - 8:45 AM and 5:15 PM - 6:15 PM.

For the Proposal, staff movements are expected to be concentrated around the start and end of the operating day, rather than wholly within the road network peak hours. As a result, a significant proportion of arrivals and departures are expected to occur outside the AM and PM network commuter peak hours.

Nonetheless, a 40% network peak hour adjustment factor has been applied to the benchmark arrival and departure profiles to estimate the proportion of building capacity movements occurring during the assessed road network peak hours.

4.1.4 Vehicle trip generation

The Proposal and existing site vehicle trips were estimated separately using the adopted arrival/departure profile, network peak hour adjustment and private vehicle mode share, as shown in Table 9 and Table 10.

Table 9: Proposal total estimated vehicle trips

Step	Item	AM peak	PM peak
A	Building capacity	1,246 persons	1,246 persons
B	Busiest arrival/departure hour	51% arrivals	44% departures
C	Network peak hour adjustment	40%	40%
D	Persons travelling in network peak (A x B x C)	254.2 persons	219.3 persons
E	Private vehicle mode share	44%	44%
F	**Total vehicle trips (D x E)**	**112 trips**	**96 trips**

Table 10: Existing site estimated vehicle trips

Step	Item	AM peak	PM peak
A	Estimated workers	82	82
B	Busiest arrival/departure hour	51% arrivals	44% departures
C	Network peak hour adjustment	40%	40%
D	Persons travelling in network peak (A x B x C)	16.7 persons	14.4 persons
E	Private vehicle mode share	44%	44%
F	**Total vehicle trips (D x E)**	**7**	**6**

Net additional vehicle trips were then calculated by deducting the estimated existing site trips from the Proposal total trips. The directional split was applied to the net additional trips, as shown in Table 11, to determine the inbound and outbound trips adopted for traffic modelling.

Table 11: Net additional trips and direction by direction

	AM		PM	
Proposal total vehicle trips	112 trips		96 trips	
Less: existing site vehicle trips	7 trips		6 trips	
Net (additional) vehicle trips	105 trips		90 trips	
	Inbound	**Outbound**	**Inbound**	**Outbound**
Directional split	90%	10%	10%	90%
Net additional trips by direction	95 trips	10 trips	9 trips	81 trips

4.2 Servicing trip generation

Deliveries are expected from 7am-5pm on weekdays, with some exceptions for out-of-hours deliveries.

The loading dock will be managed and accept:

- Dangerous goods deliveries and storage.
- Dangerous waste storage and removals.
- Bulk gas delivery and refuelling and bulk cylinder gas provision.
- Delivery and removal of large scientific instrumentation.
- Bulk consumable palette deliveries.
- Diesel back-up generator refuelling.

A management system would be implemented to minimise impacts on the surrounding road network during peak periods. A high-level UFFM assessment indicates that the development, excluding the serviced apartments, is expected to generate approximately 125 service and delivery vehicles per week, equivalent to approximately 25 vehicles per day or 50 vehicle trips per day comprising inbound and outbound movements.

Servicing activity is generally distributed outside peak traffic periods. During the peak hours, servicing demand is expected to be low, with up to one servicing vehicle anticipated during the PM peak hour and a higher concentration of activity during the AM peak, as reflected in the table above. This corresponds to a total of up to six vehicle trips during the peak hour period.

It is anticipated that servicing vehicles will generally arrive and depart within a short timeframe, with most servicing activities taking less than 30 minutes to complete. On this basis, the provision of five servicing bays is considered sufficient to accommodate peak servicing demand without adverse impacts on the surrounding road network.

Table 12 Service vehicle trips

Timeframe	Vehicles	Trips (in and out)
Vehicles per day	25 vehicles	50 trips
Vehicles during the peak hour	AM Peak: 2 vehicles PM Peak: 1 vehicle	AM Peak: 4 trips PM Peak: 2 trips
Total peak hour trips		6 trips

4.3 Vehicle trip distribution

The regional distribution of vehicle trips generated by the Proposal has been derived from Journey to Work data from the 2021 ABS Census. Origin-to-destination trip records were extracted for the destination zone encompassing the Site (DZN 113311281) and filtered to car-based journeys only.

Each origin was routed to the Site (by Google Maps API) to identify the most likely path through the surrounding road network for a typical weekday, with separate routes generated for the AM and PM peak periods. For each turn movement at the six modelled intersections, the proportion of total development traffic passing through that movement was then calculated, as summarised in Table 13 (inbound) and Table 14 (outbound).

The most prominent routes to and from the development are shown in Figure 18 and Figure 19 respectively. These illustrate the dominant travel routes only, and do not show every lower-demand route variation through the surrounding network. The routes are also presented as stick diagrams in Appendix D, in the 'Development AM' and 'Development PM' sheets.

Together, this provides an evidence-based estimate of how vehicle trips are likely to arrive at and depart from the Site, reflecting both observed Journey to Work patterns and realistic route choices through the local road network.

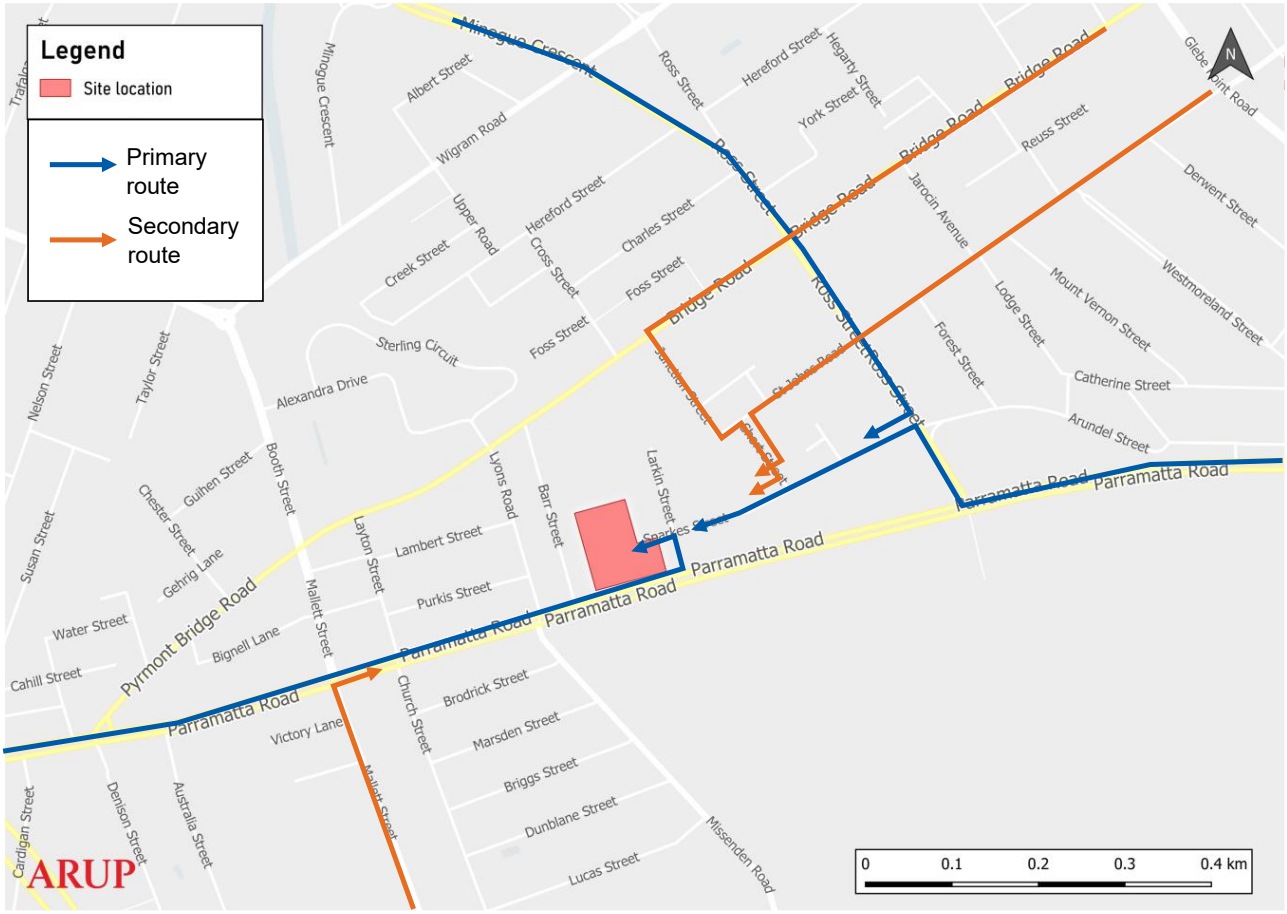


Figure 18: AM inbound routes from the development



Figure 19: PM outbound routes from the development

Table 13: Proportion of AM trips traveling to Site

Intersection	From leg	To leg	Percent of total inbound trips
Arundel Street / Ross Street	N	W	20%
Arundel Street / Ross Street	S	W	14%
Bridge Road / Ross Street	N	S	20%
Bridge Road / Ross Street	E	W	9%
Bridge Road / Ross Street	E	S	1%
Parramatta Road / Larkin Street	W	N	47%
Parramatta Road / Lyons Street	W	E	47%
Parramatta Road / Ross Street	E	N	14%
Parramatta Road / Ross Street	S	N	1%
Sparkes Street / Larkin Street	E	W	53%
Sparkes Street / Larkin Street	S	W	47%

Table 14: Proportion of PM trips leaving the Site

Intersection	From leg	To leg	Percent of total outbound trips
Arundel Street / Ross Street	S	N	69%
Arundel Street / Ross Street	E	S	2%
Bridge Road / Ross Street	S	N	36%
Bridge Road / Ross Street	S	W	14%
Parramatta Road / Larkin Street	N	E	100%
Parramatta Road / Larkin Street	E	W	1%
Parramatta Road / Lyons Street	E	W	1%
Parramatta Road / Ross Street	W	N	69%
Parramatta Road / Ross Street	W	E	31%
Parramatta Road / Ross Street	N	W	1%
Parramatta Road / Ross Street	N	S	1%
Sparkes Street / Larkin Street	W	S	100%

4.4 Traffic modelling

Traffic modelling was conducted using SIDRA Intersection 10. Key intersections were analysed to determine their performance characteristics under existing and future traffic conditions.

4.4.1 Key intersections for assessment

Key intersections assessed around the site are summarised in Table 15.

Table 15: Key intersections for assessment

Intersection	Type	Description
Parramatta Road / Missenden Road / Lyons Road	4-leg signalised intersection	○ Eastern Approach (Parramatta Rd): Three through lanes including one bus lane, an additional dedicated right-turn short lane to Missenden Rd. ○ Western Approach (Parramatta Rd): Three through lanes including one bus lane ○ Northern Approach (Missenden Rd): Two lanes including one short lane with on-street parking ○ Southern Approach (Lyons Rd): Two lanes including one short lane with on-street parking
Parramatta Road / Western Avenue / Ross Street intersection	4-leg signalised intersection	○ Eastern Approach (Parramatta Rd): Three through lanes including one bus lane. ○ Western Approach (Parramatta Rd): Three through lanes including one bus lane, an additional dedicated right-turn short lane to Ross St ○ Northern Approach (Western Avenue): Single lane ○ Southern Approach (Ross St): Two lanes including one short lane with on-street parking
Bridge Road / Ross Street intersection	4-leg signalised intersection	○ Eastern Approach (Bridge Rd): Two lanes with a dedicated right-turn short lane into Ross St. ○ Western Approach (Bridge Rd): Two lanes with a dedicated bus only right-turn short lane into Ross St. ○ Northern Approach (Ross St): Two lanes with no right turns, no left turns (short vehicles excepted). ○ Southern Approach (Ross St): Tow lanes, with no right turns.
Parramatta Rd / Larkin Street	3-leg priority-controlled intersection	○ Eastern Approach (Parramatta Rd): Multiple through lanes. Operates with bus lane in AM and PM peak. ○ Western Approach (Parramatta Rd): Multiple through lanes and left turn into Larkin Street. Operates with bus lane in AM and PM peak. ○ Northern Approach (Larkin St): Left turn only onto Parramatta Rd
Larkin Street / Sparkes Street	4-leg priority-controlled intersection	○ Northern Approach (Larkin St): Single lane, two-way operation. ○ Southern Approach (Larkin St): Single lane, two-way operation. ○ Eastern Approach (Sparkes St): Single lane, one-way westbound operation. ○ Western Approach (Sparkes St): Single lane local street approach.
Ross Street / Arundel Street	4-leg priority-controlled intersection	○ Northern Approach (Ross St): Two lane southbound (one lane in PM peak), two-way operation. ○ Southern Approach (Ross St): Single lane, two-way operation. ○ Western Approach (Arundel St): Single lane, two-way operation with high angel slip lane onto Arundel Street.

4.4.2 Modelling Scenarios

Intersection modelling was undertaken for the following scenarios:

- 2024 Base case,
- 2030 Base case (linear growth rate of 1% per annum has been assumed for background traffic), and
- 2030 Project case (i.e. Base with Development).

These scenarios were assessed for the AM and PM peak hours.

4.4.3 Performance metrics

The intersection performance has been assessed using the following metrics:

- Degree of saturation (DoS)
- Average delay (seconds per vehicle)
- Level of service (LoS)
- 95th percentile queue length

A common measure of the intersection performance is the DoS, which provides an overall measure of the capability of the intersection to accommodate additional traffic. A DoS of 1.0 indicates that an intersection is operating at capacity. The desirable maximum degree of saturation for an intersection is 0.9 (or 90%).

In urban areas, the traffic capacity of the major road network is generally a function of the performance of key intersections. This performance is quantified in terms of LoS, which is based on the average delay per vehicle. LoS ranges from A = very good to F = unsatisfactory. A full breakdown is shown in Table 16. An intersection operating at LoS D is considered to be performing at an acceptable level.

Table 16: Intersection performance indicators (TfNSW)

Level of Service	Average delay per vehicle (sec)	Traffic Signals, Roundabout	Give Way and Stop Sign
A	< 14	Good operation	Good operation
B	15 to 28	Good, acceptable delays with spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
F	> 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

4.4.4 Modelling results

The operational performance results of the 6 intersections for all scenarios and peak hours, as predicted by SIDRA modelling, are summarised in Table 17. Detailed SIDRA results are attached in Appendix A.

Table 17: SIDRA results

ID	Intersection	Peak hour	Scenario	Total traffic at intersection	DOS	Delay(s)*	LoS*
1	Parramatta Rd / Missenden Rd / Lyons Rd	AM	2024 Base	4,044	0.89	30s	C
			2030 Base	4,282	0.93	37s	C
			2030 Project case	4,329	0.95	41s	C
		PM	2024 Base	3,905	0.86	27s	B
			2030 Base	4,135	0.91	33s	C
			2030 Project case	4,139	0.91	33s	C
2	Parramatta Rd / Western Ave / Ross St	AM	2024 Base	3,708	0.93	35s	C
			2030 Base	3,924	0.99	51s	D
			2030 Project case	3,952	0.99	53s	D
		PM	2024 Base	3,874	0.79	26s	B
			2030 Base	4,102	0.84	29s	C
			2030 Project case	4,192	0.83	30s	C
3	Bridge Rd / Ross St	AM	2024 Base	2,042	0.75	18s	B
			2030 Base	2,160	0.80	19s	B
			2030 Project case	2,195	0.80	19s	B
		PM	2024 Base	2,252	0.67	17s	B
			2030 Base	2,382	0.71	18s	B
			2030 Project case	2,431	0.73	18s	B
4	Parramatta Rd / Larkin St	AM	2024 Base	3,345	0.61	6s	A
			2030 Base	3,541	0.64	6s	A
			2030 Project case	3,601	0.64	6s	A
		PM	2024 Base	3,332	0.51	6s	A
			2030 Base	3,525	0.54	6s	A
			2030 Project case	3,616	0.54	6s	A
5	Larkin St / Sparkes St	AM	2024 Base	86	0.02	5s	A
			2030 Base	89	0.02	5s	A
			2030 Project case	204	0.07	5s	A
		PM	2024 Base	77	0.02	5s	A
			2030 Base	82	0.02	5s	A
			2030 Project case	178	0.10	5s	A
6	Ross St / Arundel St	AM	2024 Base	814	0.23	16s	B
			2030 Base	864	0.24	16s	B
			2030 Project case	905	0.25	17s	B
		PM	2024 Base	929	0.25	14s	A
			2030 Base	989	0.27	15s	B
			2030 Project case	1,054	0.30	17s	B

** For priority-controlled intersections, Delay and LoS correspond to the movement experiencing the greatest delay, whereas DoS is based on the movement with the highest modelled degree of saturation. For signalised intersections, the Delay and LoS represent the weighted average of all movements, while DoS reflects the critical movement with highest degree of saturation.*

As shown in Table 17, the six assessed intersections are forecast to operate at acceptable levels under the 2030 Project case scenario. The three signalised intersections operate at LoS B to D, with the highest DoS recorded at 0.99 at Intersection 2 Parramatta Road / Western Avenue / Ross Street during the AM peak. The priority and stop-controlled intersections operate at LoS A to B in both the AM and PM peak periods, with minor delay increases. Overall, the Development scenario results show only minor changes compared with the 2030 Base scenario and indicate that the surrounding road network is expected to accommodate the additional traffic generated by the Proposal.

As shown in Table 18, the modelled delay changes on the specific legs relevant to ambulance egress from Central Ambulance Station are negligible under the 2030 Project case scenario. On the Larkin Street egress leg at Intersection 4 (onto Parramatta Road), average delay remains effectively unchanged at approximately 4 seconds in both the AM and PM peaks across all scenarios. On the Arundel Street leg at Intersection 6, average delay increases only marginally to approximately 11 seconds (AM) and 13 seconds (PM) under the 2030 Project case scenario, an increase of less than one second relative to the 2030 Base. These minor changes are not expected to materially affect ambulance egress from Central Ambulance Station or access to Parramatta Road.

Table 18: Comparison of modelled delays on key local streets and legs

ID	Intersection Leg	Peak hour	Scenario	Demand flow (veh/h)	Average delay (s)	Change vs 2030 Base (s)
4	Parramatta Road / Larkin Street North: Larkin St (37m)	AM	2024 Base	47	3.6s	
			2030 Base	52	3.6s	
			2030 Project case	64	3.6s	0.0s
		PM	2024 Base	56	3.5s	
			2030 Base	59	3.5s	
			2030 Project case	145	3.5s	0.0s
5	Larkin Street / Sparkes Street East: Sparkes St (90m)	AM	2024 Base	28	4.5s	
			2030 Base	29	4.5s	
			2030 Project case	84	3.9s	-0.6s *
		PM	2024 Base	23	4.7s	
			2030 Base	25	4.7s	
			2030 Project case	33	4.4s	-0.3s *
6	Ross Street / Arundel Street West: Arundel St (155m)	AM	2024 Base	55	10.2s	
			2030 Base	58	10.5s	
			2030 Project case	58	10.8s	+0.3s
		PM	2024 Base	63	11.4s	
			2030 Base	67	12.0s	
			2030 Project case	67	12.9s	+0.9s

** Minor reductions in modelled delay of less than one second are considered to reflect normal SIDRA model sensitivity, rounding and changes in movement weighting, and are not operationally material.*

4.5 On-street parking impacts

Swept-path assessments were undertaken to evaluate the impacts of servicing vehicle movements on the local street network, including potential impacts on footpaths, on-street parking and street infrastructure.

The assessments considered inbound and outbound movements through the Sparkes Street/Larkin Street intersection for on-street gas deliveries (8.8 m MRV) as well as vehicles accessing the Basement 1 loading dock (8.8 m MRV and 9.8m waste vehicle). Several feasible servicing arrangements were assessed, with varying implications for on-street parking, signposts and potential footpath widening.

Importantly, the on-street swept path assessments for this study were undertaken with utmost care to avoid impacts to significant roadside features, including utility poles, street trees and property boundaries.

One inbound route is proposed via Arundel Street / Sparkes Street for all service vehicles, as summarised in Table 19. Detailed swept paths are shown in Appendices C.1, C.2 and C.3. For context, in Page title, "GAS" refers to gas delivery, "B1" refers to Basement 1, "MRV" refers to 8.8 m MRVs and "WASTE" refers to 9.8 m waste vehicles.

Table 19: Inbound swept paths

Drawing #	Page title	Movement	Impacts	Avoided impacts
SKT019	GAS MRV IN	Forward in from Sparkes Street (east)	No impact	
SKT004	B1 MRV IN	Forward in from Sparkes Street (east)	No impact	
SKT013	B1 WASTE IN	Forward in from Sparkes Street (east)	No impact	

For outbound movements, broadly 3 options have been assessed to provide flexibility for further consideration:

In **Option 1,** the outbound movements would require vehicles to reverse along Sparkes Street and into the northern side of Larkin Street, before departing forward and continuing southbound along Larkin Street. These movements would be pre-arranged and undertaken outside of peak traffic periods, under a reasonable level of traffic control, with a suitably trained vehicle spotter controlling the manoeuvring area and preventing conflicting pedestrian and vehicle movements.

In **Option 2**, vehicles would be departing forward via Sparkes Street and then turning onto Larkin Street. Gas delivery would require vehicles to reverse into the basement ramp first.

Option 3 incorporates similar movements as Option 2, with more impact to on-street parking (particularly on Sparkes Street). Notwithstanding, this also creates opportunity for potential widening of the footpath along Sparkes Street.

Opportunities for widening are constrained by vehicle turning movements at the Sparkes Street/Larkin Street corner, where the swept path runs close to the existing kerb. Beyond this corner, the footpath could be widened to approximately 2.3 m, consistent with the preferred path width identified in the City of Sydney's *Sydney Streets Code 2021*. Achieving this widening would require the removal of all on-street parking along this section of Sparkes Street.

Overall, the category and references of the 3 outbound options can be summarised as:

- Option 1: No impact to parking (Table 20, Appendix C.1)
- Option 2: Moderate impact to parking (Table 21, Appendix C.2)
- Option 3: Most impact to parking, possible footpath widening (Table 22, Appendix C.3).

Table 20: Outbound option 1: No impact to parking

Drawing #	Page title	Movement	Impacts	Avoided impacts
SKT003	GAS MRV OUT 1	Reverse out from Sparkes Street into Larkin Street (north), then continue forward on Larkin Street (south)	• Relocation of one (1) street sign pole	• Parking on Sparkes Street (west) retained • Parking on Larkin Street (north and south) retained
SKT020	B1 MRV OUT 1	Forward out from B1, turn right into the alley, reverse out from Sparkes Street into Larkin Street (north), then continue forward on Larkin Street (south)	• Relocation of one (1) street sign pole	• Parking on Sparkes Street (west) retained • Parking on Larkin Street (north and south) retained
SKT022	B1 WASTE OUT 1	Forward out from B1, turn right into the alley, reverse out from Sparkes Street into Larkin Street (north), then continue forward on Larkin Street (south)	• Relocation of one (1) street sign pole	• Parking on Sparkes Street (west) retained • Parking on Larkin Street (north and south) retained

Table 21: Outbound option 2: Moderate impact to parking

Drawing #	Page title	Movement	Impacts	Avoided impacts
SKT021	GAS MRV OUT 2	Reverse into the basement ramp, forward out from Sparkes St, then turn right onto Larkin St (south)	• Two (2) on-street parking removed along Larkin Street (south) • Relocation of two (2) street sign poles	• Parking on Sparkes St (west) retained
SKT013	GAS MRV OUT 3A	Reverse into the basement ramp, forward out from Sparkes St, then turn left onto Larkin St (north) towards cul-de-sac	• One (1) on-street parking removed along Larkin Street (north) • Relocation of one (1) street sign pole	• Parking on Sparkes St (west) retained
SKT014	GAS MRV OUT 3B	5-point turn in cul-de-sac, then continuing forward southbound on Larkin St	• Two (2) on-street parking removed along Larkin Street	
SKT005	B1 MRV OUT 2	Forward out from Sparkes St, then turn right onto Larkin St (south)	• Up to two (2) on-street parking removed along Larkin Street (south) • Relocation of two (2) street sign poles	• Parking on Sparkes St (west) retained
SKT016	B1 WASTE OUT 2	Forward out from Sparkes St, then turn right onto Larkin St (south)	• Up to two (2) on-street parking removed along Larkin Street (south) • Relocation of one (1) street sign pole	• Parking on Sparkes St (west) retained

Table 22: Outbound option 3: Most impact to parking, possible footpath widening

Drawing #	Page title	Movement	Impacts	Avoided impacts
SKT012	GAS MRV OUT 4	Reverse into the basement ramp, proceed forward out from Sparkes Street, then turn right onto Larkin Street (south)	• All on-street parking impacted (4 spaces) on Sparkes Street (west) • Up to two (2) on-street parking spaces impacted on Larkin Street (south) • One (1) sign pole relocated	• One (1) street sign pole retained
SKT006	B1 MRV OUT 3	Proceed forward along Sparkes Street, turning right onto Larkin Street (south)	• All on-street parking impacted (4 spaces) on Sparkes Street (west) • Up to two (2) on-street parking impacted on Larkin Street (south) • One (1) sign pole relocated	• One (1) street sign pole retained
SKT023	B1 WASTE OUT 3	Proceed forward along Sparkes Street, turning right onto Larkin Street (south)	• All on-street parking impacted (4 spaces) on Sparkes Street (west) • Up to two (2) on-street parking spaces impacted on Larkin Street (south) • One (1) sign pole relocated	• One (1) street sign pole retained

Table 23: Summary of outbound option impacts

Option	Servicing arrangement	Impact on Parking	Impact on signpost	Other findings
1	Vehicles reverse along Sparkes Street into the Sparkes Street/Larkin Street intersection, then depart forward southbound	0 spaces removed	1 sign post relocated	Requires controlled reversing movements
2A	Vehicles depart forward from Sparkes Street and turn right into Larkin Street south	2 spaces removed on Larkin Street (south)	2 sign posts relocated	Retains all on-street parking on Sparkes Street
2B	Vehicles depart forward from Sparkes Street, turns left into Larkin Street north and undertakes a five-point turn at the cul-de-sac, then continues southbound on Larkin Street	3 spaces removed on Larkin Street (north)	1 sign post relocated	Retains all on-street parking on Sparkes Street
3	Vehicles proceed or turn within the basement-ramp area before departing forward via Larkin Street south	All 4 parking removed along Sparkes Street west. 2 parking removed on Larkin Street (south)	1 sign post relocated	Enables footpath widening beyond the constrained Sparkes/Larkin corner

No posted load, vehicle-length or height restrictions have been identified along Arundel Street, Sparkes Street or Larkin Street. However, these streets also provide access to existing residential and commercial properties requiring regular waste collection and servicing. This indicates that service vehicles of a comparable general scale already use the surrounding local street network.

The proposed 8.8 m MRVs and 9.8 m waste vehicles are therefore not expected to encounter load or height-clearance constraints along the proposed servicing route.

Additional swept path analysis demonstrates that both vehicle types can satisfactorily turn left from Larkin Street onto Parramatta Road, entering the second lane from the kerb, which represents the nearest available general traffic lane given that the kerbside lane operates as a bus lane. The corresponding swept path drawings are provided in Appendix C.4.

4.6 Impacts on Walking, Cycling and Public Transport

As discussed in Section 3.2, the main pedestrian access for the Site is proposed from Parramatta Road. Most roads in the surrounding area have footpaths on both sides, and intersections have pedestrian facilities for crossing.

Cyclist access will be provided via Parramatta Road, with dedicated bicycle parking and end-of-trip facilities located within the Proposal.

The Planning Proposal is expected to have minimal impact on public transport, walking, and cycling networks. The site benefits from strong connectivity, with 10 bus routes within a 10-minute walk, and two light rail stops accessible within 25-minute walk or 10-minute cycle.

4.7 Recommendations

To manage travel demand generated by the Planning Proposal, travel demand management measures are proposed to be implemented. Measures would aim to promote sustainable travel choices for staff and visitors and are detailed in a Framework Travel Plan as shown in Section 5.

5. Outline Framework Travel Plan

5.1 Objectives

A Framework Travel Plan (FTP) is a package of measures put in place by an employer or building manager to encourage more sustainable travel whilst commuting to and from a development. It allows an organisation to demonstrate a commitment and a proactive step towards improving environmental sustainability by reducing the environmental impact associated with travel to and from the development.

The key element of this plan is reducing reliance on private vehicles and maximising the use of public transport and other sustainable modes of transport. The FTP would contribute to a healthier and higher quality environment for building occupants, staff and visitors whilst reducing air and noise pollution. An FTP would apply to all who travel to and from the site.

As a constantly evolving strategy, the success of the plan will rely on ongoing monitoring and review. A robust governance structure could include a nominated FTP representative or committee consisting of building management. Objectives can act as measures of success and may also be used to identify potential refinements.

The objectives of an FTP typically cover the following:

- **Encourage the use of more sustainable transport modes** i.e. walking, cycling, public transport and carpooling in place of higher energy consumption travel modes such as single occupant car travel and taxi.
- **Raise awareness of sustainable modes of transportation** for employees or visitors who commute to, from and within the Site.
- **Reduce traffic congestion and air pollution** around the Site to enhance safer and more enjoyable journeys.
- **Travel Demand Management (TDM)** which includes management measures to reduce travel demand, such as by remoding, reducing or retiming trips.
- **Develop, implement, monitor, evaluate and review** the progress of the travel plan strategy.

A framework of potential management measures is also outlined to help achieve the objectives of the FTP.

5.2 Potential measures

The package of measures has been provided to encourage more sustainable travel while travelling to and from the Site. Physical and behavioural measures are two potential measures to introduce into a viable FTP. Physical measures will prioritise sustainable transport via walking, cycling, public transport or car share whereas behavioural measures aim to provide soft strategies which influence travel behaviours for those who will travel to and from the Site.

To meet the objectives and targets of an FTP, this section outlines the potential management measures that could be considered for implementation for the Proposal. The measures have been grouped into the principles of remode and reduce, which are the most relevant to this FTP as they focus specifically on sustainable travel or reducing travel altogether. These principles are discussed below.

5.2.1 Remode

The principle of remode aims to promote non-private vehicle modes of travel, such as public transport, walking or cycling, or more fuel-efficient vehicles such as electric vehicles (EVs) or small vehicles. Measures to remode travel are discussed below.

5.2.1.1 Education and awareness

Education and awareness of the availability of sustainable travel modes would be crucial in encouraging all users at the site to adopt travel plan measures. It is important that all are made aware of the need to reduce car dependency where possible.

A new development provides an opportunity to offer staff advice on travel modes to and from the site. At this time, new travel patterns are being established, and people may particularly welcome information about the travel services and facilities available to them.

Potential measures to encourage education and awareness include:

- Provide travel information for visitors travelling to and from the Site using sustainable forms of transport, as well as outlining the benefits, objectives and measures of the wider FTP. A website or app associated with the development could include links to TfNSW websites to promote sustainable travel.
- A Travel Access Guide (TAG) could also be provided to staff and visitors to highlight sustainable travel methods. The purpose of a TAG is to highlight sustainable travel methods in a legible and easy to read format and would include the following:
  - Map showing key public transport, walking and cycling routes to the development.
  - Information on end of trip facilities, events and programs.
- Provide an overview of the FTP and TAG as part of all staff induction programs. Induction may also include a visit to bicycle parking and end of trip facilities to increase awareness.
- Events such as ‘National Bike Week’, ‘Bike2Work Days’ and ‘Walk to Work Day’ could be promoted to staff.
- Other incentives to encourage sustainable travel may also include discount vouchers for a local bicycle retailer.

5.2.1.2 Promotion of public transport

The use of train and bus services could be promoted by outlining public transport services in a TAG to enable staff and visitors to assess route options and to plan a public transport route to work.

Links to journey planning websites and real-time public transport service data on a website or app associated with the development. All user groups should be provided with a user-friendly map describing the surrounding public transport links. Maps can be distributed via a range of digital platforms including email or mobile phone application. These maps would advertise and promote public transport and prompts all site users to consider public transport as their first transport option when travelling to and from the site. These public transport maps should also include information on accessible transport routes for all site users with special access needs.

5.2.1.3 Promotion of walking

Walking could be promoted via the following measures:

- All site users should have access to a legible map outlining surrounding public transport linkages, local outlets and attractions within a reasonable walking distance. Maps can be distributed via a range of digital platforms including email, mobile phone application or information boards within the Site. Walking networks can be presented in a TAG and paths to key destinations such as nearby bus stops and serviced routes are indicated clearly.
- Participate in regular events such as ‘Walk to Work Day’.

5.2.1.4 Promotion of cycling

As discussed in Section 2.8 the proposed development is located near the wider off-road cycling network and will provide easily accessible bicycle parking and end of trip facilities for cyclists. The provision of secure bicycle parking and end of trip facilities are expected to encourage all site users.

Cycling could also be promoted via the following measures:

- Outline cycling facilities in the TAG to enable cyclists to assess route options and to plan how to cycle to work.
- Facilitate a bike-sharing program within the Proposal. Bikes could be made available to all users, which would be booked for a specific period of time. A bike-sharing program would provide access to a bike for site users who do not own one and could encourage long-term adoption of cycling.
- Form a Cycling Group consisting of staff who cycle to work regularly. The Cycling Group could advocate for cycling for all site occupants, including organising cycling events and notifying building management of maintenance and issues relating to the provision of on-Site cycling facilities.
- Participate in regular events such as 'Ride to Work Day'.
- Provide bicycle maps showing surrounding cycleways and infrastructure via a mobile phone application, the development's website or as physical wayfinding. This will allow cyclists to assess route options and plan how they cycle to the Site. As the surrounding area has high quality cycling infrastructure, cycling to and from the Site can be an enjoyable and sustainable method of travel.

5.2.1.5 Car parking management

Car parking management strategies could be considered to reduce private vehicle demand or a shift to more fuel-efficient private vehicles via the following measures:

- Provision of EV charging infrastructure or provision of 'small car' parking spaces to facilitate the uptake of EVs and small cars. EVs and small cars generally have lower exhaust emissions than typical internal combustion engine or larger vehicles during operation.
  - To further encourage EV uptake and small cars, small car parking spaces or spaces with EV charging infrastructure can be located in the most desirable parking spaces near access points to the development.
- Unbundled parking is a travel demand management strategy where parking spaces are rented, leased, or sold separately from the associated premises. It allows people to choose whether they need and want to pay for a parking space, rather than paying regardless of use. This measure can encourage individuals to reconsider and potentially reduce parking needs and private vehicle demand.

5.2.2 Reduce

The principle of reduce aims to reduce the overall number of trips generated. Measures to reduce travel are discussed below.

5.2.2.1 Carpooling

Carpooling (or ride sharing) involves carrying additional vehicle passengers while undertaking a journey with low additional distance. Carpooling enables a reduction in separate vehicle trips to a similar destination and is generally cost-effective, particularly to and from areas that are not well served by public transport.

Carpooling could be facilitated in the proposed development by building management to connect site users travelling to and from a similar destination.

5.3 Monitoring and review

The FTP is a live document, and its successful implementation would rely on ongoing monitoring and review. Although the objectives of the FTP would not change, targets and measures may be changed to reflect an ambition for continued progress.

Monitoring mechanisms could include periodic travel surveys to understand the travel behaviour of site occupants and success of the measures. The survey could be distributed 3 months post-occupation as well as yearly or following key transport network changes (such as new bus routes).

A key part of an effective FTP is to nominate personnel to champion and administer the plan. A robust governance structure would contribute to the success of the plan and could include a nominated FTP representative or committee. A representative or committee could consist of building management, who would:

- Manage and implement the FTP measures.
- Periodically update the FTP as new or safer transport routes become available.
- Engage with stakeholders, promote the FTP and solicit feedback.
- Achieve target mode shares, monitor performance and make decisions on the FTP.
- Raise improvements to public transport or walking and cycling facilities with Council or TfNSW.

6. Framework Construction Traffic Management Plan (CTMP)

This section outlines the objectives of the Framework CTMP and the high-level principles that can be used to achieve them.

6.1 Traffic management objectives

The key aim of this Framework CTMP is to minimise impacts to the surrounding transport network during construction. The following objectives have been developed to support this overarching aim:

- Ensure safety of pedestrians, cyclists, construction workers, road users and the local community;
- Minimise the overall impacts to road users;
- Ensure minimal disruptions to public transport operations, including schedules, stop location and routes;
- Maintain access for existing road users, including the local community, public transport operators, pedestrians and cyclists;
- Ensure disruption to surrounding stakeholders and land uses is minimised, including appropriate consultation.
- Minimise disruption to existing road furniture and kerbside provisions including existing bus stops, cycleways and on-street parking; and
- Comply with all relevant legislation and other requirements specified by relevant authorities.

6.2 Traffic management principles

To achieve the objectives outlined above a set of principles have been developed to guide all construction management measures across the project. The key principles are as follows:

- Clear and timely communication in relation to any changes, to affected areas and the expected duration of works via various platforms through the project website, radio, newspapers, social media or direct community engagement;
- Implement appropriate traffic controls including signage, line marking and stop lights to direct private vehicles, transport operators, pedestrians and cyclists past work Sites. Alternative routes may be provided where existing infrastructure is impacted by the works;
- Manage Site compounds and work areas to ensure construction traffic and works are primarily contained within these areas and road occupancy is minimised;
- Manage pedestrians and other vulnerable road users to ensure safe and continuous movement past the work Sites. Consideration of the land uses and key pedestrian desire lines in the surrounds of the work Sites will be the key drivers for the type of traffic management strategies implemented;
- Where practical, consideration of scheduling construction traffic movements to avoid peak times and smoothing of peaks in construction traffic activity to minimise impacts to the transport network; and
- Encourage construction workers, where possible, to use modes other than private vehicle.

These principles are to be communicated to any parties involved in construction traffic management across the project. Any issues arising during the works will also require notification to the users outlined, ensuring transparency across the duration of the construction phase.

6.3 Existing user group hierarchy

During preparation of any CTMPs, prioritisation of potential user groups is important in providing appropriate construction traffic management measures at each work Site. The hierarchy of users is listed below from highest to lowest:

- Pedestrians;
- Cyclists;
- Public transport users;
- Service vehicles (relating to businesses and agricultural uses); and
- Private vehicles.

The development of the user group hierarchy has been based on similar approaches applied in Framework CTMPs for other large infrastructure schemes. This hierarchy also aligns with Future Transport 2056. This hierarchy will be considered alongside the TfNSW functional road hierarchy provided below, in order of high to low priority roads, during the development of management measures.

- Primary arterial roads;
- Sub-arterial roads;
- Collector roads; and
- Local roads.

6.4 Governance

The document owner of each CTMP will be appointed during the procurement process and the governance of the construction traffic management process will be discussed and developed with the Department of Planning, Housing and Infrastructure as the project progresses.

6.5 Proposed working hours

While the construction times will vary throughout the project, the typical working hours are 07:00-18:00, with personnel arriving to the Site before 07:00 and leaving after 18:00.

In some cases, there may be night works to minimise disruption to traffic. Further assessments of these requirements will be undertaken once the detailed design stage is undertaken, and the requirements are known. All night works would be undertaken in accordance with the TfNSW Environmental Noise Management Manual (2001): Practice Note vii–Roadworks outside normal working hours, as well as the Office of Environment and Heritage Interim Construction Noise Guideline (DECC 2009).

6.6 Truck routes and controls

Due to the location of the proposed construction access is proposed from Parramatta Road (Great Western Highway). A detailed CTMP will need to be prepared for the works following approval with details of the size of vehicles due to the one-way narrow roads within the local road network.

7. Conclusion

This Transport Impact Assessment evaluates the transport implications of the proposed Life Sciences development at 88-94 Parramatta Road, Camperdown. The assessment considered existing transport conditions, including the local road network, public transport services, active transport facilities, and travel behaviour patterns.

To estimate the impact of development on the surrounding road network, SIDRA modelling and traffic analysis were undertaken for the below scenarios:

- 2024 Base case (existing conditions),
- 2030 Base case (linear growth rate of 1% per annum has been assumed for background traffic), and
- 2030 Project case (i.e. Base with Development).

The proposal is expected to generate a net increase of 105 vehicle trips in AM peak and 90 vehicle trips in PM peak, which is considered modest compared to the existing and future background traffic in the network. Under the 2030 Project case scenario, the surrounding road network is expected to accommodate the additional traffic generated by the Proposal, with all assessed intersections continuing to operate at acceptable levels of service.

Swept-path assessments demonstrate that the proposed 8.8 m MRVs and 9.8 m waste vehicle can access and service the development. Several feasible servicing arrangements have been identified, ranging from an option that retains all existing on-street parking to options involving progressively greater parking impacts. Depending on the option selected, associated public-domain changes may also include the relocation of street signs and widening of the northern footpath along the western section of Sparkes Street.

The preferred servicing arrangement and associated public-domain works would be confirmed through the subsequent design and approval process.

As construction traffic volumes are anticipated to be lower than operational traffic volumes, the associated impacts on the road network are also expected to be lower.

Car parking demand was estimated using a first-principles approach informed by the proposed land uses.

A CTMP is planned to be prepared as part of the detailed design phase.

Overall, the Planning Proposal is not expected to significantly worsen network conditions and can be accommodated with appropriate travel demand management measures provided in the Framework Travel Plan. Swept-path assessments confirm that feasible servicing routes are available for the proposed vehicles, subject to appropriate traffic management and any public-domain changes associated with the selected servicing arrangement.

Appendix A

SIDRA Modelling

MOVEMENT SUMMARY

Site: [1.24.B.AM] 1. Parramatta x Lyons - 2024 AM (2024 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	99	2.1	99	2.1	0.113	22.7	LOS B	3.4	23.9	0.58	0.66	0.58	29.4
2	T1	All MCs	122	9.5	122	9.5	0.522	54.8	LOS D	8.0	63.3	0.97	0.79	0.97	21.2
3	R2	All MCs	12	72.7	12	72.7	0.522	75.1	LOS F	8.0	63.3	0.97	0.79	0.97	20.4
Approach			233	9.5	233	9.5	0.522	42.2	LOS C	8.0	63.3	0.80	0.73	0.80	23.9
East: Parramatta Rd (155m)															
4	L2	All MCs	114	13.9	114	13.9	0.254	38.4	LOS C	6.0	51.6	0.74	0.74	0.74	26.2
5	T1	All MCs	739	8.8	739	8.8	0.510	32.7	LOS C	17.3	127.5	0.82	0.71	0.82	21.8
Approach			853	9.5	853	9.5	0.510	33.5	LOS C	17.3	127.5	0.81	0.72	0.81	22.8
North: Lyons Rd (180m)															
7	L2	All MCs	83	2.5	83	2.5	0.303	76.9	LOS F	4.8	34.1	0.93	0.76	0.93	14.5
8	T1	All MCs	201	2.1	201	2.1	* 0.731	77.2	LOS F	13.0	92.5	1.00	0.88	1.07	20.9
9	R2	All MCs	5	0.0	5	0.0	0.731	94.3	LOS F	13.0	92.5	1.00	0.88	1.07	14.3
Approach			289	2.2	289	2.2	0.731	77.4	LOS F	13.0	92.5	0.98	0.85	1.03	16.5
West: Parramatta Rd (140m)															
10	L2	All MCs	16	6.7	16	6.7	0.076	12.5	LOS A	1.1	12.4	0.34	0.54	0.34	32.8
11	T1	All MCs	2386	4.1	2386	4.1	* 0.890	20.1	LOS B	61.3	438.0	0.84	0.79	0.86	30.9
12	R2	All MCs	267	3.9	267	3.9	0.510	51.8	LOS D	14.1	101.9	0.88	0.82	0.88	23.2
Approach			2669	4.1	2669	4.1	0.890	23.2	LOS B	61.3	438.0	0.84	0.79	0.86	27.3
All Vehicles			4044	5.4	4044	5.4	0.890	30.4	LOS C	61.3	438.0	0.84	0.78	0.86	24.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	57	60	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
East: Parramatta Rd (155m)												
P2	Full	132	139	59.5	LOS E	0.5	0.5	0.96	0.96	213.3	200.0	0.94
North: Lyons Rd (180m)												
P3	Full	69	73	59.3	LOS E	0.3	0.3	0.96	0.96	213.2	200.0	0.94
West: Parramatta Rd (140m)												
P4	Full	215	226	59.7	LOS E	0.8	0.8	0.96	0.96	213.5	200.0	0.94
All Pedestrians		473	498	59.5	LOS E	0.8	0.8	0.96	0.96	213.4	200.0	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.24.B.AM] 2. Parramatta x Ross - 2024 AM (2024 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	32	10.0	32	10.0	0.470	63.3	LOS E	6.1	44.1	0.99	0.77	0.99	10.8
2	T1	All MCs	39	0.0	39	0.0	0.470	59.9	LOS E	6.1	44.1	0.99	0.77	0.99	7.8
3	R2	All MCs	21	5.0	21	5.0	0.470	78.5	LOS F	6.1	44.1	0.99	0.77	0.99	13.8
Approach			92	4.6	92	4.6	0.470	65.3	LOS E	6.1	44.1	0.99	0.77	0.99	10.2
East: Parramatta Rd (600m)															
4	L2	All MCs	32	3.3	32	3.3	0.070	15.6	LOS B	1.2	12.0	0.34	1.03	0.34	16.1
5	T1	All MCs	761	9.5	761	9.5	0.272	6.6	LOS A	8.2	60.0	0.36	0.35	0.36	52.8
6	R2	All MCs	113	2.8	113	2.8	* 0.659	74.7	LOS F	7.8	55.8	1.00	0.82	1.05	21.2
Approach			905	8.5	905	8.5	0.659	15.4	LOS B	8.2	60.0	0.44	0.43	0.45	42.5
North: Ross St (85m)															
7	L2	All MCs	91	0.0	91	0.0	0.586	55.2	LOS D	12.0	84.5	0.97	0.82	0.97	22.6
8	T1	All MCs	97	2.2	97	2.2	0.586	76.9	LOS F	12.0	84.5	0.97	0.82	0.97	8.6
9	R2	All MCs	143	5.9	143	5.9	* 0.929	91.9	LOS F	11.6	85.1	1.00	1.07	1.43	12.4
Approach			331	3.2	331	3.2	0.929	77.5	LOS F	12.0	85.1	0.99	0.93	1.17	12.6
West: Parramatta Rd (310m)															
10	L2	All MCs	244	1.7	244	1.7	0.325	22.5	LOS B	10.4	84.2	0.56	0.70	0.56	30.5
11	T1	All MCs	2137	4.8	2137	4.8	* 0.923	37.3	LOS C	71.1	508.4	0.97	0.96	1.05	35.9
Approach			2381	4.5	2381	4.5	0.923	35.8	LOS C	71.1	508.4	0.93	0.93	1.00	35.6
All Vehicles			3708	5.4	3708	5.4	0.929	35.3	LOS C	71.1	508.4	0.82	0.81	0.88	31.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	52	55	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Parramatta Rd (600m)												
P2	Full	228	240	64.8	LOS F	0.9	0.9	0.97	0.97	218.6	200.0	0.91
North: Ross St (85m)												
P3	Full	47	49	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Parramatta Rd (310m)												
P4	Full	51	54	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		378	398	64.6	LOS F	0.9	0.9	0.96	0.96	218.4	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.24.B.AM] 3. Ross x Bridge - 2024 AM (2024 Base AM)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	100	6.3	100	6.3	0.353	28.8	LOS C	2.8	20.3	0.93	0.76	0.93	24.5
2	T1	All MCs	153	4.8	153	4.8	0.385	22.7	LOS B	4.0	29.1	0.90	0.72	0.90	26.8
Approach			253	5.4	253	5.4	0.385	25.1	LOS B	4.0	29.1	0.91	0.74	0.91	25.7
East: Bridge Rd (500m)															
4	L2	All MCs	57	1.9	57	1.9	0.454	12.9	LOS A	8.4	59.8	0.61	0.56	0.61	34.4
5	T1	All MCs	444	1.9	444	1.9	0.454	7.6	LOS A	8.4	59.8	0.61	0.56	0.61	36.4
6	R2	All MCs	36	0.0	36	0.0	0.151	22.9	LOS B	0.9	6.0	0.80	0.70	0.80	31.3
Approach			537	1.8	537	1.8	0.454	9.1	LOS A	8.4	59.8	0.62	0.57	0.62	35.9
North: Ross St (280m)															
7	L2	All MCs	83	6.3	83	6.3	0.585	32.1	LOS C	5.6	40.7	0.96	0.81	0.98	30.0
8	T1	All MCs	351	3.0	351	3.0	* 0.585	25.1	LOS B	6.5	46.6	0.95	0.80	0.96	25.4
Approach			434	3.6	434	3.6	0.585	26.5	LOS B	6.5	46.6	0.96	0.80	0.96	26.7
West: Bridge Rd (400m)															
10	L2	All MCs	44	4.8	44	4.8	* 0.748	21.3	LOS B	18.3	130.2	0.80	0.75	0.82	35.5
11	T1	All MCs	761	2.1	761	2.1	0.748	16.0	LOS B	18.3	130.2	0.80	0.75	0.82	35.3
12	R2	All MCs	14	100.0	14	100.0	0.055	20.3	LOS B	0.2	3.2	0.60	0.63	0.60	29.5
Approach			819	3.9	819	3.9	0.748	16.4	LOS B	18.3	130.2	0.79	0.75	0.82	33.3
All Vehicles			2042	3.5	2042	3.5	0.748	17.7	LOS B	18.3	130.2	0.80	0.71	0.81	32.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												
P1	Full	94	99	24.4	LOS C	0.2	0.2	0.90	0.90	178.2	200.0	1.12

East: Bridge Rd (500m)											
P2 Full	150	158	24.5	LOS C	0.2	0.2	0.91	0.91	178.3	200.0	1.12
North: Ross St (280m)											
P3 Full	70	74	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)											
P4 Full	98	103	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12
All Pedestrians	412	434	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.24.B.AM] 4. Parramatta x Larkin - 2024 AM (2024 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	895	10.8	895	10.8	0.230	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			895	10.8	895	10.8	0.230	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North: Larkin St (37m)															
7	L2	All MCs	47	6.7	47	6.7	0.040	3.6	LOS A	0.1	1.0	0.17	0.48	0.17	44.7
Approach			47	6.7	47	6.7	0.040	3.6	LOS A	0.1	1.0	0.17	0.48	0.17	44.7
West: Parramatta Rd (155m)															
10	L2	All MCs	25	8.3	25	8.3	0.059	5.6	LOS A	0.0	0.0	0.00	0.19	0.00	21.2
11	T1	All MCs	2378	5.2	2378	5.2	0.608	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
Approach			2403	5.3	2403	5.3	0.608	0.2	NA	0.0	0.0	0.00	0.01	0.00	58.8
All Vehicles			3345	6.8	3345	6.8	0.608	0.2	NA	0.1	1.0	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.24.B.AM] 5. Larkin x Sparkes - 2024 AM (2024 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	14	7.7	14	7.7	0.013	3.3	LOS A	0.0	0.0	0.00	0.31	0.00	20.8
2	T1	All MCs	9	11.1	9	11.1	0.013	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	42.3
Approach			23	9.1	23	9.1	0.013	1.9	NA	0.0	0.0	0.00	0.31	0.00	27.6
East: Sparkes St (90m)															
4	L2	All MCs	14	15.4	14	15.4	0.022	4.8	LOS A	0.1	0.6	0.11	0.50	0.11	30.4
5	T1	All MCs	7	0.0	7	0.0	0.022	3.4	LOS A	0.1	0.6	0.11	0.50	0.11	28.8
6	R2	All MCs	7	0.0	7	0.0	0.022	5.1	LOS A	0.1	0.6	0.11	0.50	0.11	33.7
Approach			28	7.4	28	7.4	0.022	4.5	LOS A	0.1	0.6	0.11	0.50	0.11	30.9
North: Larkin St (100m)															
8	T1	All MCs	29	0.0	29	0.0	0.016	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	49.1
9	R2	All MCs	1	0.0	1	0.0	0.016	4.6	LOS A	0.0	0.0	0.01	0.02	0.01	35.4
Approach			31	0.0	31	0.0	0.016	0.2	NA	0.0	0.0	0.01	0.02	0.01	48.4
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.004	4.3	LOS A	0.0	0.1	0.10	0.51	0.10	32.8
12	R2	All MCs	3	33.3	3	33.3	0.004	4.7	LOS A	0.0	0.1	0.10	0.51	0.10	26.4
Approach			4	25.0	4	25.0	0.004	4.6	LOS A	0.0	0.1	0.10	0.51	0.10	28.3
All Vehicles			86	6.1	86	6.1	0.022	2.3	NA	0.1	0.6	0.04	0.28	0.04	34.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.24.B.AM] 6. Ross x Arundel - 2024 AM (2024 Base AM)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	64	4.9	64	4.9	0.226	5.6	LOS A	0.9	6.4	0.26	0.34	0.26	36.4
2	T1	All MCs	226	3.7	226	3.7	0.226	0.6	LOS A	0.9	6.4	0.26	0.34	0.26	41.8
3	R2	All MCs	72	10.3	72	10.3	0.226	6.0	LOS A	0.9	6.4	0.26	0.34	0.26	41.3
3u	U	All MCs	11	0.0	11	0.0	0.226	7.7	LOS A	0.9	6.4	0.26	0.34	0.26	35.6
Approach			373	5.1	373	5.1	0.226	2.7	NA	0.9	6.4	0.26	0.34	0.26	40.4
East: Arundel St (250m)															
4	L2	All MCs	33	9.7	33	9.7	0.082	9.7	LOS A	0.3	2.2	0.48	0.90	0.48	34.3
5	T1	All MCs	4	25.0	4	25.0	0.082	15.6	LOS B	0.3	2.2	0.48	0.90	0.48	34.4
6	R2	All MCs	18	0.0	18	0.0	0.082	12.6	LOS A	0.3	2.2	0.48	0.90	0.48	34.5
Approach			55	7.7	55	7.7	0.082	11.1	LOS A	0.3	2.2	0.48	0.90	0.48	34.4
North: Ross St (105m)															
7	L2	All MCs	34	9.4	34	9.4	0.192	5.5	LOS A	0.5	3.5	0.17	0.24	0.17	43.5
8	T1	All MCs	246	3.0	246	3.0	0.192	0.3	LOS A	0.5	3.5	0.17	0.24	0.17	44.2
9	R2	All MCs	52	0.0	52	0.0	0.192	5.8	LOS A	0.5	3.5	0.17	0.24	0.17	38.0
Approach			332	3.2	332	3.2	0.192	1.7	NA	0.5	3.5	0.17	0.24	0.17	42.8
West: Arundel St (155m)															
10	L2	All MCs	26	4.0	26	4.0	0.087	7.8	LOS A	0.3	2.2	0.49	0.90	0.49	29.0
11	T1	All MCs	6	0.0	6	0.0	0.087	11.2	LOS A	0.3	2.2	0.49	0.90	0.49	34.1
12	R2	All MCs	22	4.8	22	4.8	0.087	12.8	LOS A	0.3	2.2	0.49	0.90	0.49	27.9
Approach			55	3.8	55	3.8	0.087	10.2	LOS A	0.3	2.2	0.49	0.90	0.49	29.3
All Vehicles			814	4.4	814	4.4	0.226	3.3	NA	0.9	6.4	0.26	0.37	0.26	39.4

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [1.24.B.PM] 1. Parramatta x Lyons - 2024 PM (2024 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	133	0.0	133	0.0	0.235	53.4	LOS D	6.7	47.0	0.79	0.74	0.79	23.7
2	T1	All MCs	234	1.4	234	1.4	* 0.837	79.4	LOS F	17.1	122.3	1.00	0.99	1.17	19.3
3	R2	All MCs	3	66.7	3	66.7	0.837	90.2	LOS F	17.1	122.3	1.00	0.99	1.17	18.6
Approach			369	1.4	369	1.4	0.837	70.1	LOS E	17.1	122.3	0.93	0.90	1.03	18.8
East: Parramatta Rd (155m)															
4	L2	All MCs	148	7.1	148	7.1	0.217	22.5	LOS B	6.1	52.0	0.53	0.67	0.53	31.4
5	T1	All MCs	1966	2.7	1966	2.7	* 0.860	26.4	LOS B	54.8	387.0	0.90	0.84	0.91	24.9
Approach			2115	3.0	2115	3.0	0.860	26.2	LOS B	54.8	387.0	0.88	0.83	0.88	25.6
North: Lyons Rd (180m)															
7	L2	All MCs	48	0.0	48	0.0	0.192	61.9	LOS E	3.0	20.8	0.93	0.73	0.93	13.8
8	T1	All MCs	94	0.0	94	0.0	0.395	59.7	LOS E	6.4	44.6	0.96	0.76	0.96	20.4
9	R2	All MCs	6	0.0	6	0.0	0.395	83.9	LOS F	6.4	44.6	0.96	0.76	0.96	13.8
Approach			148	0.0	148	0.0	0.395	61.4	LOS E	6.4	44.6	0.95	0.75	0.95	18.4
West: Parramatta Rd (140m)															
10	L2	All MCs	24	0.0	24	0.0	0.051	12.1	LOS A	0.9	8.5	0.33	0.81	0.33	29.4
11	T1	All MCs	1143	2.3	1143	2.3	0.388	6.7	LOS A	13.4	94.3	0.39	0.36	0.39	43.8
12	R2	All MCs	105	1.0	105	1.0	* 0.482	69.2	LOS E	6.9	48.6	0.98	0.79	0.98	19.0
Approach			1273	2.2	1273	2.2	0.482	12.0	LOS A	13.4	94.3	0.44	0.41	0.44	36.0
All Vehicles			3905	2.5	3905	2.5	0.860	27.1	LOS B	54.8	387.0	0.74	0.69	0.76	25.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	76	80	64.3	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
East: Parramatta Rd (155m)												
P2	Full	171	180	64.6	LOS F	0.7	0.7	0.96	0.96	218.5	200.0	0.92
North: Lyons Rd (180m)												
P3	Full	81	85	64.4	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
West: Parramatta Rd (140m)												
P4	Full	104	109	64.4	LOS F	0.4	0.4	0.96	0.96	218.3	200.0	0.92
All Pedestrians		432	455	64.5	LOS F	0.7	0.7	0.96	0.96	218.3	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.24.B.PM] 2. Parramatta x Ross - 2024 PM (2024 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	66	1.6	66	1.6	0.363	32.4	LOS C	5.9	41.7	0.89	0.72	0.89	12.3
2	T1	All MCs	67	1.6	67	1.6	0.363	29.6	LOS C	5.9	41.7	0.89	0.72	0.89	8.4
3	R2	All MCs	22	0.0	22	0.0	0.363	41.8	LOS C	5.9	41.7	0.89	0.72	0.89	15.5
Approach			156	1.4	156	1.4	0.363	32.5	LOS C	5.9	41.7	0.89	0.72	0.89	11.1
East: Parramatta Rd (600m)															
4	L2	All MCs	38	0.0	38	0.0	0.129	19.6	LOS B	1.7	17.4	0.53	0.94	0.53	16.2
5	T1	All MCs	1807	3.3	1807	3.3	0.789	16.3	LOS B	30.3	213.3	0.83	0.78	0.84	46.4
6	R2	All MCs	207	0.5	207	0.5	* 0.784	51.5	LOS D	9.7	68.0	1.00	0.92	1.19	26.6
Approach			2053	3.0	2053	3.0	0.789	19.9	LOS B	30.3	213.3	0.84	0.80	0.87	41.9
North: Ross St (85m)															
7	L2	All MCs	124	0.8	124	0.8	0.411	27.8	LOS B	7.7	54.1	0.87	0.82	0.87	30.7
8	T1	All MCs	86	1.2	86	1.2	0.411	49.0	LOS D	7.7	54.1	0.87	0.82	0.87	9.7
9	R2	All MCs	188	0.6	188	0.6	* 0.772	48.7	LOS D	8.8	61.9	1.00	0.93	1.19	19.4
Approach			399	0.8	399	0.8	0.772	42.2	LOS C	8.8	61.9	0.93	0.87	1.02	17.8
West: Parramatta Rd (310m)															
10	L2	All MCs	104	2.0	104	2.0	0.252	29.5	LOS C	4.2	35.3	0.76	0.73	0.76	27.0
11	T1	All MCs	1162	2.8	1162	2.8	* 0.784	29.1	LOS C	23.3	163.5	0.95	0.88	1.00	39.3
Approach			1266	2.7	1266	2.7	0.784	29.1	LOS C	23.3	163.5	0.93	0.87	0.98	38.7
All Vehicles			3874	2.6	3874	2.6	0.789	25.7	LOS B	30.3	213.3	0.88	0.82	0.92	34.4

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	62	65	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
East: Parramatta Rd (600m)												
P2	Full	274	288	39.7	LOS D	0.7	0.7	0.94	0.94	193.5	200.0	1.03
North: Ross St (85m)												
P3	Full	73	77	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
West: Parramatta Rd (310m)												
P4	Full	63	66	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
All Pedestrians		472	497	39.5	LOS D	0.7	0.7	0.94	0.94	193.4	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.24.B.PM] 3. Ross x Bridge - 2024 PM (2024 Base PM)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	237	3.1	237	3.1	0.595	27.1	LOS B	6.5	46.9	0.95	0.81	0.96	25.1
2	T1	All MCs	351	0.3	351	0.3	* 0.673	22.5	LOS B	9.7	68.0	0.95	0.84	0.99	26.9
Approach			587	1.4	587	1.4	0.673	24.3	LOS B	9.7	68.0	0.95	0.83	0.98	26.0
East: Bridge Rd (500m)															
4	L2	All MCs	44	2.4	44	2.4	* 0.673	17.1	LOS B	14.8	104.7	0.79	0.71	0.79	32.7
5	T1	All MCs	641	1.0	641	1.0	0.673	11.1	LOS A	14.8	104.7	0.79	0.71	0.79	35.1
6	R2	All MCs	122	0.9	122	0.9	0.301	18.4	LOS B	2.6	18.6	0.74	0.73	0.74	32.9
Approach			807	1.0	807	1.0	0.673	12.5	LOS A	14.8	104.7	0.78	0.71	0.78	34.7
North: Ross St (280m)															
7	L2	All MCs	58	0.0	58	0.0	0.163	25.6	LOS B	1.7	11.7	0.84	0.72	0.84	31.1
8	T1	All MCs	320	1.0	320	1.0	0.597	22.5	LOS B	8.2	57.6	0.92	0.79	0.92	27.1
Approach			378	0.8	378	0.8	0.597	23.0	LOS B	8.2	57.6	0.91	0.78	0.91	28.0
West: Bridge Rd (400m)															
10	L2	All MCs	89	2.4	89	2.4	0.478	16.5	LOS B	8.9	63.1	0.68	0.63	0.68	35.7
11	T1	All MCs	384	0.8	384	0.8	0.478	11.0	LOS A	8.9	63.1	0.68	0.63	0.68	35.5
12	R2	All MCs	5	100.0	5	100.0	0.035	24.0	LOS B	0.1	1.6	0.76	0.64	0.76	26.4
Approach			479	2.2	479	2.2	0.478	12.1	LOS A	8.9	63.1	0.68	0.63	0.68	34.9
All Vehicles			2252	1.4	2252	1.4	0.673	17.3	LOS B	14.8	104.7	0.82	0.74	0.83	32.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												
P1	Full	77	81	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12

East: Bridge Rd (500m)											
P2 Full	90	95	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
North: Ross St (280m)											
P3 Full	91	96	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)											
P4 Full	88	93	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
All Pedestrians	346	364	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.24.B.PM] 4. Parramatta x Larkin - 2024 PM (2024 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	2026	3.3	2026	3.3	0.509	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			2026	3.3	2026	3.3	0.509	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.6
North: Larkin St (37m)															
7	L2	All MCs	56	1.9	56	1.9	0.044	3.5	LOS A	0.2	1.1	0.13	0.48	0.13	45.3
Approach			56	1.9	56	1.9	0.044	3.5	LOS A	0.2	1.1	0.13	0.48	0.13	45.3
West: Parramatta Rd (155m)															
10	L2	All MCs	12	0.0	12	0.0	0.037	5.5	LOS A	0.0	0.0	0.00	0.15	0.00	21.4
11	T1	All MCs	1238	3.4	1238	3.4	0.309	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1249	3.4	1249	3.4	0.309	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.3
All Vehicles			3332	3.3	3332	3.3	0.509	0.2	NA	0.2	1.1	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.24.B.PM] 5. Larkin x Sparkes - 2024 PM (2024 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	9	0.0	9	0.0	0.006	3.3	LOS A	0.0	0.0	0.00	0.46	0.00	20.1
2	T1	All MCs	1	0.0	1	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.46	0.00	39.4
Approach			11	0.0	11	0.0	0.006	3.0	NA	0.0	0.0	0.00	0.46	0.00	21.5
East: Sparkes St (90m)															
4	L2	All MCs	13	0.0	13	0.0	0.017	4.6	LOS A	0.1	0.4	0.08	0.53	0.08	30.2
5	T1	All MCs	1	0.0	1	0.0	0.017	3.3	LOS A	0.1	0.4	0.08	0.53	0.08	28.4
6	R2	All MCs	9	0.0	9	0.0	0.017	5.0	LOS A	0.1	0.4	0.08	0.53	0.08	33.3
Approach			23	0.0	23	0.0	0.017	4.7	LOS A	0.1	0.4	0.08	0.53	0.08	31.6
North: Larkin St (100m)															
8	T1	All MCs	22	4.8	22	4.8	0.012	0.0	LOS A	0.0	0.0	0.01	0.03	0.01	48.9
9	R2	All MCs	1	0.0	1	0.0	0.012	4.6	LOS A	0.0	0.0	0.01	0.03	0.01	35.3
Approach			23	4.5	23	4.5	0.012	0.2	NA	0.0	0.0	0.01	0.03	0.01	47.9
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.018	4.3	LOS A	0.1	0.4	0.06	0.53	0.06	32.9
12	R2	All MCs	19	0.0	19	0.0	0.018	4.4	LOS A	0.1	0.4	0.06	0.53	0.06	27.1
Approach			20	0.0	20	0.0	0.018	4.4	LOS A	0.1	0.4	0.06	0.53	0.06	27.5
All Vehicles			77	1.4	77	1.4	0.018	3.0	NA	0.1	0.4	0.04	0.37	0.04	32.4

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.24.B.PM] 6. Ross x Arundel - 2024 PM (2024 Base PM)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	51	0.0	51	0.0	0.250	5.5	LOS A	0.8	5.4	0.21	0.27	0.21	37.5
2	T1	All MCs	317	1.0	317	1.0	0.250	0.4	LOS A	0.8	5.4	0.21	0.27	0.21	43.5
3	R2	All MCs	72	1.5	72	1.5	0.250	5.8	LOS A	0.8	5.4	0.21	0.27	0.21	42.6
3u	U	All MCs	3	0.0	3	0.0	0.250	7.9	LOS A	0.8	5.4	0.21	0.27	0.21	37.0
Approach			442	1.0	442	1.0	0.250	1.9	NA	0.8	5.4	0.21	0.27	0.21	42.4
East: Arundel St (250m)															
4	L2	All MCs	61	0.0	61	0.0	0.152	9.3	LOS A	0.6	3.9	0.52	0.91	0.52	34.4
5	T1	All MCs	3	0.0	3	0.0	0.152	13.3	LOS A	0.6	3.9	0.52	0.91	0.52	34.3
6	R2	All MCs	36	0.0	36	0.0	0.152	14.1	LOS A	0.6	3.9	0.52	0.91	0.52	34.2
Approach			100	0.0	100	0.0	0.152	11.2	LOS A	0.6	3.9	0.52	0.91	0.52	34.3
North: Ross St (105m)															
7	L2	All MCs	36	0.0	36	0.0	0.180	5.3	LOS A	0.3	1.8	0.10	0.17	0.10	44.7
8	T1	All MCs	265	0.0	265	0.0	0.180	0.2	LOS A	0.3	1.8	0.10	0.17	0.10	46.0
9	R2	All MCs	23	0.0	23	0.0	0.180	6.2	LOS A	0.3	1.8	0.10	0.17	0.10	39.0
Approach			324	0.0	324	0.0	0.180	1.2	NA	0.3	1.8	0.10	0.17	0.10	45.1
West: Arundel St (155m)															
10	L2	All MCs	20	0.0	20	0.0	0.120	8.1	LOS A	0.4	2.9	0.56	0.96	0.56	28.3
11	T1	All MCs	12	0.0	12	0.0	0.120	12.2	LOS A	0.4	2.9	0.56	0.96	0.56	33.3
12	R2	All MCs	32	0.0	32	0.0	0.120	13.1	LOS A	0.4	2.9	0.56	0.96	0.56	27.1
Approach			63	0.0	63	0.0	0.120	11.4	LOS A	0.4	2.9	0.56	0.96	0.56	28.9
All Vehicles			929	0.5	929	0.5	0.250	3.3	NA	0.8	5.4	0.23	0.35	0.23	40.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [1.30.B.AM] 1. Parramatta x Lyons - 2030 Base AM (2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	105	2.0	105	2.0	0.136	27.0	LOS B	4.2	29.6	0.62	0.67	0.62	27.8
2	T1	All MCs	129	9.8	129	9.8	0.631	62.5	LOS E	9.4	73.9	1.00	0.81	1.01	19.9
3	R2	All MCs	12	72.7	12	72.7	0.631	87.2	LOS F	9.4	73.9	1.00	0.81	1.01	19.1
Approach			246	9.4	246	9.4	0.631	48.5	LOS D	9.4	73.9	0.83	0.75	0.84	22.5
East: Parramatta Rd (155m)															
4	L2	All MCs	120	13.2	120	13.2	0.253	39.3	LOS C	6.6	56.4	0.73	0.74	0.73	26.0
5	T1	All MCs	782	8.7	782	8.7	0.522	34.1	LOS C	19.6	144.2	0.81	0.71	0.81	21.3
Approach			902	9.3	902	9.3	0.522	34.8	LOS C	19.6	144.2	0.80	0.72	0.80	22.3
North: Lyons Rd (180m)															
7	L2	All MCs	88	2.4	88	2.4	0.349	90.3	LOS F	5.6	39.7	0.95	0.77	0.95	13.6
8	T1	All MCs	213	2.0	213	2.0	* 0.867	99.7	LOS F	16.4	116.4	1.00	1.04	1.23	18.6
9	R2	All MCs	5	0.0	5	0.0	0.867	120.5	LOS F	16.4	116.4	1.00	1.04	1.23	12.2
Approach			306	2.1	306	2.1	0.867	97.4	LOS F	16.4	116.4	0.98	0.96	1.15	14.3
West: Parramatta Rd (140m)															
10	L2	All MCs	17	6.2	17	6.2	0.074	12.1	LOS A	1.1	12.5	0.31	0.53	0.31	33.2
11	T1	All MCs	2527	4.0	2527	4.0	* 0.929	27.3	LOS B	79.6	568.5	0.90	0.87	0.96	26.1
12	R2	All MCs	283	3.7	283	3.7	0.522	55.5	LOS D	15.9	115.2	0.88	0.82	0.88	22.7
Approach			2827	3.9	2827	3.9	0.929	30.0	LOS C	79.6	568.5	0.89	0.86	0.95	23.8
All Vehicles			4282	5.3	4282	5.3	0.929	36.9	LOS C	79.6	568.5	0.88	0.83	0.92	21.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	57	60	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Parramatta Rd (155m)												
P2	Full	132	139	64.5	LOS F	0.5	0.5	0.96	0.96	218.3	200.0	0.92
North: Lyons Rd (180m)												
P3	Full	69	73	64.3	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
West: Parramatta Rd (140m)												
P4	Full	215	226	64.7	LOS F	0.9	0.9	0.97	0.97	218.6	200.0	0.91
All Pedestrians		473	498	64.6	LOS F	0.9	0.9	0.96	0.96	218.4	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.30.B.AM] 2. Parramatta x Ross - 2030 Base AM (2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	34	9.4	34	9.4	0.482	62.8	LOS E	6.4	46.5	0.99	0.77	0.99	10.9
2	T1	All MCs	41	0.0	41	0.0	0.482	59.4	LOS E	6.4	46.5	0.99	0.77	0.99	7.8
3	R2	All MCs	22	4.8	22	4.8	0.482	78.8	LOS F	6.4	46.5	0.99	0.77	0.99	13.8
Approach			97	4.3	97	4.3	0.482	65.0	LOS E	6.4	46.5	0.99	0.77	0.99	10.3
East: Parramatta Rd (600m)															
4	L2	All MCs	34	3.1	34	3.1	0.072	16.0	LOS B	1.3	12.7	0.35	1.04	0.35	16.1
5	T1	All MCs	804	9.3	804	9.3	0.291	7.0	LOS A	9.0	66.2	0.38	0.36	0.38	52.4
6	R2	All MCs	119	2.7	119	2.7	* 0.695	75.4	LOS F	8.3	59.4	1.00	0.84	1.08	21.1
Approach			957	8.3	957	8.3	0.695	15.9	LOS B	9.0	66.2	0.45	0.44	0.46	42.2
North: Ross St (85m)															
7	L2	All MCs	96	0.0	96	0.0	0.593	54.5	LOS D	12.6	88.8	0.97	0.83	0.97	22.7
8	T1	All MCs	102	2.1	102	2.1	0.593	76.1	LOS F	12.6	88.8	0.97	0.83	0.97	8.6
9	R2	All MCs	152	5.6	152	5.6	* 0.929	91.6	LOS F	12.3	89.9	1.00	1.07	1.42	12.5
Approach			349	3.0	349	3.0	0.929	76.9	LOS F	12.6	89.9	0.98	0.93	1.17	12.7
West: Parramatta Rd (310m)															
10	L2	All MCs	259	1.6	259	1.6	0.344	23.3	LOS B	11.2	90.3	0.58	0.71	0.58	30.0
11	T1	All MCs	2262	4.7	2262	4.7	* 0.991	65.1	LOS E	96.5	689.6	0.99	1.18	1.24	27.6
Approach			2521	4.4	2521	4.4	0.991	60.8	LOS E	96.5	689.6	0.95	1.13	1.17	27.8
All Vehicles			3924	5.2	3924	5.2	0.991	51.4	LOS D	96.5	689.6	0.83	0.94	0.99	27.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	52	55	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Parramatta Rd (600m)												
P2	Full	228	240	64.8	LOS F	0.9	0.9	0.97	0.97	218.6	200.0	0.91
North: Ross St (85m)												
P3	Full	47	49	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Parramatta Rd (310m)												
P4	Full	51	54	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		378	398	64.6	LOS F	0.9	0.9	0.96	0.96	218.4	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.30.B.AM] 3. Ross x Bridge - 2030 Base AM (2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	105	6.0	105	6.0	0.371	28.9	LOS C	2.9	21.4	0.93	0.76	0.93	24.5
2	T1	All MCs	161	4.6	161	4.6	0.405	22.8	LOS B	4.2	30.8	0.91	0.73	0.91	26.7
Approach			266	5.1	266	5.1	0.405	25.2	LOS B	4.2	30.8	0.92	0.74	0.92	25.6
East: Bridge Rd (500m)															
4	L2	All MCs	60	1.8	60	1.8	0.480	13.1	LOS A	9.1	64.6	0.62	0.57	0.62	34.3
5	T1	All MCs	471	1.8	471	1.8	0.480	7.7	LOS A	9.1	64.6	0.62	0.57	0.62	36.3
6	R2	All MCs	38	0.0	38	0.0	0.180	25.1	LOS B	1.0	6.7	0.84	0.72	0.84	30.6
Approach			568	1.7	568	1.7	0.480	9.4	LOS A	9.1	64.6	0.64	0.58	0.64	35.8
North: Ross St (280m)															
7	L2	All MCs	87	6.0	87	6.0	0.616	32.5	LOS C	6.0	43.5	0.97	0.83	1.01	29.9
8	T1	All MCs	371	2.8	371	2.8	* 0.616	25.5	LOS B	7.0	49.9	0.96	0.82	0.99	25.3
Approach			458	3.4	458	3.4	0.616	26.9	LOS B	7.0	49.9	0.96	0.82	0.99	26.6
West: Bridge Rd (400m)															
10	L2	All MCs	46	4.5	46	4.5	* 0.795	24.5	LOS B	21.6	154.3	0.84	0.83	0.91	34.3
11	T1	All MCs	806	2.1	806	2.1	0.795	19.1	LOS B	21.6	154.3	0.84	0.83	0.91	34.4
12	R2	All MCs	15	100.0	15	100.0	0.063	21.5	LOS B	0.3	3.5	0.61	0.63	0.61	29.3
Approach			867	3.9	867	3.9	0.795	19.4	LOS B	21.6	154.3	0.83	0.82	0.91	32.3
All Vehicles			2160	3.4	2160	3.4	0.795	19.1	LOS B	21.6	154.3	0.82	0.75	0.86	31.7

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												

P1	Full	94	99	24.4	LOS C	0.2	0.2	0.90	0.90	178.2	200.0	1.12
East: Bridge Rd (500m)												
P2	Full	150	158	24.5	LOS C	0.2	0.2	0.91	0.91	178.3	200.0	1.12
North: Ross St (280m)												
P3	Full	70	74	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)												
P4	Full	98	103	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12
All Pedestrians		412	434	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.30.B.AM] 4. Parramatta x Larkin - 2030 Base AM

(2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	945	10.6	945	10.6	0.244	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			945	10.6	945	10.6	0.244	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North: Larkin St (37m)															
7	L2	All MCs	52	8.2	52	8.2	0.043	3.6	LOS A	0.2	1.2	0.17	0.49	0.17	44.5
Approach			52	8.2	52	8.2	0.043	3.6	LOS A	0.2	1.2	0.17	0.49	0.17	44.5
West: Parramatta Rd (155m)															
10	L2	All MCs	27	7.7	27	7.7	0.060	5.6	LOS A	0.0	0.0	0.00	0.20	0.00	21.1
11	T1	All MCs	2517	5.1	2517	5.1	0.644	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.2
Approach			2544	5.1	2544	5.1	0.644	0.2	NA	0.0	0.0	0.00	0.01	0.00	58.7
All Vehicles			3541	6.6	3541	6.6	0.644	0.2	NA	0.2	1.2	0.00	0.01	0.00	58.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.30.B.AM] 5. Larkin x Sparkes - 2030 Base AM (2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	15	7.1	15	7.1	0.014	3.3	LOS A	0.0	0.0	0.00	0.31	0.00	20.8
2	T1	All MCs	9	11.1	9	11.1	0.014	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	42.1
Approach			24	8.7	24	8.7	0.014	2.0	NA	0.0	0.0	0.00	0.31	0.00	27.2
East: Sparkes St (90m)															
4	L2	All MCs	15	14.3	15	14.3	0.023	4.8	LOS A	0.1	0.6	0.11	0.50	0.11	30.4
5	T1	All MCs	7	0.0	7	0.0	0.023	3.4	LOS A	0.1	0.6	0.11	0.50	0.11	28.8
6	R2	All MCs	7	0.0	7	0.0	0.023	5.1	LOS A	0.1	0.6	0.11	0.50	0.11	33.7
Approach			29	7.1	29	7.1	0.023	4.5	LOS A	0.1	0.6	0.11	0.50	0.11	30.9
North: Larkin St (100m)															
8	T1	All MCs	31	0.0	31	0.0	0.016	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	49.2
9	R2	All MCs	1	0.0	1	0.0	0.016	4.6	LOS A	0.0	0.0	0.01	0.02	0.01	35.4
Approach			32	0.0	32	0.0	0.016	0.2	NA	0.0	0.0	0.01	0.02	0.01	48.4
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.004	4.3	LOS A	0.0	0.1	0.10	0.51	0.10	32.8
12	R2	All MCs	3	33.3	3	33.3	0.004	4.7	LOS A	0.0	0.1	0.10	0.51	0.10	26.4
Approach			4	25.0	4	25.0	0.004	4.6	LOS A	0.0	0.1	0.10	0.51	0.10	28.3
All Vehicles			89	5.9	89	5.9	0.023	2.3	NA	0.1	0.6	0.04	0.28	0.04	34.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.30.B.AM] 6. Ross x Arundel - 2030 Base AM (2030 Base AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	68	6.2	68	6.2	0.241	5.7	LOS A	1.0	7.0	0.28	0.35	0.28	36.3
2	T1	All MCs	239	3.5	239	3.5	0.241	0.6	LOS A	1.0	7.0	0.28	0.35	0.28	41.6
3	R2	All MCs	76	9.7	76	9.7	0.241	6.1	LOS A	1.0	7.0	0.28	0.35	0.28	41.2
3u	U	All MCs	12	0.0	12	0.0	0.241	7.9	LOS A	1.0	7.0	0.28	0.35	0.28	35.5
Approach			395	5.1	395	5.1	0.241	2.8	NA	1.0	7.0	0.28	0.35	0.28	40.3
East: Arundel St (250m)															
4	L2	All MCs	35	12.1	35	12.1	0.093	10.0	LOS A	0.3	2.5	0.50	0.91	0.50	34.0
5	T1	All MCs	5	20.0	5	20.0	0.093	15.7	LOS B	0.3	2.5	0.50	0.91	0.50	34.2
6	R2	All MCs	19	0.0	19	0.0	0.093	13.2	LOS A	0.3	2.5	0.50	0.91	0.50	34.2
Approach			59	8.9	59	8.9	0.093	11.5	LOS A	0.3	2.5	0.50	0.91	0.50	34.1
North: Ross St (105m)															
7	L2	All MCs	37	11.4	37	11.4	0.205	5.5	LOS A	0.5	3.8	0.18	0.25	0.18	43.3
8	T1	All MCs	261	2.8	261	2.8	0.205	0.3	LOS A	0.5	3.8	0.18	0.25	0.18	44.1
9	R2	All MCs	55	0.0	55	0.0	0.205	5.9	LOS A	0.5	3.8	0.18	0.25	0.18	38.0
Approach			353	3.3	353	3.3	0.205	1.7	NA	0.5	3.8	0.18	0.25	0.18	42.7
West: Arundel St (155m)															
10	L2	All MCs	28	3.7	28	3.7	0.096	7.9	LOS A	0.3	2.4	0.50	0.90	0.50	28.8
11	T1	All MCs	6	0.0	6	0.0	0.096	11.7	LOS A	0.3	2.4	0.50	0.90	0.50	33.9
12	R2	All MCs	23	4.5	23	4.5	0.096	13.4	LOS A	0.3	2.4	0.50	0.90	0.50	27.7
Approach			58	3.6	58	3.6	0.096	10.5	LOS A	0.3	2.4	0.50	0.90	0.50	29.1
All Vehicles			864	4.5	864	4.5	0.241	3.5	NA	1.0	7.0	0.27	0.38	0.27	39.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [1.30.B.PM] 1. Parramatta x Lyons - 2030 Base PM (2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	141	0.0	141	0.0	0.250	56.6	LOS E	7.2	50.3	0.80	0.75	0.80	23.6
2	T1	All MCs	247	1.3	247	1.3	*0.910	92.3	LOS F	19.7	140.7	1.00	1.11	1.30	17.9
3	R2	All MCs	3	66.7	3	66.7	0.910	104.6	LOS F	19.7	140.7	1.00	1.11	1.30	17.3
Approach			392	1.3	392	1.3	0.910	79.6	LOS F	19.7	140.7	0.93	0.98	1.12	17.6
East: Parramatta Rd (155m)															
4	L2	All MCs	157	6.7	157	6.7	0.225	22.6	LOS B	6.5	54.3	0.54	0.68	0.54	31.3
5	T1	All MCs	2082	2.6	2082	2.6	*0.911	35.4	LOS C	67.5	476.2	0.96	0.94	1.03	20.8
Approach			2239	2.9	2239	2.9	0.911	34.5	LOS C	67.5	476.2	0.93	0.92	0.99	21.8
North: Lyons Rd (180m)															
7	L2	All MCs	52	0.0	52	0.0	0.205	62.0	LOS E	3.2	22.2	0.93	0.74	0.93	13.8
8	T1	All MCs	99	0.0	99	0.0	0.432	60.7	LOS E	6.8	47.4	0.97	0.77	0.97	20.2
9	R2	All MCs	6	0.0	6	0.0	0.432	87.7	LOS F	6.8	47.4	0.97	0.77	0.97	13.6
Approach			157	0.0	157	0.0	0.432	62.2	LOS E	6.8	47.4	0.96	0.76	0.96	18.3
West: Parramatta Rd (140m)															
10	L2	All MCs	25	0.0	25	0.0	0.052	12.1	LOS A	0.9	8.7	0.33	0.82	0.33	29.3
11	T1	All MCs	1211	2.2	1211	2.2	0.411	6.9	LOS A	14.6	102.5	0.40	0.37	0.40	43.6
12	R2	All MCs	112	0.9	112	0.9	*0.511	69.5	LOS E	7.3	51.7	0.98	0.79	0.98	19.0
Approach			1347	2.0	1347	2.0	0.511	12.2	LOS A	14.6	102.5	0.45	0.41	0.45	35.8
All Vehicles			4135	2.4	4135	2.4	0.911	32.5	LOS C	67.5	476.2	0.77	0.75	0.83	23.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	76	80	64.3	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
East: Parramatta Rd (155m)												
P2	Full	171	180	64.6	LOS F	0.7	0.7	0.96	0.96	218.5	200.0	0.92
North: Lyons Rd (180m)												
P3	Full	81	85	64.4	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
West: Parramatta Rd (140m)												
P4	Full	104	109	64.4	LOS F	0.4	0.4	0.96	0.96	218.3	200.0	0.92
All Pedestrians		432	455	64.5	LOS F	0.7	0.7	0.96	0.96	218.3	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.30.B.PM] 2. Parramatta x Ross - 2030 Base PM (2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	71	1.5	71	1.5	0.388	32.7	LOS C	6.3	44.6	0.90	0.73	0.90	12.3
2	T1	All MCs	72	1.5	72	1.5	0.388	29.8	LOS C	6.3	44.6	0.90	0.73	0.90	8.4
3	R2	All MCs	23	0.0	23	0.0	0.388	42.7	LOS D	6.3	44.6	0.90	0.73	0.90	15.5
Approach			165	1.3	165	1.3	0.388	32.8	LOS C	6.3	44.6	0.90	0.73	0.90	11.0
East: Parramatta Rd (600m)															
4	L2	All MCs	40	0.0	40	0.0	0.131	19.5	LOS B	1.7	17.7	0.53	0.95	0.53	16.2
5	T1	All MCs	1914	3.2	1914	3.2	0.841	21.0	LOS B	36.8	259.3	0.88	0.86	0.93	43.9
6	R2	All MCs	220	0.5	220	0.5	* 0.827	54.8	LOS D	10.6	74.4	1.00	0.96	1.25	26.0
Approach			2174	2.9	2174	2.9	0.841	24.4	LOS B	36.8	259.3	0.88	0.87	0.96	39.6
North: Ross St (85m)															
7	L2	All MCs	132	0.8	132	0.8	0.439	28.1	LOS B	8.2	58.0	0.88	0.82	0.88	30.5
8	T1	All MCs	92	1.1	92	1.1	0.439	49.6	LOS D	8.2	58.0	0.88	0.82	0.88	9.7
9	R2	All MCs	200	0.5	200	0.5	* 0.829	51.9	LOS D	9.8	68.8	1.00	0.99	1.28	18.6
Approach			423	0.7	423	0.7	0.829	44.0	LOS D	9.8	68.8	0.93	0.90	1.07	17.5
West: Parramatta Rd (310m)															
10	L2	All MCs	111	1.9	111	1.9	0.261	29.5	LOS C	4.4	36.8	0.76	0.73	0.76	27.0
11	T1	All MCs	1229	2.7	1229	2.7	* 0.827	31.9	LOS C	26.3	184.5	0.97	0.94	1.07	38.1
Approach			1340	2.6	1340	2.6	0.827	31.7	LOS C	26.3	184.5	0.95	0.92	1.04	37.5
All Vehicles			4102	2.5	4102	2.5	0.841	29.1	LOS C	36.8	259.3	0.91	0.89	1.00	33.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	62	65	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
East: Parramatta Rd (600m)												
P2	Full	274	288	39.7	LOS D	0.7	0.7	0.94	0.94	193.5	200.0	1.03
North: Ross St (85m)												
P3	Full	73	77	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
West: Parramatta Rd (310m)												
P4	Full	63	66	39.3	LOS D	0.2	0.2	0.94	0.94	193.2	200.0	1.04
All Pedestrians		472	497	39.5	LOS D	0.7	0.7	0.94	0.94	193.4	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.30.B.PM] 3. Ross x Bridge - 2030 Base PM (2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	251	2.9	251	2.9	0.625	27.4	LOS B	7.0	50.3	0.95	0.83	0.99	25.0
2	T1	All MCs	372	0.3	372	0.3	* 0.710	23.2	LOS B	10.6	74.1	0.96	0.88	1.04	26.5
Approach			622	1.4	622	1.4	0.710	24.9	LOS B	10.6	74.1	0.96	0.86	1.02	25.8
East: Bridge Rd (500m)															
4	L2	All MCs	46	2.3	46	2.3	* 0.710	17.7	LOS B	16.2	114.3	0.81	0.74	0.82	32.5
5	T1	All MCs	677	0.6	677	0.6	0.710	11.6	LOS A	16.2	114.3	0.81	0.74	0.82	34.9
6	R2	All MCs	129	0.8	129	0.8	0.337	19.3	LOS B	2.9	20.4	0.77	0.74	0.77	32.6
Approach			853	0.7	853	0.7	0.710	13.1	LOS A	16.2	114.3	0.81	0.74	0.81	34.5
North: Ross St (280m)															
7	L2	All MCs	61	0.0	61	0.0	0.172	25.6	LOS B	1.8	12.4	0.84	0.72	0.84	31.1
8	T1	All MCs	339	0.9	339	0.9	0.629	22.7	LOS B	8.7	61.7	0.93	0.81	0.94	26.9
Approach			400	0.8	400	0.8	0.629	23.2	LOS B	8.7	61.7	0.92	0.79	0.92	27.9
West: Bridge Rd (400m)															
10	L2	All MCs	95	2.2	95	2.2	0.509	17.4	LOS B	9.7	68.4	0.70	0.64	0.70	35.6
11	T1	All MCs	407	0.8	407	0.8	0.509	11.9	LOS A	9.7	68.4	0.70	0.64	0.70	35.3
12	R2	All MCs	5	100.0	5	100.0	0.037	26.0	LOS B	0.1	1.6	0.78	0.64	0.78	25.9
Approach			507	2.1	507	2.1	0.509	13.1	LOS A	9.7	68.4	0.70	0.64	0.70	34.5
All Vehicles			2382	1.2	2382	1.2	0.710	17.9	LOS B	16.2	114.3	0.84	0.76	0.86	31.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												

P1	Full	77	81	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
East: Bridge Rd (500m)												
P2	Full	90	95	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
North: Ross St (280m)												
P3	Full	91	96	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)												
P4	Full	88	93	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
All Pedestrians		346	364	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.30.B.PM] 4. Parramatta x Larkin - 2030 Base PM

(2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	2144	3.2	2144	3.2	0.540	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
Approach			2144	3.2	2144	3.2	0.540	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.5
North: Larkin St (37m)															
7	L2	All MCs	59	1.8	59	1.8	0.047	3.5	LOS A	0.2	1.2	0.13	0.48	0.13	45.3
Approach			59	1.8	59	1.8	0.047	3.5	LOS A	0.2	1.2	0.13	0.48	0.13	45.3
West: Parramatta Rd (155m)															
10	L2	All MCs	13	0.0	13	0.0	0.037	5.5	LOS A	0.0	0.0	0.00	0.16	0.00	21.3
11	T1	All MCs	1309	3.2	1309	3.2	0.328	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1322	3.2	1322	3.2	0.328	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.3
All Vehicles			3525	3.2	3525	3.2	0.540	0.2	NA	0.2	1.2	0.00	0.01	0.00	59.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.30.B.PM] 5. Larkin x Sparkes - 2030 Base PM (2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	1	0.0	1	0.0	0.006	3.3	LOS A	0.0	0.0	0.00	0.05	0.00	22.6
2	T1	All MCs	11	0.0	11	0.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	48.6
Approach			12	0.0	12	0.0	0.006	0.3	NA	0.0	0.0	0.00	0.05	0.00	45.1
East: Sparkes St (90m)															
4	L2	All MCs	14	0.0	14	0.0	0.019	4.6	LOS A	0.1	0.5	0.09	0.53	0.09	30.1
5	T1	All MCs	1	0.0	1	0.0	0.019	3.3	LOS A	0.1	0.5	0.09	0.53	0.09	28.4
6	R2	All MCs	11	0.0	11	0.0	0.019	5.0	LOS A	0.1	0.5	0.09	0.53	0.09	33.2
Approach			25	0.0	25	0.0	0.019	4.7	LOS A	0.1	0.5	0.09	0.53	0.09	31.5
North: Larkin St (100m)															
8	T1	All MCs	23	4.5	23	4.5	0.013	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	48.9
9	R2	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.0	0.01	0.02	0.01	35.3
Approach			24	4.3	24	4.3	0.013	0.2	NA	0.0	0.0	0.01	0.02	0.01	48.0
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.019	4.3	LOS A	0.1	0.4	0.11	0.52	0.11	32.6
12	R2	All MCs	20	0.0	20	0.0	0.019	4.5	LOS A	0.1	0.4	0.11	0.52	0.11	26.8
Approach			21	0.0	21	0.0	0.019	4.5	LOS A	0.1	0.4	0.11	0.52	0.11	27.2
All Vehicles			82	1.3	82	1.3	0.019	2.7	NA	0.1	0.5	0.06	0.31	0.06	35.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.30.B.PM] 6. Ross x Arundel - 2030 Base PM (2030 Base PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	54	0.0	54	0.0	0.268	5.6	LOS A	0.9	6.0	0.22	0.28	0.22	37.4
2	T1	All MCs	337	1.2	337	1.2	0.268	0.4	LOS A	0.9	6.0	0.22	0.28	0.22	43.4
3	R2	All MCs	76	1.4	76	1.4	0.268	6.0	LOS A	0.9	6.0	0.22	0.28	0.22	42.5
3u	U	All MCs	4	0.0	4	0.0	0.268	8.1	LOS A	0.9	6.0	0.22	0.28	0.22	36.9
Approach			471	1.1	471	1.1	0.268	2.0	NA	0.9	6.0	0.22	0.28	0.22	42.3
East: Arundel St (250m)															
4	L2	All MCs	65	0.0	65	0.0	0.173	9.5	LOS A	0.6	4.4	0.54	0.92	0.54	34.0
5	T1	All MCs	4	0.0	4	0.0	0.173	14.1	LOS A	0.6	4.4	0.54	0.92	0.54	34.0
6	R2	All MCs	38	0.0	38	0.0	0.173	15.1	LOS B	0.6	4.4	0.54	0.92	0.54	33.9
Approach			107	0.0	107	0.0	0.173	11.6	LOS A	0.6	4.4	0.54	0.92	0.54	34.0
North: Ross St (105m)															
7	L2	All MCs	38	0.0	38	0.0	0.192	5.3	LOS A	0.3	2.1	0.11	0.18	0.11	44.7
8	T1	All MCs	281	0.0	281	0.0	0.192	0.2	LOS A	0.3	2.1	0.11	0.18	0.11	45.9
9	R2	All MCs	25	0.0	25	0.0	0.192	6.3	LOS A	0.3	2.1	0.11	0.18	0.11	38.9
Approach			344	0.0	344	0.0	0.192	1.2	NA	0.3	2.1	0.11	0.18	0.11	44.9
West: Arundel St (155m)															
10	L2	All MCs	21	0.0	21	0.0	0.136	8.2	LOS A	0.5	3.3	0.58	0.98	0.58	27.8
11	T1	All MCs	13	0.0	13	0.0	0.136	12.9	LOS A	0.5	3.3	0.58	0.98	0.58	32.9
12	R2	All MCs	34	0.0	34	0.0	0.136	14.0	LOS A	0.5	3.3	0.58	0.98	0.58	26.6
Approach			67	0.0	67	0.0	0.136	12.0	LOS A	0.5	3.3	0.58	0.98	0.58	28.4
All Vehicles			989	0.5	989	0.5	0.268	3.4	NA	0.9	6.0	0.24	0.36	0.24	39.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [1.30.P.AM] 1. Parramatta x Lyons - 2030 Project Case AM

(2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	105	2.0	105	2.0	0.136	27.1	LOS B	4.2	29.7	0.62	0.68	0.62	27.8
2	T1	All MCs	129	9.8	129	9.8	0.631	62.5	LOS E	9.4	73.9	1.00	0.81	1.01	19.9
3	R2	All MCs	12	72.7	12	72.7	0.631	87.2	LOS F	9.4	73.9	1.00	0.81	1.01	19.1
Approach			246	9.4	246	9.4	0.631	48.5	LOS D	9.4	73.9	0.84	0.75	0.84	22.5
East: Parramatta Rd (155m)															
4	L2	All MCs	120	13.2	120	13.2	0.253	39.3	LOS C	6.6	56.4	0.73	0.74	0.73	26.0
5	T1	All MCs	782	8.7	782	8.7	0.522	34.1	LOS C	19.6	144.2	0.81	0.71	0.81	21.3
Approach			902	9.3	902	9.3	0.522	34.8	LOS C	19.6	144.2	0.80	0.72	0.80	22.3
North: Lyons Rd (180m)															
7	L2	All MCs	88	2.4	88	2.4	0.349	90.3	LOS F	5.6	39.7	0.95	0.77	0.95	13.6
8	T1	All MCs	213	2.0	213	2.0	* 0.867	99.7	LOS F	16.4	116.4	1.00	1.04	1.23	18.6
9	R2	All MCs	5	0.0	5	0.0	0.867	120.5	LOS F	16.4	116.4	1.00	1.04	1.23	12.2
Approach			306	2.1	306	2.1	0.867	97.4	LOS F	16.4	116.4	0.98	0.96	1.15	14.3
West: Parramatta Rd (140m)															
10	L2	All MCs	17	6.2	17	6.2	0.074	12.1	LOS A	1.1	12.5	0.31	0.53	0.31	33.2
11	T1	All MCs	2575	3.9	2575	3.9	* 0.949	34.3	LOS C	89.9	641.6	0.94	0.94	1.04	22.6
12	R2	All MCs	283	3.7	283	3.7	0.522	56.2	LOS D	15.9	115.2	0.88	0.82	0.88	22.7
Approach			2875	3.9	2875	3.9	0.949	36.3	LOS C	89.9	641.6	0.93	0.93	1.02	21.3
All Vehicles			4329	5.2	4329	5.2	0.949	41.0	LOS C	89.9	641.6	0.90	0.88	0.97	20.5

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	57	60	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Parramatta Rd (155m)												
P2	Full	132	139	64.5	LOS F	0.5	0.5	0.96	0.96	218.3	200.0	0.92
North: Lyons Rd (180m)												
P3	Full	69	73	64.3	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
West: Parramatta Rd (140m)												
P4	Full	215	226	64.7	LOS F	0.9	0.9	0.97	0.97	218.6	200.0	0.91
All Pedestrians		473	498	64.6	LOS F	0.9	0.9	0.96	0.96	218.4	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.30.P.AM] 2. Parramatta x Ross - 2030 Project Case AM

(2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	34	9.4	34	9.4	0.483	62.7	LOS E	6.5	46.9	0.99	0.77	0.99	10.9
2	T1	All MCs	42	0.0	42	0.0	0.483	59.4	LOS E	6.5	46.9	0.99	0.77	0.99	7.8
3	R2	All MCs	22	4.8	22	4.8	0.483	78.8	LOS F	6.5	46.9	0.99	0.77	0.99	13.8
Approach			98	4.3	98	4.3	0.483	64.9	LOS E	6.5	46.9	0.99	0.77	0.99	10.2
East: Parramatta Rd (600m)															
4	L2	All MCs	34	3.1	34	3.1	0.072	16.0	LOS B	1.3	12.7	0.35	1.04	0.35	16.1
5	T1	All MCs	804	9.3	804	9.3	0.291	7.1	LOS A	9.0	66.3	0.38	0.36	0.38	52.4
6	R2	All MCs	133	2.4	133	2.4	* 0.773	77.7	LOS F	9.5	67.8	1.00	0.89	1.15	20.7
Approach			971	8.1	971	8.1	0.773	17.0	LOS B	9.5	67.8	0.46	0.46	0.48	41.6
North: Ross St (85m)															
7	L2	All MCs	96	0.0	96	0.0	0.592	54.5	LOS D	12.6	88.8	0.97	0.83	0.97	22.7
8	T1	All MCs	102	2.1	102	2.1	0.592	76.1	LOS F	12.6	88.8	0.97	0.83	0.97	8.6
9	R2	All MCs	152	5.6	152	5.6	* 0.932	92.3	LOS F	12.3	90.3	1.00	1.07	1.43	12.4
Approach			349	3.0	349	3.0	0.932	77.2	LOS F	12.6	90.3	0.98	0.93	1.17	12.6
West: Parramatta Rd (310m)															
10	L2	All MCs	266	2.0	266	2.0	0.352	23.5	LOS B	11.5	93.0	0.58	0.71	0.58	29.9
11	T1	All MCs	2267	4.7	2267	4.7	* 0.994	66.8	LOS E	97.9	699.7	0.99	1.19	1.25	27.2
Approach			2534	4.4	2534	4.4	0.994	62.3	LOS E	97.9	699.7	0.95	1.14	1.18	27.4
All Vehicles			3952	5.2	3952	5.2	0.994	52.5	LOS D	97.9	699.7	0.83	0.95	1.00	26.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	52	55	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Parramatta Rd (600m)												
P2	Full	228	240	64.8	LOS F	0.9	0.9	0.97	0.97	218.6	200.0	0.91
North: Ross St (85m)												
P3	Full	47	49	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Parramatta Rd (310m)												
P4	Full	51	54	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		378	398	64.6	LOS F	0.9	0.9	0.96	0.96	218.4	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.30.P.AM] 3. Ross x Bridge - 2030 Project Case AM

(2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	107	5.9	107	5.9	0.378	29.0	LOS C	3.0	21.8	0.93	0.76	0.93	24.5
2	T1	All MCs	163	4.5	163	4.5	0.410	22.8	LOS B	4.3	31.2	0.91	0.73	0.91	26.7
Approach			271	5.1	271	5.1	0.410	25.3	LOS B	4.3	31.2	0.92	0.74	0.92	25.6
East: Bridge Rd (500m)															
4	L2	All MCs	61	1.7	61	1.7	0.490	13.2	LOS A	9.3	66.4	0.63	0.58	0.63	34.2
5	T1	All MCs	480	1.8	480	1.8	0.490	7.8	LOS A	9.3	66.4	0.63	0.58	0.63	36.3
6	R2	All MCs	38	0.0	38	0.0	0.180	25.1	LOS B	1.0	6.7	0.84	0.72	0.84	30.6
Approach			579	1.6	579	1.6	0.490	9.5	LOS A	9.3	66.4	0.64	0.59	0.64	35.7
North: Ross St (280m)															
7	L2	All MCs	87	6.0	87	6.0	0.640	32.9	LOS C	6.4	46.0	0.97	0.84	1.03	29.8
8	T1	All MCs	391	2.7	391	2.7	* 0.640	25.9	LOS B	7.3	52.5	0.97	0.84	1.01	25.1
Approach			478	3.3	478	3.3	0.640	27.2	LOS B	7.3	52.5	0.97	0.84	1.02	26.4
West: Bridge Rd (400m)															
10	L2	All MCs	46	4.5	46	4.5	* 0.795	24.5	LOS B	21.7	154.5	0.84	0.83	0.92	34.3
11	T1	All MCs	806	2.1	806	2.1	0.795	19.1	LOS B	21.7	154.5	0.84	0.83	0.92	34.4
12	R2	All MCs	15	100.0	15	100.0	0.064	21.7	LOS B	0.3	3.5	0.62	0.64	0.62	29.2
Approach			867	3.9	867	3.9	0.795	19.5	LOS B	21.7	154.5	0.83	0.82	0.91	32.3
All Vehicles			2195	3.3	2195	3.3	0.795	19.2	LOS B	21.7	154.5	0.82	0.75	0.86	31.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												

P1	Full	94	99	24.4	LOS C	0.2	0.2	0.90	0.90	178.2	200.0	1.12
East: Bridge Rd (500m)												
P2	Full	150	158	24.5	LOS C	0.2	0.2	0.91	0.91	178.3	200.0	1.12
North: Ross St (280m)												
P3	Full	70	74	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)												
P4	Full	98	103	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12
All Pedestrians		412	434	24.4	LOS C	0.2	0.2	0.90	0.90	178.3	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.30.P.AM] 4. Parramatta x Larkin - 2030 Project Case AM (2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	945	10.6	945	10.6	0.244	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			945	10.6	945	10.6	0.244	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North: Larkin St (37m)															
7	L2	All MCs	64	9.8	64	9.8	0.055	3.6	LOS A	0.2	1.5	0.17	0.49	0.17	44.4
Approach			64	9.8	64	9.8	0.055	3.6	LOS A	0.2	1.5	0.17	0.49	0.17	44.4
West: Parramatta Rd (155m)															
10	L2	All MCs	75	4.2	75	4.2	0.086	5.6	LOS A	0.0	0.0	0.00	0.34	0.00	20.4
11	T1	All MCs	2517	5.1	2517	5.1	0.644	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.1
Approach			2592	5.1	2592	5.1	0.644	0.3	NA	0.0	0.0	0.00	0.02	0.00	57.8
All Vehicles			3601	6.6	3601	6.6	0.644	0.3	NA	0.2	1.5	0.00	0.02	0.00	58.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.30.P.AM] 5. Larkin x Sparkes - 2030 Project Case AM

(2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	62	3.4	62	3.4	0.039	3.3	LOS A	0.0	0.0	0.00	0.44	0.00	20.1
2	T1	All MCs	9	11.1	9	11.1	0.039	0.0	LOS A	0.0	0.0	0.00	0.44	0.00	39.6
Approach			72	4.4	72	4.4	0.039	2.9	NA	0.0	0.0	0.00	0.44	0.00	22.0
East: Sparkes St (90m)															
4	L2	All MCs	15	14.3	15	14.3	0.068	4.8	LOS A	0.3	1.8	0.16	0.47	0.16	31.3
5	T1	All MCs	62	1.7	62	1.7	0.068	3.6	LOS A	0.3	1.8	0.16	0.47	0.16	29.4
6	R2	All MCs	7	0.0	7	0.0	0.068	5.1	LOS A	0.3	1.8	0.16	0.47	0.16	34.4
Approach			84	3.8	84	3.8	0.068	3.9	LOS A	0.3	1.8	0.16	0.47	0.16	30.2
North: Larkin St (100m)															
8	T1	All MCs	31	0.0	31	0.0	0.016	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	49.0
9	R2	All MCs	1	0.0	1	0.0	0.016	4.6	LOS A	0.0	0.0	0.01	0.02	0.01	35.4
Approach			32	0.0	32	0.0	0.016	0.2	NA	0.0	0.0	0.01	0.02	0.01	48.3
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.019	4.3	LOS A	0.1	0.5	0.19	0.52	0.19	31.9
12	R2	All MCs	16	20.0	16	20.0	0.019	5.2	LOS A	0.1	0.5	0.19	0.52	0.19	25.7
Approach			17	18.8	17	18.8	0.019	5.1	LOS A	0.1	0.5	0.19	0.52	0.19	26.2
All Vehicles			204	4.6	204	4.6	0.068	3.1	NA	0.3	1.8	0.08	0.40	0.08	28.5

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.30.P.AM] 6. Ross x Arundel - 2030 Project Case AM

(2030 Project Case AM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV %]	Arrival Flows [Total veh/h	HV %]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist m]	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	82	5.1	82	5.1	0.253	5.6	LOS A	1.0	7.3	0.27	0.36	0.27	36.3
2	T1	All MCs	246	3.8	246	3.8	0.253	0.6	LOS A	1.0	7.3	0.27	0.36	0.27	41.5
3	R2	All MCs	76	9.7	76	9.7	0.253	6.1	LOS A	1.0	7.3	0.27	0.36	0.27	41.2
3u	U	All MCs	12	0.0	12	0.0	0.253	7.9	LOS A	1.0	7.3	0.27	0.36	0.27	35.5
Approach			416	5.1	416	5.1	0.253	2.8	NA	1.0	7.3	0.27	0.36	0.27	40.1
East: Arundel St (250m)															
4	L2	All MCs	35	12.1	35	12.1	0.097	10.0	LOS A	0.3	2.5	0.51	0.92	0.51	33.8
5	T1	All MCs	5	20.0	5	20.0	0.097	16.6	LOS B	0.3	2.5	0.51	0.92	0.51	34.0
6	R2	All MCs	19	0.0	19	0.0	0.097	13.6	LOS A	0.3	2.5	0.51	0.92	0.51	34.1
Approach			59	8.9	59	8.9	0.097	11.7	LOS A	0.3	2.5	0.51	0.92	0.51	33.9
North: Ross St (105m)															
7	L2	All MCs	37	11.4	37	11.4	0.221	5.7	LOS A	0.7	5.1	0.23	0.30	0.23	42.8
8	T1	All MCs	261	2.8	261	2.8	0.221	0.5	LOS A	0.7	5.1	0.23	0.30	0.23	43.1
9	R2	All MCs	75	0.0	75	0.0	0.221	6.0	LOS A	0.7	5.1	0.23	0.30	0.23	37.4
Approach			373	3.1	373	3.1	0.221	2.1	NA	0.7	5.1	0.23	0.30	0.23	41.6
West: Arundel St (155m)															
10	L2	All MCs	28	3.7	28	3.7	0.100	7.9	LOS A	0.3	2.5	0.52	0.91	0.52	28.6
11	T1	All MCs	6	0.0	6	0.0	0.100	12.2	LOS A	0.3	2.5	0.52	0.91	0.52	33.7
12	R2	All MCs	23	4.5	23	4.5	0.100	14.0	LOS A	0.3	2.5	0.52	0.91	0.52	27.4
Approach			58	3.6	58	3.6	0.100	10.8	LOS A	0.3	2.5	0.52	0.91	0.52	28.9
All Vehicles			905	4.4	905	4.4	0.253	3.6	NA	1.0	7.3	0.29	0.40	0.29	38.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [1.30.P.PM] 1. Parramatta x Lyons - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Lyons Rd / Missenden Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Missenden Rd (500m)															
1	L2	All MCs	141	0.0	141	0.0	0.250	56.6	LOS E	7.2	50.3	0.80	0.75	0.80	23.6
2	T1	All MCs	247	1.3	247	1.3	*0.910	92.3	LOS F	19.7	140.7	1.00	1.11	1.30	17.9
3	R2	All MCs	3	66.7	3	66.7	0.910	104.6	LOS F	19.7	140.7	1.00	1.11	1.30	17.3
Approach			392	1.3	392	1.3	0.910	79.6	LOS F	19.7	140.7	0.93	0.98	1.12	17.6
East: Parramatta Rd (155m)															
4	L2	All MCs	157	6.7	157	6.7	0.225	22.6	LOS B	6.5	54.3	0.54	0.68	0.54	31.3
5	T1	All MCs	2083	2.6	2083	2.6	*0.912	35.5	LOS C	67.6	477.1	0.96	0.94	1.03	20.7
Approach			2240	2.9	2240	2.9	0.912	34.6	LOS C	67.6	477.1	0.93	0.92	0.99	21.8
North: Lyons Rd (180m)															
7	L2	All MCs	52	0.0	52	0.0	0.205	62.0	LOS E	3.2	22.2	0.93	0.74	0.93	13.8
8	T1	All MCs	99	0.0	99	0.0	0.432	60.7	LOS E	6.8	47.4	0.97	0.77	0.97	20.2
9	R2	All MCs	6	0.0	6	0.0	0.432	87.7	LOS F	6.8	47.4	0.97	0.77	0.97	13.6
Approach			157	0.0	157	0.0	0.432	62.2	LOS E	6.8	47.4	0.96	0.76	0.96	18.3
West: Parramatta Rd (140m)															
10	L2	All MCs	25	0.0	25	0.0	0.052	12.1	LOS A	0.9	8.7	0.33	0.82	0.33	29.3
11	T1	All MCs	1214	2.2	1214	2.2	0.412	6.9	LOS A	14.7	102.9	0.40	0.37	0.40	43.5
12	R2	All MCs	112	0.9	112	0.9	*0.511	69.5	LOS E	7.3	51.7	0.98	0.79	0.98	19.0
Approach			1351	2.0	1351	2.0	0.511	12.2	LOS A	14.7	102.9	0.45	0.42	0.45	35.8
All Vehicles			4139	2.4	4139	2.4	0.912	32.6	LOS C	67.6	477.1	0.77	0.75	0.83	23.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Missenden Rd (500m)												
P1	Full	76	80	64.3	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
East: Parramatta Rd (155m)												
P2	Full	171	180	64.6	LOS F	0.7	0.7	0.96	0.96	218.5	200.0	0.92
North: Lyons Rd (180m)												
P3	Full	81	85	64.4	LOS F	0.3	0.3	0.96	0.96	218.2	200.0	0.92
West: Parramatta Rd (140m)												
P4	Full	104	109	64.4	LOS F	0.4	0.4	0.96	0.96	218.3	200.0	0.92
All Pedestrians		432	455	64.5	LOS F	0.7	0.7	0.96	0.96	218.3	200.0	0.92

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [2.30.P.PM] 2. Parramatta x Ross - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd / Ross St / Western Av
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Western Av															
1	L2	All MCs	71	1.5	71	1.5	0.366	35.1	LOS C	6.8	48.3	0.88	0.72	0.88	12.2
2	T1	All MCs	72	1.5	72	1.5	0.366	32.0	LOS C	6.8	48.3	0.88	0.72	0.88	8.3
3	R2	All MCs	23	0.0	23	0.0	0.366	43.6	LOS D	6.8	48.3	0.88	0.72	0.88	15.4
Approach			165	1.3	165	1.3	0.366	34.9	LOS C	6.8	48.3	0.88	0.72	0.88	10.9
East: Parramatta Rd (600m)															
4	L2	All MCs	40	0.0	40	0.0	0.127	20.0	LOS B	1.9	19.0	0.52	0.94	0.52	16.2
5	T1	All MCs	1914	3.2	1914	3.2	* 0.828	20.4	LOS B	38.3	269.9	0.86	0.82	0.88	44.5
6	R2	All MCs	221	0.5	221	0.5	0.812	59.2	LOS E	11.5	81.2	1.00	0.93	1.20	25.1
Approach			2175	2.9	2175	2.9	0.828	24.3	LOS B	38.3	269.9	0.87	0.84	0.91	39.6
North: Ross St (85m)															
7	L2	All MCs	132	0.8	132	0.8	0.415	28.4	LOS B	8.9	62.8	0.86	0.82	0.86	30.0
8	T1	All MCs	93	1.1	93	1.1	0.415	52.8	LOS D	8.9	62.8	0.86	0.82	0.86	9.6
9	R2	All MCs	201	0.5	201	0.5	* 0.814	54.9	LOS D	10.7	75.0	1.00	0.97	1.23	18.0
Approach			425	0.7	425	0.7	0.814	46.2	LOS D	10.7	75.0	0.92	0.89	1.03	17.1
West: Parramatta Rd (310m)															
10	L2	All MCs	171	1.9	171	1.9	0.343	31.7	LOS C	7.1	56.6	0.77	0.76	0.77	25.7
11	T1	All MCs	1256	2.6	1256	2.6	0.812	32.3	LOS C	28.4	199.3	0.96	0.90	1.02	37.9
Approach			1426	2.5	1426	2.5	0.812	32.2	LOS C	28.4	199.3	0.93	0.89	0.99	36.9
All Vehicles			4192	2.5	4192	2.5	0.828	29.7	LOS C	38.3	269.9	0.90	0.85	0.95	32.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Western Av												
P1	Full	77	81	44.3	LOS E	0.2	0.2	0.94	0.94	198.2	200.0	1.01
East: Parramatta Rd (600m)												
P2	Full	90	95	44.4	LOS E	0.3	0.3	0.94	0.94	198.2	200.0	1.01
North: Ross St (85m)												
P3	Full	91	96	44.4	LOS E	0.3	0.3	0.94	0.94	198.2	200.0	1.01
West: Parramatta Rd (310m)												
P4	Full	88	93	44.4	LOS E	0.2	0.2	0.94	0.94	198.2	200.0	1.01
All Pedestrians		346	364	44.3	LOS E	0.3	0.3	0.94	0.94	198.2	200.0	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [3.30.P.PM] 3. Ross x Bridge - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St / Bridge Rd
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60.0 seconds (Site Optimum Cycle Time - Minimum Delay)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Queued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (110m)															
1	L2	All MCs	262	2.8	262	2.8	0.617	26.7	LOS B	7.2	51.7	0.95	0.82	0.97	25.2
2	T1	All MCs	402	0.3	402	0.3	* 0.734	23.3	LOS B	11.6	81.2	0.96	0.90	1.06	26.5
Approach			664	1.3	664	1.3	0.734	24.6	LOS B	11.6	81.2	0.96	0.87	1.02	25.9
East: Bridge Rd (500m)															
4	L2	All MCs	46	2.3	46	2.3	* 0.734	19.1	LOS B	17.3	122.1	0.84	0.78	0.86	31.9
5	T1	All MCs	681	0.9	681	0.9	0.734	12.9	LOS A	17.3	122.1	0.84	0.78	0.86	34.4
6	R2	All MCs	129	0.8	129	0.8	0.350	20.2	LOS B	3.0	21.0	0.79	0.75	0.79	32.2
Approach			857	1.0	857	1.0	0.734	14.4	LOS A	17.3	122.1	0.83	0.77	0.85	34.0
North: Ross St (280m)															
7	L2	All MCs	61	0.0	61	0.0	0.165	24.9	LOS B	1.8	12.4	0.83	0.72	0.83	31.4
8	T1	All MCs	341	0.9	341	0.9	0.602	21.8	LOS B	8.6	60.5	0.91	0.79	0.91	27.4
Approach			402	0.8	402	0.8	0.602	22.3	LOS B	8.6	60.5	0.90	0.78	0.90	28.3
West: Bridge Rd (400m)															
10	L2	All MCs	95	2.2	95	2.2	0.522	18.3	LOS B	10.0	70.3	0.72	0.66	0.72	35.3
11	T1	All MCs	407	0.8	407	0.8	0.522	12.8	LOS A	10.0	70.3	0.72	0.66	0.72	35.1
12	R2	All MCs	5	100.0	5	100.0	0.039	27.6	LOS B	0.1	1.7	0.81	0.64	0.81	25.5
Approach			507	2.1	507	2.1	0.522	14.0	LOS A	10.0	70.3	0.72	0.65	0.72	34.2
All Vehicles			2431	1.3	2431	1.3	0.734	18.4	LOS B	17.3	122.1	0.85	0.78	0.88	31.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Queued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Ross St (110m)												

P1	Full	77	81	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
East: Bridge Rd (500m)												
P2	Full	90	95	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
North: Ross St (280m)												
P3	Full	91	96	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
West: Bridge Rd (400m)												
P4	Full	88	93	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
All Pedestrians		346	364	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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MOVEMENT SUMMARY

Site: [4.30.P.PM] 4. Parramatta x Larkin - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Parramatta Rd x Larkin St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Parramatta Rd (310m)															
5	T1	All MCs	2145	3.2	2145	3.2	0.540	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
Approach			2145	3.2	2145	3.2	0.540	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.5
North: Larkin St (37m)															
7	L2	All MCs	145	1.4	145	1.4	0.115	3.5	LOS A	0.4	3.1	0.14	0.49	0.14	45.2
Approach			145	1.4	145	1.4	0.115	3.5	LOS A	0.4	3.1	0.14	0.49	0.14	45.2
West: Parramatta Rd (155m)															
10	L2	All MCs	16	0.0	16	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.18	0.00	21.2
11	T1	All MCs	1309	3.2	1309	3.2	0.328	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1325	3.2	1325	3.2	0.328	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.2
All Vehicles			3616	3.1	3616	3.1	0.540	0.3	NA	0.4	3.1	0.01	0.02	0.01	58.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5.30.P.PM] 5. Larkin x Sparkes - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Larkin St x Sparkes St
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Larkin St (37m)															
1	L2	All MCs	3	0.0	3	0.0	0.007	3.3	LOS A	0.0	0.0	0.00	0.12	0.00	22.1
2	T1	All MCs	11	0.0	11	0.0	0.007	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	46.7
Approach			14	0.0	14	0.0	0.007	0.8	NA	0.0	0.0	0.00	0.12	0.00	38.9
East: Sparkes St (90m)															
4	L2	All MCs	14	0.0	14	0.0	0.025	4.6	LOS A	0.1	0.6	0.09	0.51	0.09	30.6
5	T1	All MCs	8	12.5	8	12.5	0.025	3.4	LOS A	0.1	0.6	0.09	0.51	0.09	28.5
6	R2	All MCs	11	0.0	11	0.0	0.025	5.0	LOS A	0.1	0.6	0.09	0.51	0.09	33.6
Approach			33	3.2	33	3.2	0.025	4.4	LOS A	0.1	0.6	0.09	0.51	0.09	31.1
North: Larkin St (100m)															
8	T1	All MCs	23	4.5	23	4.5	0.013	0.0	LOS A	0.0	0.0	0.01	0.02	0.01	48.9
9	R2	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.0	0.01	0.02	0.01	35.3
Approach			24	4.3	24	4.3	0.013	0.2	NA	0.0	0.0	0.01	0.02	0.01	48.0
West: Sparkes St (60m)															
10	L2	All MCs	1	0.0	1	0.0	0.101	4.3	LOS A	0.4	2.5	0.15	0.53	0.15	32.4
12	R2	All MCs	106	1.0	106	1.0	0.101	4.6	LOS A	0.4	2.5	0.15	0.53	0.15	26.5
Approach			107	1.0	107	1.0	0.101	4.6	LOS A	0.4	2.5	0.15	0.53	0.15	26.6
All Vehicles			178	1.8	178	1.8	0.101	3.7	NA	0.4	2.5	0.11	0.43	0.11	30.7

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6.30.P.PM] 6. Ross x Arundel - 2030 Project Case PM

(2030 Project Case PM)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Ross St x Arundel St
Site Category: Existing Design
Stop (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Ross St (85m)															
1	L2	All MCs	55	0.0	55	0.0	0.299	5.6	LOS A	0.9	6.2	0.20	0.26	0.20	37.8
2	T1	All MCs	397	1.3	397	1.3	0.299	0.4	LOS A	0.9	6.2	0.20	0.26	0.20	44.0
3	R2	All MCs	76	1.4	76	1.4	0.299	6.0	LOS A	0.9	6.2	0.20	0.26	0.20	42.8
3u	U	All MCs	4	0.0	4	0.0	0.299	8.2	LOS A	0.9	6.2	0.20	0.26	0.20	37.4
Approach			532	1.2	532	1.2	0.299	1.8	NA	0.9	6.2	0.20	0.26	0.20	42.9
East: Arundel St (250m)															
4	L2	All MCs	66	0.0	66	0.0	0.186	9.5	LOS A	0.7	4.8	0.57	0.92	0.57	33.6
5	T1	All MCs	4	0.0	4	0.0	0.186	15.3	LOS B	0.7	4.8	0.57	0.92	0.57	33.6
6	R2	All MCs	38	0.0	38	0.0	0.186	16.5	LOS B	0.7	4.8	0.57	0.92	0.57	33.5
Approach			108	0.0	108	0.0	0.186	12.1	LOS A	0.7	4.8	0.57	0.92	0.57	33.6
North: Ross St (105m)															
7	L2	All MCs	38	0.0	38	0.0	0.195	5.6	LOS A	0.3	2.4	0.13	0.20	0.13	44.5
8	T1	All MCs	281	0.0	281	0.0	0.195	0.3	LOS A	0.3	2.4	0.13	0.20	0.13	45.6
9	R2	All MCs	27	0.0	27	0.0	0.195	6.6	LOS A	0.3	2.4	0.13	0.20	0.13	38.7
Approach			346	0.0	346	0.0	0.195	1.4	NA	0.3	2.4	0.13	0.20	0.13	44.6
West: Arundel St (155m)															
10	L2	All MCs	21	0.0	21	0.0	0.152	8.6	LOS A	0.5	3.6	0.62	1.00	0.62	27.1
11	T1	All MCs	13	0.0	13	0.0	0.152	14.0	LOS A	0.5	3.6	0.62	1.00	0.62	32.2
12	R2	All MCs	34	0.0	34	0.0	0.152	15.3	LOS B	0.5	3.6	0.62	1.00	0.62	25.9
Approach			67	0.0	67	0.0	0.152	12.9	LOS A	0.5	3.6	0.62	1.00	0.62	27.7
All Vehicles			1054	0.6	1054	0.6	0.299	3.4	NA	0.9	6.2	0.24	0.35	0.24	40.0

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Appendix B

Basement Swept Paths

A3

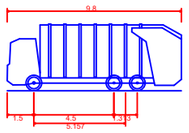


B1 WASTE PARKING

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Issue	Date	By	Chkd	Appd
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status **DRAFT**

Job No	Drawing No	Issue
304985-00	**SKT017**	**C**

549

Do not scale

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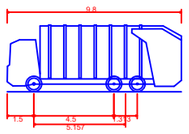
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Issue	Date	By	Chkd	Appd
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

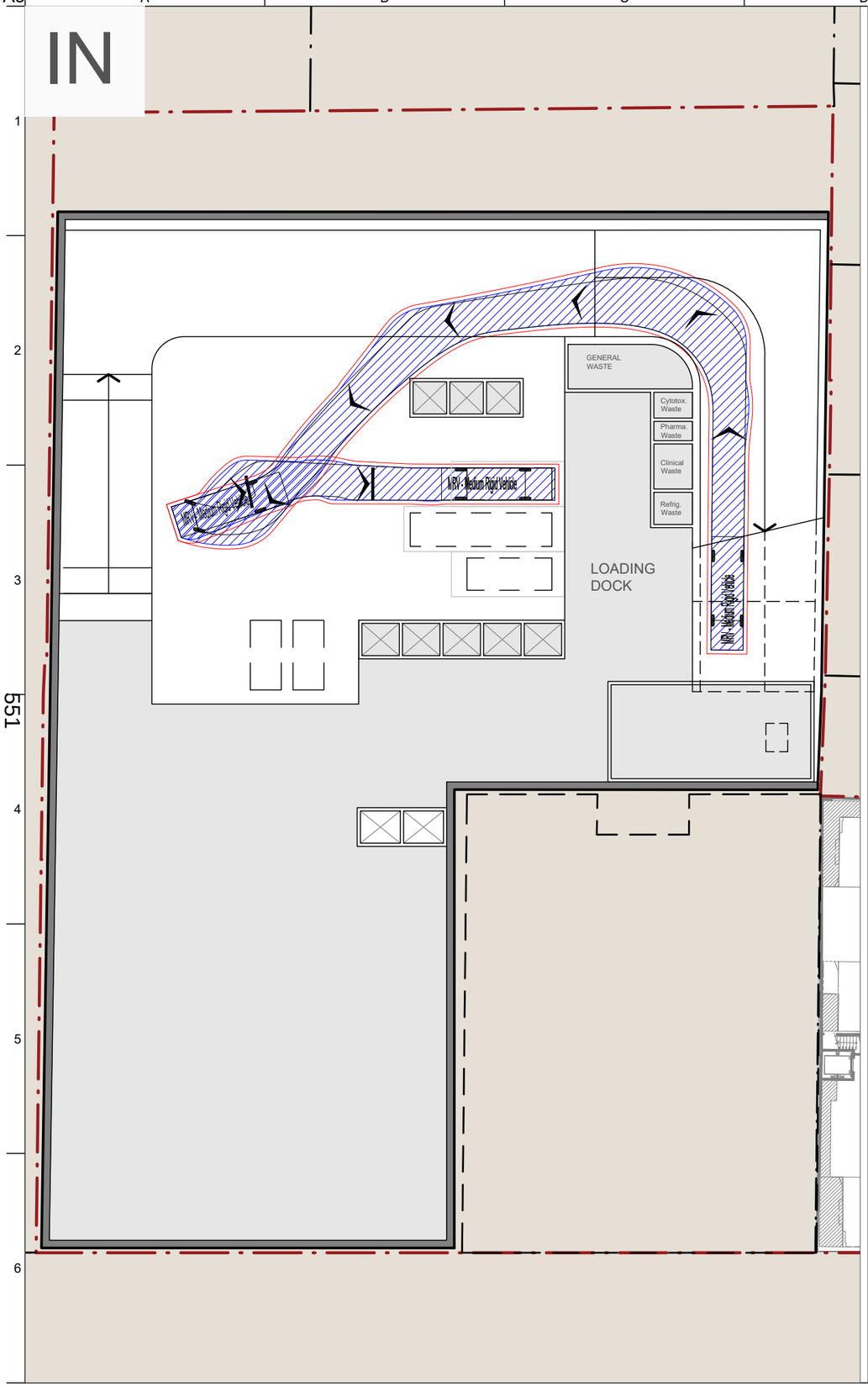
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304985-00	**SKT017**	**C**

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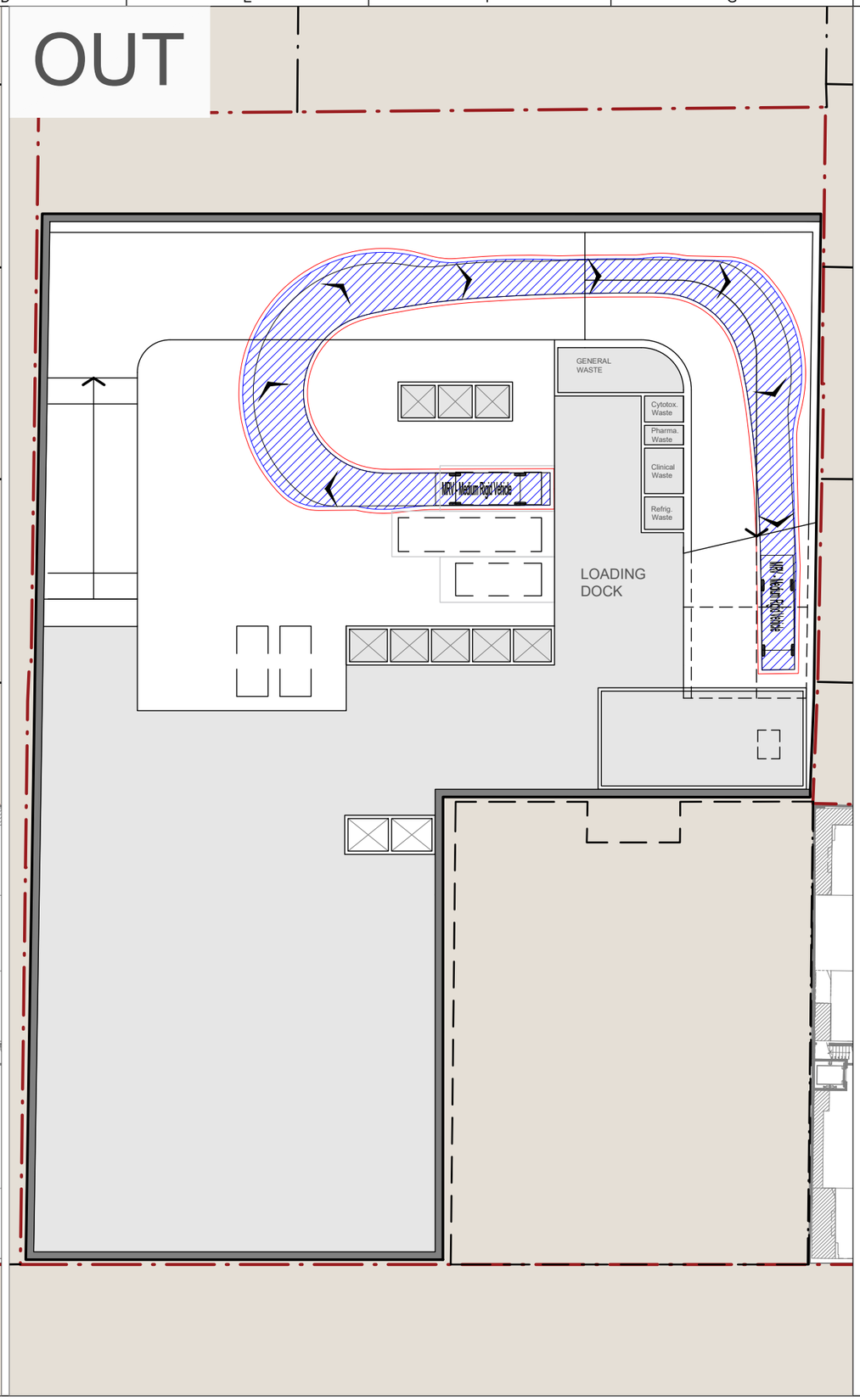
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A3

IN



OUT



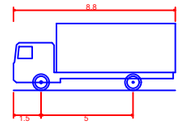
551

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Issue	Date	By	Chkd	Appd
B	20/07/26	JG	SH	SH
A	01/10/25	LW	WZ	WZ
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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
BASEMENT 1
MRV SWEPT PATH ASSESSMENT
MRV BAY 1

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

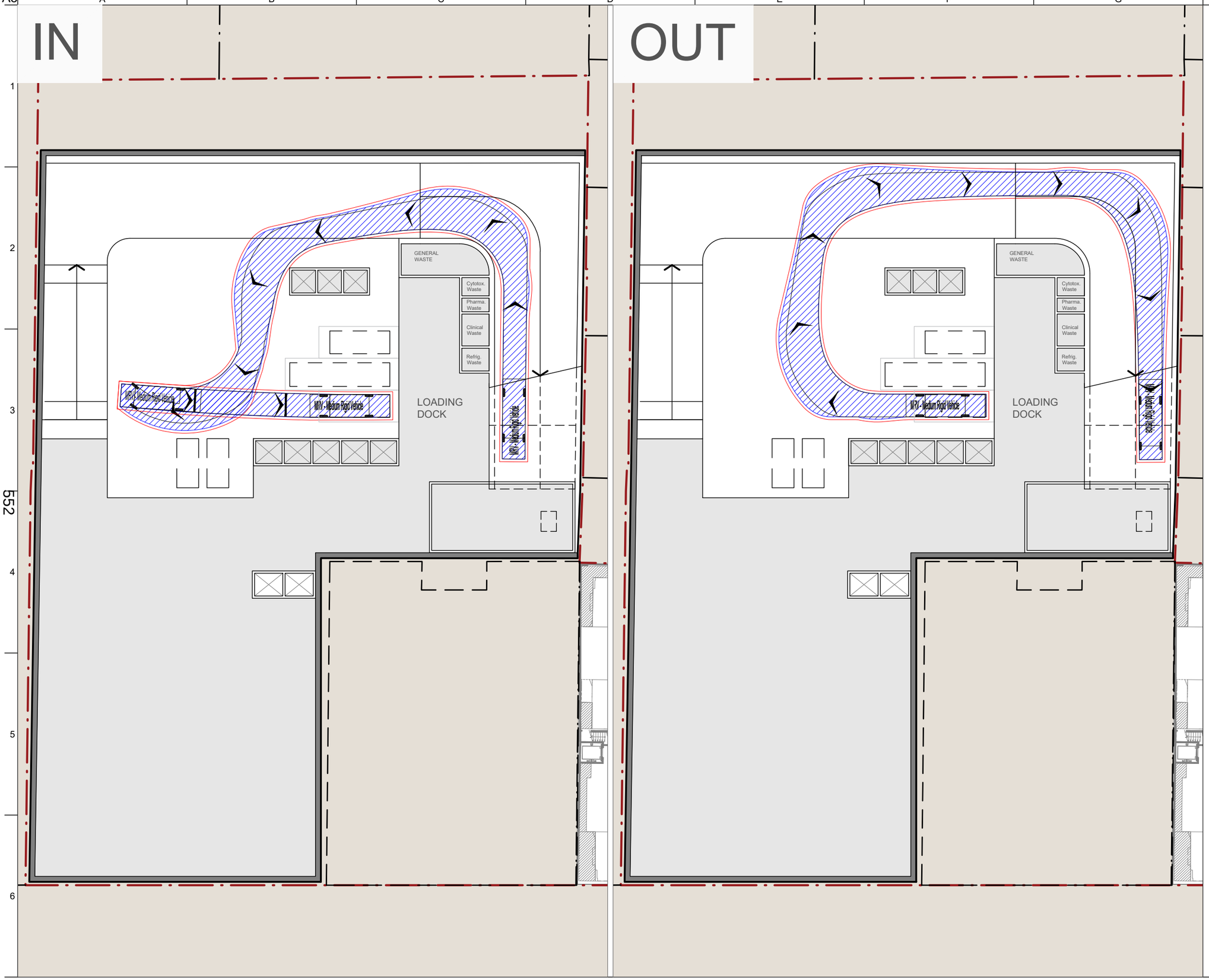
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A3

IN

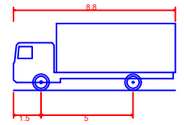
OUT



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Issue	Date	By	Chkd	Appd
B	20/07/26	JG	SH	SH
A	01/10/25	LW	WZ	WZ
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
BASEMENT 1
MRV SWEPT PATH ASSESSMENT
MRV BAY 2

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

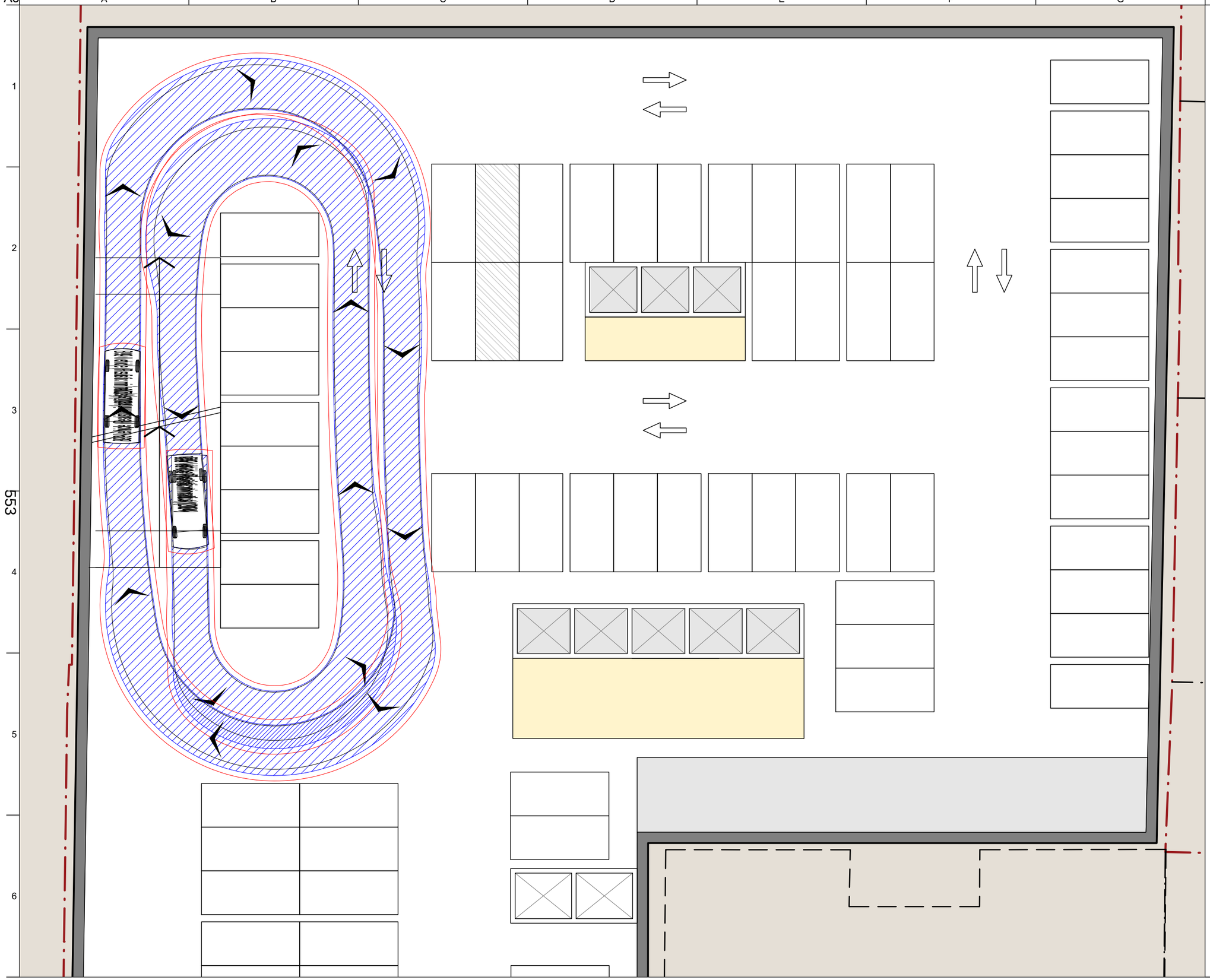
Job No	Drawing No	Issue
304985-00	**SKT004**	**B**

552

Do not scale

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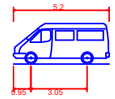
A3



Legend

- Body Envelope
- 300mm Envelope
- Wheel Envelope

Design Vehicle(s)



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.250m

Issue	Date	By	Chkd	Appd
B	20/07/26	JG	SH	SH
A	01/10/25	LW	WZ	WZ
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
BASEMENT 1
B99 SWEPT PATH ASSESSMENT
B99 CIRCULATION

Scale at A3 1:200

Discipline TRAFFIC

Drawing Status **DRAFT**

Job No	Drawing No	Issue
304985-00	**SKT005**	**B**

Do not scale

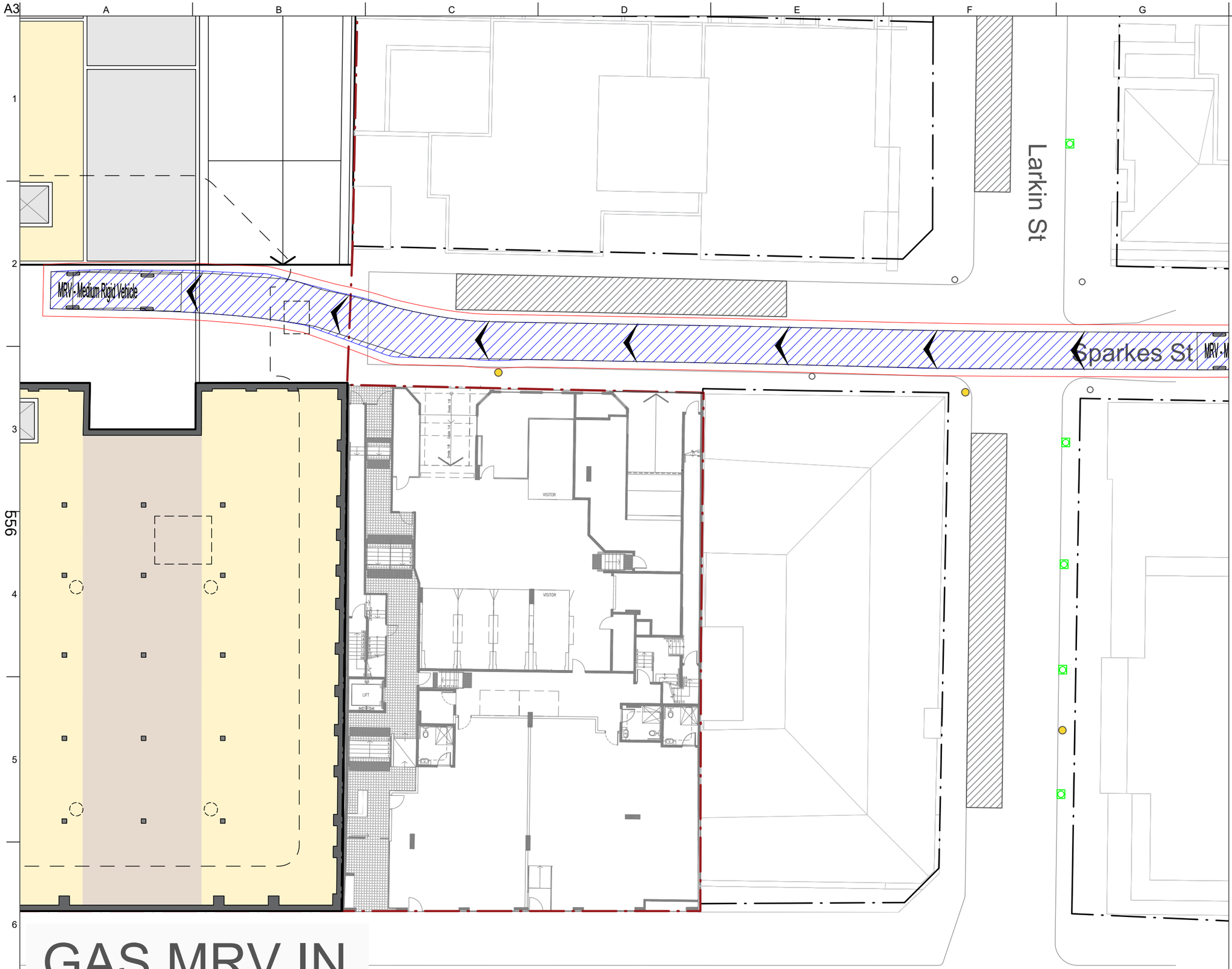
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Appendix C

On-street Swept Paths

C.1 Option 1 paths

A3

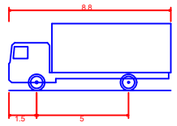


GAS MRV IN

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

ARUP

Arup, Level 5, 151 Clarence St
Sydney, NSW, 2000
Tel +61(02)9320 9320 Fax +61(02)9320 9321
www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

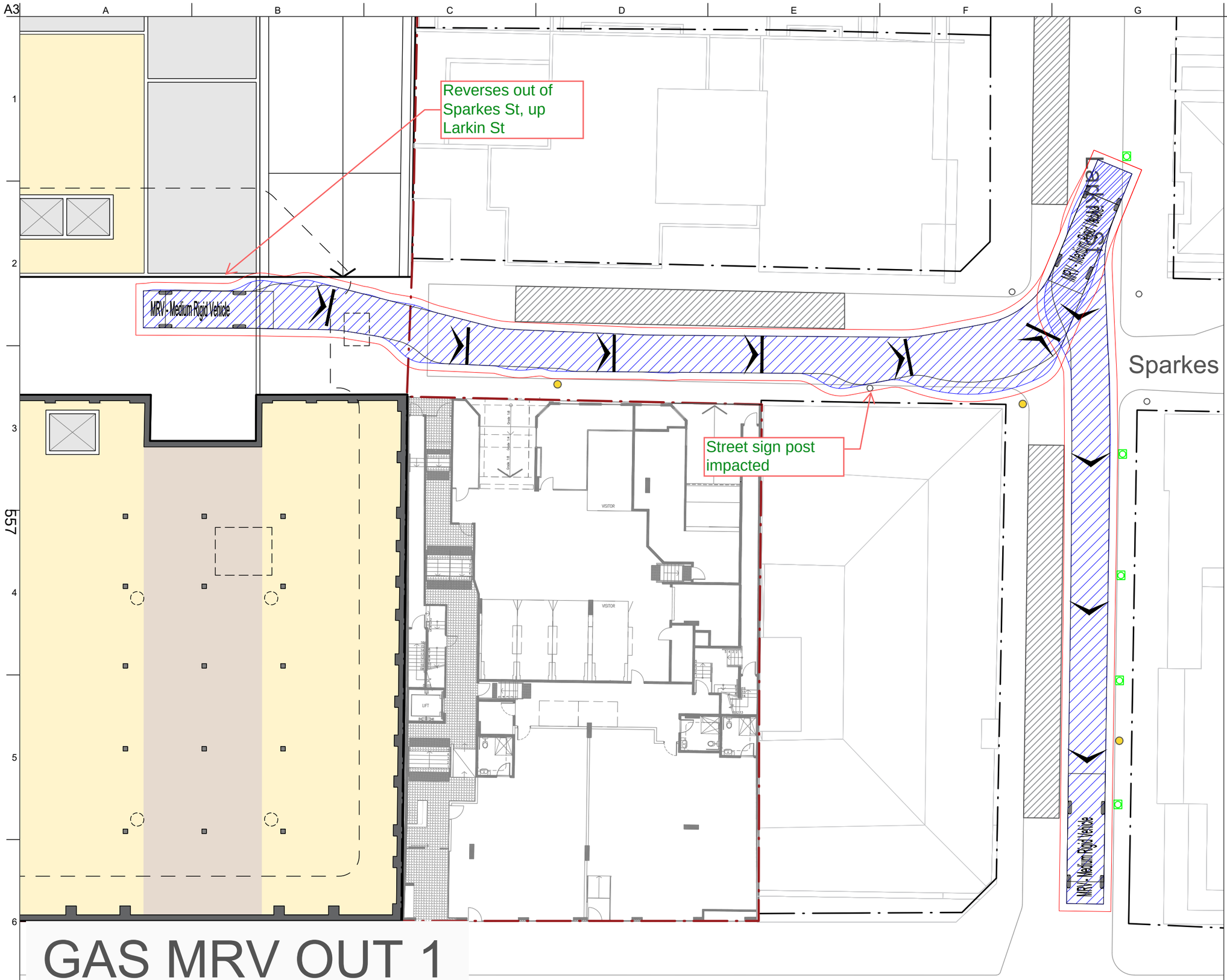
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT019**	**D**

Do not scale

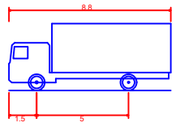
© Arup



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

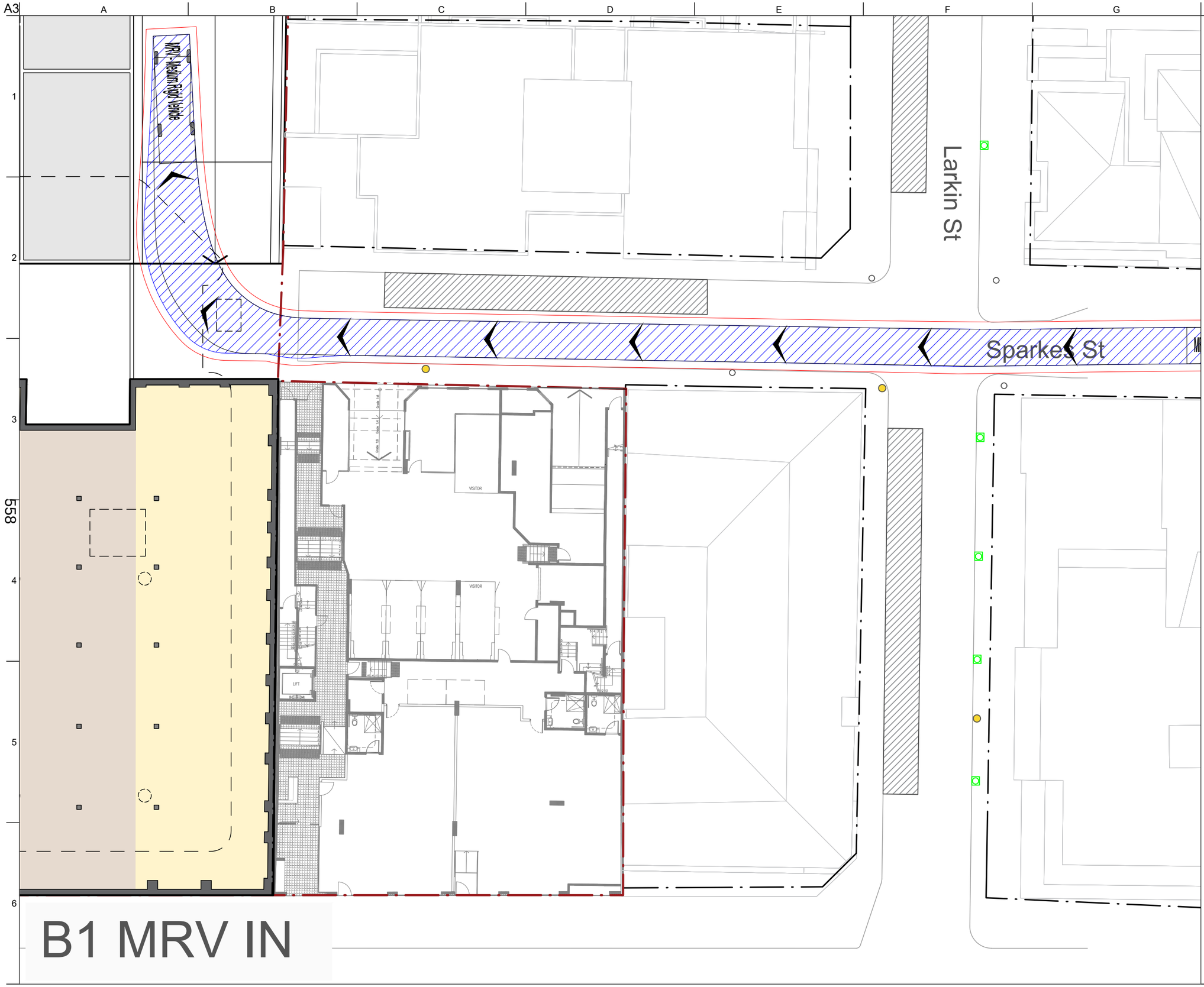
Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT003**	**D**

Do not scale

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A3



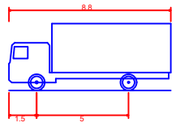
B1 MRV IN

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET TO BASEMENT LEVEL
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

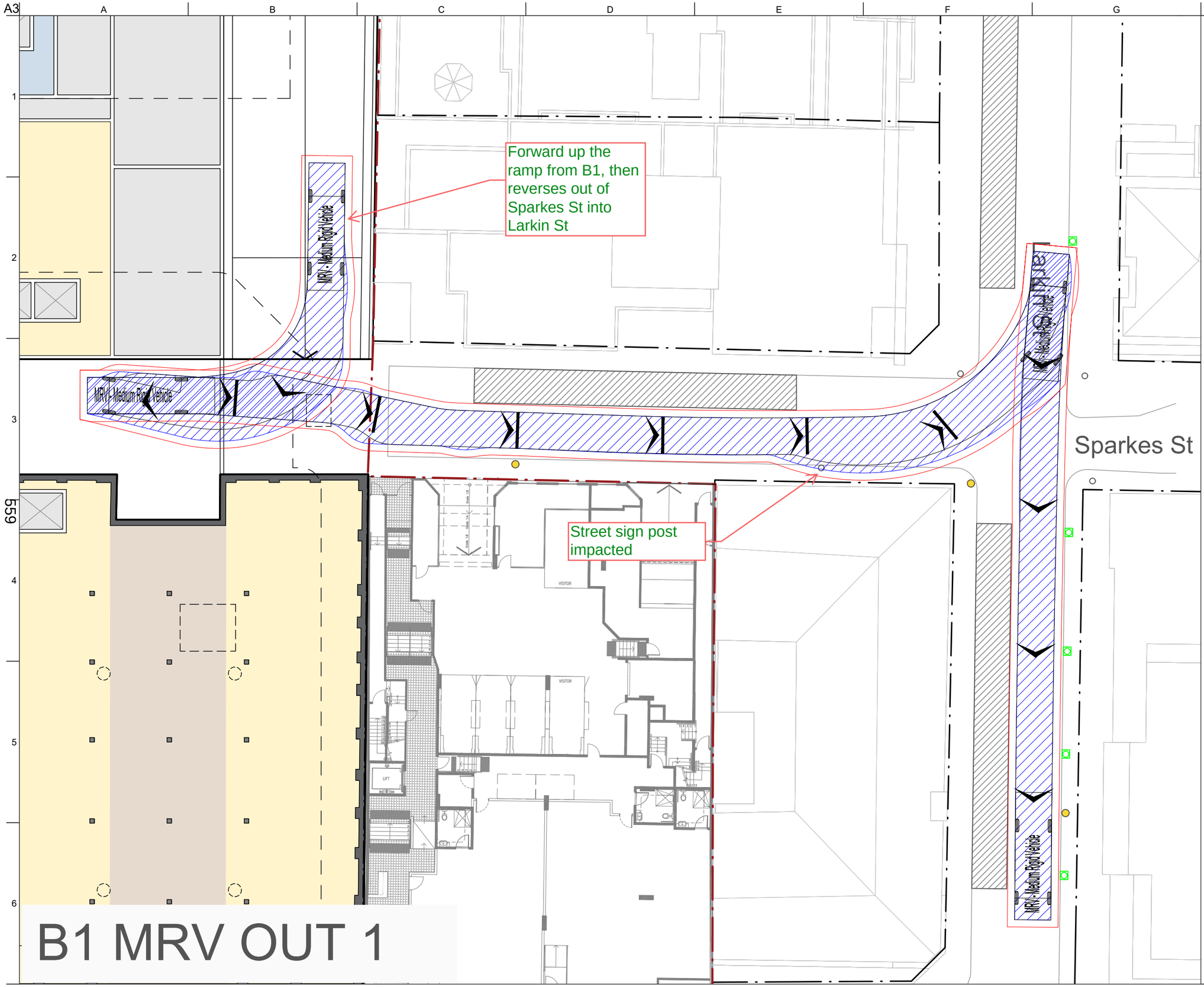
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT004**	**D**

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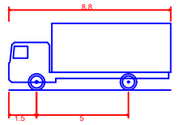
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

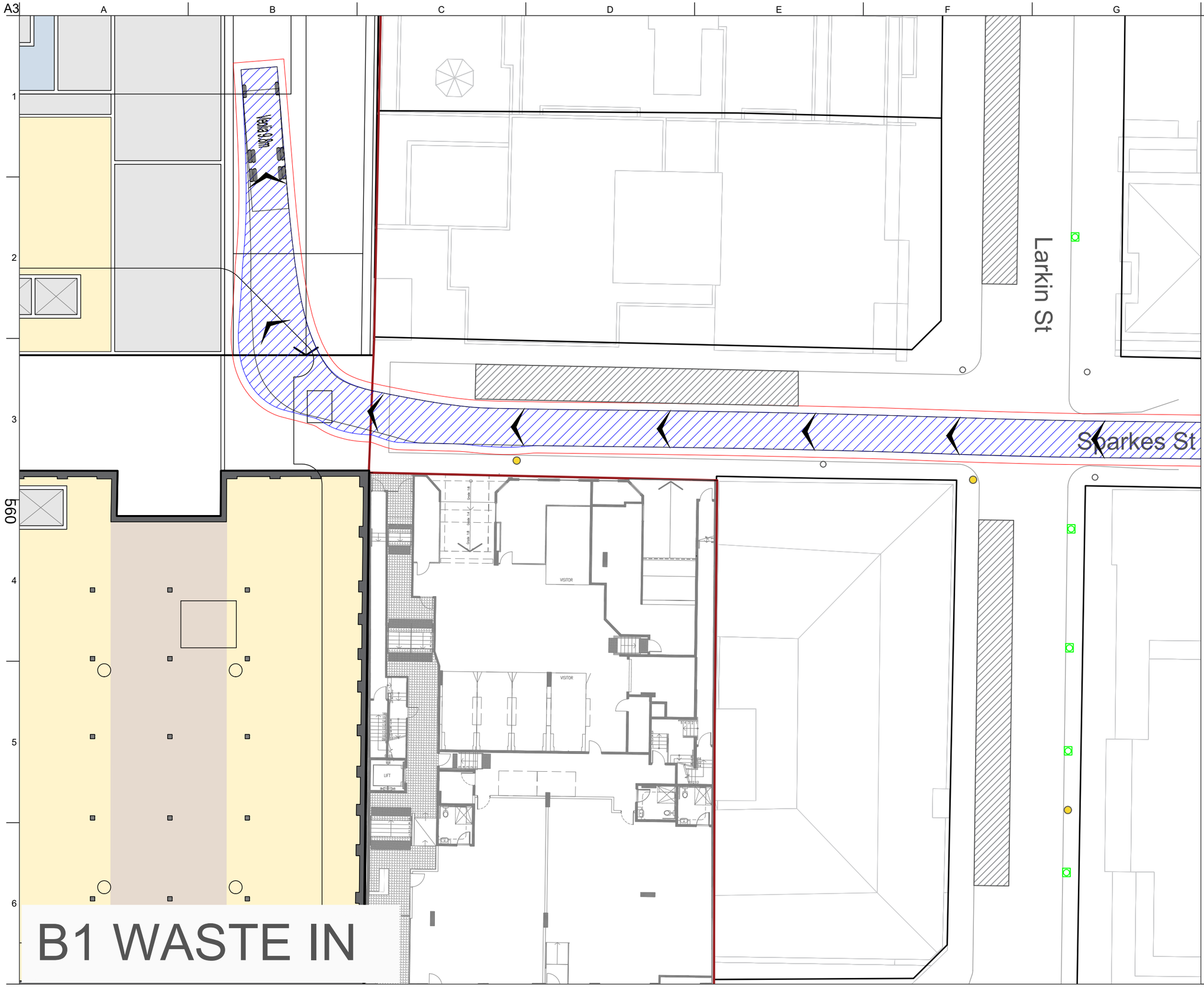
Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT020**	**D**

Do not scale

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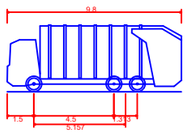
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

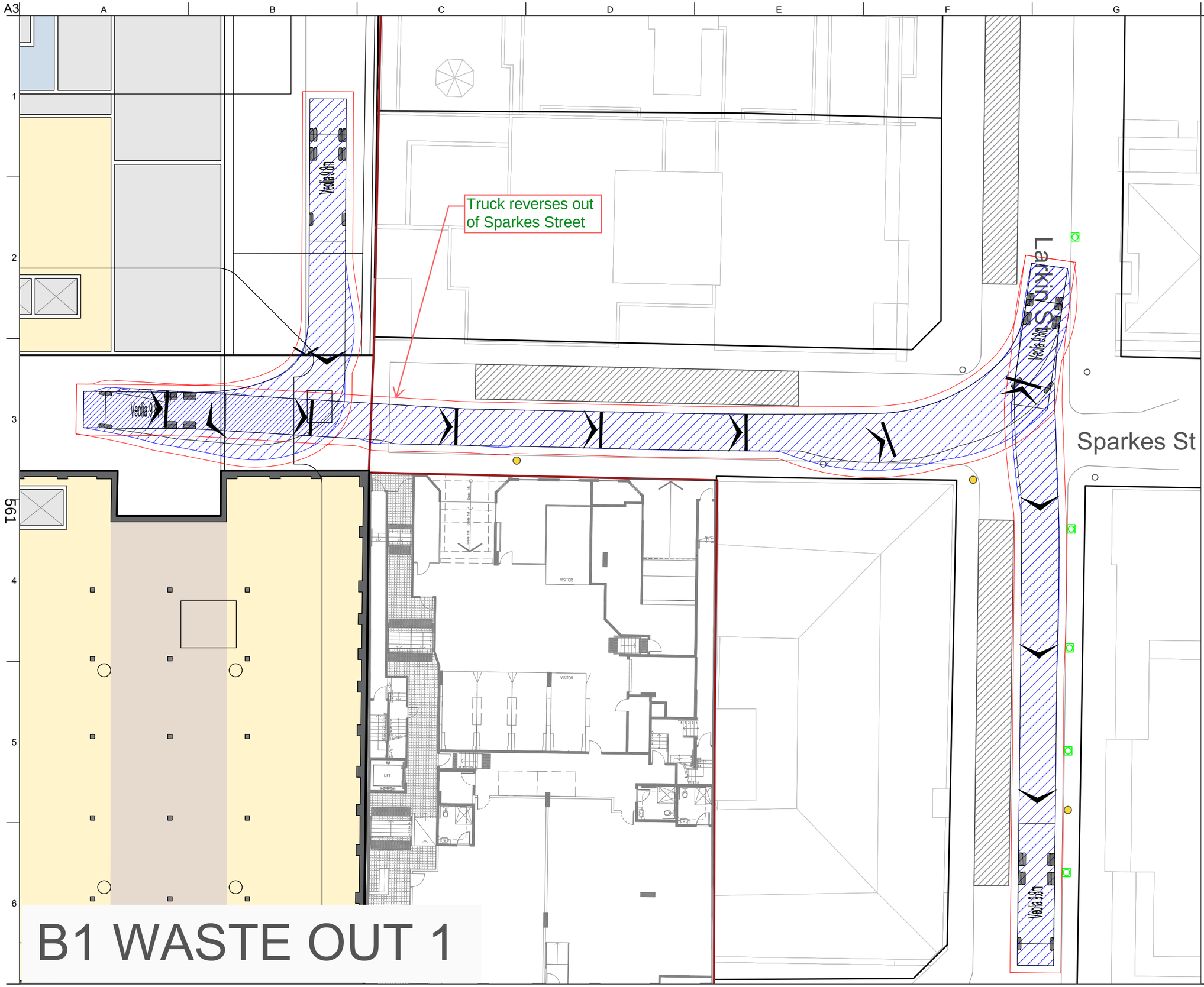
Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT013**	**C**

Do not scale

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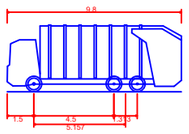
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m

Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	16/09/26	JG	SH	SH
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH

For information

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

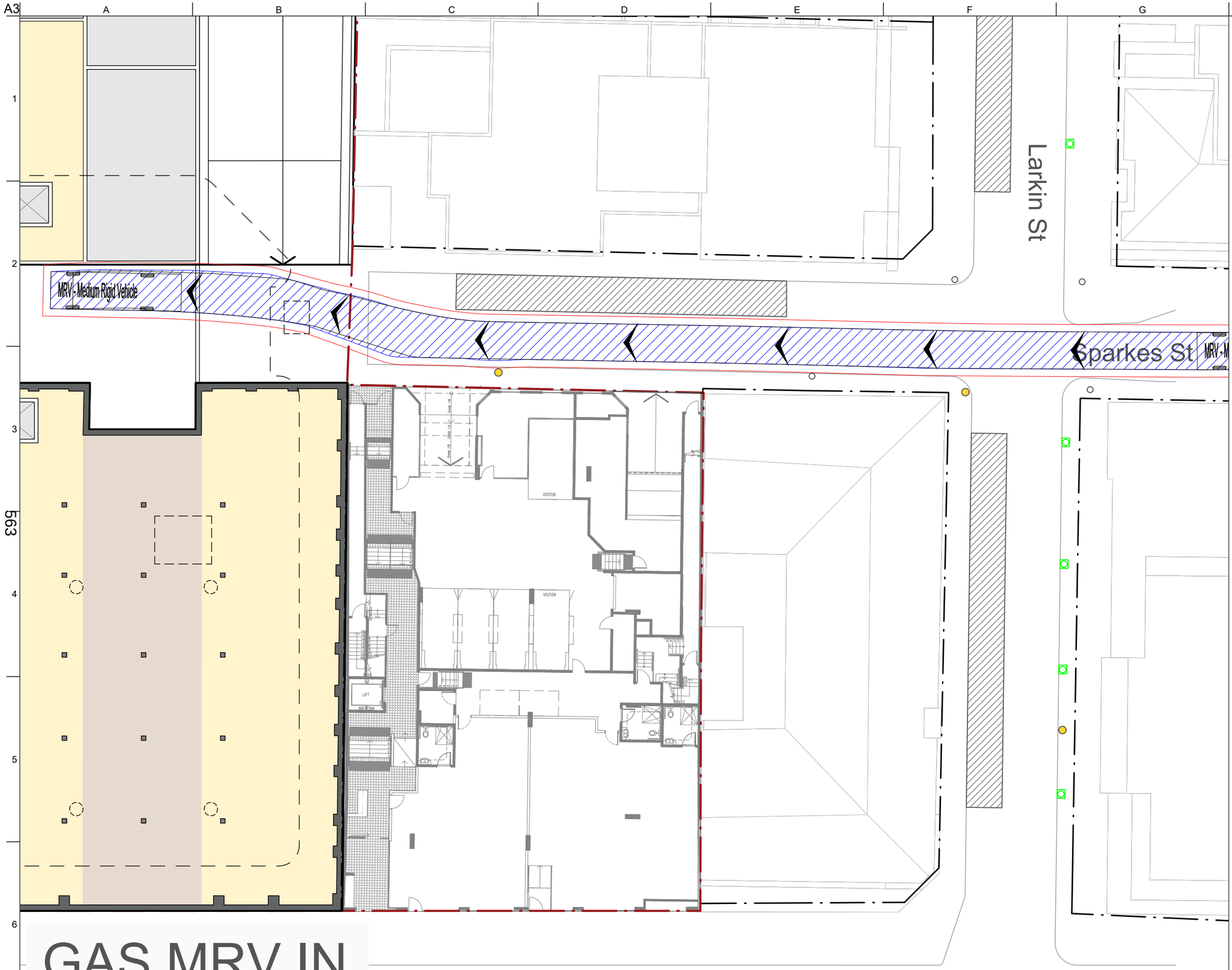
Job No	Drawing No	Issue
304985-00	**SKT022**	**D**

Do not scale

© Arup

C.2 Option 2 paths

A3

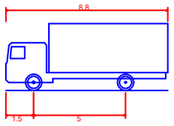


GAS MRV IN

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT019**	**D**

Do not scale

© Arup

A3

Reverses into the driveway then drives forward out onto Sparkes St

Street sign needs to be relocated

Street sign needs to be relocated

Half of on-street parking impacted by turning path

MRV - Medium Rigid Vehicle

Larkin St

Sparkes St

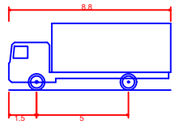
GAS MRV OUT 2

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT021**	**D**

© Arup

A3

Reverses into the driveway then drives forward out onto Sparkes St

Continues north on Larkin St

One parking space impacted by turning path

Street sign needs to be relocated

MRV - Medium Rigid Vehicle

Larkin St

Sparkes St

VISITOR

LIFT

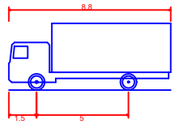
GAS MRV OUT 3A

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status **DRAFT**

Job No	Drawing No	Issue
304985-00	**SKT013**	**D**

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A3

FIRE HYDRANT

Vehicle body needs to avoid fire hydrant block

MRV reverses into wide driveway

5 point turn using round about and driveway

12m or about 2 parallel parking spaces impacted

Continues south on Larkin St

Larkin St Cul de sac

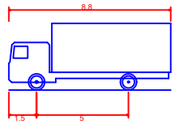
GAS MRV OUT 3B

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

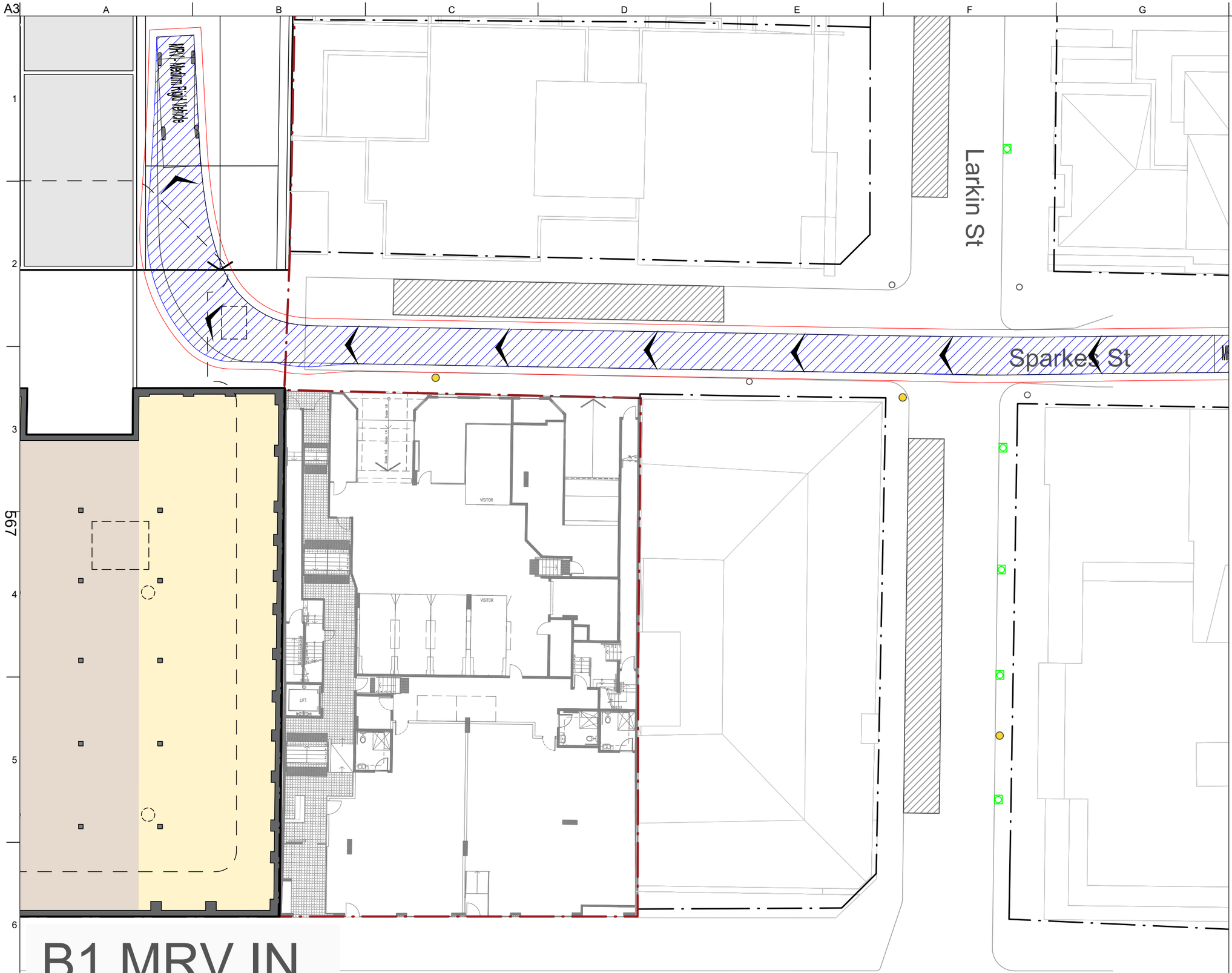
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT014**	**D**

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A3

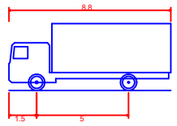


B1 MRV IN

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET TO BASEMENT LEVEL
MRV SWEPT PATH ASSESSMENT

Scale at A3
1:400

Discipline
TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT004**	**D**

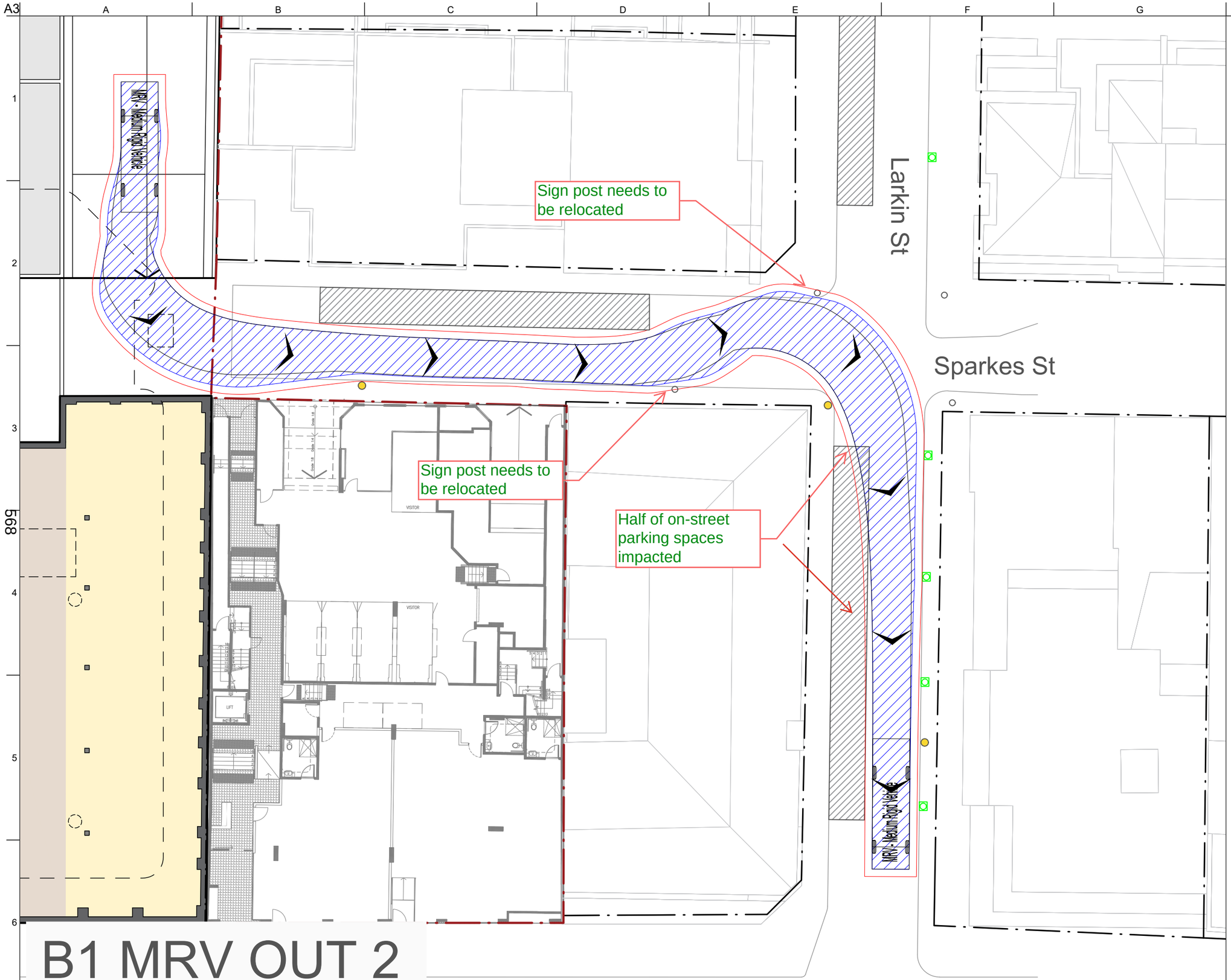
Do not scale

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A3

A B C D E F G

1 2 3 4 5 6



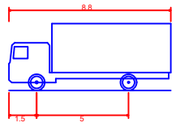
B1 MRV OUT 2

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET TO BASEMENT LEVEL
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

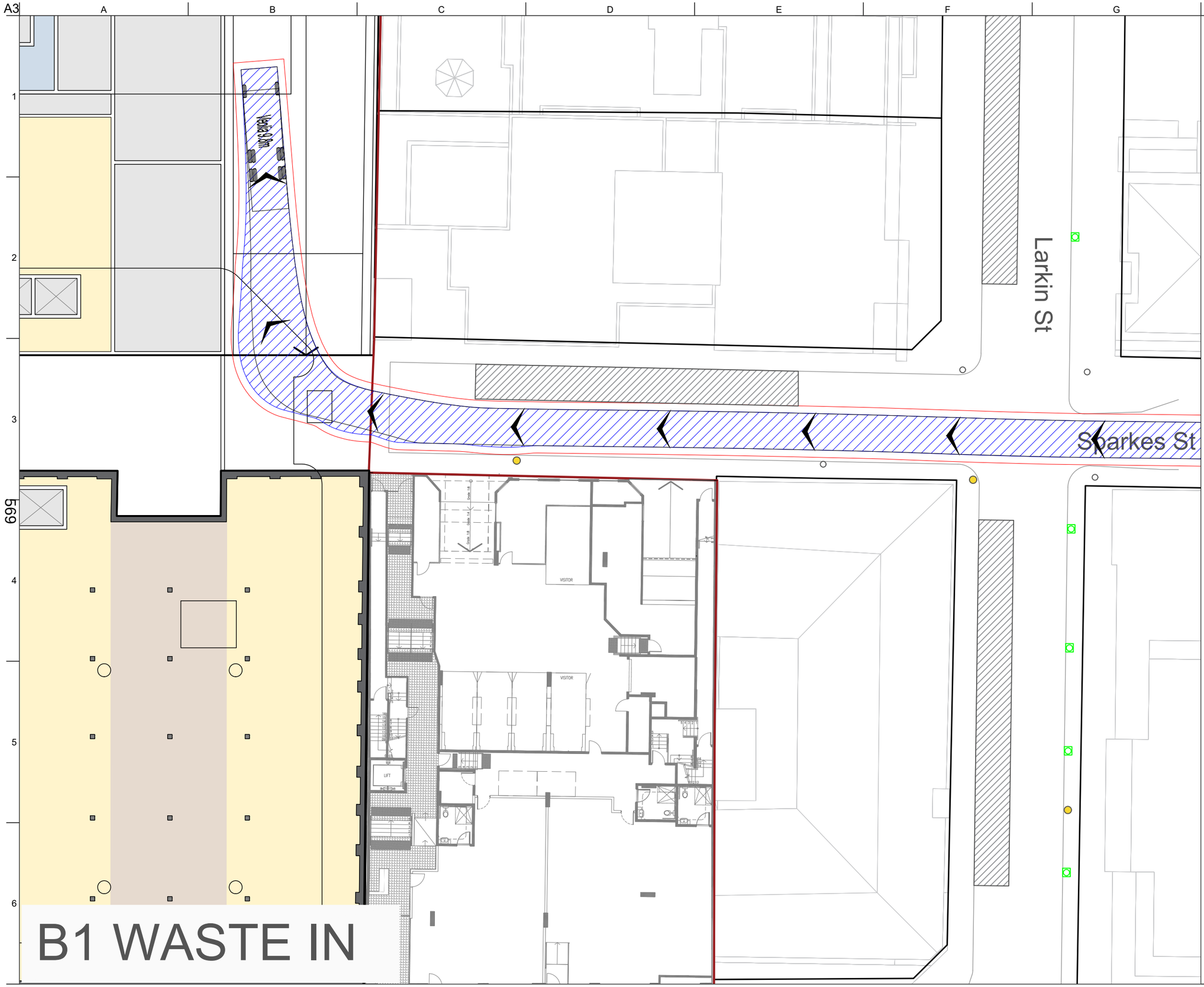
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT005**	**D**

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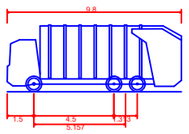
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

ARUP

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Tel +61(02)9320 9320 Fax +61(02)9320 9321
www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT013**	**C**

Do not scale

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A3

Street sign needs to be relocated

Half of on-street parking impacted by turning path

Larkin St

Sparkes St

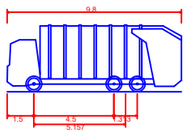
Veolia 9.8m

B1 WASTE OUT 2

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	16/09/26	JG	SH	SH
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Sydney, NSW, 2000
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www.arup.com.au

Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

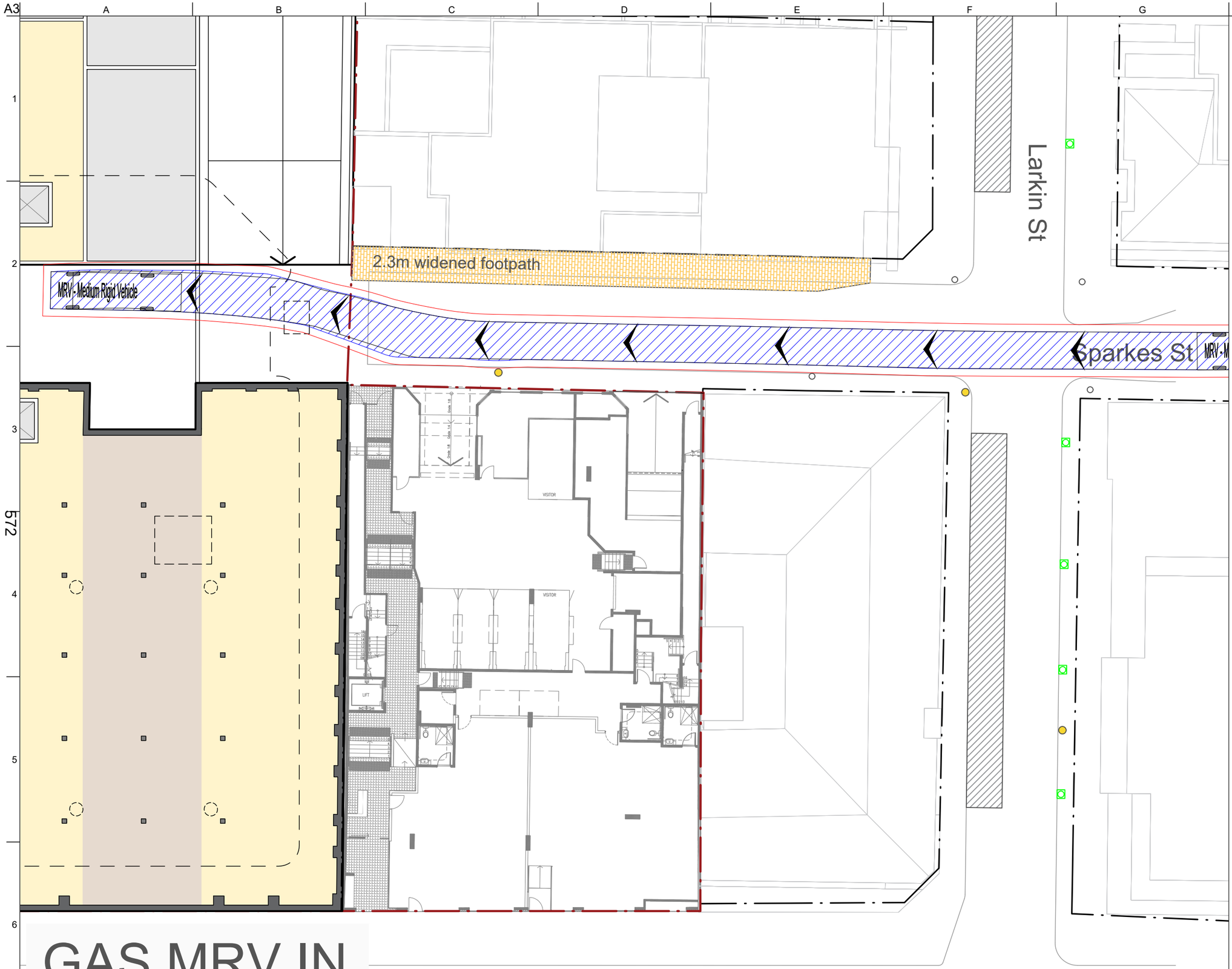
Job No	Drawing No	Issue
304985-00	**SKT016**	**D**

Do not scale

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C.3 Option 3 paths

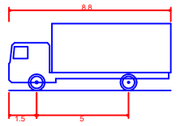
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT019**	**D**

Do not scale

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A3

Reversed on ramp to exit Sparkes St forward out

Sign post needs to be re-located

2.3m widened footpath

Half of on-street parking spaces impacted

Larkin St

Sparkes St

MRV - Medium Rigid Vehicle

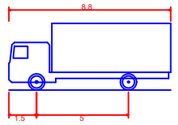
GAS MRV OUT 4

Do not scale

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET LEVEL GAS DELIVERY
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

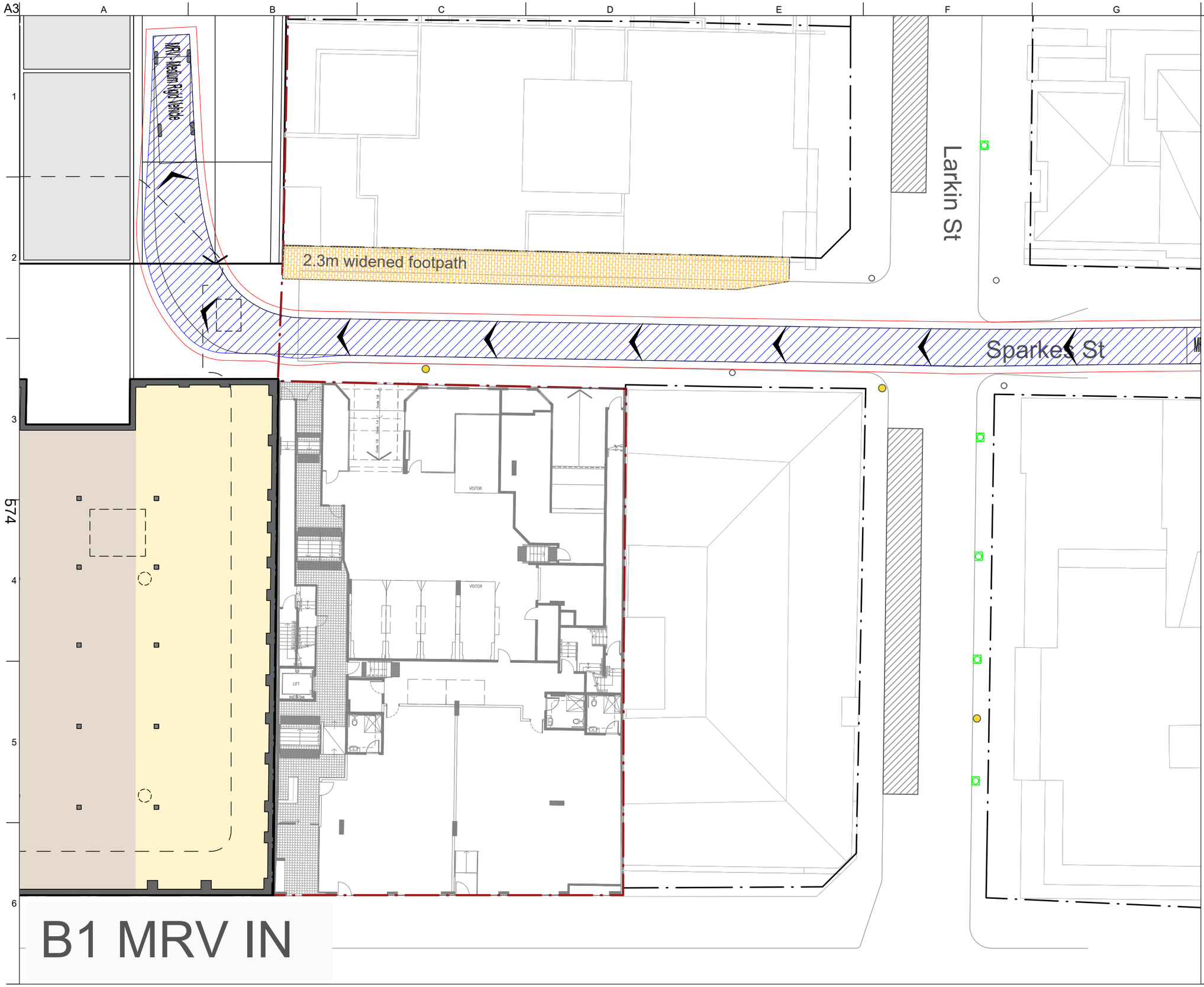
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT012**	**D**

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A3

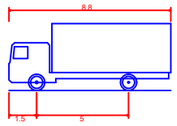


B1 MRV IN

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET TO BASEMENT LEVEL
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

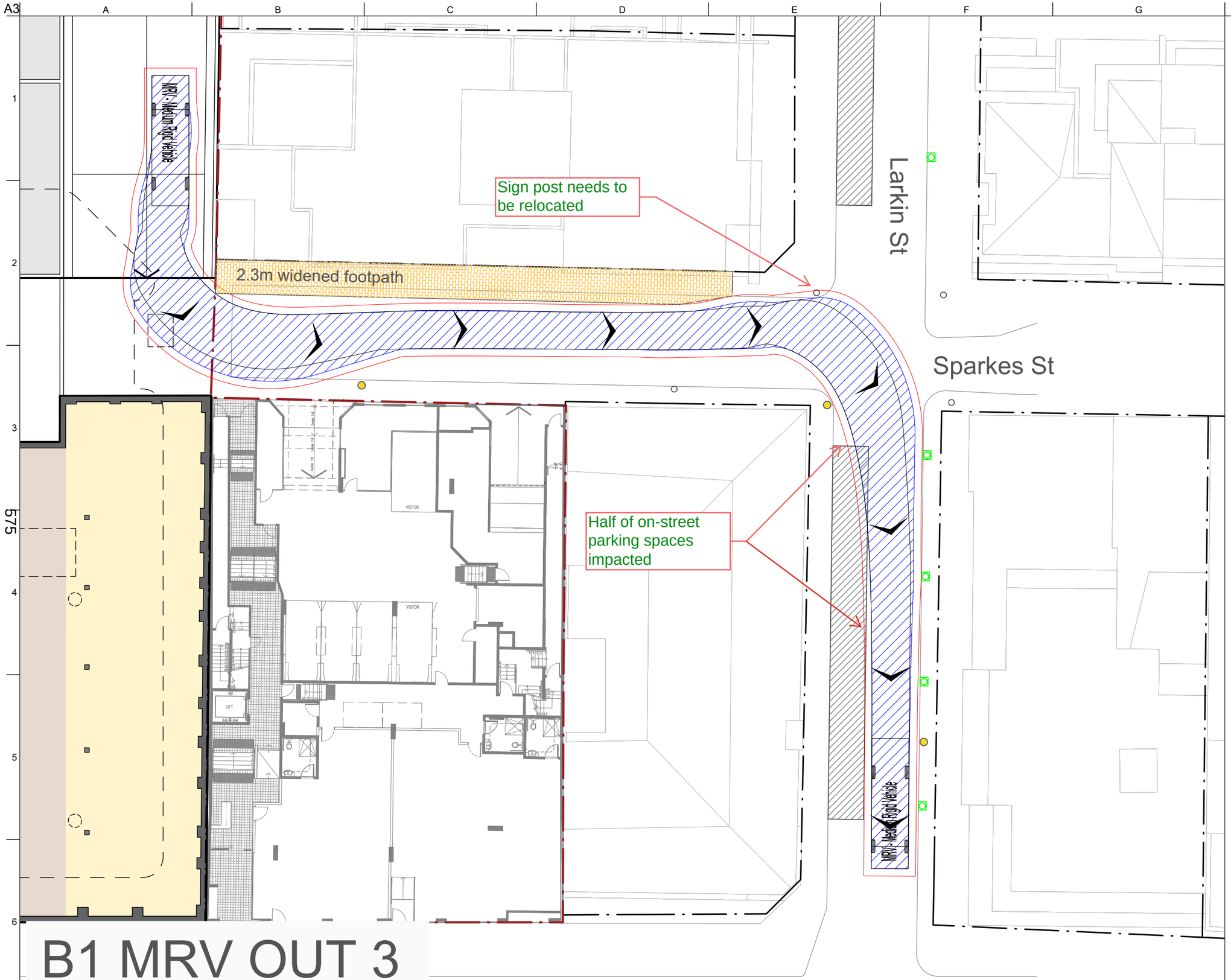
Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT004**	**D**

Do not scale

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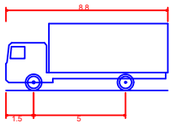


A3

Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	04/09/26	JG	SH	SH
C	25/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
STREET TO BASEMENT LEVEL
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

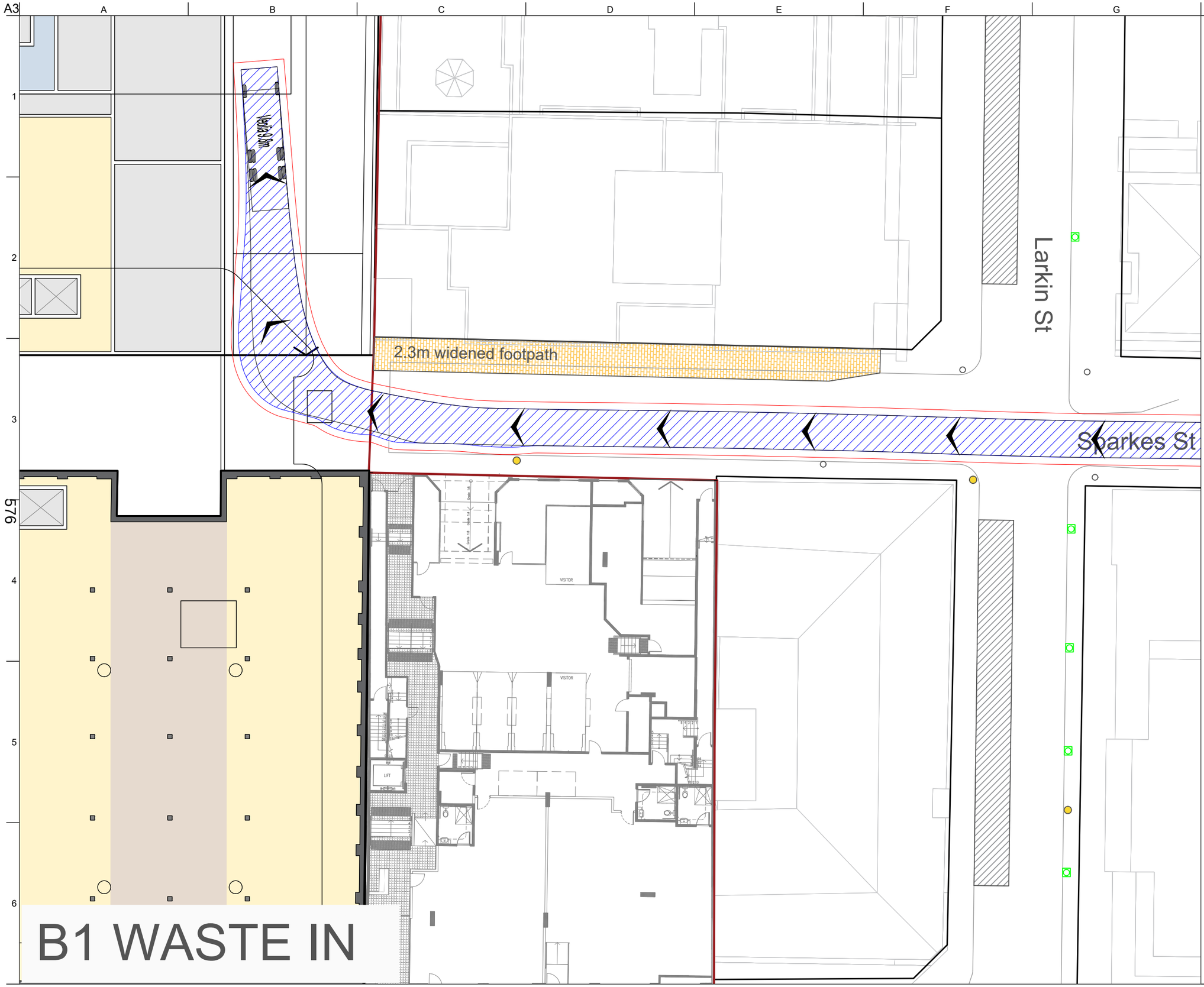
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B1 MRV OUT 3

Do not scale

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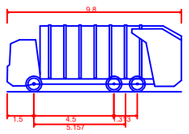
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m

Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

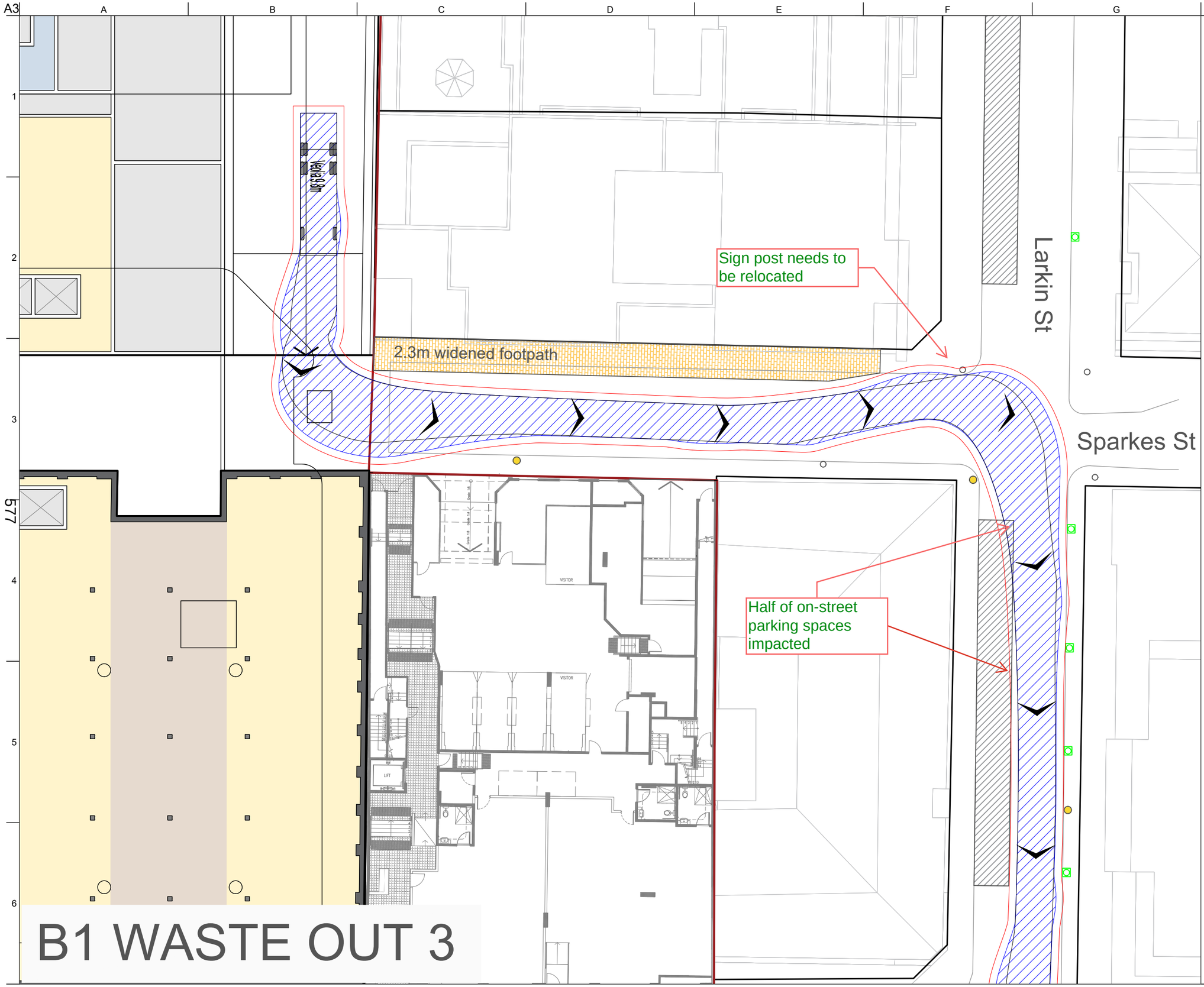
Drawing Status
DRAFT

Job No	Drawing No	Issue
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Do not scale

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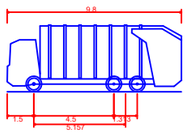
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m

Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

- Tree
- Power pole
- Street sign pole

Issue	Date	By	Chkd	Appd
D	16/09/26	JG	SH	SH
C	01/09/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
B1 WASTE COLLECTION
9.8M SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

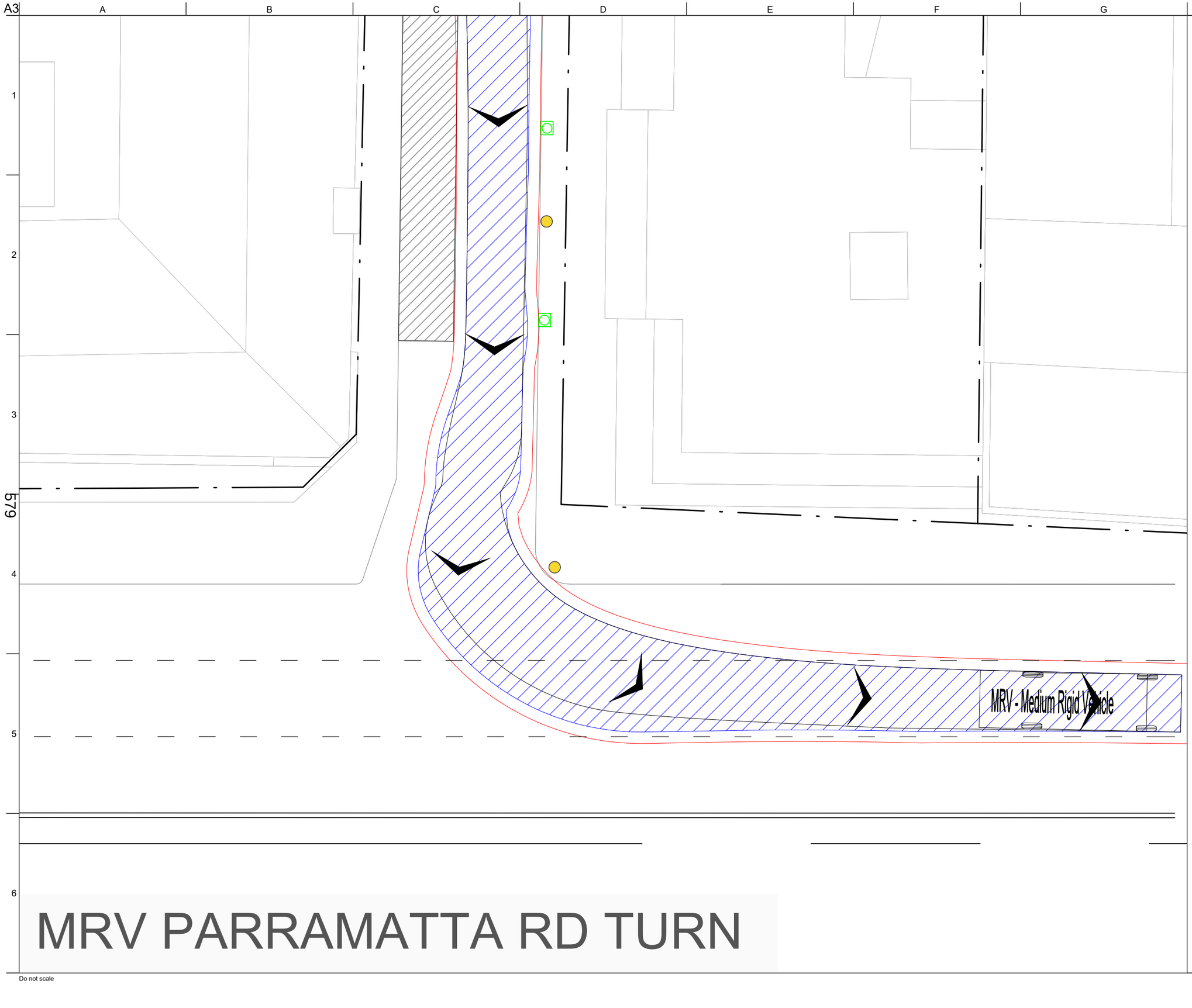
Job No	Drawing No	Issue
304985-00	**SKT023**	**D**

Do not scale

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C.4 Turn out to Parramatta Road paths

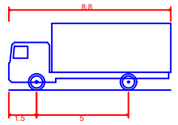
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	16/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
LARKIN ST TO PARRAMATTA RD
MRV SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT024**	**D**

MRV PARRAMATTA RD TURN

Do not scale

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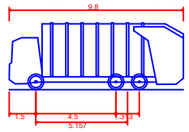
A3



Legend

- Body Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



Veolia 9.8m	
Overall Length	9.800m
Overall Width	2.500m
Overall Body Height	3.752m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.000m

Tree

Power pole

Street sign pole

Issue	Date	By	Chkd	Appd
D	16/09/26	JG	SH	SH
C	31/08/26	JG	SH	SH
B	10/07/26	JG	SH	SH
For information				

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Client
WENTWORTH CAPITAL

Job Title
84-94 PARRAMATTA ROAD

Drawing Title
DESIGN REVIEW
LARKIN ST TO PARRAMATTA RD
9.8m SWEPT PATH ASSESSMENT

Scale at A3 1:400

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
304985-00	**SKT025**	**D**

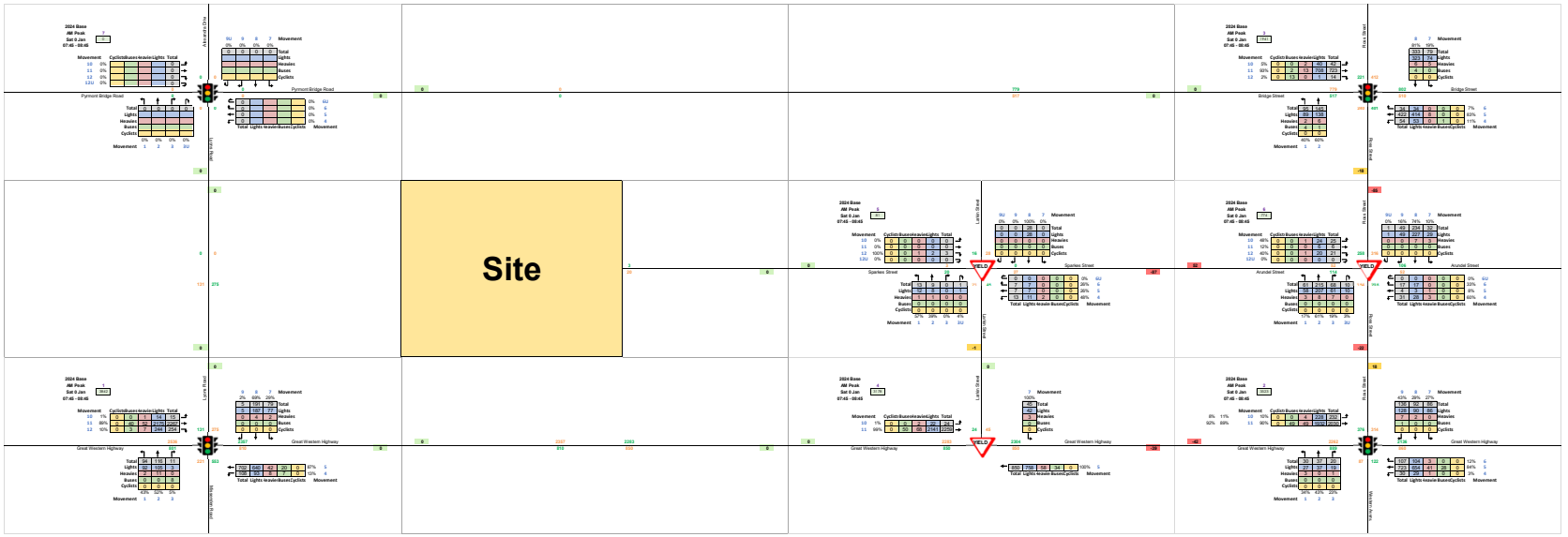
WASTE PARRAMATTA RD TURN

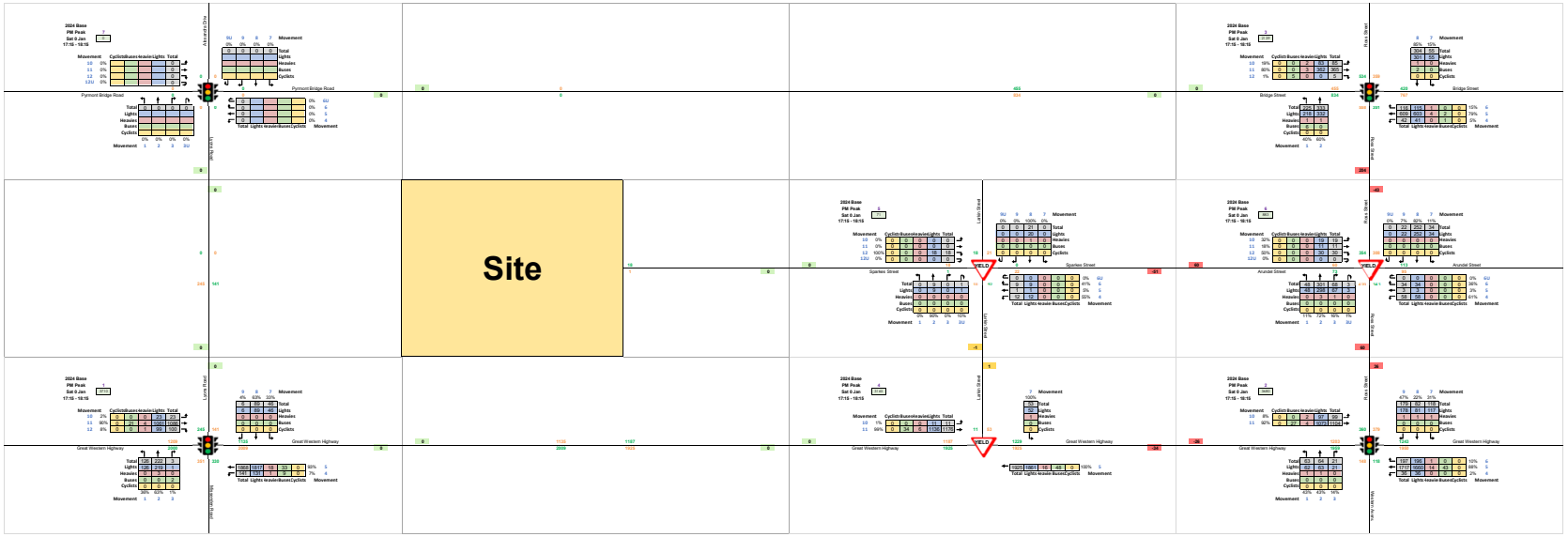
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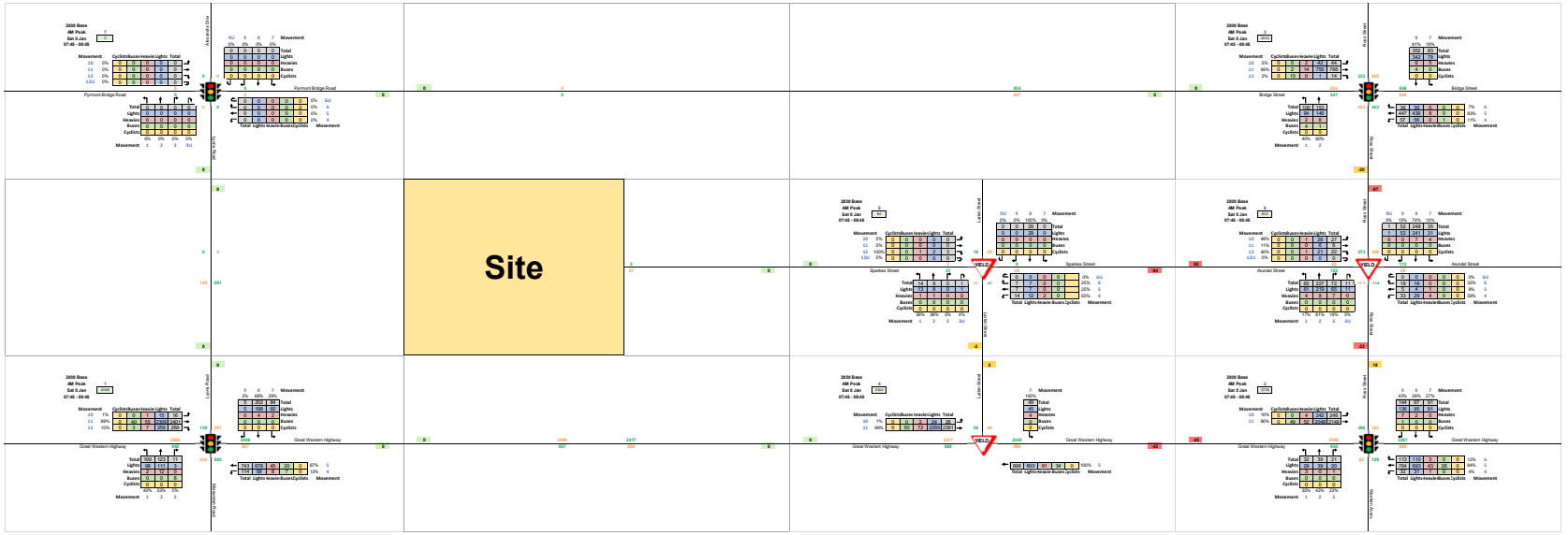
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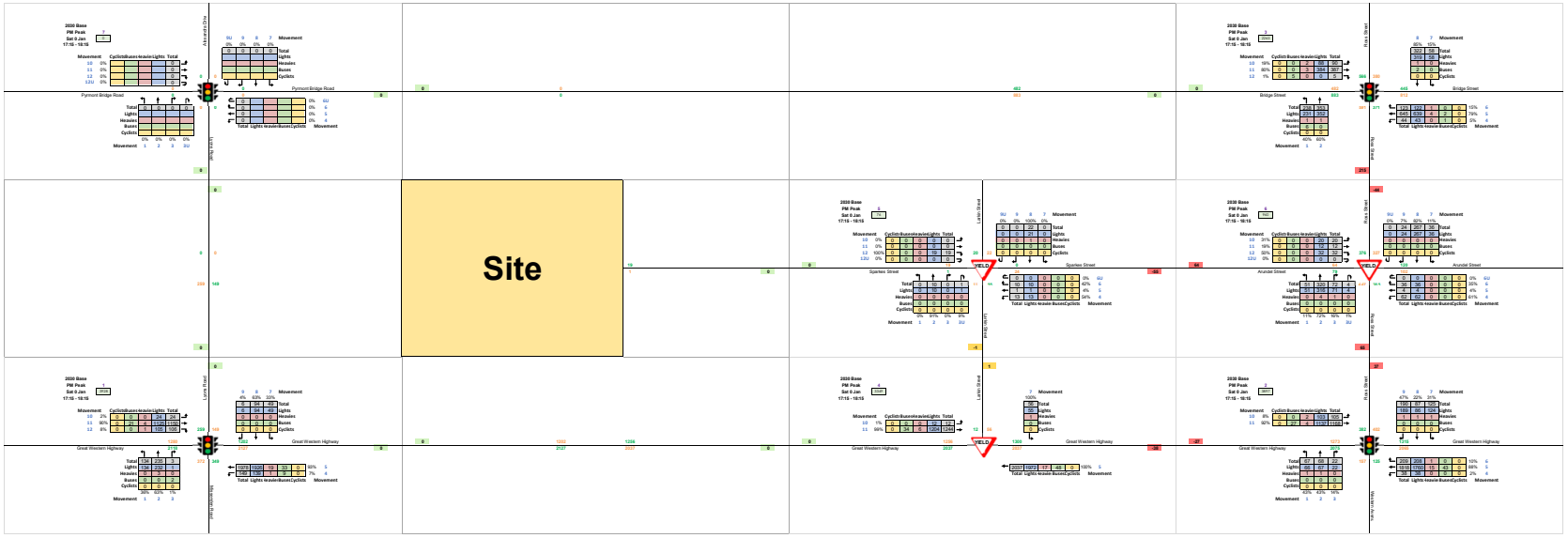
Appendix D

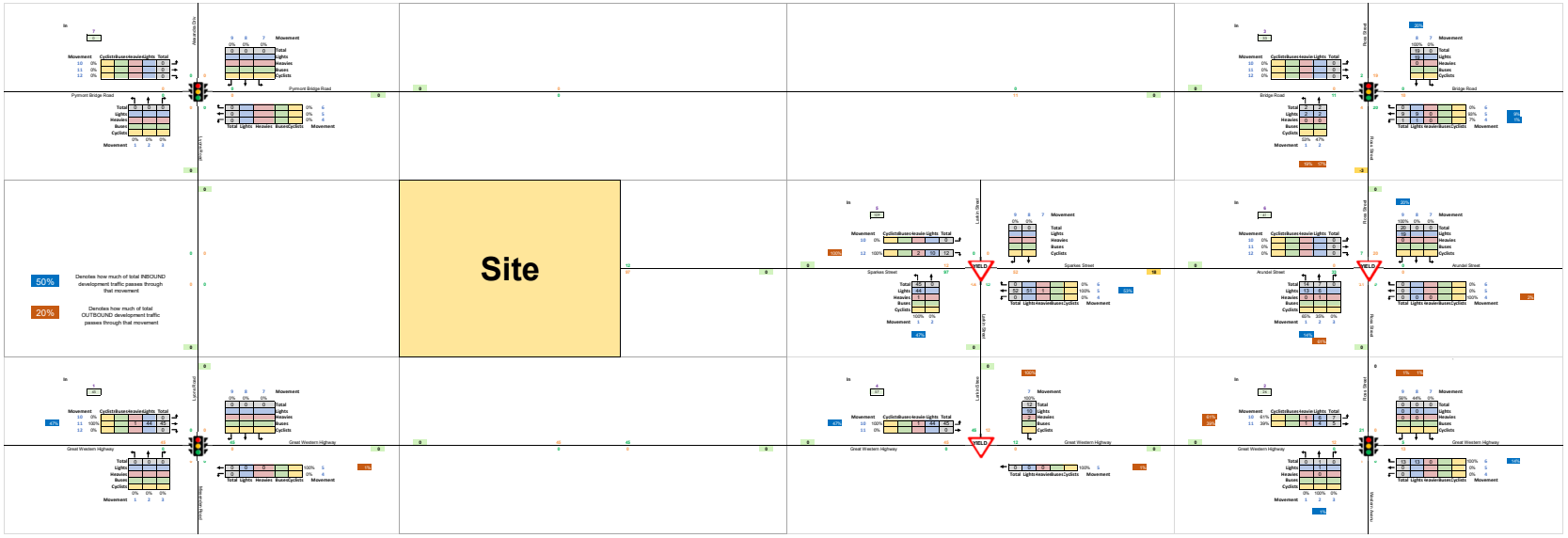
Stick diagrams


Site

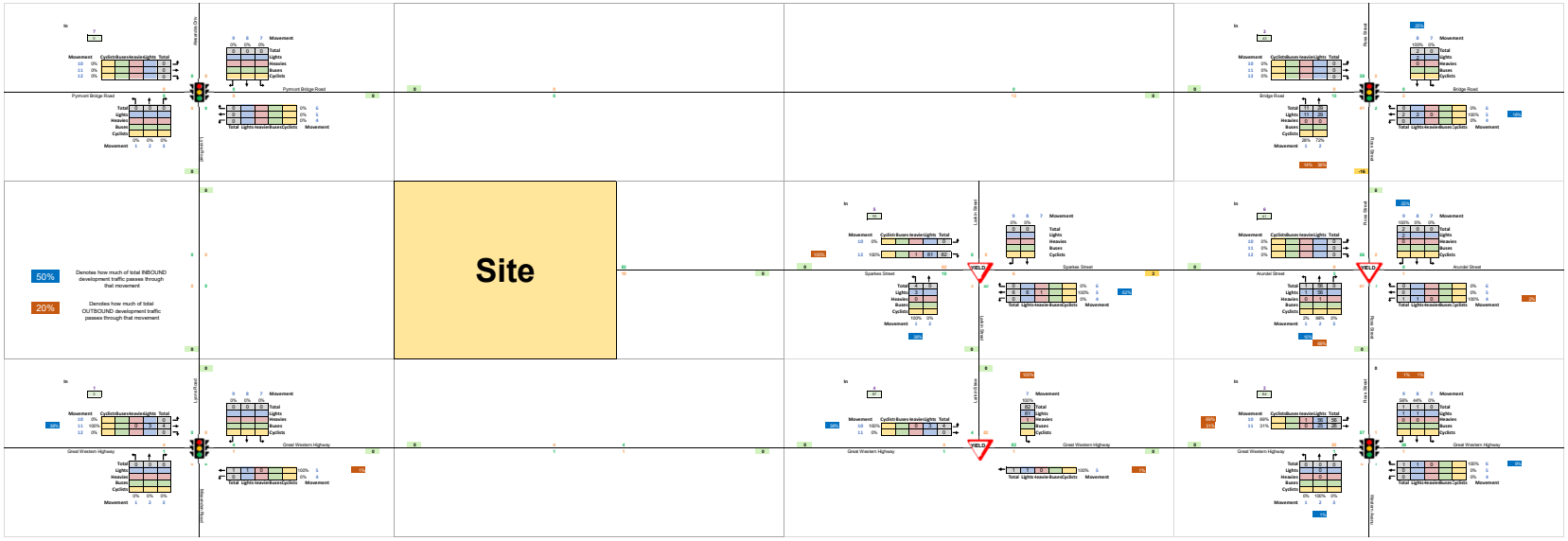

Site


Site

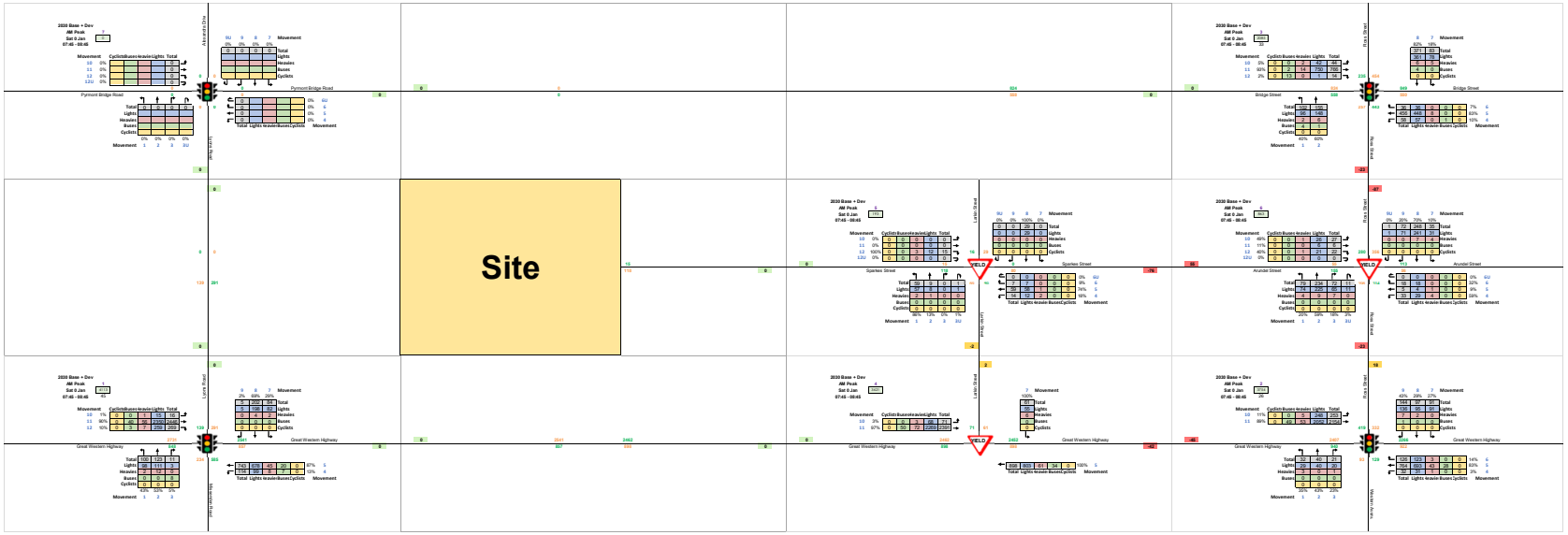

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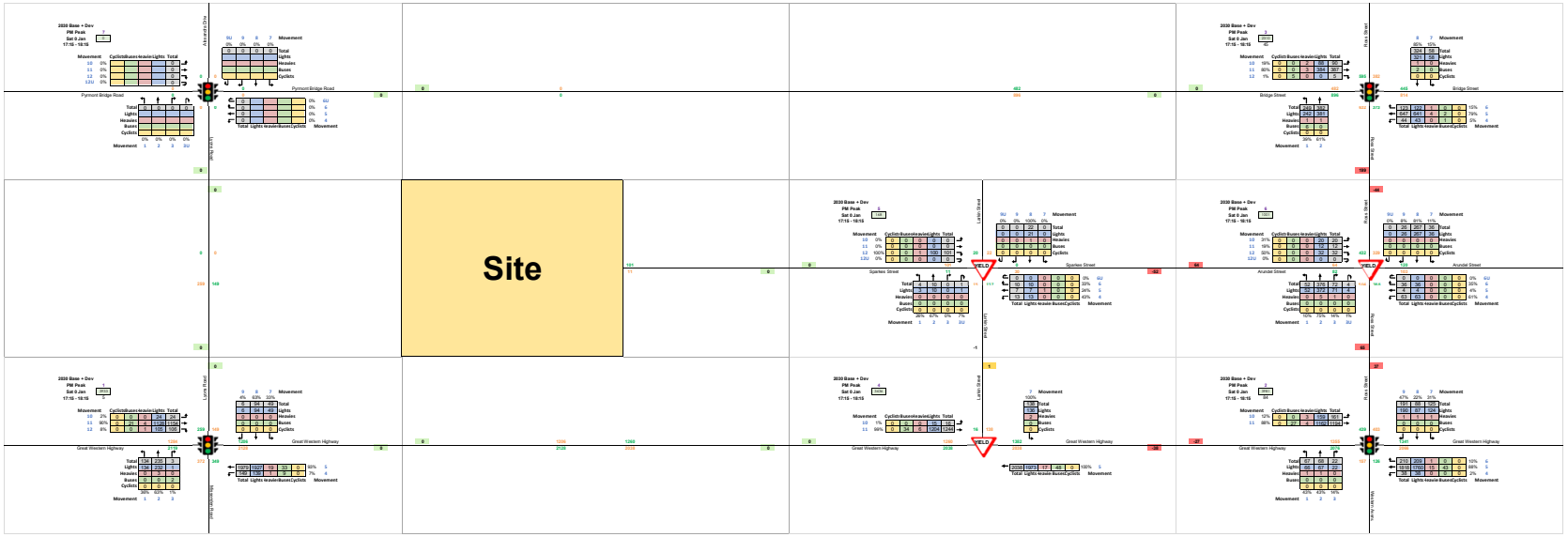

Site
50%
Denotes how much of total INBOUND development traffic passes through that movement
20%
Denotes how much of total OUTBOUND development traffic passes through that movement
Pyrmont Bridge Road
Wattle Hill Dr
Bridge Road
Pine Street
Sparkes Street
Lade Dr Street
Arundel Street
Ryde Bridge
Great Western Highway
Lyon Park Road
Lyon Park Rd
Lee Holm Drive
Ezra Street
Victory Park Drive
YIELD

Development only generated traffic to / from development in PM



587


Site
YIELD
YIELD


Site

Attachment A8

Transport impact assessment
Serviced apartments development

ARUP

Wentworth

84 Parramatta Road, Camperdown

Transport Impact Assessment – Serviced Apartments

Reference: 304985-00

Final Rev 04 | 22 September 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 304985-00

Arup Australia Pty Ltd | ABN 76 625 912 665

Arup Australia Pty Ltd
Level 5
151 Clarence Street
Sydney
NSW, 2000
Australia
arup.com

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Document Verification

Project title	84 Parramatta Road Camperdown
Document title	Transport Impact Assessment
Job number	304985-00
Document ref	260922_ 84 Parramatta Rd_ TIA_ Serviced Apartments
File reference	260922_ 84 Parramatta Rd_ TIA_ Serviced Apartments

Revision	**Date**	**Filename**	260119 84 Parramatta Road - Transport Impact Assessment – Serviced Apartments		
Draft	19/01/2026	**Description**	Draft Transport Impact Assessment – Serviced Apartments		
			Prepared by	**Checked by**	**Approved by**
		Name	Luca Welfare	Bryony Dalton	Eric Rivers
		Signature			
Rev 01	19/02/2026	**Filename**	260219 84 Parramatta Road - TIA – Serviced Apartments		
		Description	Updated Transport Impact Assessment – Serviced Apartments		
			Prepared by	**Checked by**	**Approved by**
		Name	Luca Welfare	Bryony Dalton	Eric Rivers
		Signature			
Rev 02	02/03/2026	**Filename**	260302 84 Parramatta Road - TIA – Serviced Apartments		
		Description	Updated Transport Impact Assessment – Serviced Apartments		
			Prepared by	**Checked by**	**Approved by**
		Name	Joyce Wong	Bryony Dalton	Eric Rivers
		Signature			
Rev 03	30/07/2026	**Filename**	260730_ 84 Parramatta Rd_ TIA_ Serviced Apartments		
		Description	Updated TIA, based on City of Sydney feedback		
			Prepared by	**Checked by**	**Approved by**
		Name	Jack Gelabert	Sharif Hasan	Sharif Hasan
		Signature			
Rev 04	22/09/2026	**Filename**	260922_ 84 Parramatta Rd_ TIA_ Serviced Apartments		
		Description	Minor corrections.		
			Prepared by	**Checked by**	**Approved by**
		Name	Jack Gelabert	Sharif Hasan	Sharif Hasan
		Signature			

Issue Document Verification with Document ☑

Contents

1.	Introduction	1
1.1	Background	1
1.2	Proposal overview	1
1.3	Purpose of this report	1
2.	Existing transport environment	2
2.1	Site location	2
2.2	Road network	2
2.3	Walking environment	3
2.4	Cycling environment	4
2.5	Public transport	5
2.6	Travel behaviour	10
3.	Proposed development	11
3.1	Site layout	11
3.2	Site access	12
3.3	Vehicle parking	13
3.4	Loading	14
3.5	Bicycle parking and End of Trip Facilities	15
4.	Transport impact assessment	16
4.1	Vehicular trips	16
4.2	Servicing trip generation	17
4.3	Access arrangements	19
4.4	Impacts on Walking, Cycling and Public Transport	19
4.5	Recommendations	19
5.	Outline Framework Travel Plan	20
5.1	Objectives	20
5.2	Potential measures	20
5.3	Monitoring and review	22
6.	Framework Construction Traffic Management Plan (CTMP)	24
6.1	Traffic management objectives	24
6.2	Traffic management principles	24
6.3	Existing user group hierarchy	25
6.4	Governance	25
6.5	Proposed working hours	25
6.6	Truck routes and controls	25
7.	Conclusion	26

Tables

Table 1: Bus routes and frequency 7
Table 2: Existing mode share for SA2 (Glebe/Forest Lodge and Newtown/Camperdown/Darlington) 10
Table 3: Proposed Schedule 11
Table 4: Minimum cycle parking rates 15
Table 5: SIDRA results 16
Table 6: Service vehicle trips (UFFM model) 18
Table 7: Breakdown of service vehicle trips by vehicle type 18
Table 8: Daily and weekly waste servicing (UFFM model) 18

Figures

Figure 1: Site location 2
Figure 2: Walking accessibility 3
Figure 3: Cycling network (source: City of Sydney) 4
Figure 4: Cycling accessibility 5
Figure 5: Public transport accessibility (source: City of Sydney LEP) 5
Figure 6: Public transport accessibility – AM (Arriving at the Site at 9am) 6
Figure 7: Public transport accessibility – PM (Departing from the Site at 5:30pm) 6
Figure 8: Bus routes 7
Figure 9: Proposed site layout 11
Figure 10: Pedestrian and cycling access 12
Figure 11: Vehicle access 13
Figure 12: Proposed car parking 14
Figure 13: Basement Substation with Access Hatch and Crane Access to 88-94 Parramatta Road 15
Figure 14: Vehicle access 19

1. Introduction

1.1 Background

This Transport Impact Assessment (TIA) report is submitted to the City of Sydney on behalf of Wentworth in support of the proposed serviced apartments development at 84 Parramatta Road, Camperdown. The report assesses the transport and traffic impacts of the proposal and identifies measures to support safe and efficient access for all modes.

1.2 Proposal overview

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.5:1, retaining the mixed-use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.
- Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

1.3 Purpose of this report

The purpose of this report is to support the Planning Proposal (PP). The report summarises the existing transport conditions and assesses the likely traffic on the surrounding road network during the operation of the Proposal.

This report also assesses the internal traffic network within the Site, including access arrangements, internal circulation and loading dock operations. In addition, an outline Framework Travel Plan (FTP) and a framework Construction Traffic Management Plan (CTMP) will also be included as individual chapters in this report. The FTP is provided to support sustainable travel behaviours to and from the Proposal. The CTMP will establish the objectives and principles of traffic management during construction.

2. Existing transport environment

This section of the report details the existing transport network surrounding the development Site.

2.1 Site location

The site is located at 84 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes. The site's locational context is shown at Figure 1.



Figure 1: Site location

2.2 Road network

2.2.1 Parramatta Road

Parramatta Road is a major arterial road that runs in an east-west direction along the southern boundary of the Site. It is a two-way road generally configured with three lanes in each direction inclusive of kerbside bus lanes. The section of Parramatta Road that runs past the Site is subject to a posted speed limit of 60km/h and has parking restrictions during bus lanes hours of operation from 6am to 10am and 3pm to 7pm weekdays.

2.2.2 Ross Street

Ross Street runs in a north-south direction approximately 350m to the east of the Site. It is a two-way road generally configured with one lane in each direction with kerbside car parking provided for permit holders

on the eastern side of the road between Parramatta Road and St Johns Road and both sides of the road between St Johns Road and Bridge Road. This section of Ross Street provides a highway frontage to residential and commercial properties and is subject to a 50km/h posted speed limit.

2.2.3 Bridge Road

Bridge Road is a two-way road that runs in a northeast to southwest direction approximately 130m to the north of the Site. The section of road that runs to north of the Site is generally configured with one lane in each direction with on-street segregated cycle lanes on both sides of the road. This section of Bridge Road is a designated clearway with parking restrictions on both sides of the road and a posted speed limit of 40km/h.

2.2.4 Sparkes Street

The existing vehicular access to the Site is from Sparkes Street. Sparkes Street is a local road that runs in an east-west direction between the eastern boundary of the Site and Short Street. Sparkes Street is intersected by Larkin Street. The section of Sparkes Street between the Site access and Larkin Street is a two-way road with parking and stopping restrictions on the southern side of the road. On-street parking on the northern side of the road reduces the effective carriageway width to approximately 3.5 metres, which limits the ability for two vehicles to pass simultaneously.

2.3 Walking environment

The walking accessibility of the Site is very good due to its location in an urban setting close to Sydney CBD. Most roads in the surrounding area have footpaths on both sides, and intersections have pedestrian facilities for crossing.

A walking accessibility assessment for the 10, 15 and 20-minute walking catchments has been undertaken and is shown in Figure 2. Within the 10-minute catchment, there are ten bus routes, with eight of them stopping on Parramatta Road, at the bus stop directly outside the Site. One additional bus route is accessible within the 15-minute walking catchment. To the north two light rail stops along the L1 line are accessible within the 20-minute walking catchment, as well as an additional seven bus routes. The train stations that service the T2 and T3 lines are just outside the 20-minute walking catchment.


Legend
84 Parramatta Road
Walking Catchment
10min
15min
20min
Parramatta Road
Broadway
Bridge Road
Fig Street
Wattle Street
Harris Street
Pier Street
City West Link
Johnston Street
The Crescent
M8 Motorway Tunnel
Stanmore Road
Enmore Road
King Street
City Road
Regent Street
Gibbons Street
REDFERN
Wilson Lane
Carillon Avenue
Catherine Street
Albion Street
Corunna Road
Macauley Road
Albany Road
Wigram Road
Alfred Road
Glebe Point Road
Ross Street
Rose Street
Nelson Street
Trafalgar Street
Young Street
Moore Street
Hill Street
Queen Street
Norton Street
Balmain Road
Coleridge Street
Catherine Street
Albion Lane
Corunna Lane
Macauley Lane
Albany Lane
Westbourne Lane
Crystal Street
Budds Lane
Douglas Street
Gordon Crescent
Trafalgar Street
Harrow Road
Cavendish Street
College Lane
Albert Street
Newman Street
Henderson Lane
Locomotive Street
Botany Road
Pitt Street
George Street
Abercrombie Street
Shepherd Street
Mazs Crescent
Physics Road
Fisher Road
Australia Street
Mallet Street
Lucas Street
Cardigan Street
Kingston Lane
Robert Street
Chalmers Street
Pritchard Street
Denison Street
Bedford Street
Oxford Street
Church Street
Hickam Street
O'Connell Street
Campbell Street
Lingon Street
Stafford Street
Salisbury Road
Ravenue Lane
Railway Avenue
Percival Lane West
Percival Road
Ferris Street
Young Lane
Collins Lane
Armandale Street
Piper Lane
View Street
Wallis Street
Susan Street
Nelson Lane
Trafalgar Lane
Wigram Lane
Hereford Street
Bell Street
Arcadia Road
Arcadia Lane
Toxteth Road
Victoria Road
Avenue Road
Allen Street
Glebe Point Road
Cook Street
Ferry Road
Darghan Lane
Derwent Street
Phillip Street
Broughton Street
Glebe Street
Campbell Street
Derwent Lane
Weaponsfield Lane
Bay Street
Jones Street
Wentworth Park Road
Ada Place
Fig Street Overpass
Lilyfield Road
Railway Parade
Prospect Street
Percival Street
Starling Street
Gladstone Street
White Street
Young Street
Armandale Street
Ilka Street
Moore Lane
Young Street
Collins Lane
Alfred Street
Armandale Street
Balmain Road
Norton Street
Renwick Street
Ferris Street
Young Street
Young Lane
Hearn Street
Albion Street
Albion Lane
Johnston Street
Parramatta Road
Corunna Road
Macauley Road
Albany Road
Albany Lane
Cardigan Street
Australia Street
Mallet Street
Lucas Street
Physics Road
Fisher Road
City Road
Prie Street
Carillon Avenue
Campbell Street
King Street
Wilson Street
Wilson Lane
Shepherd Street
Abercrombie Street
Mazs Crescent
Regent Street
George Street
Pitt Street
Gibbons Street
Locomotive Street
Botany Road
Cope Street
Henderson Lane
Newman Street
Albert Street
Enmore Road
Stanmore Road
Cavendish Street
Harrow Road
Trafalgar Street
Gordon Crescent
Douglas Street
Ravenue Lane
Railway Avenue
Salisbury Road
Lingon Street
Stafford Street
Cardigan Lane
Kingston Lane
Bedford Street
Oxford Street
Chalmers Street
Pritchard Street
Denison Street
Robert Street
Church Street
Hickam Street
O'Connell Street
Campbell Street
Wilson Street
Locomotive Street
Gibbons Street
Botany Road
Cope Street
Pitt

2.4 Cycling environment

The cycling accessibility of the Site is good due to its location in an urban setting and the presence of separated and shared use cycleways and paths as shown in Figure 3. Parramatta Road does not have any cycling infrastructure located along it. However, Bridge Road to the north has a separated off-road cycleway which connects into a network of off-road shared paths to the north of the Site.

A cycling accessibility assessment has been undertaken for the 10, 20 and 30-minute cycling catchments as shown in Figure 4. Four train stations and three light rail stops are located within the 10-minute cycling catchment. These train stations service the T2 and T3 rail lines and offer connections to the Sydney CBD and other key centres within Greater Sydney. The light rail stops service the L1 line connecting the Central Station to Dulwich Hill. Leichhardt, Chippendale and Stanmore are also a 10-minute cycle from the Site. Within the 20-minute catchment, additional train lines are accessible, such as the T1, T4, T8 and T9 as well as the new Metro line. Surry Hills, Balmain, Alexandria and Ashfield are all reachable within a 20-minute cycle. The Sydney CBD, Rosebery, Ashbury and Drummoyne are within a 30-minute cycle from the Site.



Figure 3: Cycling network (source: City of Sydney)

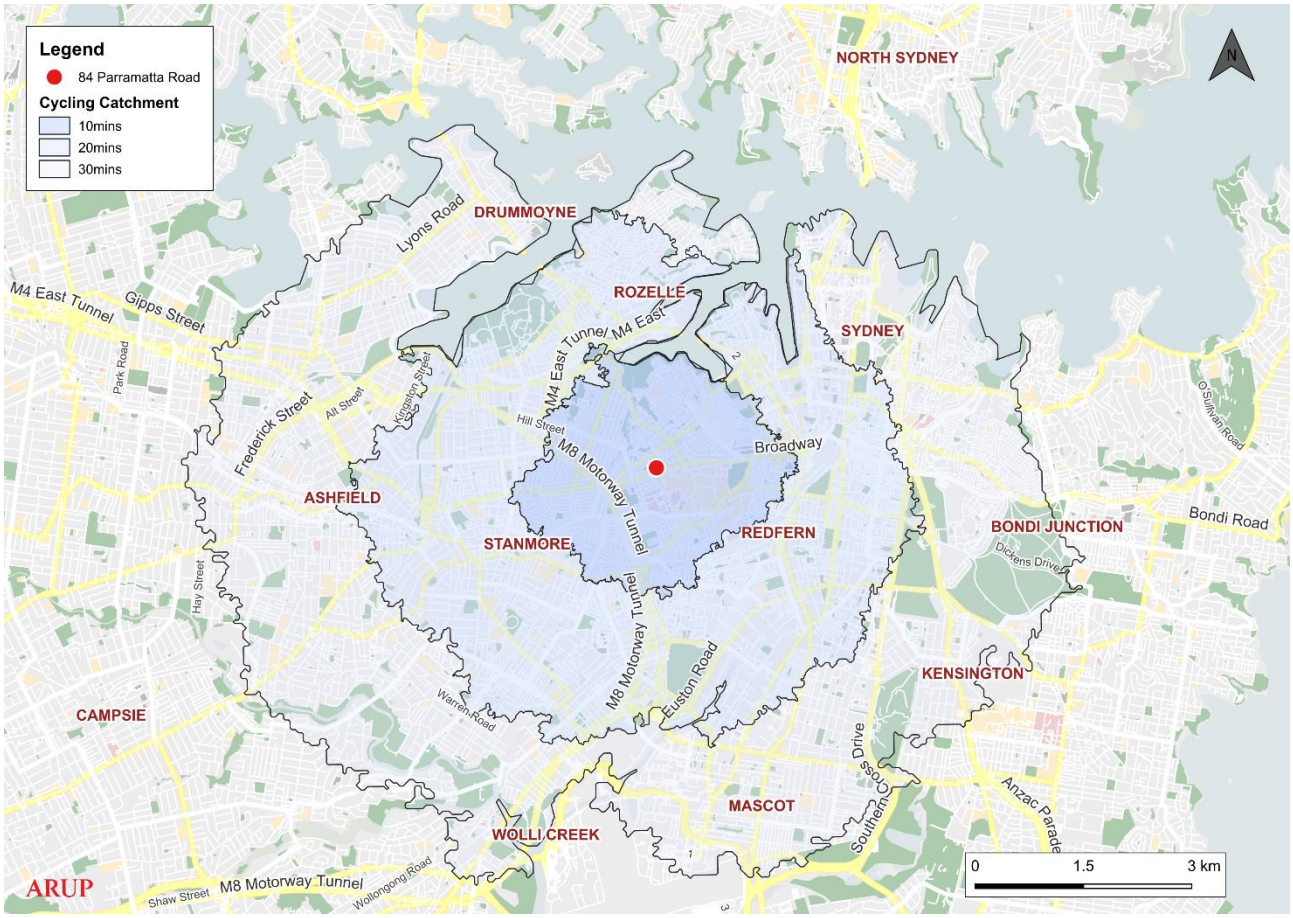


Figure 4: Cycling accessibility

2.5 Public transport

The Site is well connected to metropolitan Sydney as well as Greater Sydney via public transport. City of Sydney has categorised the Site's public transport accessibility as Category D, which is the highest level of accessibility. The train routes that service nearby stations mentioned in Section 2.3 and Section 2.4, stop at many stations around Sydney and most train lines are accessible with just one transfer. Bus services available on Parramatta Road and King Street connect the Site with other inner-city regions of Sydney.



Figure 5: Public transport accessibility (source: City of Sydney LEP)

A public transport accessibility assessment has been undertaken for the AM (arriving at 09:00) and PM (departing at 17:30) for the 15, 30, 45 and 60-minute catchments as shown in Figure 6 and Figure 7.

Public transport options available allow users to travel to/from as far as the likes of Parramatta, Chatswood and Revesby within 60 minutes. The inner city is mostly within the 45-minute catchment.

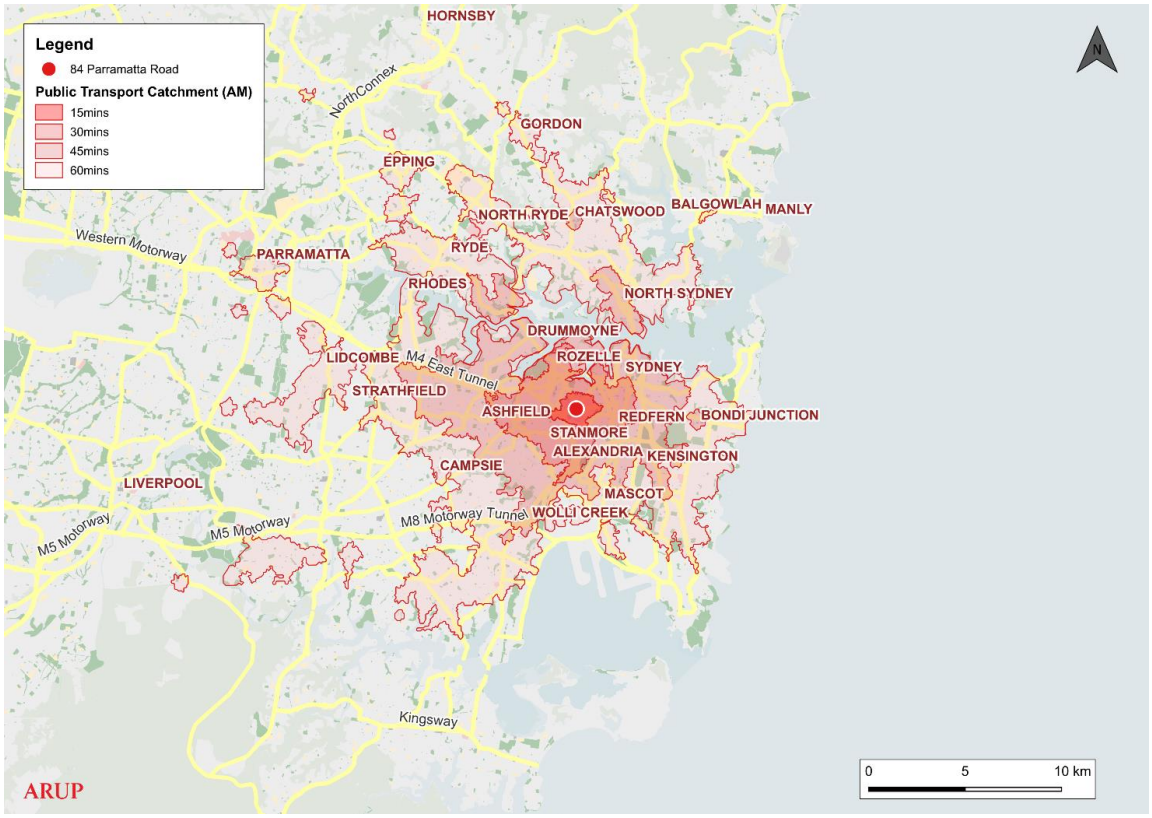


Figure 6: Public transport accessibility – AM (Arriving at the Site at 9am)

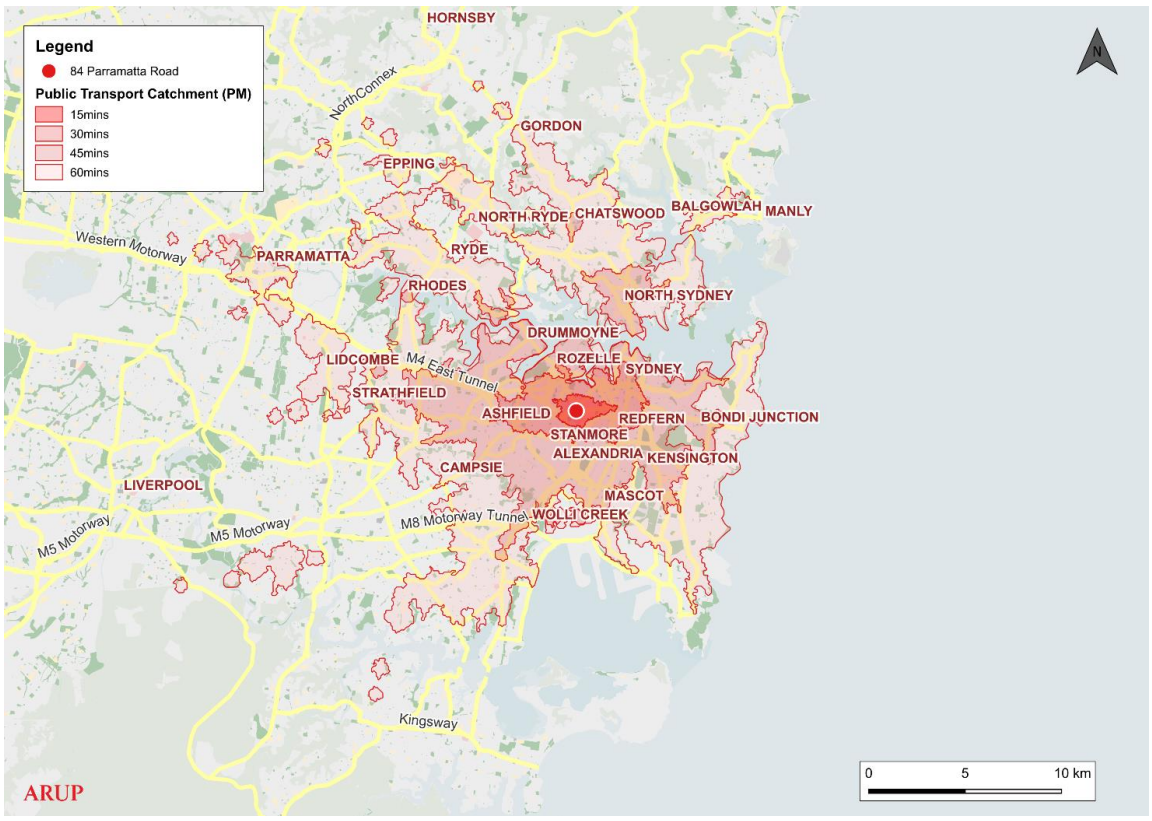


Figure 7: Public transport accessibility – PM (Departing from the Site at 5:30pm)

2.5.1 Bus

The Transdev John Holland bus routes service the roads surrounding the Site with the main routes located on Parramatta Road, King Street and Glebe Point Road. The bus routes are shown in Figure 8, whereas the bus services are summarised in Table 1.



Figure 8: Bus routes

Bus routes located within a 20-minute walk of the Site are summarised in Table 1, together with their respective service frequencies. These routes typically operate at least hourly between 6am and 9pm on weekdays and between 8am and 6pm on Saturdays and Sundays.

Table 1: Bus routes and frequency

Route	Description	Closest stop	Walk time to stop	AM Peak Hour Frequency	PM Peak Hour Frequency
352	Marrickville Metro to Bondi Junction	King Street	15 mins	2 Inbound 2 Outbound	2 Inbound 3 Outbound
370	Coogee to Glebe Point	King Street/Glebe Point Road	15 mins	6 Inbound 9 Outbound	12 Inbound 7 Outbound
412	Campsie to City Martin Place via Earlwood & Dulwich Hill	Parramatta Road	5 mins	3 Inbound 4 Outbound	2 Inbound 3 Outbound
413	Campsie and Central Pitt Street	Parramatta Road	5 mins	5 Inbound 2 Outbound	3 Inbound 4 Outbound
422	Kogarah to Central Pitt Street	Parramatta Road	5 mins	4 Inbound 4 Outbound	4 Inbound 4 Outbound

Route	Description	Closest stop	Walk time to stop	AM Peak Hour Frequency	PM Peak Hour Frequency
423	Kingsgrove to City Martin Place	King Street	15 mins	6 Inbound 5 Outbound	14 Inbound 10 Outbound
423X	Earlwood Shops to Martin Place	King Street	15 mins	1 Inbound	2 Outbound
426	Dulwich Hill to City Martin Place	King Street	15 mins	4 Inbound 2 Outbound	4 Inbound 4 Outbound
428	Canterbury to City Martin Place	King Street	15 mins	6 inbound 4 Outbound	4 Inbound 6 Outbound
428X	Canterbury Station to Martin Place	King Street	15 mins	3 Inbound	3 Outbound
430	Sydenham to Central Railway Square (Loop Service)	King Street	15 mins	3 Inbound	3 Inbound
431	Glebe Point to City Martin Place	Glebe Point Road	15 mins	6 Inbound 6 Outbound	5 Inbound 6 Outbound
433	Balmain Gladstone Park to Central Pitt Street	Minogue Crescent	12 mins	8 Inbound 5 Outbound	5 Inbound 6 Outbound
438X	Canterbury to City Martin Place	Parramatta Road	5 mins	10 Inbound 6 Outbound	6 Inbound 9 Outbound
440	Bondi Junction to Rozelle	Parramatta Road	5 mins	10 Inbound 5 Outbound	6 Inbound 5 Outbound
461X	Burwood to City Domain	Parramatta Road	5 mins	6 Inbound 5 Outbound	4 Inbound 6 Outbound
469	Marketplace Leichhardt to Glebe (Loop Service)	Ross Street	10 mins	3 Inbound	3 Inbound
470	Lilyfield to City Martin Place	Ross Street	10 mins	10 Inbound 6 Outbound	7 Inbound 8 Outbound
480	Strathfield to Central Pitt Street via Homebush Road	Parramatta Road	5 mins	3 Inbound 3 Outbound	2 Inbound 8 Outbound
483	Strathfield to Central Pitt Street via South Strathfield	Parramatta Road	5 mins	4 Inbound 2 Outbound	4 Inbound 3 Outbound

2.5.2 Light Rail

The Site is not currently served directly by light rail. The closest light rail station is Glebe Station located 1.5km (a 20-minute walk) northeast from the Site. Glebe Station is part of the L1 light rail line which connects Dulwich Hill and Central Station at a service frequency of every 6 minutes during the weekday peak, 10 minutes during weekday off peak and 15 minutes on Saturdays.

Glebe Station is accessible from the Site via the 440 and 469 bus routes which both stop on Glebe Point Road within 260m walk from the light rail station.

The ALTRAC consortium has proposed a new light rail line from Parramatta Road to Green Square via Central Station. The proposed 11km route would run along Parramatta Road and Broadway, passing through Central Station and various stops along the route, before terminating at Green Square Station. If delivered, the project would significantly improve public transport within the local area and provide an alternative option to access the Site from Sydney CBD.

On 24 June 2024, City of Sydney confirmed its support for the project and committed to working with the NSW Government and other stakeholders to accelerate planning and consultation[1]. At the time of writing, the proposal remains subject to further investigation, funding consideration and statutory approvals, and no confirmed delivery timeframe has been announced.

2.5.3 Train

The nearest train station to the Site is Macdonaldtown Station which is located approximately 1.6km (a 23-minute walk) south of the Site, or a 10-minute cycle. Macdonaldtown Station is served by T2 train services which connect Parramatta to Sydney CBD via Strathfield every 8-15 minutes during peak hours. The Station is also served infrequently by T3 Liverpool and Inner West Line services.

Further from the Site, there are options for alternative rail lines. Erskineville Station is located approximately 400m south of Macdonaldtown Station and 2km south of the Site. This station is served by Sydney Trains T8 Airport and South services which connect Sydenham and Campbelltown to Sydney CBD every15 minutes during peak hours.

2.5.4 Metro

While the Site is not directly served by Sydney Metro, Metro services can be accessed from Central Station approximately 2.3km to the east of the Site (10-minute cycle). Central Station is served by the Metro M1 line which connects Tallawong to Sydenham via Sydney's CBD with services running every 4 minutes during peak hours. This line will eventually continue directly to Bankstown via the converted T3 line to metro services.

Central Station is accessible from the Site via multiple bus routes that operate along Parramatta Road and Broadway, including the 422, 412, 413 and 483. These services stop on Pitt Street within 150m of Central Station.

[1] https://meetings.cityofsydney.nsw.gov.au/ieDecisionDetails.aspx?AIId=17932

2.6 Travel behaviour

Australian Bureau of Statistics (ABS) 2016 Census data has been used to understand travel patterns. The existing mode share for the Site was calculated using the 2016 Journey to Work Census data for two Statistical Area Level 2 (SA2) Glebe/Forest Lodge and Newtown/Camperdown/Darlington, with resultant mode shares presented below in Table 2.

2016 Census data was used to approximate the existing mode share. The more recent 2021 Census data was not used due to the significant impact on movement during the COVID-19 pandemic.

Table 2: Existing mode share for SA2 (Glebe/Forest Lodge and Newtown/Camperdown/Darlington)

Mode	Mode share 2016
Private vehicle	44%
Rail	24%
Bus	14%
Walk	13%
Bicycle	3%
Motorcycle	1%
Ferry	<1%
Other	<1%
Total	**100%**

The most common mode of transport is private vehicle followed by public transport. Due to the large area of the two SA2s used the mode share is not exactly representative the Site. The Site has a Public Transport Accessibility Level Category D, as shown in Figure 5, which is the highest level. The area surrounding the Site is Category E or F. This would indicate that the Site has better access to Public Transport than the rest of the SA2's and the public transport mode share is likely higher than what is shown in Table 2.

3. Proposed development

This section describes the proposed development including proposals for pedestrian, cycle and vehicular access as well as cycle and car parking facilities.

3.1 Site layout

The Proposal includes one basement level for parking. The Site will be accessed from the north via Sparkes Street and to the south via Parramatta Road.

The Site is currently zoned for mixed use - MU1. The area surrounding the Site is zoned for infrastructure – SP2 to the south and mostly residential - R1 to the north. The Site currently comprises existing serviced apartments. A schedule of the proposed building yields can be seen in Table 3.

The reference scheme for the Veriu serviced apartment site comprises 3,545m² GFA across 9 storeys (6 existing + 3 additional) to a height of 29.3m.

Table 3: Proposed Schedule

Service Apartments (unit)	Existing	Proposed
1 Bedroom	8	20
2 Bedroom	12	16
3 Bedroom	8	8
Total	**28**	**44**

The proposed layout for the Site is shown in Figure 9.

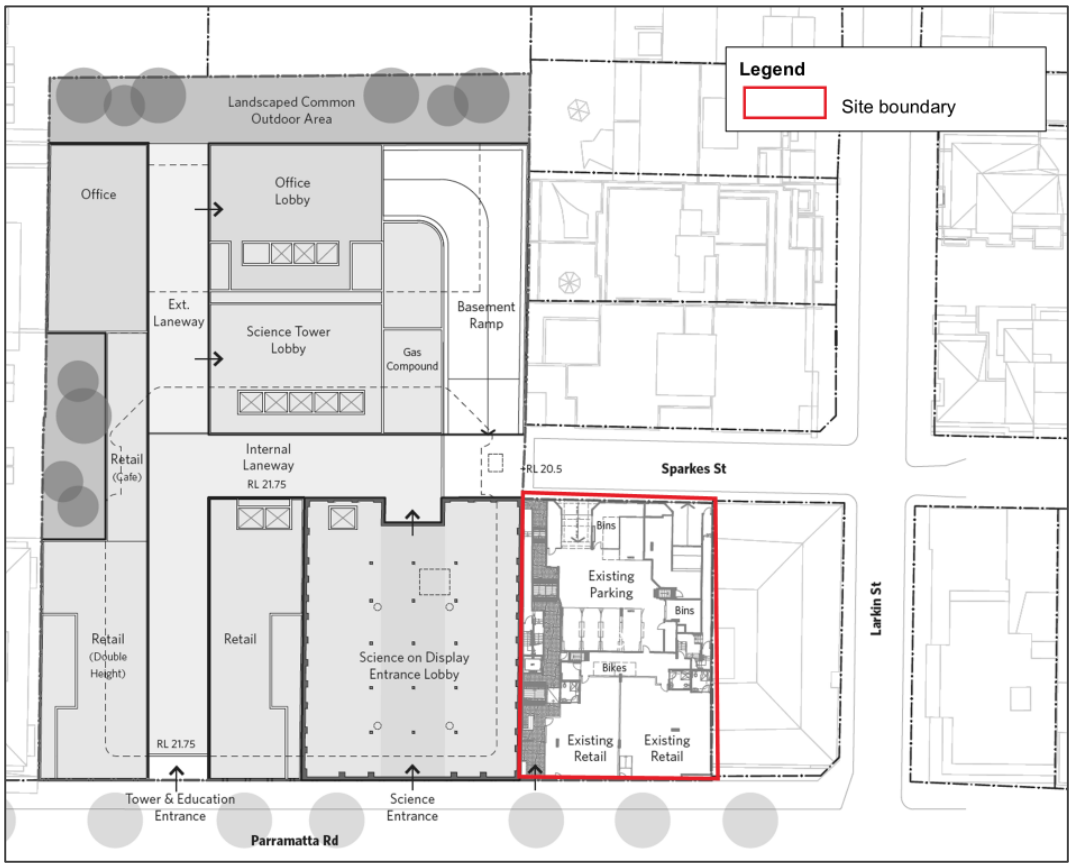


Figure 9: Proposed site layout

3.2 Site access

The following sub-sections detail the key principles of the pedestrian, cycling and vehicular movement and access strategy for the proposed development.

3.2.1 Pedestrian and cycling access

The pedestrian and cyclist access points for the Site are shown in Figure 10.

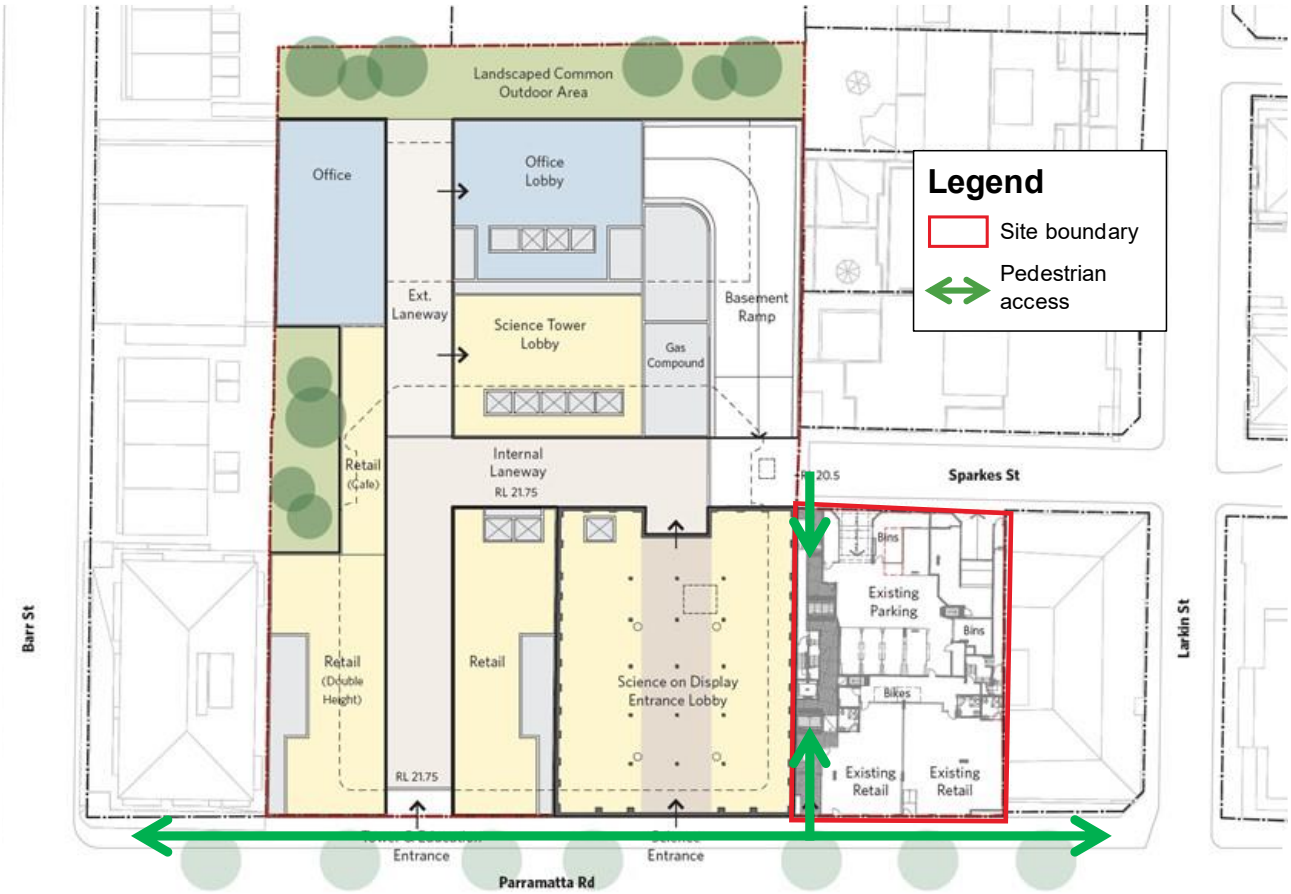


Figure 10: Pedestrian and cycling access

The main pedestrian access points to the Site are proposed from Parramatta Road and Sparkes Street, providing residents and visitors with direct access to the residential lobby. Both frontages will accommodate safe and convenient pedestrian movement to and from the Site.

3.2.2 Vehicle access

The proposed development site has been designed to accommodate vehicle movements associated with car parking, delivery and servicing activities. Access to basement level car parking is proposed to be from Sparkes Street, as shown in Figure 11.

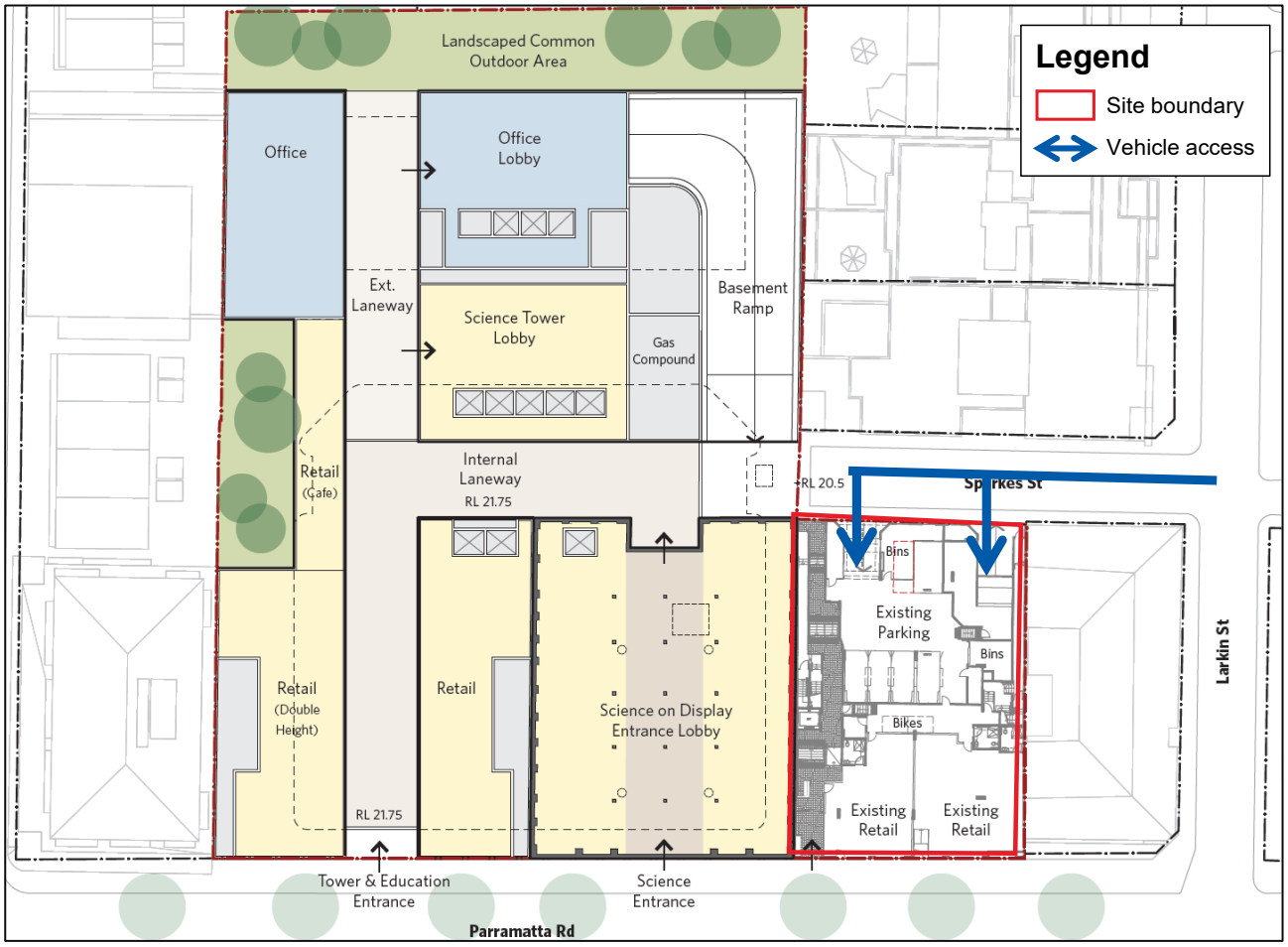


Figure 11: Vehicle access

3.3 Vehicle parking

The existing and proposed ground floor parking arrangement is shown in Figure 12. The Veriu serviced apartment building currently provides 28 car parking spaces. Under the proposed arrangement, one existing visitor parking space would be converted to provide additional waste storage for the serviced apartments, reducing the total parking provision to 27 spaces. This would comprise 22 residential spaces, two visitor space and three commercial spaces.

The reduction of one visitor space is considered acceptable given the site's high public transport accessibility and the limited parking demand associated with the proposed uplift in serviced apartment yield.

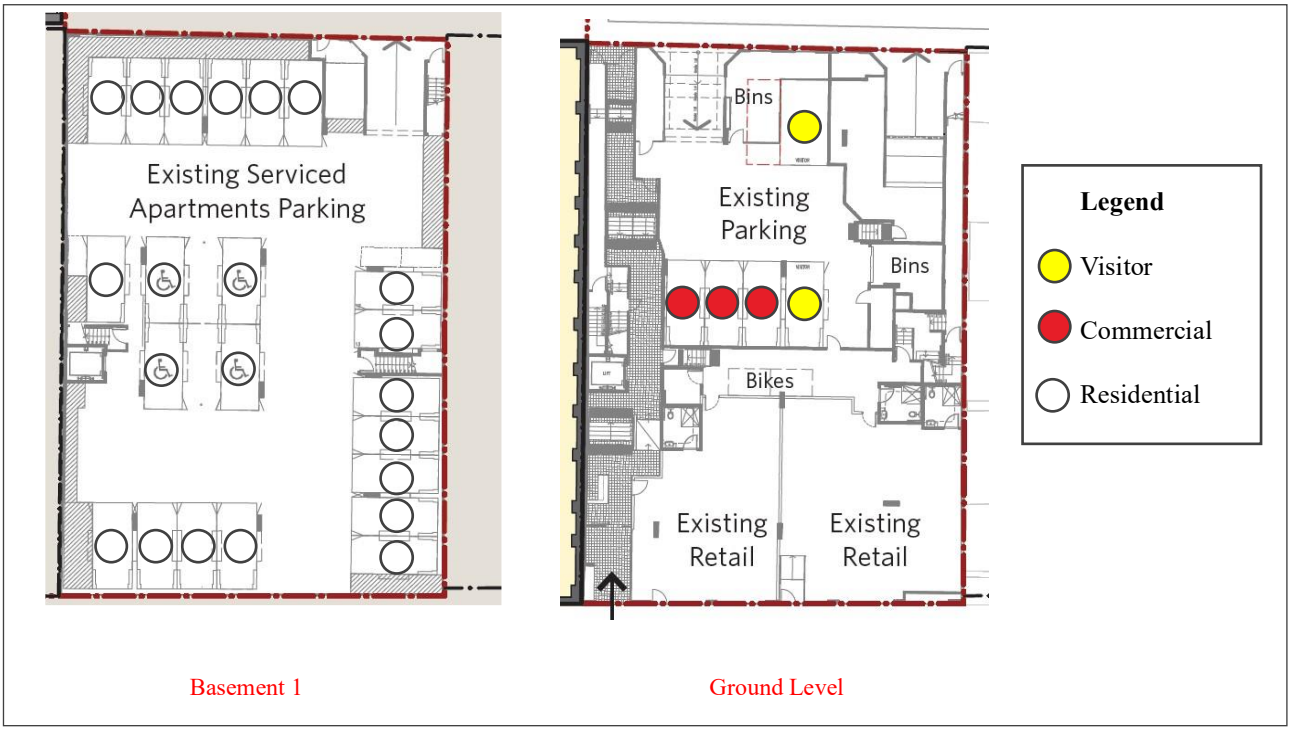


Figure 12: Proposed car parking

3.4 Loading

All loading, servicing and waste collection activities associated with the Veriu serviced apartments will continue to occur via Sparkes Street. The serviced apartments will operate independently of the proposed life sciences tower and associated basement levels and will not rely on the proposed new loading dock or servicing infrastructure to service the serviced apartment use.

One existing ground floor car parking space is proposed to be converted to increase the waste store from 14 m² to 23 m², supporting the proposed increase in yield while maintaining the existing servicing access from Sparkes Street.

Servicing demand has been assessed as a standalone land use using the Urban Freight Forecast Model (UFFM), with the detailed forecast provided in Section 4.2. In summary, peak-hour servicing would remain at approximately one service vehicle during each of the AM and PM peak hours, consistent with existing demand, with the overall increase occurring predominantly outside peak periods. Waste collection would increase from approximately one to two collections per week, occurring outside peak periods and accommodated through the existing on-street servicing arrangements.

Accordingly, the proposed increase in serviced-apartment yield is not expected to materially alter the existing servicing access arrangements or result in significant additional impacts on the surrounding road network. The enlarged waste storage area and increased collection frequency would accommodate the additional servicing demand.

3.4.1 Utilities access

3.4.1.1 Electrical services

A 3x1500kVA triplex transformer chamber substation is to be installed to supply the adjacent 88-94 Parramatta Road development, in consultation with local power supply authority Ausgrid. The substation is proposed to be installed with equipment access from ground level via an equipment access hatch, as shown in Figure 13. Traffic management will be required on Sparkes Street to manage vehicle movements to and from the Site during the servicing and replacement of substation equipment. As the replacement of substation equipment occurs infrequently, the impact is deemed to be insignificant.

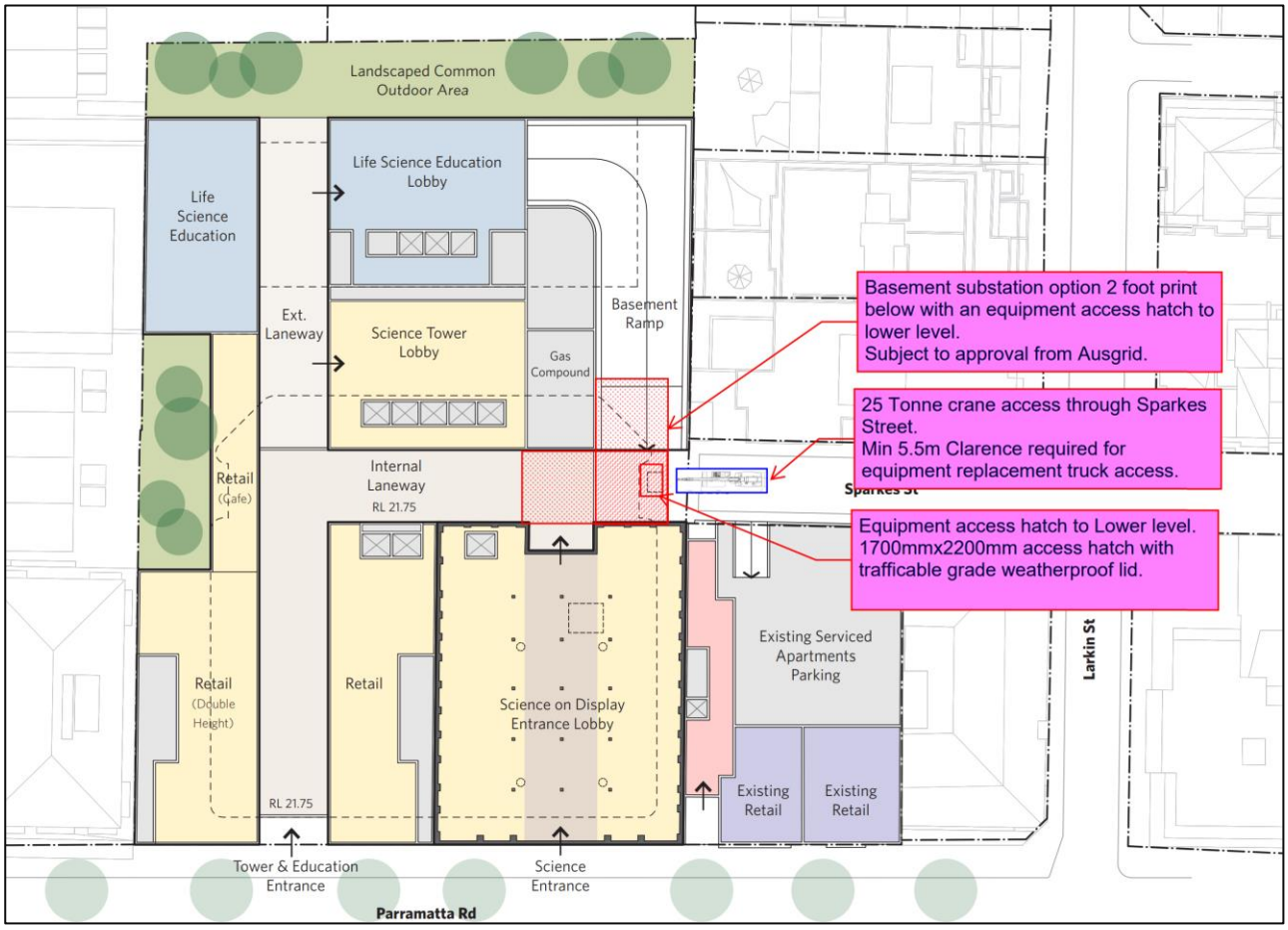


Figure 13: Basement Substation with Access Hatch and Crane Access to 88-94 Parramatta Road

3.4.1.2 Laboratory gases

Cryogenic gas is required for laboratory activities at the adjacent 88–94 Parramatta Road development. After discussions with the supplier, deliveries would occur on Sparkes Street using an 8.8 m Medium Rigid Vehicle (MRV), superseding the earlier assumption that a 12.5 m Heavy Rigid Vehicle would be required.

Laboratory gas deliveries may temporarily restrict access to the Veriu serviced apartments. Delivery times would therefore be coordinated between the serviced apartments and the life sciences development and managed through appropriate traffic-control measures.

3.5 Bicycle parking and End of Trip Facilities

The development currently provides 14 bicycle parking spaces at ground level. The minimum bicycle parking requirement has been reviewed against the updated serviced-apartment schedule of 76 rooms. In accordance with the Sydney DCP 2012, four visitor bicycle parking spaces are required based on a rate of one space per 20 rooms. The staff bicycle parking requirement is based on a rate of one space per four staff and will be confirmed when the anticipated staffing level is finalised.

Table 4: Minimum cycle parking rates

Land use	Quantum	Rate		Requirement	
		Staff	Visitor	Staff	Visitor
Serviced apartments	76 bedrooms	1 per 4 staff	1 per 20 rooms	4	4
Total				4	4

4. Transport impact assessment

4.1 Vehicular trips

4.1.1 Trip generation

Vehicle trip generation has been estimated using the motel land use trip rates from the TfNSW Guide to Traffic Generating Developments 2002 (GTGD), which is considered the closest available proxy for serviced apartment use. This reflects the short-stay accommodation nature of the proposal.

In terms of peak hour trips for motels, GTGD recommends below trip rates:

- PM peak hour: 0.4 vehicle-trips per unit,
- AM peak hour: 0 vehicle-trips per unit.

The proposal would increase the serviced apartment yield by 16 units, resulting in an estimated additional 7 trips (rounded up) during PM peak hour. As shown above, GTGD recommends no vehicle trips for motels during AM peak hour, which was also adopted for this assessment.

4.1.2 Impact of additional trips

Regarding the impact of the additional 7 trips, the SIDRA modelling outputs prepared for the adjacent Life Sciences Planning Proposal (reference: 88-94 Parramatta Road Camperdown TIA, prepared by Arup, dated 30 July 2026) were reviewed. These outputs include 2024 Base (existing conditions) and 2030 Base (i.e. with background traffic growth only) AM and PM peak performance of the key intersections surrounding the site, as presented in Table 5 for easier reference.

Table 5: SIDRA results

ID	Intersection	Peak hour	Scenario	Total traffic at intersection	DOS	Delay(s)*	LoS*
1	Parramatta Rd / Missenden Rd / Lyons Rd	AM	2024 Base	4,044	0.89	30s	C
			2030 Base	4,282	0.93	37s	C
		PM	2024 Base	3,905	0.86	27s	B
			2030 Base	4,135	0.91	33s	C
2	Parramatta Rd / Western Ave / Ross St	AM	2024 Base	3,708	0.93	35s	C
			2030 Base	3,924	0.99	51s	D
		PM	2024 Base	3,874	0.79	26s	B
			2030 Base	4,102	0.84	29s	C
3	Bridge Rd / Ross St	AM	2024 Base	2,042	0.75	18s	B
			2030 Base	2,160	0.80	19s	B
		PM	2024 Base	2,252	0.67	17s	B
			2030 Base	2,382	0.71	18s	B
4	Parramatta Rd / Larkin St	AM	2024 Base	3,345	0.61	6s	A
			2030 Base	3,541	0.64	6s	A
		PM	2024 Base	3,332	0.51	6s	A
			2030 Base	3,525	0.54	6s	A

ID	Intersection	Peak hour	Scenario	Total traffic at intersection	DOS	Delay(s)*	LoS*
5	Larkin St / Sparkes St	AM	2024 Base	86	0.02	5s	A
			2030 Base	89	0.02	5s	A
		PM	2024 Base	77	0.02	5s	A
			2030 Base	82	0.02	5s	A
6	Ross St / Arundel St	AM	2024 Base	814	0.23	16s	B
			2030 Base	864	0.24	16s	B
		PM	2024 Base	929	0.25	14s	A
			2030 Base	989	0.27	15s	B

** For priority-controlled intersections, Delay and LoS correspond to the movement experiencing the greatest delay, whereas DoS is based on the movement with the highest modelled degree of saturation. For signalised intersections, the Delay and LoS represent the weighted average of all movements, while DoS reflects the critical movement with highest degree of saturation.*

For serviced apartments, the additional 7 trips during PM peak hour forecast for the serviced apartment uplift would range between 0.17% and 0.29% increase in traffic at the intersections modelled. The forecast increase is considered minor and further SIDRA modelling is not considered warranted for this Planning Proposal.

Notwithstanding, based on the results presented in Table 5, the nearby signalised intersections are forecast to operate at LoS C or better in the 2030 Base PM scenario, and the priority-controlled intersections would operate with low delays as well (LoS A or B). All 6 intersections are expected to continue to operate with acceptable delays and LoS when the serviced apartments are operational.

4.2 Servicing trip generation

Servicing demand for the serviced apartment component has been estimated in accordance with the Transport for NSW Urban Freight Forecast Model (UFFM), which provides benchmark service vehicle generation rates for residential land uses, including apartments and serviced apartments.

Based on the UFFM, the development is expected to generate approximately 9 service and delivery vehicles per day as seen in Table 6. This equates to 18 vehicle trips (inbound and outbound) across the day.

Demand is distributed throughout the day, with approximately one servicing vehicle expected to occur during each of the AM and PM peak hours in both the existing and proposed scenarios (equating to two vehicle trips in the peak hour). As a result, the change in peak-period servicing demand, and the corresponding impact on Sparkes Street, is expected to be negligible.

It is anticipated that servicing vehicles will generally arrive and depart within a short timeframe, with most servicing activities taking less than 30 minutes to complete. On this basis, the provision of five servicing bays is considered sufficient to accommodate peak servicing demand without adverse impacts on the surrounding road network.

Waste servicing has been assessed separately using the UFFM. As shown in Table 8, waste collection demand is expected to increase from approximately one collection per week under existing conditions to around two collections per week under the proposed scheme.

Table 6: Service vehicle trips (UFFM model)

	Timeframe	Vehicles	Trips (in and out)
Current	Vehicles per day	6 vehicles	12 trips
	Vehicles during peak	1 vehicle per peak hour	2 trips per peak hour
Proposed scheme	Vehicles per day	9 vehicles	18 trips
	Vehicles during peak	1 vehicle per peak hour	2 trips per peak hour

Table 7: Breakdown of service vehicle trips by vehicle type

Vehicle type	Current / day	Proposed / day	Increase / day	Comment
Van	4.40	6.91	+2.51	Generally, can be accommodated within service bays
SRV	0.75	1.17	+0.42	Minor increase
MRV/HRV	0.43	0.68	+0.25	Minor increase
Total	5.58	8.76	+3.18	Increase is largely driven by vans

Table 8: Daily and weekly waste servicing (UFFM model)

Timeframe	Current waste requirements	Proposal waste requirements
Vehicles per day	0.15 vehicles per day	0.24 vehicles per day
Vehicles per week	1.05 vehicles per week	1.68 vehicles per week

4.3 Access arrangements

Access to the proposed development is via Sparkes Street using the routes shown in Figure 14.

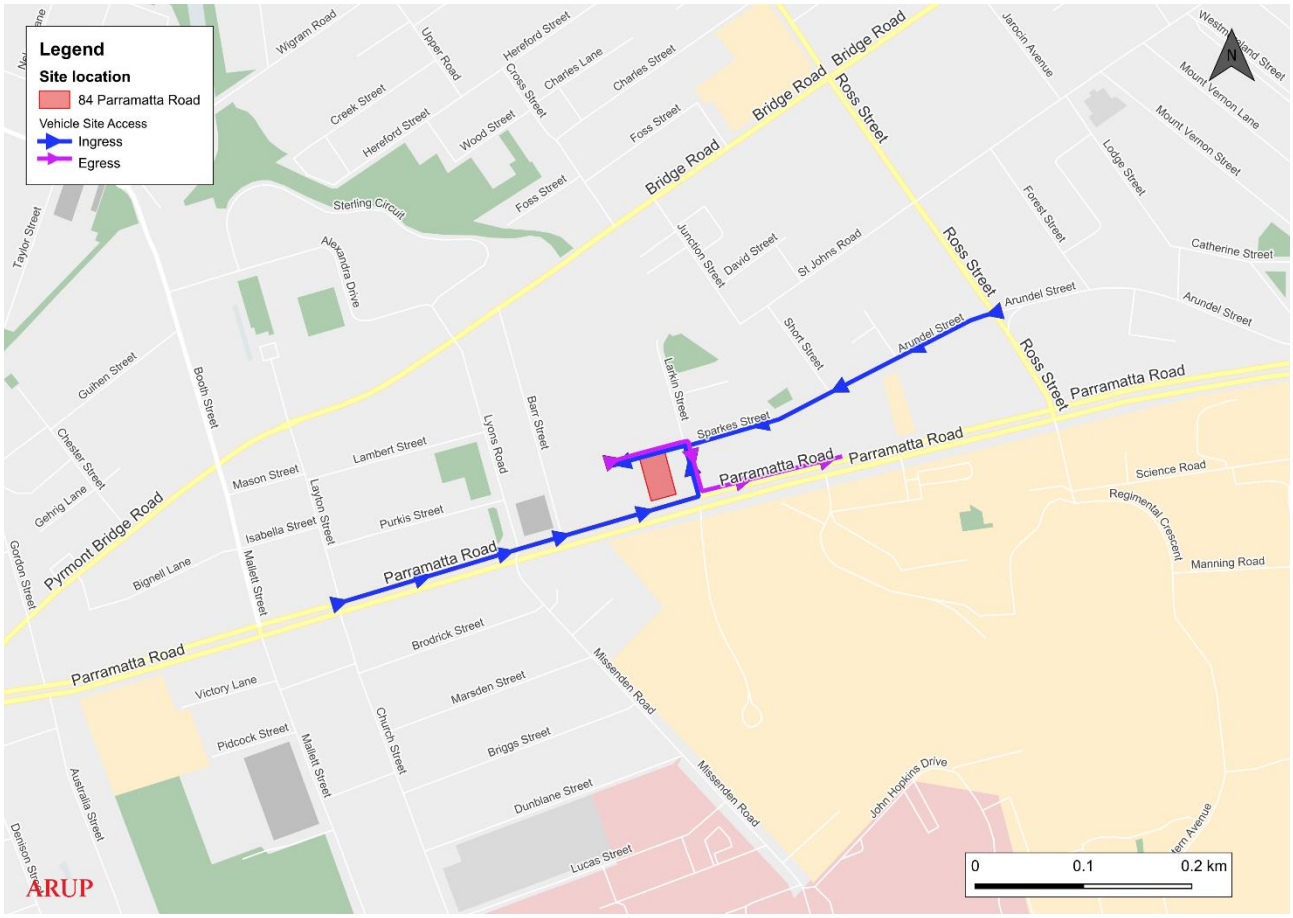


Figure 14: Vehicle access

Vehicles accessing the site from:

- the east are expected to do so from the Ross Street/Arundel Street intersection.
- the west are expected to do so via Parramatta Road (Great Western Highway)

Vehicles leaving the site must travel eastbound on Parramatta Road due to the left-out only arrangement at the intersection with Larkin Street.

4.4 Impacts on Walking, Cycling and Public Transport

As discussed in Section 3.2, the main pedestrian access for the Site is proposed from Parramatta Road. Most roads in the surrounding area have footpaths on both sides, and intersections have pedestrian facilities for crossing.

Cyclist access will be provided via Parramatta Road, with dedicated bicycle parking and end-of-trip facilities located within the PP.

The PP is expected to have minimal impact on public transport, walking, and cycling networks. The site benefits from strong connectivity, with 10 bus routes within a 10-minute walk, and two light rail stops accessible within 25-minute walk or 10-minute cycle.

4.5 Recommendations

To manage travel demand generated by the PP, travel demand management measures are proposed to be implemented. Measures would aim to promote sustainable travel choices for staff and visitors and are detailed in a Framework Travel Plan as shown in Chapter 5.

5. Outline Framework Travel Plan

5.1 Objectives

A Framework Travel Plan (FTP) is a package of measures put in place by a building manager to encourage more sustainable travel whilst commuting to and from a development. It allows an organisation to demonstrate a commitment and a proactive step towards improving environmental sustainability by reducing the environmental impact associated with travel to and from the development.

The key element of this plan is reducing reliance on private vehicles and maximising the use of public transport and other sustainable modes of transport. The FTP would contribute to a healthier and higher quality of life for residents and visitors whilst reducing air and noise pollution. An FTP would apply to all who travel to and from the Site.

As a constantly evolving strategy, the success of the plan will rely on ongoing monitoring and review. A robust governance structure could include a nominated FTP representative or committee consisting of residents and/or building management. Objectives can act as measures of success and may also be used to identify potential refinements.

The objectives of an FTP typically cover the following:

- Encourage the use of more sustainable transport modes i.e. walking, cycling, public transport and carpooling in place of higher energy consumption travel modes such as single occupant car travel and taxi.
- Raise awareness of sustainable modes of transportation for residents and visitors who commute to, from and within the Site.
- Reduce traffic congestion and air pollution around the Site to enhance safer and more enjoyable journeys.
- Travel Demand Management (TDM) which includes management measures to reduce travel demand, such as by remoding, reducing or retiming trips.
- Develop, implement, monitor, evaluate and review the progress of the travel plan strategy.

A framework of potential management measures is also outlined to help achieve the objectives of the FTP.

5.2 Potential measures

The package of measures has been provided to encourage more sustainable travel while travelling to and from the Site. Physical and behavioural measures are two potential measures to introduce into a viable FTP. Physical measures will prioritise sustainable transport via walking, cycling, public transport or car share whereas behavioural measures aim to provide soft strategies which influence travel behaviours for those who will travel to and from the Site.

To meet the objectives and targets of an FTP, this section outlines the potential management measures that could be considered for implementation at the proposed development. The measures have been grouped into the principles of remode and reduce, which are the most relevant to this FTP as they focus specifically on sustainable travel or reducing travel altogether. These principles are discussed below.

5.2.1 Remode

The principle of remode aims to promote non-private vehicle modes of travel, such as public transport, walking or cycling, or more fuel-efficient vehicles such as electric vehicles (EVs) or small vehicles. Measures to remode travel are discussed below.

5.2.1.1 Education and awareness

Education and awareness of the availability of sustainable travel modes would be crucial in encouraging all users at the Site to adopt travel plan measures. It is important that all users are made aware of the need to reduce car dependency where possible.

A new development provides an opportunity to offer residents and visitors advice on travel modes to and from the Site. At this time, new travel habits are being established, and people may particularly welcome information about the travel services and facilities available to them.

- Potential measures to encourage education and awareness include:
- Provide travel information for visitors travelling to and from the Site using sustainable forms of transport, as well as outlining the benefits, objectives and measures of the wider FTP. A website or app associated with the development could include links to TfNSW websites to promote sustainable travel.
- A Travel Access Guide (TAG) could also be provided to residents and visitors to highlight sustainable travel methods. The purpose of a TAG is to highlight sustainable travel methods in a legible and easy to read format and would include the following:
  - Map showing key public transport, walking and cycling routes to the development.
  - Information on end of trip facilities, events and programs.
- Provide an overview of the FTP and TAG as part of resident information or welcome material. This may also include information on bicycle parking and end of trip facilities to increase awareness.
- Events such as ‘National Bike Week’, ‘Bike2Work Days’ and ‘Walk to Work Day’ could be promoted.
- Other incentives to encourage sustainable travel may also include discount vouchers for a local bicycle retailer.

5.2.1.2 Promotion of public transport

The use of train and bus services could be promoted by outlining public transport services in a TAG to enable residents and visitors to assess route options and to plan a public transport trip to and from the Site.

Links to journey planning websites and real-time public transport service data could be provided on a website or app associated with the development. All user groups should be provided with a user-friendly map describing the surrounding public transport links. Maps can be distributed via a range of digital platforms including email or mobile phone application. These maps would advertise and promote public transport and prompt site users to consider public transport as their first transport option when travelling to and from the Site. These public transport maps should also include information on accessible transport routes for all site users with special access needs.

5.2.1.3 Promotion of walking

Walking could be promoted via the following measures:

- All site users should have access to a legible map outlining surrounding public transport linkages, local outlets and attractions within a reasonable walking distance. Maps can be distributed via a range of digital platforms including email, mobile phone application or information boards within the Site. Walking networks can be presented in a TAG and paths to key destinations such as nearby bus stops and serviced routes are indicated clearly.
- Participate in regular events such as ‘Walk to Work Day’.

5.2.1.4 Promotion of cycling

As discussed in Section 2.4, the proposed development is located near the wider off-road cycling network and will provide easily accessible bicycle parking and end of trip facilities for cyclists. The provision of secure bicycle parking and end of trip facilities are expected to encourage all site users.

Cycling could also be promoted via the following measures:

- Outline cycling facilities in the TAG to enable cyclists to assess route options and to plan how to cycle to and from the Site.
- Facilitate a bike-sharing program within the proposed development. Bikes could be made available to all users, which would be booked for a specific period of time. A bike-sharing program would provide access to a bike for site users who do not own one and could encourage long-term adoption of cycling.
- Form a Cycling Group consisting of residents and regular cyclists. The Cycling Group could advocate for cycling for all tenants, including organising cycling events and notifying building management of maintenance and issues relating to the provision of on-Site cycling facilities.
- Participate in regular events such as 'Ride to Work Day'.
- Provide bicycle maps showing surrounding cycleways and infrastructure via a mobile phone application, the development's website or as physical wayfinding. This will allow cyclists to assess route options and plan how they cycle to the Site. As the surrounding area has high quality cycling infrastructure, cycling to and from the Site can be an enjoyable and sustainable method of travel.

5.2.1.5 Car parking management

Car parking management strategies could be considered to reduce private vehicle demand or encourage a shift to more fuel-efficient private vehicles via the following measures:

- Provision of EV charging infrastructure or provision of 'small car' parking spaces to facilitate the uptake of EVs and small cars.
  - To further encourage EV uptake and small cars, small car parking spaces or spaces with EV charging infrastructure can be located in the most desirable parking spaces near access points to the development.
- Unbundled parking is a travel demand management strategy where parking spaces are rented, leased, or sold separately from the associated premises. It allows people to choose whether they need and want to pay for a parking space, rather than paying regardless of use. This measure can encourage individuals to reconsider and potentially reduce parking needs and private vehicle demand.

5.2.2 Reduce

The principle of reduce aims to reduce the overall number of trips generated. Measures to reduce travel are discussed below.

5.2.2.1 Carpooling

Carpooling (or ride sharing) involves carrying additional vehicle passengers while undertaking a journey with low additional distance. Carpooling enables a reduction in separate vehicle trips to a similar destination and is generally cost-effective, particularly to and from areas that are not well served by public transport.

Carpooling could be facilitated in the proposed development by building management to connect site users travelling to and from a similar destination.

5.3 Monitoring and review

The FTP is a live document, and its successful implementation would rely on ongoing monitoring and review. Although the objectives of the FTP would not change, targets and measures may be changed to reflect an ambition for continued progress.

Monitoring mechanisms could include periodic travel surveys to understand the travel behaviour of residents and visitors and the success of the measures. The survey could be distributed three months post-occupation as well as yearly or following key transport network changes (such as new bus routes).

A key part of an effective FTP is to nominate personnel to champion and administer the plan. A robust governance structure would contribute to the success of the plan and could include a nominated FTP

representative or committee. A representative or committee could consist of residents and/or building management, who would:

- Manage and implement the FTP measures.
- Periodically update the FTP as new or safer transport routes become available.
- Engage with stakeholders, promote the FTP and solicit feedback.
- Monitor performance and make decisions on the FTP.
- Raise improvements to public transport or walking and cycling facilities with Council or TfNSW.

6. Framework Construction Traffic Management Plan (CTMP)

This section outlines the objectives of the framework CTMP and the high-level principles that can be used to achieve them.

6.1 Traffic management objectives

The key aim of this framework CTMP is to minimise impacts to the surrounding transport network during construction. The following objectives have been developed to support this overarching aim:

- Ensure safety of pedestrians, cyclists, construction workers, road users and the local community;
- Minimise the overall impacts to road users;
- Ensure minimal disruptions to public transport operations, including schedules, stop location and routes;
- Maintain access for existing road users, including the local community, public transport operators, pedestrians and cyclists;
- Ensure disruption to surrounding stakeholders and land uses is minimised, including appropriate consultation.
- Minimise disruption to existing road furniture and kerbside provisions including existing bus stops, cycleways and on-street parking; and
- Comply with all relevant legislation and other requirements specified by relevant authorities.

6.2 Traffic management principles

To achieve the objectives outlined above a set of principles have been developed to guide all construction management measures across the project. The key principles are as follows:

- Clear and timely communication in relation to any changes, to affected areas and the expected duration of works via various platforms through the project website, radio, newspapers, social media or direct community engagement;
- Implement appropriate traffic controls including signage, line marking and stop lights to direct private vehicles, transport operators, pedestrians and cyclists past work Sites. Alternative routes may be provided where existing infrastructure is impacted by the works;
- Manage Site compounds and work areas to ensure construction traffic and works are primarily contained within these areas and road occupancy is minimised;
- Manage pedestrians and other vulnerable road users to ensure safe and continuous movement past the work Sites. Consideration of the land uses and key pedestrian desire lines in the surrounds of the work Sites will be the key drivers for the type of traffic management strategies implemented;
- Where practical, consideration of scheduling construction traffic movements to avoid peak times and smoothing of peaks in construction traffic activity to minimise impacts to the transport network; and
- Encourage construction workers, where possible, to use modes other than private vehicle.

These principles are to be communicated to any parties involved in construction traffic management across the project. Any issues arising during the works will also require notification to the users outlined, ensuring transparency across the duration of the construction phase.

6.3 Existing user group hierarchy

During preparation of any CTMPs, prioritisation of potential user groups is important in providing appropriate construction traffic management measures at each work Site. The hierarchy of users is listed below from highest to lowest:

- Pedestrians;
- Cyclists;
- Public transport users;
- Service vehicles (relating to businesses and agricultural uses); and
- Private vehicles.

The development of the user group hierarchy has been based on similar approaches applied in Framework CTMPs for other large infrastructure schemes. This hierarchy also aligns with Future Transport 2056. This hierarchy will be considered alongside the TfNSW functional road hierarchy provided below, in order of high to low priority roads, during the development of management measures.

- Primary arterial roads;
- Sub-arterial roads;
- Collector roads; and
- Local roads.

6.4 Governance

The document owner of each CTMP will be appointed during the procurement process and the governance of the construction traffic management process will be discussed and developed with the Department of Planning, Housing and Infrastructure as the project progresses.

6.5 Proposed working hours

While the construction times will vary throughout the project, the typical working hours are 07:00-18:00, with personnel arriving to the Site before 07:00 and leaving after 18:00.

In some cases, there may be night works to minimise disruption to traffic. Further assessments of these requirements will be undertaken once the detailed design stage is undertaken, and the requirements are known. All night works would be undertaken in accordance with the TfNSW Environmental Noise Management Manual (2001): Practice Note vii–Roadworks outside normal working hours, as well as the Office of Environment and Heritage Interim Construction Noise Guideline (DECC 2009).

6.6 Truck routes and controls

Due to the location of the proposed development, construction access is proposed from Parramatta Road (Great Western Highway). A detailed CTMP will need to be prepared for the works following approval with details of the size of vehicles due to the one-way narrow roads within the local road network.

7. Conclusion

This Transport Impact Assessment evaluates the transport implications of the proposed 84 Parramatta Road development. The assessment considered existing transport conditions, including the local road network, public transport services, active transport facilities, and travel behaviour patterns.

The assessment considered existing transport conditions, including the local road network, public transport services, active transport facilities and travel behaviour. The site benefits from excellent public transport accessibility (City of Sydney Category D) and strong active transport connectivity, supporting a low reliance on private vehicles.

In terms of peak hour vehicle trips, the proposal is forecast to generate additional 7 vehicle trips during the PM peak hour (no trips during AM peak hour). No standalone SIDRA modelling was undertaken for this Planning Proposal; instead, as a sensitivity check, this increase was compared against the 2030 future base SIDRA volumes prepared for the adjacent Life Sciences Planning Proposal. The additional trips would represent approximately 0.17% to 0.29% of traffic at each of the three nearby signalised intersections, which are forecast to operate at LoS C or better. The nearby priority-controlled intersections also operate with low delays in the 2030 base case. Accordingly, the additional traffic is not expected to materially affect the operation of the surrounding road network.

One existing visitor parking space would be converted to provide additional waste storage. Peak-hour servicing demand would remain unchanged, while waste collection would increase modestly from approximately one to two collections per week.

The traffic generation during construction is expected to be lower than during operation and thus likely to have lower impact on the road network than during operation. A CTMP would be prepared as part of the detailed design phase.

Overall, the Planning Proposal is not expected to result in any adverse transport impacts on the surrounding network and can be satisfactorily accommodated.

Attachment A9

Economic impact assessment

Atlas Economics

88-94 Parramatta Road, Camperdown

Economic Impact Assessment

WENTWORTH CAPITAL

FEBRUARY 2026



Document Control

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Executive Summary

Background

Wentworth Capital, in partnership with the University of Sydney (**USYD**), are progressing a planning proposal to enable development of a Life Sciences Hub (**the Proposal**) at 88-94 Parramatta Road, Camperdown (**the Site**). The Site is owned by the USYD.

The Site is part of the Camperdown Health and Education Precinct, a sub-precinct within 'Tech Central' – a 600ha precinct comprising parts of Camperdown, Haymarket and South Eveleigh planned by the NSW Government to become an internationally renowned innovation district. Facilitating private sector investment into Tech Central is a key objective of the NSW Government.

The Site is zoned MU1 Mixed Use under the Sydney Local Environment Plan 2012 (**Sydney LEP 2012**). The maximum density controls permitted include a Floor Space Ratio (**FSR**) of FSR 2.5:1 and maximum height control of 18m. To enable development of the Proposal, additional densities (FSR and height) above those currently permitted under the Sydney LEP 2012 are required.

Atlas Economics (**Atlas**) are engaged to carry out an Economic Impact Assessment (**the Study**) to assess the need for life sciences floorspace and the economic impacts of the Proposal.

THE PROPOSAL

To facilitate the Proposal, a planning proposal is being prepared to amend relevant planning controls under the Sydney LEP 2012, increasing the maximum FSR and building height (HOB). The Proposal envisages delivery of 38,317sqm of gross floor area (GFA), comprising a mix of incubator and lab space, conference facilities, industry space, 'Science on Display', food and beverage (F&B), life science education space and serviced apartments. The Proposal would create a new 'life sciences campus' within the Camperdown Health and Education Precinct.

The new campus and will enhance the capacity of existing research facilities and strategic infrastructure being developed by USYD, (including the Sydney Biomedical Accelerator and upgrades to the Royal Prince Alfred Hospital). Importantly, the Proposal facilitates the commercialisation of biomedical and life sciences research.

Defining Life Sciences

Life sciences study living organisms and their processes. It spans a vast range of scientific research, disciplines and sub-disciplines.

The life sciences industry is characterised by a mix of private businesses, universities, government-funded research agencies and small startups. Whilst there is significant overlap between the sectors that these actors operate in, the two key sub-sectors within the life sciences industry include biotechnology and pharmaceutical development.

- Biotechnology

  Biotechnology is the use of technology to improve life, and it is one of the most important modern tools to address biological problems. The biotechnology industry is primarily divided into medical and agricultural biotechnology.

  The global biotechnology market was estimated at approximately $1.55 trillion (USD) in 2023 and is forecast to grow to $3.88 trillion by 2030 (Grand View Research, 2024).

- Pharmaceutical Development

  The pharmaceutical industry develops, synthesizes, and produces drug products derived from chemicals. The pharmaceutical industry involves concerted efforts toward drug discovery, drug product development, and approval.

  The value of the global pharmaceutical market is projected to grow 38% from 2023-2028.

There are also multiple overlapping sub-fields within the life sciences sector, such as medical devices and diagnostic development, bioinformatics, computational biology and food development.

Policy Context

This Study finds that there is a concerted, whole-of-government approach to support and grow the Australian life sciences sector:

The Australian Government considers the life sciences sector as critical to Australia's future economic growth, prosperity and sovereign manufacturing capability. Its importance is outlined in multiple strategic plans and roadmaps, including Australia's National Life Sciences Statement (2024) and the Biotechnology in Australia (2022) strategic plan.

- Life sciences also form a critical component of the Australian Government's *Modern Manufacturing Strategy* and *Modern Manufacturing Initiative*, with the sector a key beneficiary of this $1.5b fund.
- The economic importance of life sciences has also been long acknowledged by the NSW Government. Successive strategic policy documents, such as the *NSW Economic Blueprint 2040* (2019), *NSW 20-YR R&D Roadmap* (2022) and, most recently, the *NSW Innovation Blueprint* (2025), champion the need for a concerted whole-of-Government approach to grow life sciences.
- The Innovation Blueprint in particular acknowledges the various challenges facing the local life sciences sector, such as poor rates of commercialisation and lack of spaces for innovation and research to occur.

  It specifically identifies the importance of growing the Tech Central Precinct to address these challenges, along with the need to engage with global and local investors to increase capital investment into sector.
- From a strategic planning perspective, the Site's position within the Camperdown Health and Education Precinct and Tech Central Precinct make it a highly appropriate location to accommodate life science uses. The Proposal itself would address several key planning priorities under the *Greater Sydney Region Plan*, *Eastern City District Plan* and *City Plan 2036: Local Strategic Planning Statement* (LSPS).

From a statutory planning perspective, the Site is zoned MU1 Mixed Use under the Sydney LEP 2012. The LSPS acknowledges opportunities to increase capacity for commercial and other enterprise uses in mixed use zoned areas should be explored, particularly if they contribute to the development of important industry clusters. The Proposal could potentially exemplify such an opportunity.

The Australian Life Sciences Sector

The life sciences sector is amongst the most significant contributors to global economic growth. It is consistently amongst the fastest growing sectors worldwide, with growth by up to 10% per annum expected by many industry experts over the coming decade.

This growth is being driven by a convergence of demographic, economic and social factors, namely a growing but ageing population, higher life expectancy, growing rates of chronic disease, growing income levels and rapid advancements in technology. Australia is at the forefront of many of these trends.

Australia's life science industry is in its adolescence and contributes just 1%-2% of the global industry's total output. It is however rapidly growing, with the number of life science companies rising by 40% over 2019-2022 alone. Melbourne and Sydney are the primary sources of this growth.

Whilst all tiers of Government are seeking to grow the sector, public investment into life sciences R&D activities is estimated at ~0.1% of national GDP, well below the OECD average (0.2%). This reflects Australia's overall poor levels of investment into R&D.

Private VC investment into Australia is also low. Life science VC invested into both Melbourne and Sydney in 2024 was recorded at US$183m (CBRE, 2025). This pales in comparison to other global cities, such as Boston-Cambridge (US$9b), San Diego (US$3.3b), Shanghai (US$1.1b), London (US$590m) and Montreal (US$450m).

Life science floorspace supply is also highly constrained across Australia compared to global peers. For instance, San Diego is the third largest life science cluster in the US and comprises some 2,500,000sqm of life science floorspace. In contrast, total life science floorspace across *Australia* is estimated at no more than 900,000sqm.

Challenges to Local Growth

Australia's life science sector is only at the beginning of the growth cycle compared to other global leaders.

Whilst this presents opportunities to apply best practice learnings from advanced countries, growth of the sector is not a given. It is playing 'catch-up' in a globally competitive marketplace, competing for access to funding, capital and human talent. Key challenges facing the local life science sector include:

- Lack of life sciences floorspace (particularly privately owned and operated facilities).
- Lack of Venture Capital (VC) funding.
- Attracting and retaining talent.
- Lack of advanced manufacturing facilities and infrastructure.
- Low levels of Government investment (as proportion of national GDP).

Many of these challenges are beyond the control of planning authorities. However, the planning framework can play an important role in facilitating the delivery of life sciences floorspace.

Existing life science floorspace across Australia is overwhelmingly limited to universities and/or clustered in high value urban areas around hospital precincts. Specialist laboratory or research floorspace is typically only available via programs or through relationships with institutions, often making this floorspace inaccessible to new entrants and/or startups.

Australia's private life sciences real estate market is in its infancy. Across Australia, it is estimated that there is only some ~50,000sqm to ~100,000sqm of privately operated life science research floorspace available for startups. Its delivery is challenging given its locational and capital requirements and need for dedicated expertise in delivery. Unlike the US or UK, there are few private sector developers active in the local market.

Role for the Site

The Proposal comprises 34,332sqm of life sciences, commercial and ancillary floorspace to accommodate life science industries, along with 3,985sqm of additional short-term accommodation (STA) floorspace.

If delivered, the Proposal (together with the Sydney Biomedical Accelerator) would result in the Camperdown Health and Education Precinct accommodating almost 190,000sqm of life sciences floorspace. Whilst this remains small from a global comparison, it is an important step in Camperdown's evolution into an 'Innovation District' as proposed in various strategic plans.

More importantly, the Proposal would facilitate an increase in much needed private life science floorspace supply. Across Australia, there is just ~100,000sqm of privately owned life sciences floorspace which is available to startups.

Arguably the most important factor of the Proposal is the strategic partnership with USYD. This partnership arrangement will enable the new facility to be integrated and complement the larger University of Sydney life science and innovation ecosystem. This will provide opportunities for the commercialisation of life sciences research, a critical 'next step' for the Australian life sciences industry.

Economic Impacts of the Proposal

The economic impacts of the Proposal are estimated using Atlas' proprietary Input-Output model and assessed at the Sydney LGA level. The assessment distinguishes the economic impacts during construction and those generated upon completion.

The findings of the economic modelling shows that the Proposal could deliver significant and positive economic impacts:

- During construction, it is estimated to result in a significant (but short-term) increase in economic activity through a mix of direct and indirect (flow-on) activity, including:
  - **$649.6 million** in output (including $455.5 million in direct activity).
  - **$204.4 million** in contributions to GRP (including $104.8 million in direct activity).
  - **$139.1 million** in incomes and salaries paid to households (including $83.4 million in direct income).
  - **1,217 ongoing FTE jobs** (including 688 FTE directly related to activity at the Site).

- More critical is the permanent economic impacts that Proposal could generate. When operational, the Proposal is estimated to result in an ***annual*** net increase in economic activity. Compared to the Base Case (i.e. no change), the Proposal would generate:
    - **$670.9 million** in additional output (including $440.9 million in direct activity).
    - **$336.8 million** in additional contributions to GRP (including $215.1 million in direct activity).
    - **$195.8 million** in additional incomes and salaries paid to households (inc. $110.5 million in direct income).
    - **1,940 additional ongoing FTE jobs** (including 1,225 FTE directly related to activity at the Site).

In addition to these economic impacts, the Proposal (together with the Sydney Biomedical Accelerator) would result in the Camperdown Health and Education Precinct accommodating growing to a precinct of ~190,000sqm of life sciences floorspace. Whilst this remains small from a global comparison, it is an important step in Camperdown's evolution into an 'Innovation District' as proposed in various strategic plans.

Furthermore, the Proposal includes an increase in STA supply within the Camperdown Precinct which is another critical 'ingredient' in the success of innovation precincts.

It will also act as an important signal to the market of Camperdown's leading role in NSW's life science ecosystem. It has the potential to foster further interest and investment from the private sector – a critical ingredient to the evolution of the precinct. Opportunities for collaboration will arise from the partnership arrangement with USYD and the envisaged Sydney Biomedical Accelerator (**SBA**), which will act as an incubator.

Startups in the life science sectors will be able to begin operations in the SBA and as they mature, move into the larger footprints of the building in the Proposal.

Accordingly, it is recommended that the Proposal be considered for approval, subject to other technical findings.

Table of Contents

Executive Summary i

1 Introduction 7

1.1 Background 8

1.2 Defining Life Sciences 9

1.3 Scope and Approach 10

1.4 Assumptions and Limitations 11

2 Strategic Context 12

2.1 The Eastern City and Eastern Economic Corridor 13

2.2 Tech Central Precinct 14

2.3 The Camperdown Precinct 15

2.4 Key Economic Anchors 16

3 Policy Context 18

3.1 Life Sciences: A Whole of Government Policy Approach 19

3.2 Strategic Planning Policy 24

3.3 Local Planning Policy 26

3.4 Implications for the Proposal 27

4 The Life Sciences Sector 28

4.1 The Global Life Sciences Sector 29

4.2 The Australian Life Sciences Sector 33

4.3 Investment Levels 38

4.4 Challenges to Industry Growth 39

4.5 Need for Short-term Accommodation 40

4.6 Implications for the Proposal 40

5 Economic Impact Assessment 42

5.1 Overview and Approach 43

5.2 Drivers of Economic Activity 44

5.3 Economic Activity and Impacts 44

5.4 Summary of Economic Impacts 48

References 49

Schedules

SCHEDULE 1 Input-Output Modelling Assumptions 53

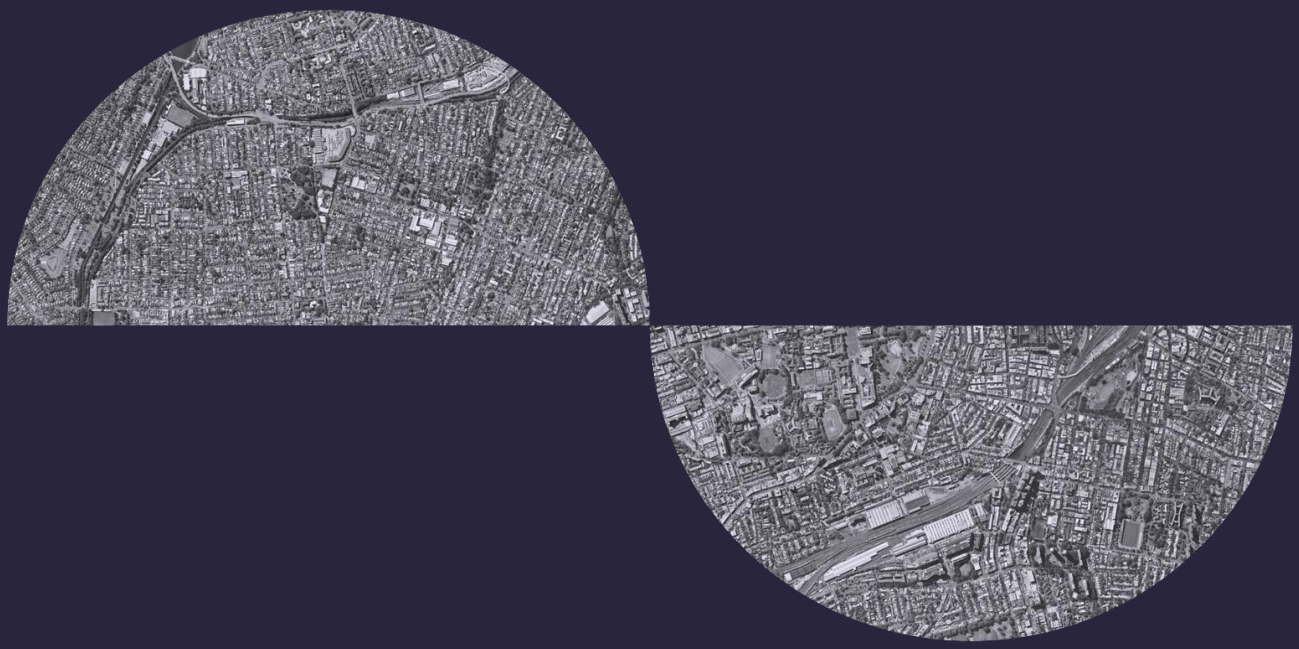
Tables

TABLE 3-1: Policy Imperatives and Required Government Actions, Australia's National Science Statement 19
TABLE 4-1: Life Science Worker Growth (2009-2024), Leading Nations 32
TABLE 4-2: Major Australian Life Science Precincts 37
TABLE 4-3: Challenges to Australia's Life Science Industry 39
TABLE 5-1: Economic Impact Indicators 43
TABLE 5-2: Operational Impacts (Sydney LGA & Greater Sydney), Base Case 45
TABLE 5-3: Construction Impacts (Sydney LGA & Greater Sydney), The Proposal 46
TABLE 5-4: Operational Impacts (Sydney LGA and Greater Sydney), Proposal Case 46
TABLE 5-5: Net Operation Impacts (Sydney LGA and Greater Sydney), Proposal Case 47
TABLE S1-1: Economic Activity Indicators 53
TABLE S1-2: Construction Cost Allocation (including Contingency), Proposal Case 55
TABLE S1-3: Operational FTE Allocation of Floorspace, Base Case 55
TABLE S1-4: Operational FTE Allocation of Floorspace, Proposal Case 56

Figures

FIGURE 1-1: Locational Context 8
FIGURE 1-2: The Proposal 9
FIGURE 2-1: The Eastern Economic Corridor (shaded in yellow) 13
FIGURE 2-2: Tech Central Innovation District 14
FIGURE 2-3: The Camperdown Precinct 15
FIGURE 2-4: The Site and Surrounds 17
FIGURE 3-1: Existing Planning Controls, Sydney LEP 2012 26
FIGURE 4-1: Historical and Projected Global Population, Median Age and Life Expectancy (1950-2100) 29
FIGURE 4-2: Life Sciences Venture Capital Funding by Major Country (2019-2024) 31
FIGURE 4-3: Life Sciences Floorspace (Million Square Feet) by Major Metro Area (2024) 31
FIGURE 4-4: Life Sciences Lab/R&D Floorspace Under Construction (2024), Major Life Science Cities 32
FIGURE 4-5: The Australian Life Sciences Ecosystem 34
FIGURE 4-6: Life Science Sector Organisations (2019 and 2022), Australia 34
FIGURE 4-7: Life Science Industry Companies (2017-2022), Australia 35
FIGURE 4-8: No. of Life Science Sector Organisations (2017-2022) 35
FIGURE 4-9: No. of Life Science Workers (2017-2022) 36
FIGURE 4-10: Life Science Sector Workers by State (2022) 36
FIGURE 4-11: Capital Investment into R&D (2025, All Sectors), OECD 38
FIGURE 4-12: VC Investment into Life Sciences (2024, Global Cities 38
FIGURE 5-1: Net Operations Impact (Sydney LGA and Greater Sydney) 47

1
Introduction



Beyond the
horizon thinking.

88-94 Parramatta Road, Camperdown

1.1 Background

This Economic Impact Assessment is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the Sydney Local Environmental Plan 2012 for the introduction a new site specific Floor Space Ratio and Height of Buildings development standard for the purpose of a life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown (**the Site**).

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (**FSR**) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

- A new maximum building height of part 80 metres, part 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of FSR 4.8:1.
- A new site-specific provision for 88-94 Parramatta Road that enables FSR 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the Site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (**Sydney DCP 2012**) to address site specific outcomes.

The full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

THE SITE

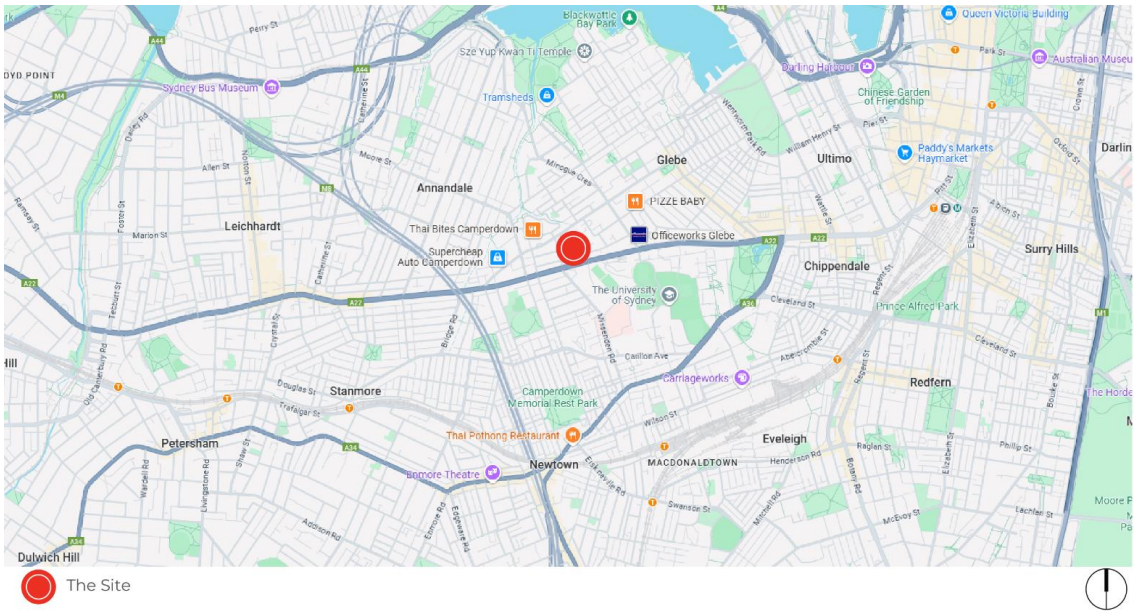
The Site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The Site comprises four adjoining lots, measuring some 6,195sqm in site area and is located within the Sydney local government area (**LGA**). The Site is located ~2.4km east of Central Train Station and the southern Sydney CBD.

The Site is also located just ~500m north of the Royal Prince Alfred Hospital – a Tier 1 Principal Referral and teaching hospital comprising almost 1,200 beds and is the largest hospital in the Sydney Local Health District (**SLHD**).

FIGURE 1-1: Locational Context



Source: Colliers Urban Planning (using Google Maps)

THE PROPOSAL

To facilitate the Proposal, a planning proposal is being prepared to amend relevant planning controls under the Sydney LEP 2012, increasing the maximum FSR and building height (HOB). The Proposal envisages delivery of 38,317sqm of gross floor area (GFA), comprising a mix of incubator and lab space, conference facilities, industry space, 'Science on Display', food and beverage (F&B), life science education space and serviced apartments. The Proposal would create a new 'life sciences campus' within the Camperdown Health and Education Precinct.

The new campus will enhance the capacity of existing research facilities and strategic infrastructure being developed by USYD, (including the Sydney Biomedical Accelerator and upgrades to the Royal Prince Alfred Hospital). Importantly, the Proposal facilitates the commercialisation of biomedical and life sciences research.

FIGURE 1-2 provides an illustration of the breakdown of uses envisaged in the Proposal (per the indicative scheme).

FIGURE 1-2: The Proposal



Source: HDR

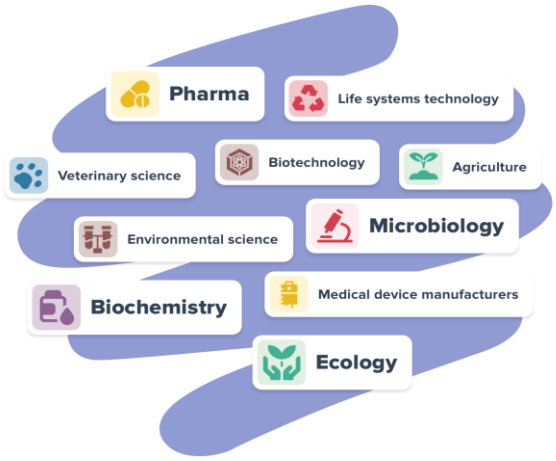
1.2 Defining Life Sciences

WHAT ARE LIFE SCIENCES?

Life sciences study living organisms and their processes. It spans a vast range of scientific research, disciplines and sub-disciplines.

Life sciences can generally be divided into:

- Basic science (e.g. the discovery of life processes, such as cell division).
- Applied science (e.g. new drug candidate testing in clinical phases to manipulate uncontrolled cell division)
- Translational research (e.g. screening a drug compound to treat cancer and using it for medicinal practice).



These various forms of scientific research fundamentally seek to apply learnings to solve real-world problems.

The individual scientific disciplines which fall under the definition of life sciences are broad, ranging from biology, cell biology, biochemistry, environmental sciences, neuroscience, genetics, genomics, proteomics. There are multiple other notable sub-disciplines, such as ecology, food science and epidemiology, which also fall under the life sciences umbrella.

THE LIFE SCIENCES INDUSTRY

The life sciences industry is characterised by a mix of private businesses, universities, government-funded research agencies and small startups. Whilst there is significant overlap between the sectors that these actors operate in, the two key sub-sectors within the life sciences industry include biotechnology and pharmaceutical development.

- Biotechnology

  Biotechnology is the use of technology to improve life, and it is one of the most important modern tools to address biological problems. The biotechnology industry is primarily divided into medical and agricultural biotechnology.

  Medical biotechnology has helped develop new drug products, whilst agricultural biotechnology has developed solutions to improve of crop yield and food products. In addition to medical and agricultural sectors, biotechnology is also stratified into environmental, animal (e.g. animal vaccines), and industrial biotechnology (e.g. biofuels).

  The global biotechnology market was estimated at approximately $1.55 trillion (USD) in 2023 and is forecast to grow to $3.88 trillion by 2030 (Grand View Research, 2024).

- Pharmaceutical Development

  The pharmaceutical industry develops, synthesises and produces drug products derived from chemicals. The pharmaceutical industry involves concerted efforts toward drug discovery, drug product development, and approval. The process of initial candidate selection to commercialization requires the expertise of biochemists, environmentalists, biologists, and other life scientists and often takes around 15-years (Leica BioSystems, 2025).

  The global pharmaceutical industry was estimated at approximately $1.64b in 2024 and is projected to grow to $2.35b by 2030 (Grand View Research, 2024).

There are also multiple overlapping sub-fields within the life sciences sector, such as medical devices and diagnostic development, bioinformatics, computational biology and food development.

In summary, life sciences encompass an incredibly diverse mix of sub-sectors and research fields and is expected to drive a significant portion of global economic growth over the coming decades.

1.3 Scope and Approach

Atlas Economics (**Atlas**) are engaged to carry out an Economic Impact Assessment (**the Study**) to assess the need for life sciences floorspace and the economic impacts of the Proposal.

The EIA fundamentally seeks to:

- Assess the need for the mix and quantum of land uses envisaged in the Proposal, being a mix of incubator, research and lab space to support life science industries, conference facilities and food and beverage (F&B).
- Examine the net economic impacts of the Proposal that could result from its construction and upon completion.

To prepare the EIA, the following tasks are carried out:

- Review of the Site's strategic context and relationship with Tech Central and the Camperdown Health and Education Precinct.
- Review strategic policies prepared by the Commonwealth Government (interchangeably referred to as 'Australian Government' throughout this Study), NSW Government and City of Sydney relevant to the Australian life sciences sector.
- Analysis of structural and macro-economic drivers influencing the global and Australian life sciences sector.
- Review of international case studies to understand opportunities and challenges the Australian life sciences industry faces.
- Assess the potential role for the Site in supporting the growth of the Australian and Sydney life sciences sector.
- Estimate of the economic impacts (direct and indirect) resulting from the Proposal during construction and those which are ongoing upon completion of the development.

The overarching objective of the Study is to consider the economic justification for the Proposal to proceed.

1.4 Assumptions and Limitations

Atlas acknowledges several assumptions and limitations associated with the Study:

- As at Q2 2025, the global economy is experiencing a heightened period of uncertainty due to, *inter alia*, geopolitical instability, global trade risks, multiple military conflicts, slowing economic growth and persistently high levels of inflation. The Australian economy is exposed to many of these global downside risks, particularly impacts with key trade partners.
- The domestic economy continues to be impacted by labour shortages, persistent (though falling) inflation, deteriorating housing affordability and the upcoming Federal election in mid-2025.
- The 2021 Census was administered during the COVID-19 pandemic and at a time of widespread lockdowns across Australia's east coast. Activity recorded at this time may not be accurately representative of employment levels.
- Market research is carried out on a 'desktop' basis without the benefit of site surveys and internal inspections.
- Floorspace supply data is sourced from various third-party databases and subscriptions and is not validated.
- Specific assumptions related to economic impact modelling are detailed in Schedule 1.

Notwithstanding the above, due care, skill and diligence has been applied to this Study as is reasonably expected.

2

Strategic Context





Beyond the
horizon thinking.

88-94 Parramatta Road, Camperdown

This Chapter considers the locational context of the Site within several important strategic precincts as defined in State Government planning policies, along with the Site's proximity to multiple key economic anchors.

2.1 The Eastern City and Eastern Economic Corridor

NSW Government strategic planning policy defines Greater Sydney into three distinct cities – the Eastern Harbour City, the Central River City and the Western Parklands City. The City of Sydney LGA forms part of the Eastern Harbour City, which stretches from the Northern Beaches in the north to Sutherland in the south.

Much of the Eastern Harbour City's economic productivity and employment is generated in the Eastern Economic Corridor, which covers strategic areas including Macquarie Park, Chatswood and St Leonards through to Green Square-Mascot, Randwick and Sydney Airport. The Eastern Economic Corridor is NSW's greatest economic asset – contributing to the majority of NSW's economic growth.

The success of the Eastern Harbour City is underpinned by the competitive advantages of being connected to the agglomeration of businesses in the Eastern Economic Corridor, along with its multiple world-class health, education and innovation precincts. Supporting the continued growth of the Eastern Economic Corridor is a core strategic planning objective of both the NSW Government and City of Sydney.

FIGURE 2-1: The Eastern Economic Corridor (shaded in yellow)



Source: DPHI (2018b)

2.2 Tech Central Precinct

The 'Tech Central' Precinct, formerly known as the 'Camperdown-Ultimo Collaboration Area' is a key area of economic significance identified by the NSW Government. Strategic planning for the precinct has been ongoing for almost a decade and remains a central focus for the NSW Government, with Investment NSW taking a leading role in investment attraction and facilitation for the precinct.

Tech Central encompasses the areas between Central Station, Royal Prince Alfred Hospital and the proposed Waterloo Metro Station, is approximately 6sqkm in size and comprises three sub-precincts – Camperdown, Eveleigh and Haymarket. The Tech Central area includes an existing technology and innovation community, a network of premier research and education institutions and a growing ecosystem of technology industries.

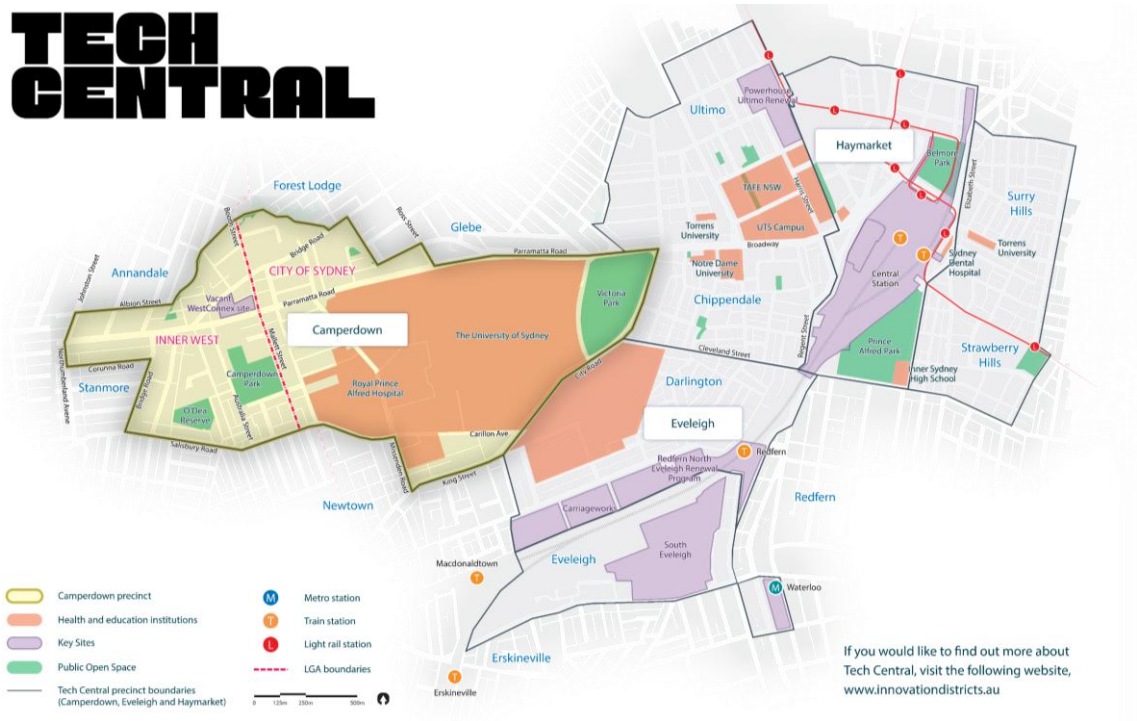
In August 2018, the NSW Government established the Sydney Tech taskforce panel comprising representatives from various industry, health, education, government agencies and key community members. In December 2018 'The Sydney Innovation and Technology Precinct Panel Report' set out the Panel's recommendations for a pathway to delivering a successful innovation and technology precinct at Tech Central. Through collaboration with Sydney's tech industry, health, education, and government stakeholders, the Panel prepared a vision for the Precinct to be:

"*A place where world-class universities, ambitious start-ups, high-tech giants and the community collaborate to solve problems, socialise and spark ideas that change our world. The Precinct will be underpinned by high quality physical and digital infrastructure.*"

The Tech Central Strategy (2025) seeks to grow the precinct to deliver **25,000 jobs** by 2036, **250,000sqm of net lettable floorspace** for the companies and **50,000sqm of lettable affordable workspace** for start-ups.

FIGURE 2-2 illustrates the Tech Central Precinct and location of the Site within the 'Camperdown' sub-precinct.

FIGURE 2-2: Tech Central Innovation District



Source: Inner West Council (2023)

Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and talent. Examples include USYD, University of Technology Sydney, Notre Dame university, Centenary Institute of Cancer Medicine and Cell Biology and the Woolcock Institute of Medical Research

Colocation with hospitals and clinical research provide the necessary expertise and patient settings to support successful life sciences product development and delivery. Examples include RPAH, NHMRC Clinical Trials Centre University of Sydney and the National Research Cyclotron.

2.3 The Camperdown Precinct

The Camperdown Precinct is one of the three sub-precincts within Tech Central. Including parts of Forest Lodge, Camperdown, Annandale, Newtown and Stanmore, it extends across both the Inner West and City of Sydney LGAs.

The Camperdown Precinct already accommodates an established biotechnology precinct, anchored by the USYD Camperdown Campus and Royal Prince Alfred (RPA) Hospital. It supports more than 60 science, technology and research institutions, including the:

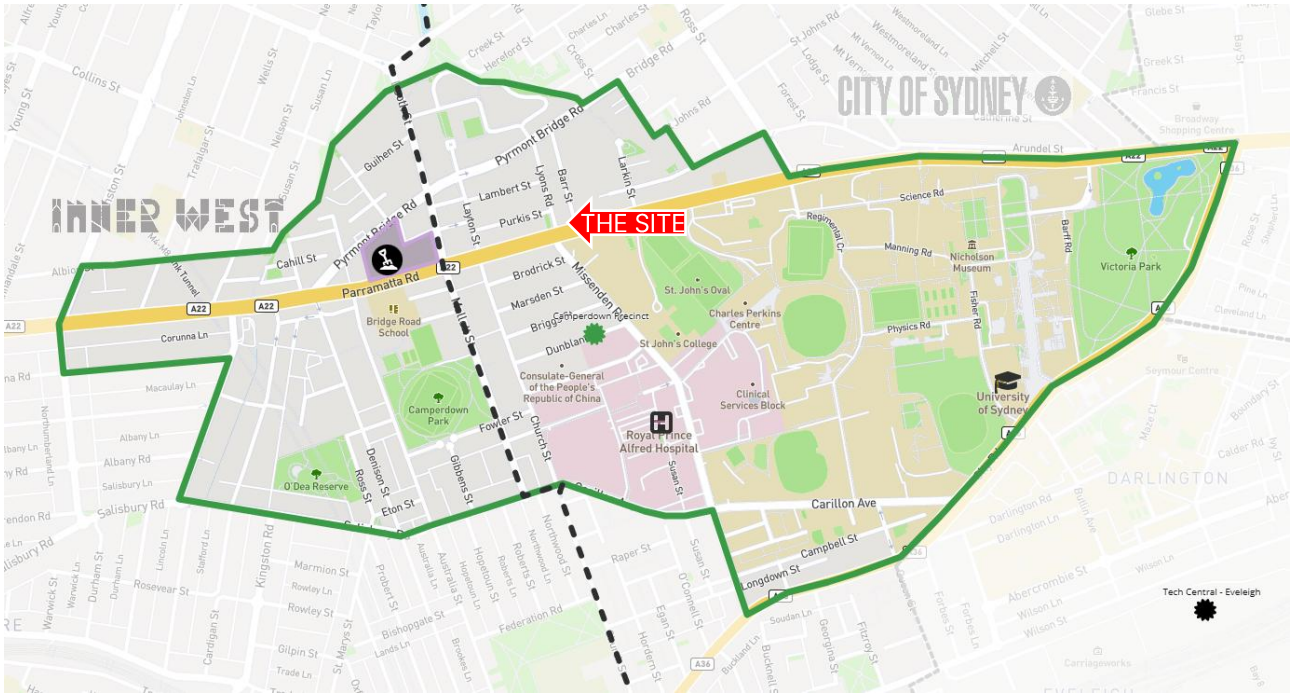
- University of Sydney's multidisciplinary Charles Perkins Centre.
- Brain and Mind Centre.
- Susan Wakil Health Building (completed in 2021).
- Planned $150m Biomedical Building and new multi-disciplinary Biochemistry and Biomedical Engineering Facility.

Significant collaboration between public and private stakeholders including universities, businesses, community members and State and local Government has occurred in recent years to leverage the significant opportunities of these existing assets.

Both City of Sydney and Inner West Council are jointly preparing a Master Plan for the Camperdown Precinct. The Master Plan will set a long-term planning vision for the precinct and update planning controls across the precinct.

FIGURE 2-3 illustrates the boundaries of the Camperdown Precinct.

FIGURE 2-3: The Camperdown Precinct



Source: Inner West Council (2025)

Location in Camperdown and proximity to the CBD is a key strength of Tech Central over other major health and innovation precincts in NSW. Benefits include a large population and high connectivity from public transport (light rail, metro, train and buses) and road networks, supporting talent attraction.

2.4 Key Economic Anchors

Owing to the Site's location within the Camperdown Precinct, it benefits from close proximity to several key economic anchors, namely the Royal Prince Alfred Hospital, University of Sydney Camperdown Campus and future Sydney Biomedical Accelerator. These key economic anchors are discussed in turn.

ROYAL PRINCE ALFRED HOSPITAL



The Royal Alfred Hospital (**RPA**) is one of Australia's leading principal referral and teaching hospitals and is one of the largest hospitals in NSW with approximately 1,200 hospital beds.

RPA offers an extensive range of specialised clinical services, from emergency/ intensive care to advanced surgical procedures and neonatal care. RPA consists of four clinical sections providing specialty services: Division of Medicine, Division of Surgery, Division of Obstetrics/ Gynaecology and Division of Diagnostic Services – as well as a range of Allied Health services.

RPA employs over 4,000 medical staff, providing the most in-patient treatments of any hospital in NSW and over 500,000 out-patients treatments. Each year, RPA has around ~80,000 Emergency Department (**ED**) presentations, 20,000 ambulance arrivals, delivers over 4,200 babies, performs almost 20,000 operations and provides outpatient services to over 560,000 people.

RPA also plays a significant role in education, research and development. It is the main teaching hospital for USYD's Central Clinical School and was NSW's first teaching hospital. It hosts the largest student intake in NSW as well as one of the largest staff made up of resident medical officers in NSW. RPA also physically accommodates several leading medical research institutes, such as the Centenary Institute, Heart Research Institute and Woolcock Institute of Respiratory Disease. These direct collaborative partnerships make RPA one of the most significant incubators of medical research in Australia.

UNIVERSITY OF SYDNEY CAMPERDOWN-DARLINGTON CAMPUS



USYD Camperdown-Darlington Campus (**the Campus**) is USYD's primary and largest campus. Spanning some 72ha, the Campus is the oldest university in Australia and comprises the faculties and schools of Architecture, Design and Planning; Arts and Social Sciences; Business; Engineering; Law; Medicine and Health and Science.

It is placed at 18th best university in the world as per the QS University World Rankings in 2025. Many of its life science disciplines are ranked as the best in Australia and within the top 50 globally.

The Campus supports over 12,000 staff and ~72,500 students and is the second largest university in Australia. The Campus also accommodates a significant number of research centres, institutes and facilities, several of which are in the life sciences. These include the Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders, Charles Perkins Centre and Institute of Agriculture.

SYDNEY BIOMEDICAL ACCELERATOR

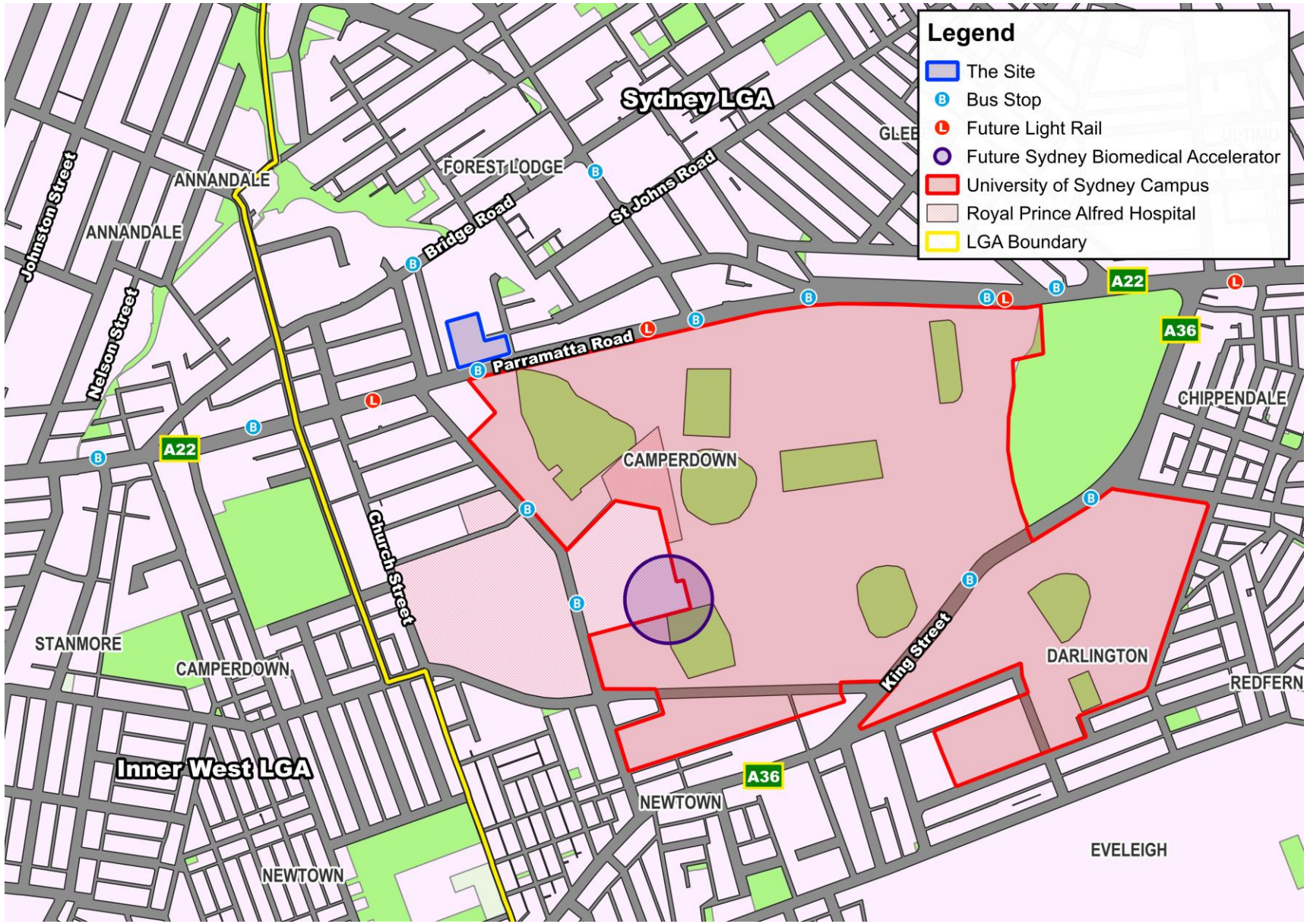


The Sydney Biomedical Accelerator (**the SBA**) is a visionary partnership between USYD, SLHD and the NSW Government which will bring together clinicians, researchers, academics and industry to address the world's most complex health challenges.

The $650 million project is co-funded by the NSW Government and USYD and will be Australia's first complex that integrates research at a molecular and cellular level with clinical and patient-oriented research and health outcomes. Expected for completion in 2028, the SBA will comprise two new buildings with approximately 36,000sqm of life sciences floorspace.

Once completed, the SBA will assemble multidisciplinary teams to accelerate research into commercialisation of diagnostics, treatments and changes to health care delivery.

FIGURE 2-4: The Site and Surrounds



Source: Atlas Economics

3
Policy Context



Beyond the
horizon thinking.

88-94 Parramatta Road, Camperdown

This Chapter considers the policy context of relevance to the Proposal. The extensive life sciences policy framework at the Commonwealth, State and local government level is firstly explored. Next, relevant NSW strategic planning policies are reviewed.

Lastly, the Chapter considers the local statutory planning framework which applies to the Site.

3.1 Life Sciences: A Whole of Government Policy Approach

A detailed policy review finds that there is a concerted, whole-of-government policy approach to supporting and growing the Australian life sciences sector.

This section considers some of the most relevant policies that drive investment into the local life science industries.

3.1.1 Commonwealth Policy Framework

AUSTRALIA'S NATIONAL SCIENCE STATEMENT (2024)



Published by the Department of Industry, Science and Resources, *Australia's National Science Statement* (2024) (the Statement) provides a framework to shape science policy and leadership in the coming years to 2034.

The Statement proposes that "*Through science and innovation, Australia will develop new industries that drive a dynamic economy, provide well paid jobs, improve our quality of life, preserve our unique environment and build a future made in Australia".*

The Statement places science and research at the forefront of Australia's industrial transformation and the government's efforts towards a "*future Made in Australia*".

The Statement outlines five imperatives to guide the national science system and science policy framework. These are collective obligations, engaging various levels of governments, academic bodies, industry leaders and international partners. The Statement includes a series of actions under each imperative.

TABLE 3-1: Policy Imperatives and Required Government Actions, Australia's National Science Statement

IMPERATIVE	GOVERNMENT ACTIONS
1. Australian scientists, science institutions and infrastructure shape Australia's science future	• Continue efforts to embed and be an exemplar in evidence informed policy development and decision making. • Target strategic investment in science infrastructure and agencies to meet Australia's future needs. • Modernise our science agency systems and decision-making mechanisms, including to better support open science and cross disciplinary and cross institution collaborations.
2. Science at the centre of Australian industry	• Incentivise and support the translation of science and research into new industries and sustainable products. • Challenge and value risk-taking by businesses, government and universities. • Support greater flexibility in the movement of science-trained professionals institutions.
3. A diverse, skilled workforce to underpin the translation of science into new industries	• Celebrate and invest in science professionals in every sector. • Offer programs that support diverse and under-represented groups and remove barriers holding them back from entering and staying in STEM careers. • Elevate, respect, and invest in Aboriginal and Torres Strait Islander knowledge systems and Aboriginal and Torres Strait Islander scientists. • Incentivise new approaches to science and greater collaboration across science disciplines.
4. Embracing science to drive Australia's regional and global interests	• Identify opportunities for international collaboration to keep Australia at the forefront of new discoveries and emerging technologies. • Promote scientific collaborations as part of geopolitical relationships, particularly in the Asia Pacific region, and to solving shared problems. • Use Australia's diverse scientific leadership to foster new opportunities for collaboration. • Invest in programs that provide avenues for science diplomacy.
5. A science system prepared for future challenges	• Be an exemplar advocating for, respecting and listening to scientific advice. • Support science engagement initiatives to promote public trust in science. • Build trust in emerging technologies by promoting responsible technology development. • Continue to prioritise work to address and counter misinformation and disinformation online, monitor emerging risks and ensure AI in Australia is safe and responsible.

Source: Department of Industry, Science and Resources (2024)

BIOTECHNOLOGY IN AUSTRALIA – STRATEGIC PLAN FOR HEALTH AND MEDICINE (2022)



Biotechnology in Australia (2022) is the Department of Health's strategic plan for Australia's biotechnology sector. It provides an overview of the current Australian biotechnology landscape and identifies initiatives that will support and grow Australia's developing biotechnology sector, ensuring globally competitive research is translated into high-value products of global standing.

A '**Long-term Vision for Australian Biotechnology**' outlines Australia's desired growth in the sector through increased jobs and exports. All Australians will benefit from access to leading-edge technologies. Coordinated efforts from medical and health biotechnology sector will be aimed at making the following economic contributions by 2032:

- $8b in gross value-added (**GVA**) (up from $5.2b in 2019).
- 1,400 companies (>200 ASX listed) compared to 1,78 companies, (~135 ASX listed) in 2019.
- 80,000 jobs supported (compared to 68,000 jobs supported in 2019).
- $12b in manufacturing exports (50% increase from 2019) sustained growth in clinical trials ($8.2b in 2019).

In December 2021, the Department of Health along with Department of Industry, Science, Energy and Resources convened a roundtable discussion on the key challenges facing the sector, and opportunities for improving outcomes. In particular, it was found that **the biotechnology sector is limited by access to capital:**

- Biotechnology and medical technologies are capital intensive, requiring investments in high-tech equipment, costly materials, and a highly skilled workforce. Biotechnology as a high-tech sector often incurs high establishment costs (e.g. regulatory, insurance, licences, patents) and high fixed operating costs (e.g., expensive equipment, highly skilled workforce, specialised premises) compared to other industries.
- Access to capital is a key barrier and enabler for the sector to translate innovative research into commercial outcomes. The Biomedical Translation Fund (**BTF**) is cited as a successful tool for increasing access to capital.
- Stakeholders deliberated that the growing pool of funders and investors who understand the nuances of biomedical sciences, including the risks involved, could mean more chances that research is translated into real-world outcomes.

The long-term Australian Government's Plan for biotechnology in health and medicine focuses on **three key Pillars**:

- **Supporting world-class research and development by strategically investing** in areas of need and driving strong partnerships between academia, government science organisations, industry, health services, and consumers.
- **Facilitating high-quality and secure clinical development** that attracts global interest by continuously improving research capabilities, processes, and infrastructure thus ensuring they remain or become globally competitive.
- **Accelerating commercialisation through partnerships** and collaborations between academics, government science organisations, and industry; regulation that is fit-for-purpose; and by supporting the development of advanced manufacturing capabilities for biopharma and med-tech products.

THE AUSTRALIAN GOVERNMENT'S MODERN MANUFACTURING STRATEGY (2020)



The Australian Government's Modern Manufacturing Strategy (**the Manufacturing Strategy**) outlines a vision for Australia to be recognised as a high-quality and sustainable manufacturing nation that helps to deliver a strong, modern and resilient economy.

The Manufacturing Strategy establishes national manufacturing priorities within six key sectors, which includes Resources Technology and Critical Minerals Processing, Food & Beverage, Recycling & Clean Energy, Defence, Space and **Medical Products.**

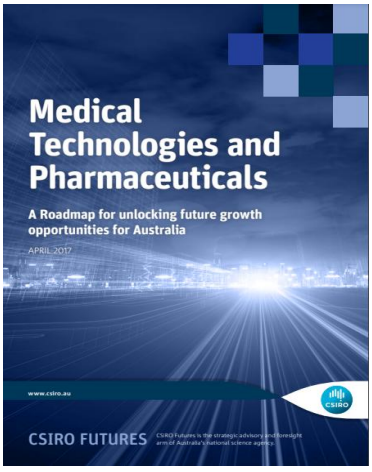
Medical products are recognised as having the potential to deliver long-term, transformative outcomes for the Australian economy. The Manufacturing Strategy highlights Australia's medical research capabilities for meeting quality standards and responding to emerging markets.

Underpinning the Manufacturing Strategy is the Commonwealth Government's **$1.5b Modern Manufacturing Initiative** fund which seeks to encourage private investment and support large projects through a co-funding agreement with the Commonwealth Government and fund applicants. In the medical products funding stream, applicants were able to seek grants of between $1m and $20m for eligible projects.

OTHER KEY PLANS AND ROADMAPS

There are multiple plans and roadmaps prepared by the Commonwealth Government of relevance to the Australian life sciences sector. These are briefly summarised in **TABLE 3-2**.

TABLE 3-2: Other Key Commonwealth Plans and Roadmaps, Australian Life Sciences Sectors

PLAN/ROADMAP	DESCRIPTION
Medical Products National Manufacturing Priority Roadmap *Department of Industry, Science and Resources (2021)* 	The Medical Products National Manufacturing Priority Roadmap was released as part of the Modern Manufacturing Initiative. Funding opportunities medical products funding stream are tied to opportunities identified in the Roadmap. The Roadmap identified opportunities in two distinct funding streams: • Manufacturing translation stream, which helps Australian manufacturers translate high quality research and ideas into commercial outcomes to meet market needs; and the • Manufacturing integration stream, which assists Australian manufacturers gain greater access domestic and global supply chains, to produce and distribute quality products and high value services to these markets. Specific priority areas which they Roadmap identified for funding included medical devices (including smart monitoring devices, diagnostics, personalised implants and bionics) and digitally integrated products and platforms (which could include digitised medical products, data driven products and advanced manufacturing technologies). Funding rounds for both streams has closed.
Medical Technology, Biotechnology & Pharmaceutical Sector Competitiveness Plan 2020 *MTPConnect (2020)* 	The Medical Technology, Biotechnology & Pharmaceutical Sector Competitiveness Plan 2020 is an MTPConnect document highlighting the future of MTP will be defined by innovation and technological advancements in areas such as digital health solutions, precision and regenerative medicine. All these sectors are supports by advanced manufacturing. The Competitiveness Plan communicates the sector-wide vision and priorities as well as its own priorities to support the achievement of these shared objectives. It provides a roadmap that can be used for the sector to enhance collaboration and cohesion. The Competitiveness Plan acknowledges significant steps made by Australia MTP sector in recent years, and highlights that significant opportunities remain to build the capabilities of the MTP workforce. The Competitiveness Plan sets a vision for enhanced investment and expenditure into research and development to deliver greater success in translation and commercialisation. This will deliver significant benefits, including economic (jobs growth) and improve the wellbeing of Australian and international consumers.
Medical Technologies and Pharmaceuticals – A Roadmap for Unlocking Future Growth *(CSIRO and MTPConnect, 2017)* 	Medical Technologies and Pharmaceuticals 2017 (the Roadmap) is a collaborative strategic document from CSIRO and MTPConnect, highlighting the need for giant leaps in Australia's medical, pharmaceutical and technological sector development. The roadmap outlines the Australian medical technologies and pharmaceutical (MTP) sector must endeavour to become more competitive, progressing development of high value and digitally enabled MTP solutions, responding to global market needs and trends. The Roadmap outlines that MTP sector must increase its capacity and ability to translate research into commercially viable solutions for global markets, developing improved access to global value chains. The roadmap highlights that a supportive, collaborative and efficient business environment is fundamental to increasing the competitiveness of the MTP sector, which will promote the success of startups and SMEs and attract and retain companies of various sizes to complete onshore development and manufacturing of high value MTP solutions. The Roadmap recognises 'Driving Megatrends' that are influencing the future medical, technology and pharmaceutical sectors: • Diagnostic and informatics products/ services and smart devices, implants and bionics development is driven by a growing market demand for precision healthcare; the digital evolution and increased consumer control. • Accelerated pharmaceutical development and the manufacturing of 'high-value pharmaceuticals is driven by increased rates of chronic burden; developing markets and global biosecurity.

Source: CSIRO and MTPConnect(2017)/Department of Industry, Science and Resources (2021)/MTPConnect (2020)

3.1.2 NSW Government Policy Framework

The NSW Government has an equally strong focus on building and strengthening the life sciences sector. Driving growth and innovation in the health, education and life sciences sectors is consistently identified in multiple NSW Government policies. Those of direct relevance to the Site are considered in turn.

NSW INNOVATION BLUEPRINT 2035 (2025)



Released by Investment NSW in March 2025, the *NSW Innovation Blueprint 2035* (the Innovation Blueprint) sets out a long-term vision and policy priorities for NSW's innovation ecosystem.

Whilst not a comprehensive list of all State-led activities being pursued to increase innovation, it sets a series of clearly defined goals and priority action areas that will guide how the NSW Government designs programs, allocates funding and interacts with the NSW innovation ecosystem.

Consultation on the Blueprint began in January 2024, with over 370 stakeholders engaged through an innovation summit; 8 roundtables hosted by the Minister for Innovation, Science and Technology; and a Have Your Say survey. The NSW Government then engaged former Tech Council of Australia CEO Kate Pounder to conduct an independent review of the NSW innovation ecosystem.

The Innovation Blueprint acknowledges the multiple challenges facing NSW's innovation ecosystem:

- NSW (and Australia more broadly) performs below global peers in important innovation metrics, with lower numbers of patent applications, venture capital investment and university-industry collaboration as compared to other advanced economies like Canada, Germany, the UK, the US, Israel, Japan, Singapore and Korea.
- NSW's innovation performance varies across industries, with poor rates of research commercialisation in several priority sectors (many which fall within the 'life sciences' spectrum).
- Innovation is threatened by multiple economic, social and environmental risks, including access to housing, the energy transition and a shrinking manufacturing sector.

To address these challenges, the Innovation Blueprint outlines a set of strategies and actions. Those of direct relevance to the Proposal include:

- *Strategy #3: Help create world- class, affordable spaces to innovate around the state that bring different parts of the ecosystem together* by:
    - Transition to Tech Central for technology-intensive businesses at different stages of growth.
    - Explore ways to support businesses at all stages of growth to navigate innovation infrastructure, including "understanding the needs of innovation-driven businesses (e.g. access to lab space, equipment, expertise and pilot manufacturing capabilities) and create solutions to connect them with the necessary infrastructure and support across universities and other public and private facilities".
    - Engaging with global and local investors to bolster international venture capital investment into NSW.

This Strategy specifically identifies the need for focusing more investment and activity within the Tech Central precinct to facilitate the growth of NSW's innovation ecosystem.

NSW 20-YEAR R&D ROADMAP (2022)



Also developed by Investment NSW, the *NSW 20-Year R&D Roadmap* (the R&D Roadmap) provides a blueprint that will assist NSW Government direct research and development (R&D) investments and activities in science and technology.

It emphasises the importance of increasing investment into R&D into sectors where NSW has existing and emerging competitive advantages or strategic needs.

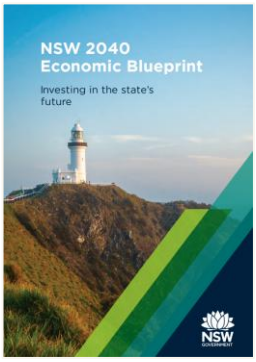
The R&D Roadmap identifies four technology themes where NSW has competitive advantages:

- Energy (i.e. renewable energy, energy storage, Power to X)
- Digital technology (i.e. artificial intelligence, quantum computing, block chain, robotics, etc)

- Materials/chemistry (i.e. nanotechnology, smart materials, circular economy, nuclear science)
- Biotechnology (i.e. biochemical technologies, cell technologies, generic and molecular technologies).

The two latter themes form part of the broader life sciences industry, emphasising their importance to NSW's economic future.

NSW 2040 ECONOMIC BLUEPRINT (2019)



The NSW 2040 Economic Blueprint (**the Economic Blueprint**) was prepared by NSW Treasury in 2019 and was designed to help direct the NSW economy, making recommendations about where investment and expenditure should be focused.

The Economic Blueprint notes that NSW should be able to become Australia's first trillion-dollar state by 2030 and its first $2 trillion state after 2040. It is acknowledged this could be achieved sooner through implementation of measures to enhance innovation and productivity.

The Economic Blueprint sets out aspirations for NSW, including

- A **diversified economy that favours fast-growing industries** and services, and to be expand fast enough to meet market needs and lift living standards.
- The NSW to comprise **innovative businesses and industries of** the future and a government that leaves a lighter footprint on private sector activity.

The industries singled out specifically include:

- **Industries that serve NSW and Australian domestic needs** such as cyber security; medical technology; waste management.
- **Emerging industries** such as advanced manufacturing, food production and agricultural technology

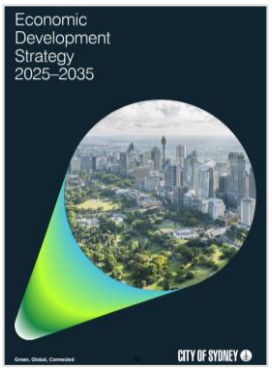
The Economic Blueprint makes several recommendations to enhance and strengthen the NSW economy:

- Support the review of NSW research and development landscape.
- Utilise Innovation Precincts and industry strategies to concentrate research strengths, drive collaboration between researchers and businesses and accelerate innovation.
- Establish 'medtech' commercialisation and accelerator programs.
- Support the growth and success of early-stage innovative businesses.

Again, the Economic Blueprint identifies the importance of the life sciences sector to NSW's future growth.

3.1.3 Local Policy Framework

CITY OF SYDNEY ECONOMIC DEVELOPMENT STRATEGY



The City of Sydney's draft Economic Development Strategy 2025-2035 (**the EDS**) outlines a series of actions to drive innovation-led growth that is sustainable, inclusive and provides great local experiences. A set of 33 actions are grouped into four key themes – Sustainable, Inclusive, Innovative and Experiential.

Sydney is identified as a leading global destination for education, research and training.

A series of actions are outlined to promote Sydney as a global city:

- **Boost Sydney's innovation ecosystem** and connect it globally to attract and retain businesses, talent and investment; and
- Enhance Sydney's reputation as a **global study destination**

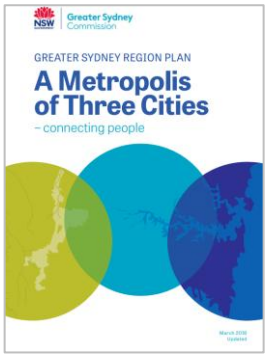
The EDS cites the Tech Central Innovation District as having global reach, representing Australia's deepest and broadest research and technology ecosystem, producing innovative ideas and developing and attracting talent. The Tech Central Innovation precinct brings together industry, research, entrepreneurs and investors, the skills, research and ideas that will drive the next wave of innovation.

Supporting the growth and maturity of the Tech Central precinct is an implicit objective of the EDS, aligning with the objectives of the *NSW Innovation Blueprint 2035*.

3.2 Strategic Planning Policy

In addition to the breadth of Commonwealth, State and Local Government policies which seek to support the growth of the life sciences sector, there are also multiple strategic planning policies of relevance to the Site.

GREATER SYDNEY REGION PLAN



The *Greater Sydney Region Plan* (the Region Plan) envisages Greater Sydney as three interconnected cities - the Eastern Harbour City, anchored by the Sydney CBD; the Central River City, anchored by Parramatta; and the Western Parkland City.. The key objectives of the Region Plan are to:

- Align infrastructure development to support population growth;
- Enhance liveability, and connectivity,
- Improve economic productivity by investing in health, education and innovation; and
- Promote environmental sustainability and ensure resource management.

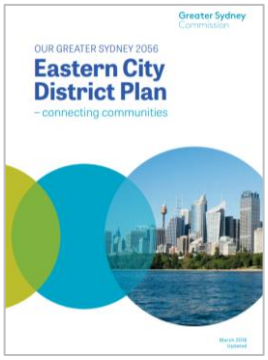
The Site is located within the Eastern Harbour City and specifically the 'Harbour CBD'. The Harbour CBD includes the areas of Sydney CBD, North Sydney CBD, Barangaroo, Darling Harbour, Pyrmont, the Bays Precinct, Redfern to Eveleigh and the Camperdown-Ultimo Health and Education Precinct (now known as Tech Central).

Objective 18 of the Region Plan is to ensure the Harbour CBD is "*stronger and more competitive*". The strength of the Harbour CBD is recognised and channelled through:

- An internationally competitive health and education precinct;
- A robust creative sector providing entrepreneurial and job opportunities; and
- Various entertainment, cultural, tourist and conference facilities.

The Region Plan acknowledges "facilitating the attraction and development of innovation" is essential to enhancing Greater Sydney's global competitiveness.

EASTERN CITY DISTRICT PLAN



The *Eastern City District Plan* (the District Plan) builds upon the Region Plan and provides the strategic planning framework to guide the future growth of the Eastern City District.

The District Plan defines an 'Innovation Corridor' which encompasses much of the Camperdown-Ultimo Health and Education Precinct. Camperdown-Ultimo is recognised for its world-leading education, training and health anchors, fostering research, skill development and attracting talent for knowledge-intensive jobs.

Planning Priorities of the District Plan include:

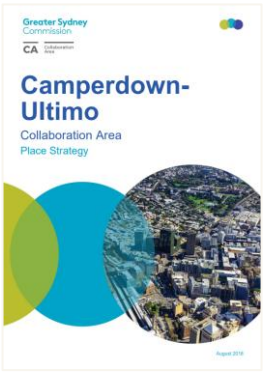
Planning Priority E8 is to *grow and invest in health and education precincts and the Innovation Corridor*, particularly health and education sectors. Priority E8 outlines:

- the need for planning controls to allow a sufficient supply of workspaces and provide flexibility for these enterprises include providing for a range of permissible uses and activities ;
- Camperdown-Ultimo health and education precinct has the potential to become 'Innovation District';
- growing innovation, start-up and creative industries alongside the health and education sectors will present opportunities for a new generation of workers; and
- the need to "explore flexible zoning to accommodate ancillary and complementary uses such as health and medical research activities, private hospitals, allied health, start-ups, innovation and creative industries".

Planning Priority E13 aims to support the growth of targeted industry sectors. Priority E13 outlines:

- The Eastern City District is characterised by emerging industry sectors that are drawn to the highly skilled workforce, accessibility to local and global markets and a variety of well mature and specialised sectors.
- There is an opportunity to leverage existing industry and government actions and aim toward delivering high impact practical initiatives to drive sector growth through industry, academia and government collaboration.

CAMPERDOWN-ULTIMO PLACE STRATEGY



Prepared in 2018 to align with the Eastern City District Plan, the *Camperdown-Ultimo Place Strategy* (the Place Strategy) covers much of the area now referred to as 'Tech Central'. It outlines a strategic vision, set of priorities and actions for NSW Government and other key stakeholders to deliver upon.

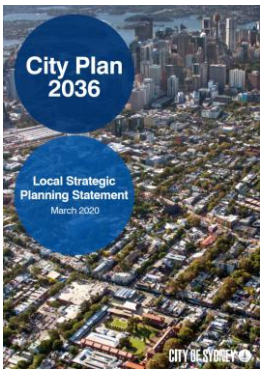
The vision for the precinct as outlined in the Strategy is "*In 2036, Camperdown-Ultimo Collaboration Area is Australia's innovation and technology capital. Industry, business, health, education and skills institutions work together, and talent, creativity, research and partnerships thrive*".

Priorities for the Camperdown-Ultimo area as identified under the Place Strategy include:

- Priority 7, to cultivate an internationally competitive health, education, research and innovation area. This is done through enhancement of medical innovation, research and health services. Specific actions under this Priority of relevance to the Proposal include:
    - Link industry, researchers and investors; and encourages their collaboration and interaction.
    - Attract investment and drive jobs growth.
    - Support commercialisation and translation of research into practice.
- Priority 8 is to support the role and function of employment lands. One of the key actions under this Priority is:
    - Establishing a biotechnology hub in Camperdown, and safeguard innovative, incubator and research activities from unrelated commercial land uses through planning controls.

  Relevantly, the site originally planned for this hub (Parramatta Road, Mallet Street and Pyrmont Bridge Road) is no longer being planned as a biotechnology hub and is instead being progressed for residential development.

CITY PLAN 2036: LOCAL STRATEGIC PLANNING STATEMENT (2020)



The *City Plan 2036: Local Strategic Planning Statement* (the LSPS) was adopted by the City in 2020 and sets out a long-term land use vision for the City of Sydney.

It gives effect to multiple objectives and actions outlined in both the Region Plan and District Plan, linking strategic land use planning frameworks with local planning controls.

The LSPS includes multiple objectives and actions of direct relevance to the Proposal and Site. These are primarily outlined under:

- P2 'Developing innovative and diverse business clusters in City Fringe'

  This priority gives effect to several priorities outlined in the District Plan, particularly E8 and E13. It seeks to ensure the City Fringe (which includes Camperdown) is a leading place for investment and innovation, whilst supporting the Innovation Corridor's role as globally competitive research and innovation-based cluster.

  The importance of the Camperdown Health and Education Precinct is specifically referenced, with the following actions identified:

    - Strengthen the economic and productive role of the Innovation Corridor by:
        i. prioritising and safeguarding space for specialised and knowledge-based clusters and businesses, including, health, education, creative industries, professional services and information media
        ii. identifying and supporting opportunities to appropriately increase capacity for commercial and other enterprise uses particularly those contributing to specialised and knowledge-based clusters, in mixed use (B2 and B4) zoned areas, including the Botany Road Corridor
        iii. continuing our collaboration with NSW Government, Inner West Council, TAFE NSW, University of Notre Dame, University of Sydney, University of Technology Sydney, NSW Health and the Local Health District and other relevant stakeholders to ensure that productivity and industry cluster growth outcomes are prioritised in the Camperdown-Ultimo Health and Education precinct and Sydney Technology and Innovation Precinct

Overall, the LSPS seeks to support the growth and development of the Camperdown Health and Education precinct and recognises that opportunities for additional commercial floorspace capacity should be investigated in certain areas and zones.

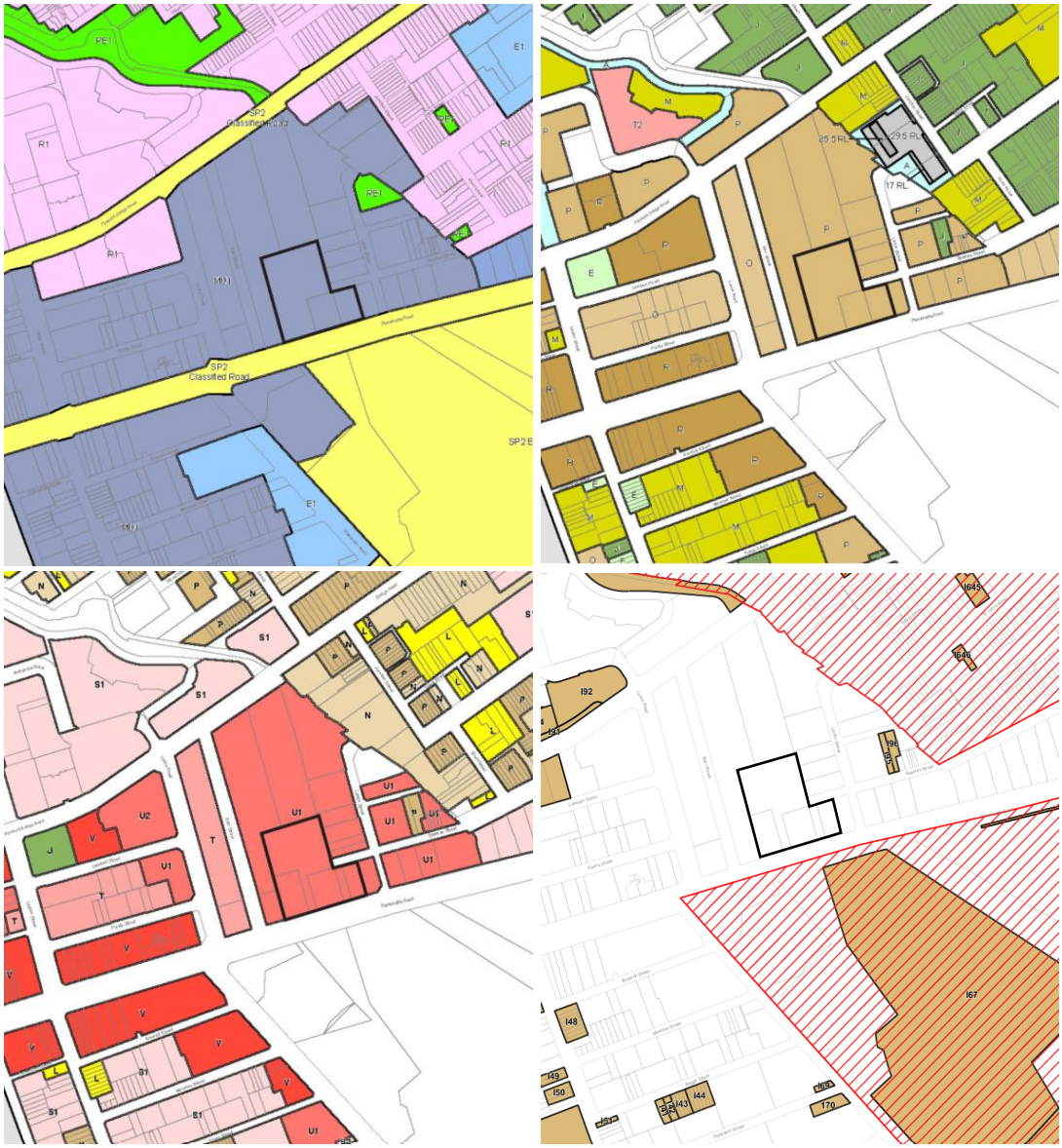
3.3 Local Planning Policy

The Site falls within the Sydney LGA and is subject to planning controls of the Sydney LEP 2012. Under the Sydney LEP 2012, the Site is zoned MU1 Mixed Use. The objectives of the MU1 Mixed Use zone are broad and 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 ensure land uses support the viability of nearby centres.
- To integrate suitable business, office, residential, retail and other land uses in accessible locations that maximise public transport patronage and encourage walking and cycling.

Existing density controls which apply to the Site include FSR 2.5:1 and maximum building height control of 18m. The Site is not heritage-listed, though is located immediately north of several heritage items (i.e. University of Sydney campus). **FIGURE 3-1** shows these key planning controls (the Site being outlined in black).

FIGURE 3-1: Existing Planning Controls, Sydney LEP 2012



Source: Sydney LEP 2012

3.4 Implications for the Proposal

This Chapter has considered the extensive, 'Whole of Government' policy framework which is seeking to grow and strengthen Australia's life sciences sector. It is clear from this review that there is a strong strategic justification for increasing the supply of life sciences floorspace in order to grow the sector.

Key observations from this Chapter include:

- The Australian Government considers the life sciences sector as critical to Australia's future economic growth, prosperity and sovereign manufacturing capability. Its importance is outlined in multiple strategic plans and roadmaps, including *Australia's National Life Sciences Statement (2024)* and the *Biotechnology in Australia* (2022) strategic plan.

  Life sciences also form a critical component of the Australian Government's *Modern Manufacturing Strategy and Modern Manufacturing Initiative*, with the sector a key beneficiary of this $1.5b fund.

- The economic importance of life sciences has also been long acknowledged by the NSW Government. Successive strategic policy documents, such as the *NSW Economic Blueprint 2040* (2019), *NSW 20-YR R&D Roadmap* (2022) and, most recently, the *NSW Innovation Blueprint* (2025), champion the need for a concerted, whole-of-Government approach to supporting the growth of Australia's life sciences sector.

  The *Innovation Blueprint* in particular acknowledges the various challenges facing the local life sciences sector, such as poor rates of commercialisation and lack of spaces for innovation and research to occur. It specifically identifies the importance of growing the Tech Central Precinct to address these challenges, along with the need to engage with global and local investors to increase capital investment into sector.

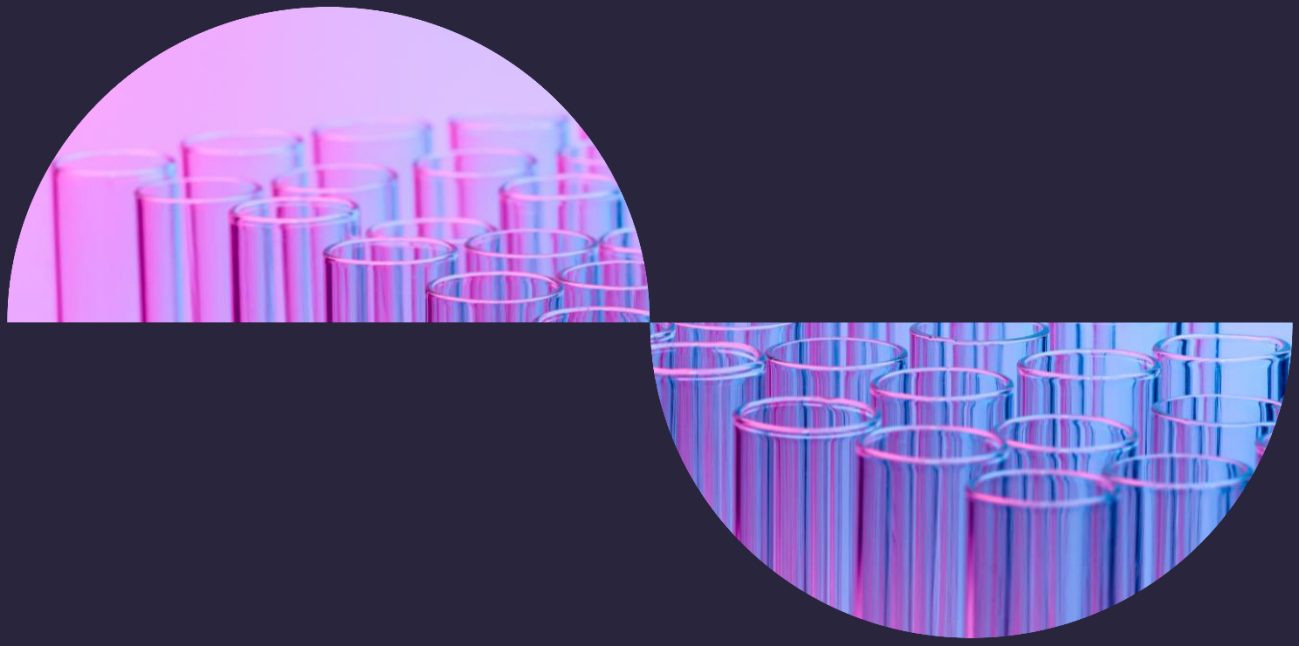
- From a strategic planning perspective, the Site's position within the Camperdown Health and Education Precinct and Tech Central Precinct make it a highly appropriate location to accommodate life science uses. The Proposal itself would address several key planning priorities under the Region Plan, District Plan and LSPS.

- The Site is zoned MU1 Mixed Use under the Sydney LEP 2012. The LSPS acknowledges opportunities to increase capacity for commercial and other enterprise uses in mixed use zoned areas should be explored, particularly if they contribute to the development of important industry clusters. The Proposal could potentially exemplify such an opportunity.

Overall, the findings from this Chapter suggest that the Proposal could meet several of the objectives of the Australian and NSW Government to grow the life sciences industry, whilst importantly aligning with key planning priorities of the City.

The next Chapter explores the international and Australian life sciences sector in detail, considers how Australia (and Sydney) compares against some of its international peers and the potential role for the Site in supporting the growth of sector.

4
The Life Sciences Sector



Beyond the
horizon thinking.

88-94 Parramatta Road, Camperdown

This Chapter explores the international and Australian life sciences sector. It firstly considers the macroeconomic demand drivers shaping the growth of sector. It secondly considers the size of the international life science sector, its key hubs and where it is expected to grow. A deep dive into the Australian life sciences sector follows, with a comparison of the Australian market against other global cities.

Lastly, the Chapter considers the challenges for the Australian life sciences sector and the potential role of the Site in contributing to the growth of the industry.

4.1 The Global Life Sciences Sector

The life sciences sector is amongst the most significant contributors to global economic growth. Whilst the exact size of the industry is notoriously difficult to define given its multiple sub-branches, the value of the sector is often estimated in the order of US$2.83 trillion (Deloitte, 2023). It is consistently amongst the fastest growing sectors worldwide, with multiple forecasters expecting the sector to grow by up to 10% per annum over the coming decade (BioSpace, 2025; Labbiotech, 2025).

This section explores the key macroeconomic forces driving demand for life sciences globally, the geographical distribution of the sector and its growth outlook over the coming decades.

4.1.1 Macro-Economic Demand Drivers

The global life sciences sector is being driven by multiple demographic, economic and technological tailwinds. Some of the more prominent drivers are considered below.

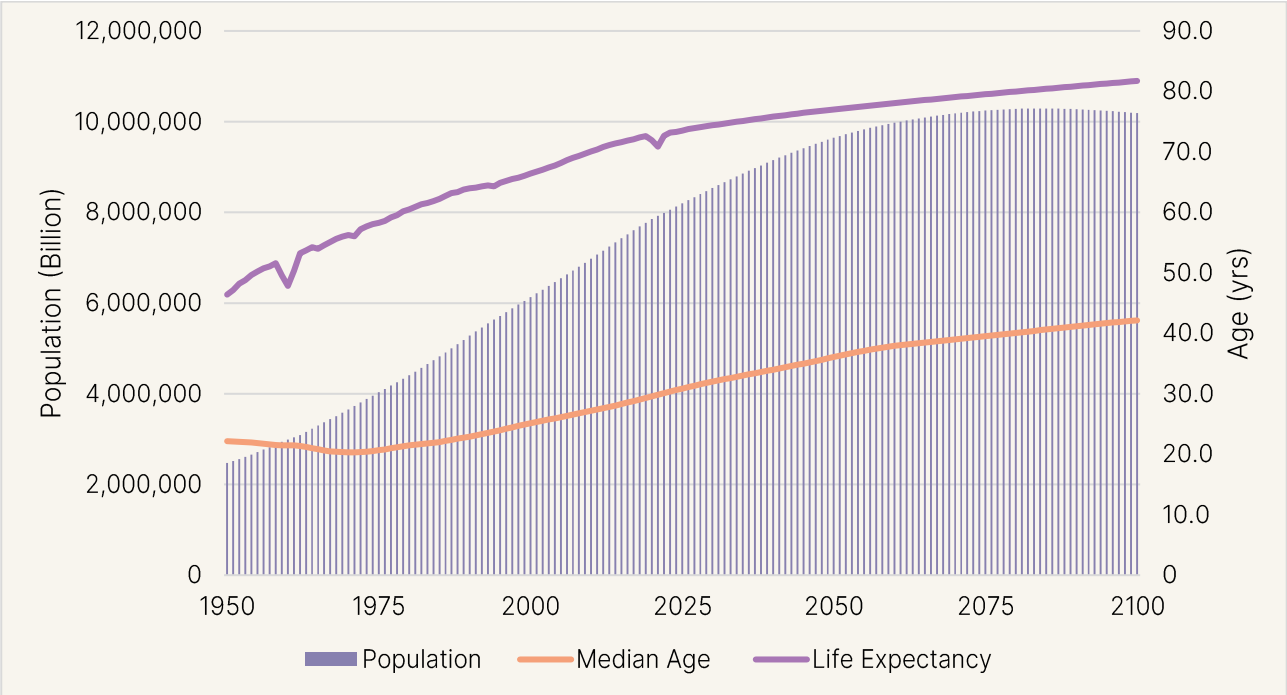
RISING POPULATION AND AGEING DEMOGRAPHICS

As at 2024, the global population was estimated to be approximately 8.2b persons (United Nations, 2024). The global population is projected to continue rising over the coming 50 to 60-years, peaking at approximately 10.3b persons by the mid-2080s. This significant population growth is expected to drive continued and strengthening demand for life sciences, ranging from healthcare to agriculture.

Coupled with this overall growth in population is an expected rise in age expectancy. Average life expectancy is set to rise from 73.5 years in 2025, to 81.7 years in 2100. This significant growth in life expectancy has obvious demand implications for a mix of life science sectors, particularly those related to healthcare and medicine.

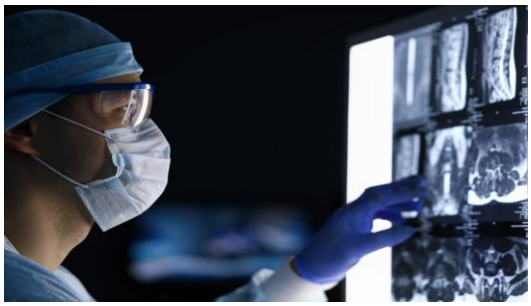
FIGURE 4-1 shows historical and projected global population, median age and life expectancy from 1950-2100.

FIGURE 4-1: Historical and Projected Global Population, Median Age and Life Expectancy (1950-2100)



Source: United Nations (2024)

TECHNOLOGICAL ADVANCEMENTS AND PRECISION MEDICINE

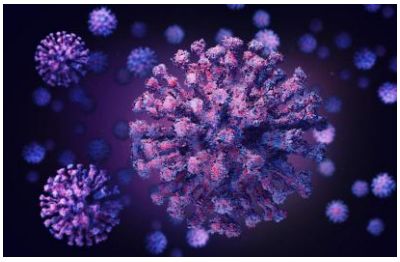


The rapid development of artificial intelligence (**AI**), machine learning and automation is transforming the life sciences sectors.

AI tools are being used to identify patterns in enormous datasets that would ordinarily take human researchers far longer to sift through. This has led to several major breakthroughs in multiple fields in the past decade, such as CRISPR gene editing technology which led to the development of RDNA vaccines in the midst of the COVID-19 pandemic.

As technology continues to improve, the emergence of novel sub sectors is expected to gather further momentum. This is being observed in the growth of personalised medicine and medical services. Common technologies utilised by most people today such as smart/ health watches) and healthcare apps can monitor health data, assist users in managing chronic health issues and in some instances detect health issues early. These technologies are set to become more and more sophisticated. By 2030, the global life science tools market is expected to reach US$330b (Grand View Research, 2023).

GLOBAL HEALTH CRISES



Prior to the COVID-19 Pandemic (**the Pandemic**), life science sectors in the United States of America (**USA**) were growing at an accelerated rate of 19% between 2010 and 2019, compared to overall employment growth of 16% (Newark, 2020).

The pandemic has since further catalysed life sciences sectors - evidenced by venture capitalist (**VC**) funding for health innovation reaching US$9.1b (AU$14.7b) in Q1 2020. In 2024, VC funding was 10% higher than its pre-pandemic peak in 2019 (CBRE, 2024).

The impact of the Pandemic on clinical studies was immediate and will have long-reaching consequences on research and development and production of health and life science sectors. A better understanding of the importance of fast and efficient diagnostics is cited as a key legacy of the pandemic (Peter Simpson - CSO, Medicines Discovery Catapult, 2022)

An increased requirement and want for vaccine development and rollout, accessible diagnostic testing and sufficiency of medical supplies are all highly sought after. Consequently, supply chains are observing increased demand from patients and health care providers to deliver.

RISING LEVELS OF PUBLIC AND PRIVATE INVESTMENT



In regions with particularly strong economies and higher levels of income, there is a shift in interest toward life science sectors. Increased expenditure, resources and funding are being allocated toward R&D, clinical trials and the translation and commercialisation of novel therapeutics.

This is evidenced by key indicators such as:

- Public equity investment into life sciences companies in the USA reaching a record $10.8b in October 2024;
- USA-based VC funding increasing by 10% year-over-year in Q3 2024; and
- Over 2017-2024, the US Food and Drug Agency (**FDA**) approved an average 49 novel drugs per year. This is a 38% increase from the previous 8-year period (35 drugs year) and almost double that from 2000-2010 (25 drugs per year).

This demonstrates that in economically developed nations, investment into innovative life sciences is growing at an unprecedented rate.

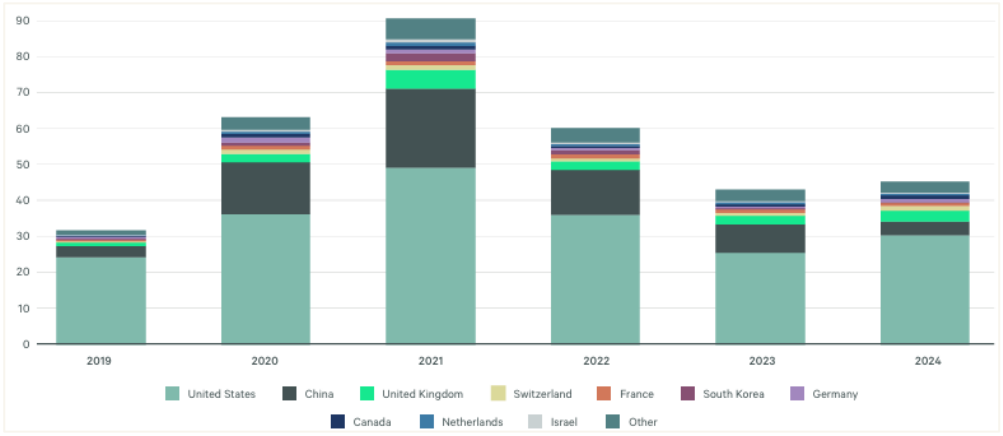
4.1.2 Geographical Distribution

Whilst the growth of life sciences over the past three decades has been a global phenomenon, the sector is undoubtedly clustered in the world's more advanced economies.

The United States (US) remains the global hub of biotechnology, pharmaceutical and medical research, development and commercialisation, whilst European countries such as Germany and Switzerland (along with the US) account for much of global pharmaceutical export volumes (CBRE, 2025). That said, the rapid expansion of China's life sciences market over the past decade – in terms of both research and physical lab floorspace – is unmatched.

FIGURE 4-2 illustrates VC funding by major country over 2019-2024 and illustrates the dominance of the US market.

FIGURE 4-2: Life Sciences Venture Capital Funding by Major Country (2019-2024)

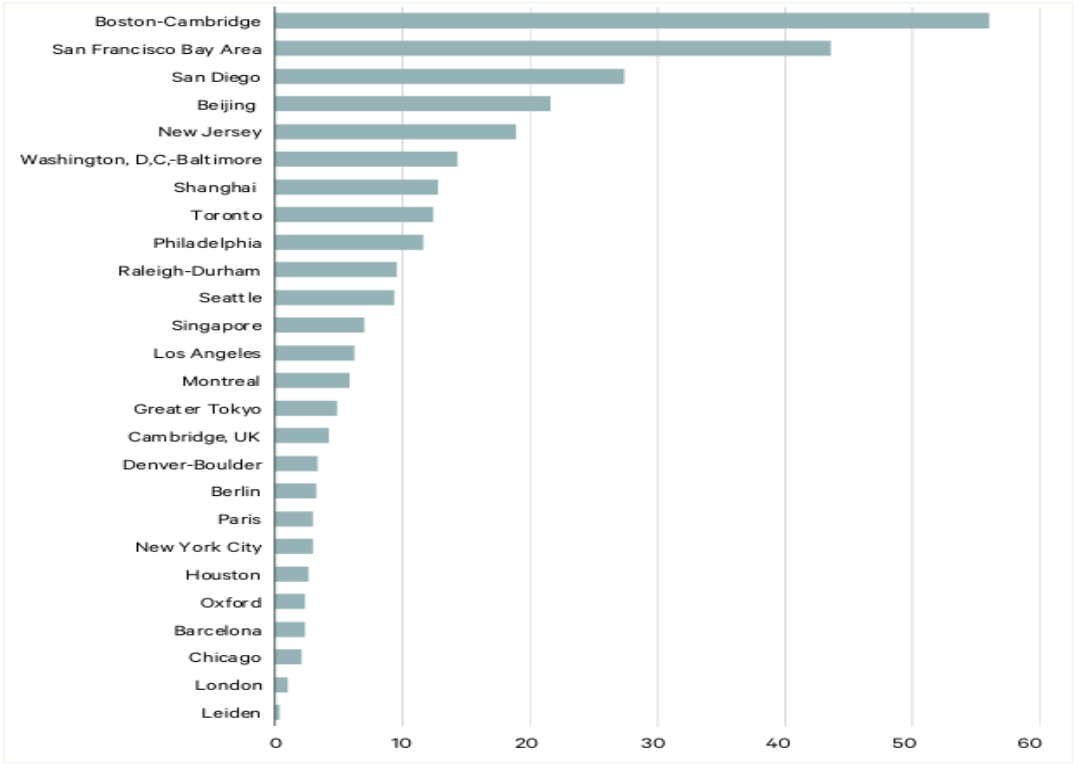


Source: CBRE (2025)

On a city basis, a similar trend of concentration is observed. Three US metropolitan areas – the San Francisco Bay Area, Boston-Cambridge and San Diego – collectively accounted for 42% of the total global life sciences investment recorded in 2024 (CBRE, 2025).

Unsurprisingly, these locations also accommodate the largest share of the life sciences laboratory and research floorspace. As at 2024, Boston-Cambridge accommodated ~5,100,000sqm of life sciences floorspace, followed by the San Fransico Bay Area (~4,000,000sqm) and San Diego (2,500,000sqm).

FIGURE 4-3: Life Sciences Floorspace (Million Square Feet) by Major Metro Area (2024)



Source: CBRE (2025)

4.1.3 Workforce Distribution

Across the leading nations in life science sector (USA, UK, China, Germany, Switzerland and Japan), the number of workers employed in life science sectors has risen significantly in recent years

Employment in life science sectors collectively grew by 45% over the 2009-2024 period (~2.5% average growth per annum), far outpacing the total labour force change (largely attributable to a 45m worker decline in China). Notably, life science employment in China grew by 1m workers over the 15-year period, despite overall employment decline.

TABLE 4-1 details life science sector and total employment growth in leading nations from 2009-2024.

TABLE 4-1: Life Science Worker Growth (2009-2024), Leading Nations

COUNTRY	NO. OF LIFE SCIENCE WORKERS		LIFE SCIENCE LABOUR CHANGE (2009-2024)	TOTAL LABOUR CHANGE (2009-2024)
	2009	2024		
United States	800,000	1,000,000	+25%	+11%
China	1,500,000	2,500,000	+67%	-6%
United Kingdom	200,000	300,000	+50%	+14%
Germany	300,000	350,000	+17%	+13%
Switzerland	80,000	100,000	+25%	+15%
Japan	250,000	300,000	+20%	+3%

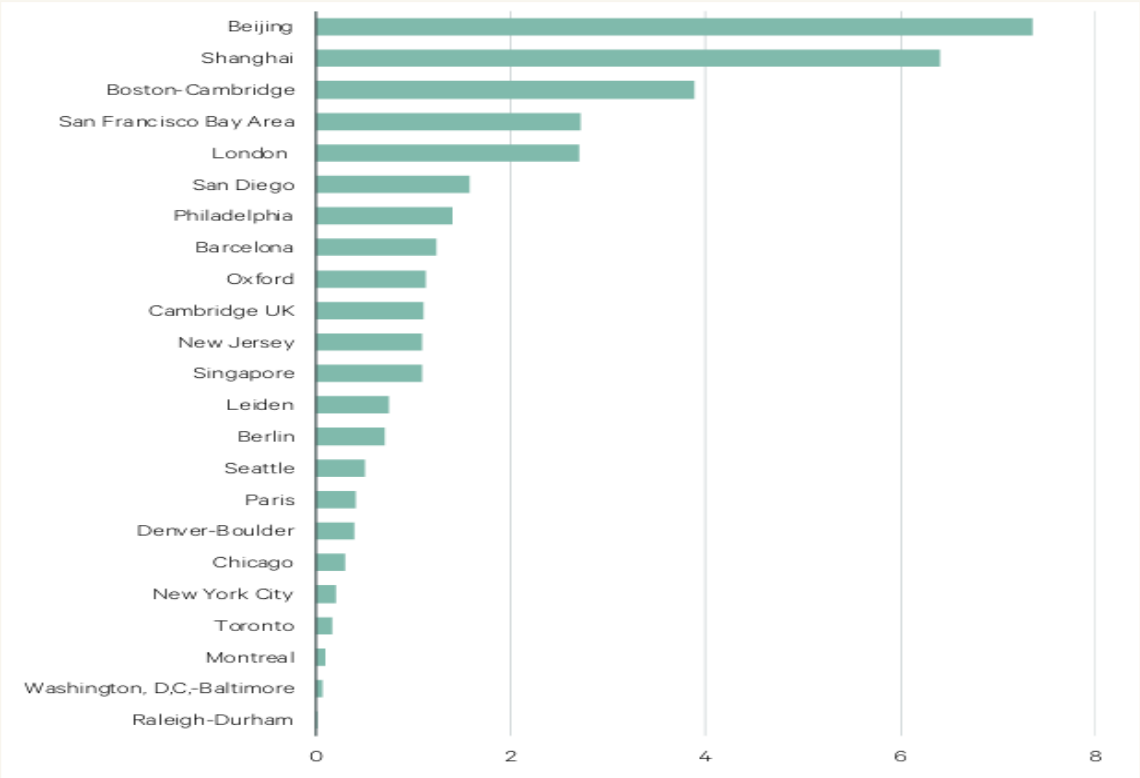
Source: Various

GLOBAL DEVELOPMENT PIPELINE

Looking forward, development activity in life sciences floorspace is being driven by Beijing and Shanghai. Approximately 12.7m square metres of life sciences floorspace is under construction in both cities, which will rapidly increase the global importance of both cities in the sector.

In the US, the major markets of Boston-Cambridge, the San Fransico Bay Area and San Diego are also poised for further expansion with ~740,000sqm of life sciences floorspace currently under construction.

FIGURE 4-4: Life Sciences Lab/R&D Floorspace Under Construction (2024), Major Life Science Cities



Source: CBRE (2025)

4.2 The Australian Life Sciences Sector

The Australian life sciences sector is a small but important contributor to the global industry. Whilst it only contributes between 1%-2% of total output across the global life sciences market, it is widely recognised for excellence in research and is ranked 9th globally in life sciences research (Pulse Economics, 2025).

This section explores the local demand drivers influencing the Australian life sciences sector, the size and scale of Australia's life sciences industry, its geographical distribution and key precincts/clusters of activity.

4.2.1 Domestic Demand Drivers

Whilst a small component of the global life sciences industry, Australia's life sciences sector will arguably benefit to a much greater degree from many of the macro-economic demand drivers spurring on growth of industry.

The main megatrends driving the local life sciences sector include:

- An Ageing Population and Higher Rates of Chronic Disease

  Australia's population is aging, with a significant increase in individuals aged 65 years and over. In 2024, approximately 4.7m Australians were aged over 65 years and 586,000 were aged over 85 years (ABS, 2024). By 2044, this will rise to 7.6m and over 1.5m respectively.

  This is driving demand for healthcare solutions targeting age-related conditions like neurodegenerative diseases (e.g. Alzheimer's and Parkinson's), musculoskeletal issues (e.g. arthritis, osteoporosis) and cardiovascular and metabolic disorders.

- Whole of Government Focus and Investment

  Since the Pandemic, the Australian life sciences sector has become risen in national importance. There has been a larger focus on ensuring a level of self-sufficiency, particularly related to vaccine development and manufacturing.

  To facilitate the growth of the sector, the Australian Government has established several major funds. This includes the:

  - Medical Research Future Fund (MRFF), which is a 10-year investment plan committing $22b to transform health and medical research.
  - Biomedical Translation Fund (BTF), which is also a 10-year investment plan providing over $500m to translate biomedical discoveries into commercial products and services.
  - Medical Research Commercialisation Initiative will commit more than $450m over 10-years to early-stage health and medical research.
  - National Reconstruction Fund (NRF) which earmarks $1.5b for medical manufacturing through co-investment.
  - Clinical Trials Activity initiative which provides $750m over 10 years to help Australian researchers take treatments through clinical trials.

- Rising Income Levels and Demand for Personalised Medicine

  Australia has amongst the world's highest median wealth and income levels. With relatively high levels of discretionary income, there is a growing demand for personalised and precision health solutions based on an individual's genetic, environmental and lifestyle factors. Australia is ranked 6th in the world in spend per capita on wellness services and 10th overall in the total spend, with the Australian health and wellness market estimated at US$84b (RecoveryLab, 2023).

- World Renowned Universities and Research Agencies

  Australia has consistently boasted some of the world's highest-ranking universities, particularly in medicine and health care. As at 2025, Australia recorded six universities within the top 100 universities worldwide, with six universities also within the top 100 global medical schools (Times Higher Education, 2025).

  Australian university partnerships with research institutions, public hospitals and government agencies have generated world-leading research, with Australian ranked 2nd in the world for Phase 1 clinical trials in 2021 (AusBiotech, 2022).

Collectively, these drivers are providing the 'ingredients' necessary for the Australian life sciences sector to grow.

4.2.2 Size and Scale of Australia's Life Sciences Industry

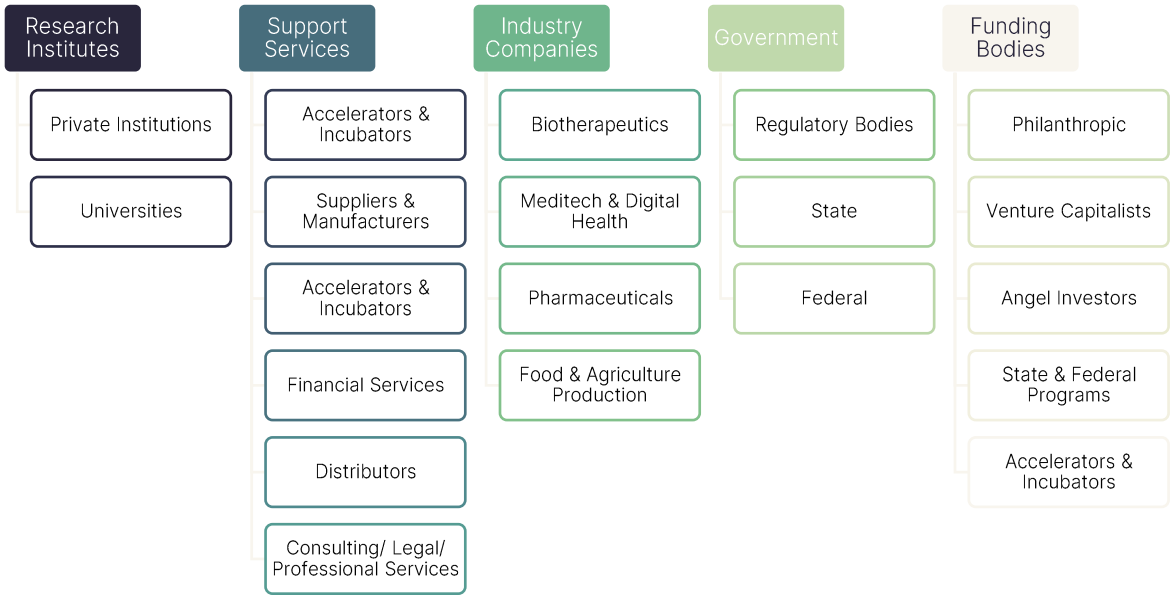
The Australian life science sector is a vast and rapidly growing ecosystem of industry firms, governing bodies, support services, research institutes and funding bodies.

As at 2025 (AusBiotech, 2025a), the entire life sciences ecosystem was estimated to comprise:

- ~2,905 life science organisations.
- ~1,592 biotech and med tech companies
- Over 190 life sciences companies listed on the Australian Stock Exchange (**ASX**), with a value of $255b.
- Over 350,000 biotech jobs.

The structure of the Australian life science ecosystem is illustrated in **FIGURE 4-5**.

FIGURE 4-5: The Australian Life Sciences Ecosystem



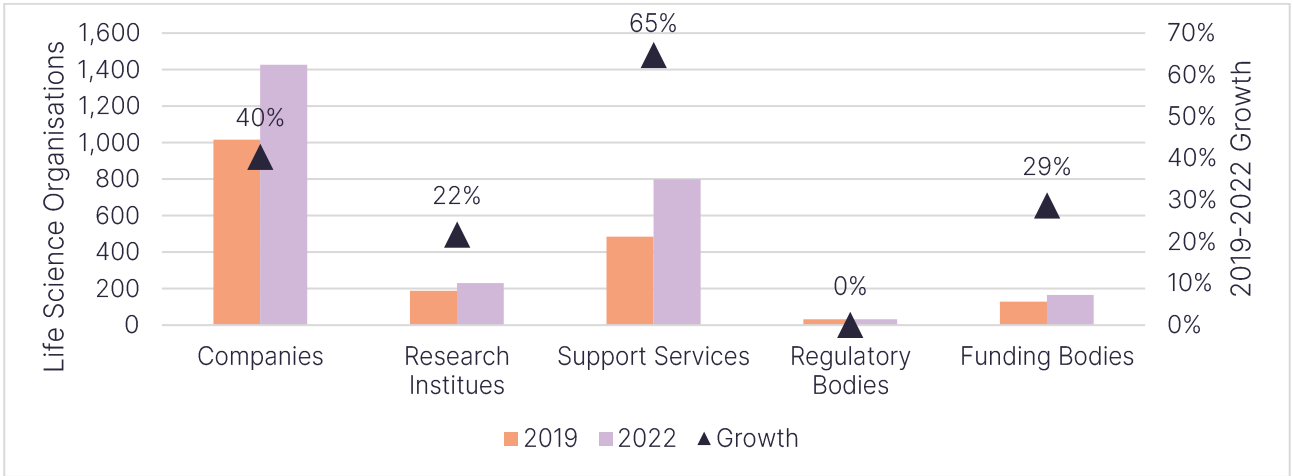
Source: Atlas Economics, AusBiotech (2022)

ORGANISATION GROWTH

Over the 2019-2022 period, the number of private life science companies in Australia rose by 40% (1,020 companies). Countries with established life science markets experienced slower growth, such as the USA (7%) and UK (3%), meanwhile emerging markets such as Ireland (13% growth) and China (28% growth) also experienced significant growth (Biotech Australia, 2022).

As shown in **FIGURE 4-6**, all parts of Australia's life science ecosystem grew over 2019-2022 (with the exception of regulatory bodies).

FIGURE 4-6: Life Science Sector Organisations (2019 and 2022), Australia



Source: AusBiotech (2019, 2022)

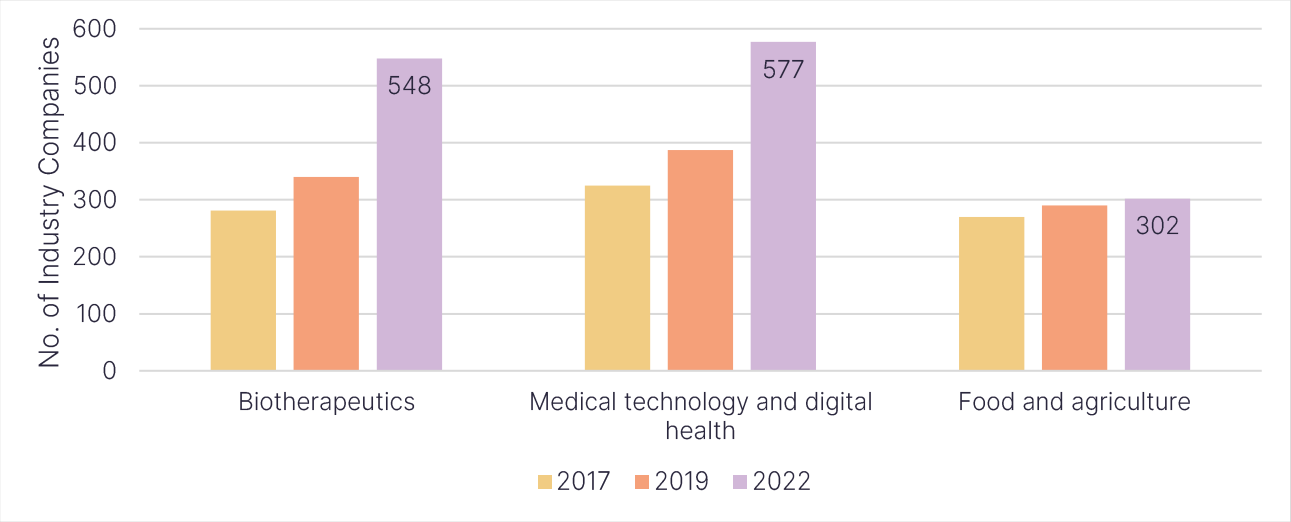
From a more granular perspective, approximately 40% of Australia's 1,450 life science companies fall within the biotherapeutics and pharmaceuticals medical technology and digital health sectors. Food and agriculture (industrial and plant production) represent the remaining 20%. These three broad industry groups recorded strong growth over the 2017-2022 period:

- Biotherapeutic companies grew by an average 14% per annum;
- Medical technology and digital health companies by an average 12% per annum 12%) and;
- Food and agriculture companies grew by some 2% per annum.

Comparatively, the total number of Australian companies grew 3% per annum over the same period (Biotech Australia, 2022).

Growth of life science industry companies across each sector in Australia is illustrated in **FIGURE 4-7**.

FIGURE 4-7: Life Science Industry Companies (2017-2022), Australia



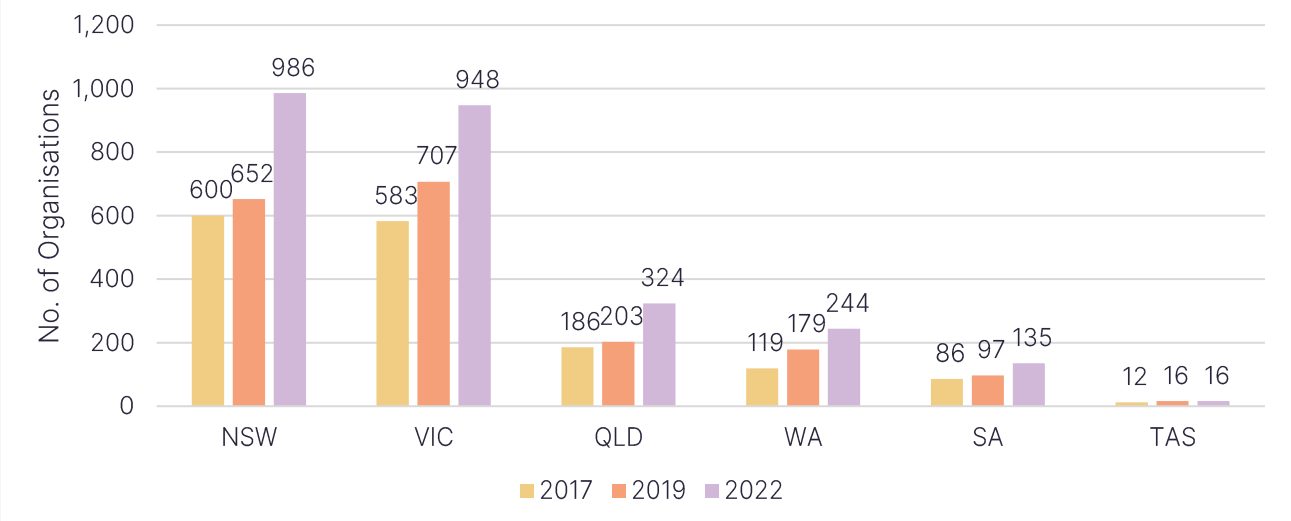
Source: AusBiotech (2022)

On a state-by-state basis, around 36% of life science organisations are located in NSW, closely followed by Victoria at 33%. When combined with Queensland, over 85% of the entire life sciences sector is located within Australia's eastern states.

From a growth perspective, both NSW and Victoria have recorded the greatest level of growth across the country, with an additional 386 and 365 life science organisations over the 2017-2022 period respectively.

FIGURE 4-8 provides a breakdown of the number of life science organisations by State over 2017-2022.

FIGURE 4-8: No. of Life Science Sector Organisations (2017-2022)



Source: AusBiotech (2019, 2022)

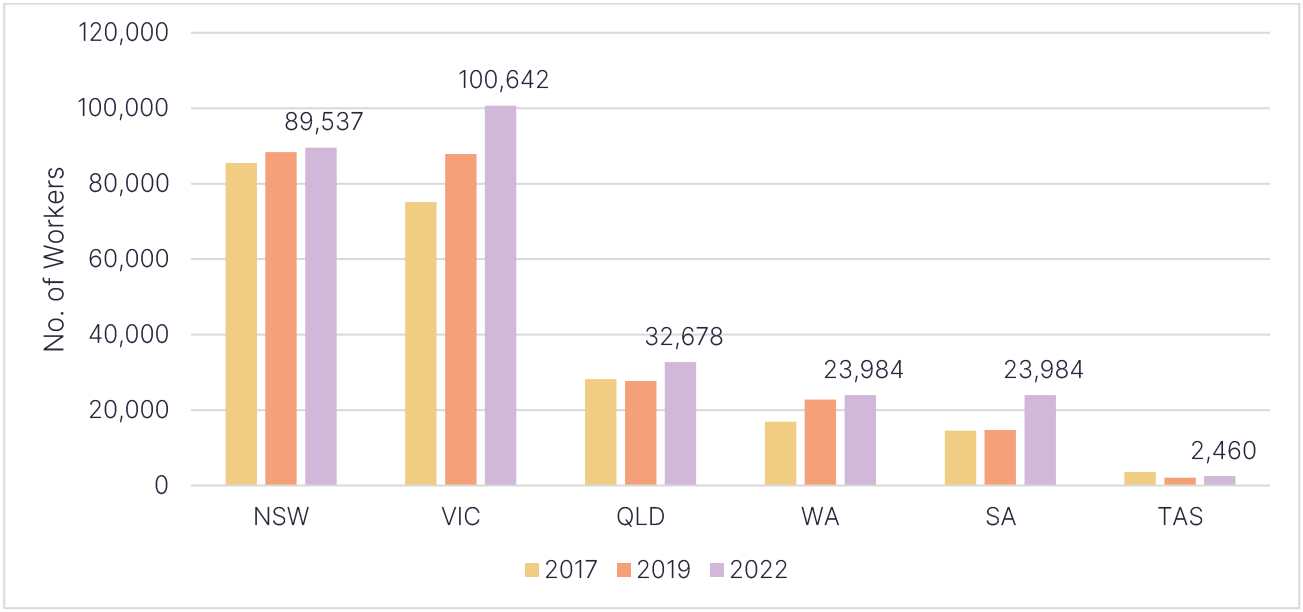
EMPLOYMENT GROWTH

As at 2022, there are ~275,000 workers in the life science ecosystem across Australia. Approximately 70% of these workers are located in Victoria (37%) and NSW (33%). In contrast to the organisation numbers, Victoria comprises a larger life science workforce at ~101,000 workers compared to 89,500 workers in NSW.

From 2017-2022, the number of life science workers increased by 4% per annum, outpacing total employment growth across Australia of 2% per annum. The fastest growing states for life science sector employment was South Australia (averaging 11% per annum). Western Australia (averaging 7% per annum) and Victoria (averaging 6% per annum). Notably, Victoria was the first state to reach a total of 100,000 life science sector workers.

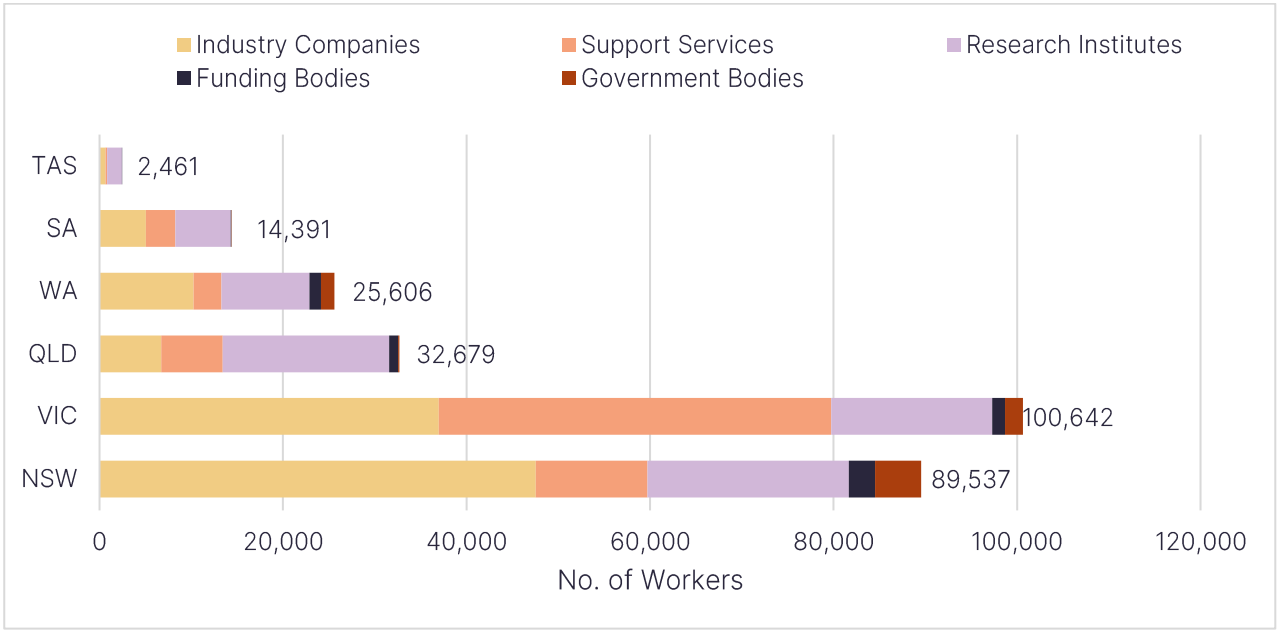
FIGURE 4-9 illustrates total life science employment by State over 2017-2022, with **FIGURE 4-10** providing a more detailed breakdown of employment by state and organisation type.

FIGURE 4-9: No. of Life Science Workers (2017-2022)



Source: AusBiotech (2019, 2022)

FIGURE 4-10: Life Science Sector Workers by State (2022)



Source: AusBiotech (2019, 2022)

4.2.3 Key Life Science Precincts

Life science precincts are clusters of institutions, universities and companies in dense geographic concentrations. They sustain a culture of collaboration, creativity, research and development involving highly skilled knowledge-based jobs and supporting amenities within an innovation ecosystem.

Unsurprisingly, Australia's largest life science precincts are located in the capital cities of Victoria and NSW – Melbourne and Sydney. They include the:

- Melbourne Biomedical Precinct.
- Camperdown Health and Education Precinct.
- Westmead Health and Education Precinct.
- Randwick Health and Education Precinct.

The Melbourne Biomedical Precinct (**MBP**) is Australia's largest (in both land area and floorspace terms) biomedical precinct. Located ~1.5km north of the Melbourne CBD, the precinct spans ~300ha and has a critical mass of public, academic and private occupiers. Key anchors include the University of Melbourne, Royal Melbourne Hospital, CSIRO and CSL (Australia's third largest public company and world leading pharmaceutical manufacturer). Approximately 7,000 university students are accommodated across the MBP.

The MBP has established itself as one of the largest international life science clusters with over 40 private and academic research facilities, anchored by the Walter and Eliza Hall Institute, The Murdoch Institute and CSIRO. The precinct is a leader in numerous areas of research and drug development, including cancer treatment, infectious diseases, therapeutics, neuroscience and genomics. The precinct is also the major centre for clinical trials and pharmaceutical development within Australia.

Critical to the success of the MBP has been its multiple partnerships with private companies. The precinct includes multiple purpose-built life science and research buildings such as the CSIRO's new global headquarters (35,000sqm GFA) and the Bio21 Institute (5,100sqm GFA). The scale of research and life sciences floorspace and large cluster of private life sciences companies in MBP makes it unique compared to Australia's other major life science precincts.

TABLE 4-2 summarises the key characteristics of Australia's major life science precincts.

TABLE 4-2: Major Australian Life Science Precincts

	MELBOURNE (PARKVILLE)	CAMPERDOWN	WESTMEAD	RANDWICK
Location	Parkville, Melbourne	Camperdown, Sydney	Westmead, Sydney	Randwick, Sydney
Land Area (ha)	300	94ha	75	136
Universities	3	1	2	1
Hospitals	7	2	4	4
Research Institutes	Over 40	10-20	10-20	10-20
Commercial Anchors	• CSL Limited • CSIRO • Seqirus	No major commercial anchors	• CSIRO • Telstra Health • Cicada	No major commercial anchors
Employment (2021)	83,000	15,800	18,000	20,300
University Students	Over 7,000	Over 8,000	Over 3,400	Unverified
Research and Life Sciences Floorspace	610,000sqm*	116,000sqm (+36,000sqm*)	89,000sqm	61,000sqm

*Some of this floorspace is attributed to university floorspace which may not be related to the life sciences

Source: ABS (2022)/Atlas Economics/City of Melbourne (2025)

Whilst there are larger health precincts across NSW (e.g. Westmead, Randwick), the Camperdown Health and Education Precinct is considered to be NSW's largest life sciences precinct. It comprises a significant number of university students and researchers, and is estimated to comprise almost 120,000sqm of research and life sciences floorspace. When the Sydney Biomedical Accelerator is completed in 2028, this will see the precinct grow to almost ~150,000sqm in research/life science floorspace.

4.3 Investment Levels

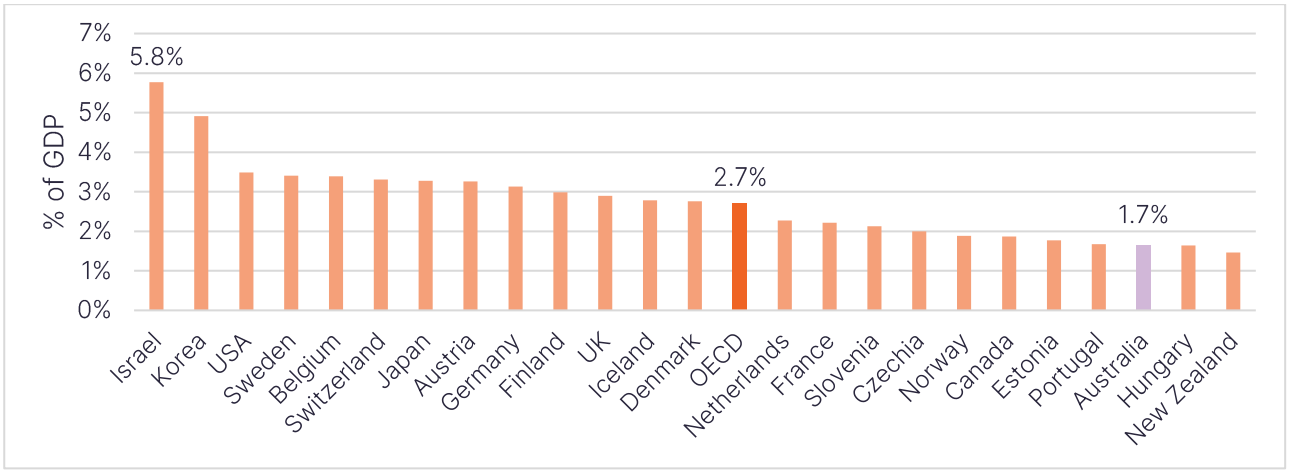
The Australian life sciences industry has grown markedly in the past decade. In 1985, there were a handful of life science companies listed on the ASX. As at March 2025, there were almost 180 publicly listed life science companies with a combined market capitalisation of over AU$252b, with over 1,200 private firms (AusBiotech, 2025b).

SOURCES OF INVESTMENT

The Australian life sciences market is estimated to receive AU$4.0 to $6.6b in annual investment flows, with 40% to 50% from the Australian Government and 50% to 60% from the private sector (Pulse Economics, 2025). Whilst all tiers of Government are seeking to grow the sector, public investment into life sciences R&D activities is just ~0.1% of national GDP, well below the Organisation for Economic Co-operation and Development (OECD) average (~0.2%).

This reflects Australia's overall poor levels of investment into R&D. As shown in **FIGURE 4-11**, Australia's total investment into R&D activities as a proportion of national GDP at 1.7% is the third lowest in the OECD, lagging peer nations such as the US (3.5%), Japan (3.3%), the UK (2.9%) and Canada (1.9%) (OECD, 2025).

FIGURE 4-11: Capital Investment into R&D (2025, All Sectors), OECD

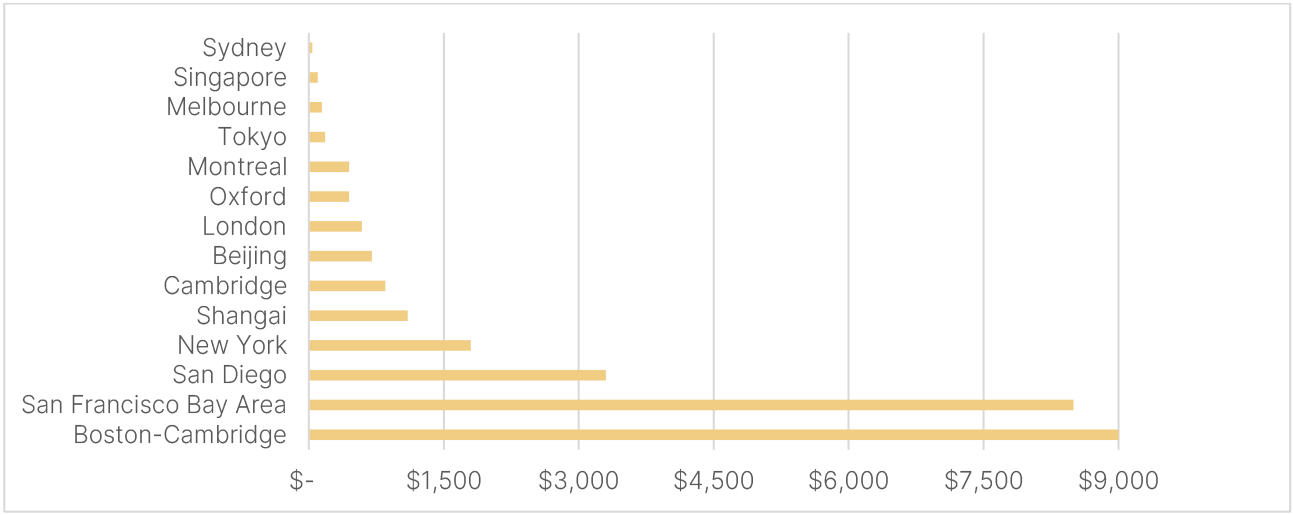


Source: OECD (2025)

Total annual private sector investment into the Australian life sciences sector is estimated to be in the order of AU$2 to $3.6b. Nearly half of capital raised (40-45%) is generated by VC groups, 20-25% from private equity, 10-15% from corporate investment groups, and 5-10% each from other investors.

VC investment into the local life science sector is also markedly lower than international peers. For instance, VC invested into the Melbourne and Sydney life science sectors in 2024 was recorded at $145m and $38m respectively (CBRE, 2025). This combined total of $183m pales in comparison to other global cities, as shown in **FIGURE 4-12**.

FIGURE 4-12: VC Investment into Life Sciences (2024, Global Cities



Source: CBRE (2025)

4.4 Challenges to Industry Growth

Australia's life science sector is only at the beginning of the growth life cycle compared to other global leaders like the USA (more than 30 years' growth), the UK and Europe (both more than 20 years' growth). Whilst this presents opportunities to apply best practice learnings from advanced countries, growth of the sector is not a given. It is playing 'catch-up' in a globally competitive marketplace, competing for access to funding, capital and human talent.

TABLE 4-3 outlines some of the key challenges facing Australia's life science industries.

TABLE 4-3: Challenges to Australia's Life Science Industry

CHALLENGE	ANALYSIS
Space Constraints 	Australia suffers from a shortage of available modern, high-quality laboratory and innovation space. As an emerging and specialist asset class, this hindered by a relatively small number of investors seeking exposing to the sector (CBRE, 2024)
Availability of Funding 	Compared to other global markets, Australia has more limited availability of venture capital and investment funding. Consequently, Australia loses skilled talent and intellectual property (IP) to other jurisdictions.
Attracting and Retaining Talent 	The industry has challenges in retaining skilled professionals due to competition from global life sciences hubs. Penetration of Australian patients in global studies in 2021 at 1.3% was lower than 7 competitor countries including US, UK, Germany and France (all above 2%) (PWC, 2024).
Small Domestic Market 	As a relatively small domestic market, Australia's lack of population density does limit the initial scalability for startups, given the overall lack of demand to service, availability of capital, supply of high-quality, cutting-edge space.
Infrastructure Needs 	Gaps in manufacturing and specialised facilities for large-scale production are key risks to attracting and retaining industry. There is significant capital costs associated with purpose-built infrastructure which impedes new investment.
Government investment 	Whilst efforts are being made to channel more government funding to life sciences such as the BTF and MRFF, Australia still lags behind countries such as US, UK and Singapore in government investment for health R&D as a proportion of GDP (PWC, 2024).
Collaboration 	Several countries outperform Australia in university and industry collaboration, contributing to Australia's low level of research commercialisation. This may reflect a lack of suitable floorspace for collaboration and a need to build a strong domestic life sciences network and a requirement for more investment into university capacity.

Source: Atlas Economics

Many of the challenges outlined in TABLE 4-3 are beyond the control of planning authorities. However, the planning framework can play an important role in facilitating the delivery of life sciences floorspace.

Life science floorspace across Australia is largely limited to universities and/or clustered in high value urban areas around health precincts. Specialist laboratory or research floorspace is often only available via programs or through relationships with institutions, making this floorspace inaccessible to new entrants and/or startups.

Australia's private life sciences real estate market is in its infancy. Across Australia, it is estimated that there is only some ~50,000sqm to ~100,000sqm of privately operated life science research floorspace available for startups (Wentworth Capital, 2025). Its delivery is challenging given its locational and capital requirements and need for dedicated expertise in delivery. Unlike the US or UK, there are few private sector participants.

Where appropriate, authorities can play an important role in mitigating these challenges to enable supply through supportive and accommodative planning controls.

4.5 Need for Short-term Accommodation

Short-term accommodation (STA) is a critical ingredient of 'success' for health and education precincts, supporting labour mobility, knowledge exchange, service delivery and research commercialisation.

Unlike traditional tourism precincts (e.g. CBDs) which primarily respond to holiday visitation, the role and function of STA within health and education precincts is distinctly different. The availability of STA within health and education precincts directly influences their capacity to attract specialist workers, host collaborative research programs, deliver tertiary health services, and participate in national and international innovation networks.

EXISTING SHORT-TERM ACCOMMODATION

The Camperdown Precinct currently accommodates approximately four short-term accommodation establishments with a total room supply of circa 257 beds. This includes:

- Rydges Camperdown (146 rooms)
- BreakFree on Broadway Sydney (47 rooms)
- Best Western Plus Camperdown Suites (36 rooms)
- Veriu Camperdown (28 rooms)

The Veriu Camperdown building is located on the Site (84 Parramatta Road) and is the smallest STA establishment within the Precinct with 28 rooms.

Informal discussions with the operator suggest that the establishment operates at or close to full occupancy, with the overwhelming majority of demand generated by the neighbouring RPA Hospital. This driven by a mix of hospital-related visitors; visiting clinicians, rotating staff, patient families and some patients undergoing extended treatment.

ROLE FOR THE PROPOSAL

The Proposal envisages the delivery of an additional 16 serviced apartments above the existing Veriu Camperdown building, increasing the total number of rooms on the Site to 44 rooms. This will provide additional capacity for the broader Camperdown Precinct to grow, particularly given the ongoing expansion of RPA Hospital.

4.6 Implications for the Proposal

This Chapter has explored the global and Australian life sciences sector. It has identified that there are multiple megatrends set to drive the continued growth of the industry over the coming decades. Whilst Australia has several key 'ingredients' needed to capitalise on these drivers, there are many challenges which may limit its growth.

HOW IS AUSTRALIA'S LIFE SCIENCE SECTOR SET TO GROW?

The life sciences sector is amongst the most significant contributors to global economic growth. It is consistently amongst the fastest growing sectors worldwide, with growth by up to 10% per annum expected by many industry experts over the coming decade.

This growth is being driven by a convergence of demographic, economic and social factors, namely a growing but ageing population, higher life expectancy, growing rates of chronic disease, growing income levels and rapid advancements in technology. Australia is at the forefront of many of these driving growth trends.

Australia's life science industry is in its adolescence and contributes just 1%-2% of the global industry's total output. It is however rapidly growing, with the number of life science companies rising by 40% over 2019-2022 alone. Melbourne and Sydney are the primary sources of this growth.

WHERE DOES AUSTRALIA SIT COMPARED TO PEERS?

Australia is globally recognised for contributions to life science, home to three of the top 100 Science and Technology global clusters. Whilst Australia contributes ~3% of the world's research output in life science, it is not known for commercialisation of this research.

Whilst all tiers of Government are seeking to grow the sector, public investment into life sciences R&D activities is estimated at ~0.1% of national GDP, well below the OECD average (0.2%). This reflects Australia's overall poor levels of investment into R&D.

Private VC investment into Australia is also low. Life science VC invested into both Melbourne and Sydney in 2024 was recorded at US$183m (CBRE, 2025). This pales in comparison to other global cities, such as Boston-Cambridge (US$9b), San Diego (US$3.3b), Shanghai (US$1.1b), London (US$590m) and Montreal (US$450m).

Life science floorspace supply is also highly constrained across Australia compared to global peers. For instance, San Diego is the third largest life science cluster in the US and comprises some 2,500,000sqm of life science floorspace. In contrast, total life science floorspace across *Australia* is estimated at no more than 900,000sqm.

HOW DOES CAMPERDOWN COMPARE NATIONALLY?

The Camperdown Health and Education is Australia's second largest life sciences precinct and largest in NSW. It is estimated to comprise almost 120,000sqm of research and life sciences floorspace and when the Sydney Biomedical Accelerator is completed, the precinct will grow to almost ~150,000sqm in research/life science floorspace.

This still remains significantly smaller than the MBP – Australia's largest life sciences precinct – which comprises over 600,000sqm. Critically, the Camperdown Health and Education Precinct does not accommodate any major private life science companies.

WHAT ROLE CAN THE PROPOSAL PLAY?

The Proposal envisages the delivery of 27,210sqm of incubator, lab and industry floorspace to accommodate life science industries, along with an additional 16 serviced apartments to accommodate demand for STA.

If delivered, the Proposal (coupled with the SBA) would result in the Camperdown Health and Education Precinct accommodating almost 190,000sqm of life sciences floorspace. Whilst this remains small from a global comparison, it is an important step in Camperdown's evolution into an 'Innovation District' as proposed in various strategic plans.

Delivery of the Proposal would also facilitate an increase in much needed private life science floorspace supply. Across Australia, there is just ~100,000sqm of privately owned life sciences floorspace which is available to startups.

Arguably the most important factor of the Proposal is the strategic partnership with USYD. This partnership arrangement will enable the new facility to be integrated and complement the larger University of Sydney life science and innovation ecosystem and will enhance the existing research facilities and strategic infrastructure presently being developed by the University, including the SBA, as well as the RPAH upgrades.

The colocation of the SBA and the Proposal would enable start-ups to commence operations in the SBA and transition to the proposed large floorplates at the Site as they mature and require more floorspace.

This will enable commercialisation of life sciences research, a critical 'next step' for the Australian life sciences industry.

The next Chapter considers the economic impacts which could result if the Proposal proceeded to delivery.

5
Economic Impact Assessment



Beyond the
horizon thinking.

88-94 Parramatta Road, Camperdown

5.1 Overview and Approach

This section examines the economic activity and impacts that could be facilitated by the Proposal during construction and upon completion. The analysis estimates economic activity supported in the Base Case compared with the Proposal:

Base Case:

- The Site is not developed and remains 'as is', improved by the 11,900sqm Medical Foundation medical research facility, a 2,700sqm vacant strip retail building and a 2,600sqm serviced apartment building comprising 28 rooms.

Proposal Case:

- The Proposal proceeds, works are carried out to redevelopment the existing Sydney University Medical Research Building and adjoining blocks into a mixed-use precinct including:
    - 27,685sqm of lab and incubator space, Science on Display, food and beverage, breakout, conference and health and wellbeing spaces, accommodating a mix of employment opportunities and economic activity.
    - 6,647sqm of life science education and support space.
    - 3,985sqm of serviced apartments GFA.

METHODOLOGY

Economic impact modelling (using models known as Input-Output models) is a method to estimate the overall economic impact within a certain area resulting from a stimulus to the economy, such as a new development.

The economic impacts are assessed at the Sydney LGA and Greater Sydney level. Output models (including the development of specific regional Input-Output transaction tables) have been developed to reflect the respective economic structures.

Input-Output modelling considers economic activity through examining impacts as described in **TABLE 5-1**.

TABLE 5-1: Economic Impact Indicators

INDICATOR	DESCRIPTION
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Regional Product	The value of output after deducting the cost of goods and services inputs in the production process (including the impact of net taxes on final production). GRP defines a net contribution to economic activity.
Incomes	The wages and salaries paid to employees as a result of the Project either directly or indirectly.
Employment	Employment accommodated by the Project or Proposal (either full time or part time, directly or indirectly). Employment is reported in terms of Full-time Equivalent (FTE) positions or person-years.

Source: Atlas Economics

Input-Output modelling traces the economic impact resulting from a 'shock' to a local economy through measuring a series of impacts - referred to as 'Direct' and 'Flow-on' impacts.

- Direct impacts, which are the first round of effects from direct operational expenditure on goods and services.
- Flow-on impacts, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
    - Production-induced impacts (Type I) show the effects of additional activities undertaken by supply chain industries increasing their production in response to direct and subsequent rounds of spending.
    - Consumption-induced impacts (Type II) estimate the re-circulation of labour income earned as a result of the initial spending, through other industry impacts, or impacts from increased household consumption.

The estimates of economic impacts consider production and consumption-induced flow-on impacts. Type II impacts are commonly considered to overstate economic activity and therefore the types of flow-on impacts are reported separately.

5.2 Drivers of Economic Activity

To understand the economic impacts likely to result from the Proposal, it is necessary to distinguish economic impacts during the construction phase and those economic impacts that will be more permanent in nature following construction completion and operations commencement and stabilisation to long-run averages.

- Construction Phase

  Construction activity will draw resources from and thereby generate economic activity in Greater Sydney. Modelling assumes the construction phase is serviced by labour and businesses within the Greater Sydney area.

- Operational Phase

  Estimated ongoing economic activity from the mix of industrial businesses which would operate from Site B following completion of construction and upon commencement of business operations.

Refer to Schedule 1 for a description of the drivers and assumptions that underpin the assessed economic impacts.

5.3 Economic Activity and Impacts

5.3.1 Base Case

The Base Case assumes the Site is not redeveloped and remains 'as is', improved by the 11,900sqm 'Medical Foundation' medical research facility, a 2,700sqm vacant commercial building and a 2,600sqm serviced apartment building comprising 28 rooms.

The Base Case considers operational impacts only; a construction phase is not considered in the Base Case.

OPERATIONAL PHASE

In the Base Case, the Site is estimated to support the following ***annual*** net economic activity across the Sydney LGA and broader Greater Sydney Region, through direct and indirect (flow-on) impacts associated with operations:

- Sydney LGA
  - **$40.4 million** in output (including $26.4 million in direct activity).
  - **$20.4 million** in contributions to GRP (including $13.1 million in direct activity).
  - **$12.1 million** in incomes and salaries paid to households (including $7.9 million in direct income).
  - **129 ongoing FTE jobs** (including 87 FTE directly related to activity at the Site).
- Greater Sydney
  - **$50.8 million** in output (including $26.4 million in direct activity).
  - **$25.4 million** in contributions to GRP (including $13.1 million in direct activity).
  - **$14.8 million** in incomes and salaries paid to households (including $7.9 million in direct income).
  - **164 ongoing FTE jobs** (including 87 FTE directly related to activity at the Site).

The total ongoing economic impacts estimated under the Base Case are summarised in **TABLE 5-2**.

TABLE 5-2: Operational Impacts (Sydney LGA & Greater Sydney), Base Case

INDICATOR	OUTPUT ($M)	GRP ($M)	INCOMES ($M)	EMPLOYMENT (FTE)
Sydney LGA				
Direct	$26.4	$13.1	$7.9	87
Flow-on Type I	$8.1	$4.2	$2.6	23
Flow-on Type II	$5.9	$3.2	$1.6	20
Total	**$40.4**	**$20.5**	**$12.1**	**129**
Greater Sydney				
Direct	$26.4	$13.1	$7.9	87
Flow-on Type I	$11.8	$5.8	$3.4	32
Flow-on Type II	$12.5	$6.6	$3.6	45
Total	**$50.8**	**$25.4**	**$14.8**	**164**

1 Totals may not sum due to rounding.
2 Impacts at the Sydney LGA level are not in addition to the impacts measured at the Greater Sydney level.
Source: Atlas Economics

5.3.2 Proposal Case

The Proposal Case assumes development of the reference scheme, comprising 36,500sqm of GFA across two buildings, accommodating retail, industry space, conference facilities, specialist labs, serviced apartments and life science education/ support space.

The economic impacts of the Proposal during both construction and upon completion are considered in turn.

CONSTRUCTION PHASE

Construction impacts are expected to be short-term in nature (occurring as the Site is redeveloped) and will conclude when development activity is completed.

Through construction the Proposal is estimated to generate the following economic impacts across Sydney LGA and Greater Sydney:

- Sydney LGA
  - **$649.6 million** in output (including $455.5 million in direct activity).
  - **$204.4 million** in contributions to GRP (including $104.8 million in direct activity).
  - **$139.1 million** in incomes and salaries paid to households (including $83.4 million in direct income).
  - **1,217 ongoing FTE jobs** (including 688 FTE directly related to activity at the Site).
- Greater Sydney
  - **$925.4 million** in output (including $455.5 million in direct activity).
  - **$329.3 million** in contributions to GRP (including $104.8 million in direct activity).
  - **$208.4 million** in incomes and salaries paid to households (including $83.4 million in direct income).
  - **1,991 ongoing FTE jobs** (including 688 FTE directly related to activity at the Site).

The economic impacts during construction are summarised in **TABLE 5-3**.

Atlas highlights that construction impacts are reported ***in total*** for the construction phase over the life of the development, and do not represent an average annual estimate.

TABLE 5-3: Construction Impacts (Sydney LGA & Greater Sydney), The Proposal

INDICATOR	OUTPUT ($M)	GRP ($M)	INCOMES ($M)	EMPLOYMENT (FTE)
Sydney LGA				
Direct	$455.5	$104.8	$83.4	688
Flow-on Type I	$133.8	$67.0	$39.1	341
Flow-on Type II	$60.3	$32.5	$16.6	189
Total	**$649.6**	**$204.4**	**$139.1**	**1,217**
Greater Sydney				
Direct	$455.5	$104.8	$83.4	688
Flow-on Type I	$299.9	$135.6	$77.4	725
Flow-on Type II	$170.0	$88.9	$48.1	578
Total	**$925.4**	**$329.3**	**$208.9**	**1,991**

1 Totals may not sum due to rounding.
2 Impacts at the Sydney LGA level are not in addition to the impacts measured at the Greater Sydney level.
Source: Atlas Economics

OPERATIONAL PHASE

Following redevelopment of the Site, the Proposal is estimated to support the following annual economic activity across Sydney LGA and Greater Sydney, through direct and indirect (flow-on) impacts associated with operations on Site:

- Sydney LGA
  - **$711.3 million** in output (including $467.3 million in direct activity).
  - **$357.3 million** in contributions to GRP (including $228.2 million in direct activity).
  - **$207.9 million** in incomes and salaries paid to households (including $134.3 million in direct income).
  - **2,079 ongoing FTE jobs** (including 1,342 FTE directly related to activity at the Site).
- Greater Sydney
  - **$889.7 million** in output (including $467.3 million in direct activity).
  - **$441.9 million** in contributions to GRP (including $228.2 million in direct activity).
  - **$255.1 million** in incomes and salaries paid to households (including $134.3 million in direct income).
  - **2,679 ongoing FTE jobs** (including 1,342 FTE directly related to activity at the Site).

TABLE 5-4 summarises the ongoing economic impacts of the Proposal during the operational phase.

TABLE 5-4: Operational Impacts (Sydney LGA and Greater Sydney), Proposal Case

INDICATOR	OUTPUT ($M)	GRP ($M)	INCOMES ($M)	EMPLOYMENT (FTE)
Sydney LGA				
Direct	$467.3	$228.2	$134.3	1,342
Flow-on Type I	$142.6	$74.4	$45.6	400
Flow-on Type II	$101.4	$54.7	$28.0	337
Total	**$711.3**	**$357.3**	**$207.9**	**2,079**
Greater Sydney				
Direct	$467.3	$228.2	$134.3	1,342
Flow-on Type I	$206.9	$101.0	$59.8	559
Flow-on Type II	$215.5	$112.7	$61.0	778
Total	**$889.7**	**$441.9**	**$255.1**	**2,679**

1 Totals may not sum due to rounding.
2 Impacts at the Sydney LGA level are not in addition to the impacts measured at the Greater Sydney level.
Source: Atlas Economics

NET OPERATIONAL IMPACTS

Following the completion of redevelopment of the Site, the Proposal is estimated to support the following *net annual economic activity* across Sydney LGA and Greater Sydney, through direct and indirect (flow-on) impacts associated with operations on Site:

- Sydney LGA
  - **$670.9 million** in additional output (including $440.9 million in direct activity).
  - **$336.8 million** in additional contributions to GRP (including $215.1 million in direct activity).
  - **$195.8 million** in additional incomes and salaries paid to households (inc. $110.5 million in direct income).
  - **1,940 additional ongoing FTE jobs** (including 1,225 FTE directly related to activity at the Site).
- Greater Sydney
  - **$838.9 million** in additional output (including $440.9 million in direct activity).
  - **$416.5 million** in additional contributions to GRP (including $215.1 million in direct activity).
  - **$240.3 million** in additional incomes and salaries paid to households (inc. $110.5 million in direct income).
  - **2,515 additional ongoing FTE jobs** (including 1,225 FTE directly related to activity at the Site).

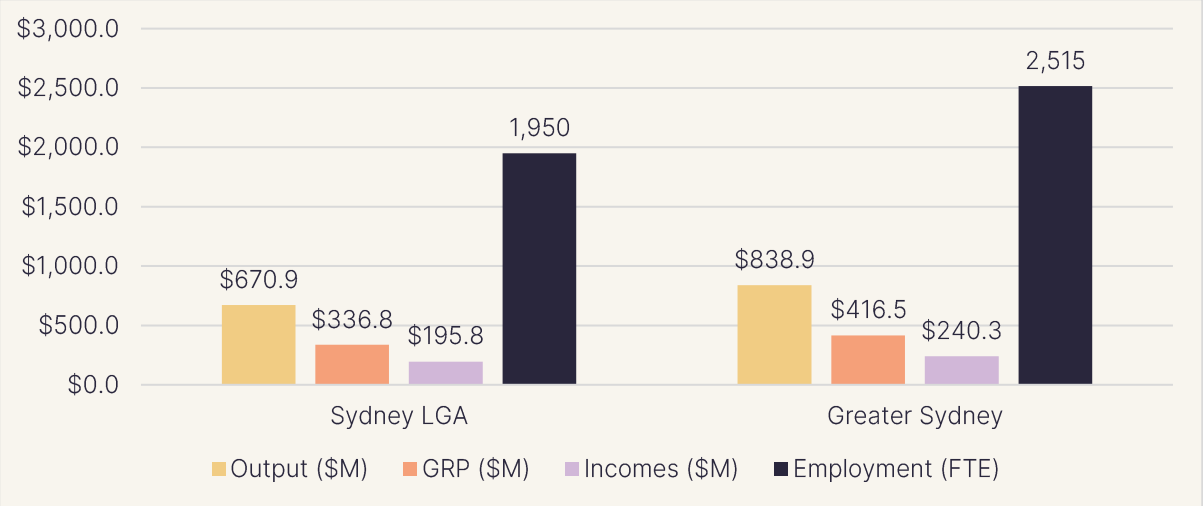
TABLE 5-5: Net Operation Impacts (Sydney LGA and Greater Sydney), Proposal Case

INDICATOR	OUTPUT ($M)	GRP ($M)	INCOMES ($M)	EMPLOYMENT (FTE)
Sydney LGA				
Direct	$440.9	$215.1	$126.4	1,255
Flow-on Type I	$134.5	$70.2	$43.0	377
Flow-on Type II	$95.5	$51.5	$26.4	317
Total	**$670.9**	**$336.8**	**$195.8**	**1,950**
Greater Sydney				
Direct	$440.9	$215.1	$126.4	1,255
Flow-on Type I	$195.1	$95.2	$56.4	527
Flow-on Type II	$203.0	$106.1	$57.4	733
Total	**$838.9**	**$416.5**	**$240.3**	**2,515**

Source: Atlas Economics

The net economic impacts of the operations of the Proposal case against the current and ongoing operations of the Base Case is illustrated in **FIGURE 5-1**

FIGURE 5-1: Net Operations Impact (Sydney LGA and Greater Sydney)



Note: impacts at the Sydney LGA level are not in addition to the impacts measured at the Greater Sydney level

Source: Atlas Economics

5.4 Summary of Economic Impacts

The Proposal is shown to deliver significant and positive economic impacts to the Sydney LGA economy.

During construction, it is estimated to result in a significant (but short-term) increase in economic activity through a mix of direct and indirect (flow-on) activity, including:

- **$649.6 million** in output (including $455.5 million in direct activity).
- **$204.4 million** in contributions to GRP (including $104.8 million in direct activity).
- **$139.1 million** in incomes and salaries paid to households (including $83.4 million in direct income).
- **1,217 ongoing FTE jobs** (including 688 FTE directly related to activity at the Site).

More critical is the permanent economic impacts that Proposal could generate. When operational, the Proposal is estimated to result in an ***annual*** net increase in economic activity. Compared to the Base Case (i.e. no change), the Proposal would generate:

- **$670.9 million** in additional output (including $440.9 million in direct activity).
- **$336.8 million** in additional contributions to GRP (including $215.1 million in direct activity).
- **$195.8 million** in additional incomes and salaries paid to households (inc. $110.5 million in direct income).
- **1,940 additional ongoing FTE jobs** (including 1,225 FTE directly related to activity at the Site).

In addition to these economic impacts, the Proposal (together with the Sydney Biomedical Accelerator) would result in the Camperdown Health and Education Precinct expanding to accommodate a total of ~190,000sqm of life sciences floorspace. Whilst this remains small from a global comparison, it is an important step in Camperdown's evolution into an 'Innovation District' as proposed in various strategic plans.

Furthermore, the Proposal includes an increase in STA supply within the Camperdown Precinct which is another critical 'ingredient' in the success of innovation precincts.

The Proposal will also act as an important signal to the market of Camperdown's leading role in NSW's life science ecosystem. It has the potential to foster further interest and investment from the private sector – a critical ingredient to the evolution of the precinct.

Arguably the most important factor of the Proposal is the strategic partnership with USYD. This partnership arrangement will enable the new facility to be integrated and complement the larger University of Sydney life science and innovation ecosystem. This will provide opportunities for the commercialisation of life sciences research, a critical 'next step' for the Australian life sciences industry.

Accordingly, it is recommended that the Proposal be considered for approval, subject to other technical findings.

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Schedules



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SCHEDULE 1

Input-Output Modelling Assumptions

Input-Output models are a method to describe and analyse forward and backward economic linkages between industries based on a matrix of monetary transactions. The model estimates how products sold (outputs) from one industry are purchased (inputs) in the production process by other industries.

The analysis of these industry linkages enables estimation of the overall economic impact within a catchment area due to a change in demand levels within a specific sector or sectors.

Impacts are traced through the economy via:

- Direct impacts, which are the first round of effects from direct operational expenditure on goods and services.
- Flow-on impacts (indirect impacts), which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
    - Industry Support Effects (Type I) derived from open Input-Output models. Type I impacts represent the production induced support activity as a result of additional expenditure by the industry experiencing the stimulus on goods and services, and subsequent round effects of increased purchases by suppliers in response to increased sales.
    - Household Consumption Effects (Type II) derived from closed Input-Output Models. Type II impacts represent the consumption induced activity from additional household expenditure on goods and services resulting from additional wages and salaries being paid within the catchment economy.

Economic analysis considers the following four types of impacts.

TABLE S1-1: Economic Activity Indicators

INDICATOR	DESCRIPTION
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Regional Product	The value of output after deducting the cost of goods and services inputs in the production process (including the impact of net taxes on final production). GRP defines a net contribution to economic activity.
Incomes	The wages and salaries paid to employees as a result of the Project either directly or indirectly.
Employment	Employment accommodated by the Project or Proposal (either full time or part time, directly or indirectly). Employment is reported in terms of Full-time Equivalent (FTE) positions or person-years.

Source: Atlas Economics

Regional Model Development

Multipliers used in this assessment have been created using a regionalised Input-Output model derived from the 2020-2021 Australian transaction table (ABS, 2023a).

Estimates of gross industry production in the catchment area were developed based on the share of employment (by place of work) of the catchment area within the Australian economy (ABS, 2022) using the Flegg Location Quotient and Cross Hauling Adjusted Regionalisation Method (CHARM). See Norbert (2015) and Kronenberg (2009) for further details. Where required, values were indexed to current dollar values using CPI (ABS, 2023b).

Modelling Limitations and Assumptions

Input-Output modelling is subject to a number of key assumptions and limitations (ABS, 2023a):

- Lack of supply-side constraints: The most significant limitation of economic impact analysis using multipliers is the implicit assumption that the economy has no supply-side constraints. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.
- Fixed prices: Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- Fixed ratios for intermediate inputs and production: Economic impact analysis using multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. As such, impact analysis using multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount.
- No allowance for purchasers' marginal responses to change: Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- Absence of budget constraints: Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.

Despite these notable limitations, Input-Output techniques provide a solid approach for assessing the direct and flow-on economic impacts of a project or policy that does not result in a significant change in the overall economic structure.

Drivers of Economic Impact

In order to understand the economic impacts likely to result from the Proposal, it is necessary to distinguish economic impacts during the construction phase and those economic impacts that will be more permanent following construction completion.

- Construction Phase

  Construction activity will draw resources from and thereby generate economic activity across NSW.

  Modelling assumes the construction phase is serviced by labour and businesses within the Greater Sydney area.
- Operational Phase

  Estimated ongoing economic activity from industrial businesses locating at the Site.

CONSTRUCTION PHASE

For modelling purposes, construction costs (including contingency) for the Proposal were broken down into their respective Australia and New Zealand Standard Industrial Classification (ANZSIC) industries.

The breakdowns were developed based on the following assumptions by Atlas regarding the most appropriate ANZSIC industries for each activity and estimated average square metre construction costs for occupying businesses.

Construction costs have been estimated based on industry benchmarks from sources such as RLB and from Atlas industry knowledge.

TABLE S1-2: Construction Cost Allocation (including Contingency), Proposal Case

WORK TYPE	($M)	ANZSIC
Site Preparation	$0.6	Construction Services
Retail	$7.2	Non-Residential Building Construction
Industry Space	$36.0	Non-Residential Building Construction
Science on Display	$21.9	Non-Residential Building Construction
Conference Facilities	$6.3	Non-Residential Building Construction
Lab	$208.3	Non-Residential Building Construction
Serviced Apartments	$216.3	Residential Building Construction
Life science support/ education	$22.5	Residential Building Construction
Site Costs	$26.0	Heavy and Civil Engineering Construction
Professional Fees	$62.3	Professional, Scientific and Technical Services
Total	$607.3	

Note: Totals may not sum due to rounding.

Source: Atlas Economics

Of the above capital outlay, not all activity will be undertaken within the Sydney LGA economy. It was assumed:

- 75% of the direct expenditure on construction-related (i.e. Non-residential Building Construction and Construction Services) activity would be sourced from local businesses and labour. Of this:
    - Approximately 25% of purchases on goods and services (supply chain related activity) made by construction-related businesses sourced from outside the Sydney LGA would be spent within the local economy (i.e., 25% of the Type I flow on activity associated with non-local construction companies is assumed to represent additional local activity in the Sydney LGA).
    - Approximately 5% of wages and salaries paid to construction-related workers sourced from outside the region would be spent on local goods and services, such as food and beverages (i.e. 5% of the Type II).
        a. Only flow-on activity of locally sourced professional, scientific and technical services activity (75%) is included, as it is not anticipated professional, scientific and technical services businesses located outside of NSW would purchase goods/ services locally.

OPERATIONAL PHASE

Base Case

Employment by industry estimates for committed and future developments were converted to a direct output value using a multiplier based on the national transaction table (ABS, 2023a). The resultant estimates of output were modelled as the direct activity associated with the Site remaining 'as is'.

TABLE S1-3: Operational FTE Allocation of Floorspace, Base Case

WORK TYPE	GFA (SQM)	GFA (SQM) / FTE	ESTIMATED JOBS (FTE)	ANZSIC
Medical Research	11,876	145	82	Health Care Services; Human Pharmaceutical and Medicinal Product Manufacturing; Professional, Scientific and Technical Services; Professional, Scientific, Computer and Electronic Equipment Manufacturing.
Strip Retail	2,714	80	-[1]	-
Serviced Apartments	2,600	500	5	Retail Trade
Total	17,190		87	

Note: Totals may not sum due to rounding.

Source: Atlas Economics

Proposal Case

Employment by industry estimates for committed and future developments were converted to a direct output value using a multiplier based on the national transaction table (ABS, 2023a). The resultant estimates of output were modelled as the direct activity associated with the Proposal.

TABLE S1-4: Operational FTE Allocation of Floorspace, Proposal Case

WORK TYPE	GFA (SQM)	GFA (SQM) / FTE	ESTIMATED JOBS (FTE)	ANZSIC
Retail and Ancillary Uses	2,286	50	65	Retail Trade (50%), Food Services (50%)
Industry Space	2,300	25	92	Professional, Scientific and Technical Services (33%); Professional, Scientific, Computer and Electronic Equipment Manufacturing (33%); Human Pharmaceutical and Medicinal Product Manufacturing (33%)
Science on Display	1,400	45	31	Education and Training
Conference Facilities	1,200	20	60	Education and Training
Incubator Lab	13,318	25	533	Professional, Scientific and Technical Services (33%); Professional, Scientific, Computer and Electronic Equipment Manufacturing (33%); Human Pharmaceutical and Medicinal Product Manufacturing (33%)
Lab Space	13,828	25	553	Professional, Scientific and Technical Services (33%); Professional, Scientific, Computer and Electronic Equipment Manufacturing (33%); Human Pharmaceutical and Medicinal Product Manufacturing (33%)
Serviced Apartments	3,985	500	8	Accommodation and Food Services
Total	38,317		1,342	

1 Totals may not sum due to rounding.

Source: Atlas Economics



SYDNEY

Level 12, 179 Elizabeth St
Sydney NSW 2000
Gadigal Country

MELBOURNE

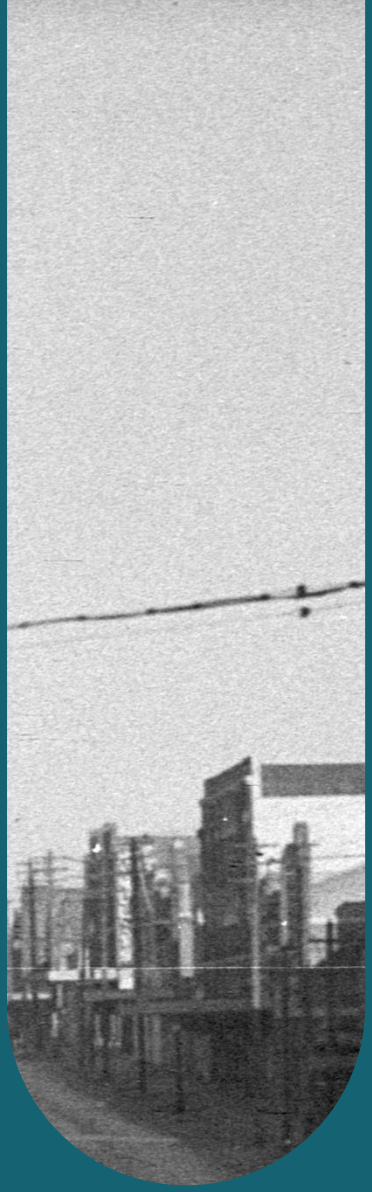
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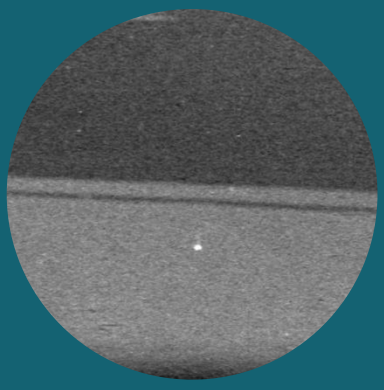
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Attachment A10

Heritage impact assessment

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PROJECTS





Camperdown Life Sciences Hub Planning Proposal

Heritage Impact Statement

March 2026

We acknowledge the Gadigal of the Eora Nation as the Traditional Owners of the land on which 84-94 Parramatta Road sits today. We recognise the Gadigal continuing connection to land, waters and culture. We pay our respects to their Elders past, present and emerging.

Document Information

Citation

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Local Government Area

City of Sydney Council

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4	03.10.25	Revised draft	Client review	Kate Wine	
5	02.03.26	Updated draft	Client review	Kate Wine	Natalie Vinton
6	02.03.26	Final	For submission	Kate Wine	

This report has been prepared based on research by Curio Projects specialists. Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and in figure captions.

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CURIO PROJECTS

Contents

Document Information 3

Executive Summary 7

1. Introduction 8

1.1. The Purpose of this report 9

1.2. Project background 10

1.3. Site identification 11

1.4. Limitations and constraints 13

1.5. Authorship and acknowledgements 13

2. Statutory Context 14

2.1. Heritage Statutory Framework 15

2.1.1. Environmental Planning and Assessment Act (NSW) 1979 15

2.1.2. Heritage Act (NSW) 1977 15

2.1.3. Statutory Heritage Listings 16

2.1.4. Previous studies 17

3. Historical Summary 19

3.1. Car History of Australia and Parramatta Road 20

3.2. History of the study area 24

3.2.1. 1900's - Inglis Horse Bazaar 24

3.2.2. 1920s – Sneddon Motors and Newland Motors 27

3.2.3. 1930s 30

3.2.4. 1940s-1950s – Motor Body Assemblers and York Motors 32

3.2.5. 1960'S – 2000's 34

4. Physical Analysis 37

4.1. Site Photos 39

4.1.1. 84-86 Parramatta Road (Apartment) 39

4.1.2. 88-90 Parramatta Road (Warehouse) 40

4.1.3. 92-94 Parramatta Road (Medical Foundation Building) 49

5. Heritage Significance 51

5.1. Heritage significance of the study area 52

5.1.1. Assessment of Significance for 84-94 Parramatta Road, Camperdown 53

5.1.2. Assessment of Significance for 84-86 Parramatta Road, Camperdown 57

The building has been assessed has having little to no heritage significance at a State or Local level. 60

5.2. Significance of items within the vicinity of study area 61

5.2.1. *'The University of Sydney, University Colleges and Victoria Park'* (SHR #01974) and University of Sydney HCA (C5) 63

5.2.2. *'St John's College, University of Sydney'* (LEP #I67) 68

5.2.3. *Site landscaping University of Sydney* (LEP #I72) 70

5.2.4. *JD Stewart Building, University of Sydney including interior* (LEP #I73) 71

5.2.5. Terrace House including interior, 12 Sparkes Street and Terrace House including interior, 14 Sparkes Street (LEP #I94 and #I95) 72

5.2.6. Former Royal Alexandra Hospital for Children "Venables House" including interior and courtyard (LEP #I92) 73

5.2.7. Housing development 'Alexandra Dwellings' (#I93) 74

5.2.8. Hereford and Forest Lodge Significance (LEP #C33) 76

6. Proposed Development 78

6.1. Planning Proposal details 79

6.2. Pre-Planning Proposal design development 79

7. Heritage Impact Analysis and Assessment 83

7.1. Heritage impact of proposal on study area 84

7.1.1. Impacts of proposed built form, scale and massing 84

7.1.2. Physical impacts on Inter-war warehouse at 88-90 Parramatta Road 87

7.1.3. Impacts on setting and views 92

7.2. Heritage impact on items within the vicinity 95

7.2.1. Heritage items within close proximity 95

7.2.2. Heritage items and HCAs within the wider vicinity 96

7.3. NSW Guidelines for Preparing a Statement of Heritage Impact 97

Heritage NSW Questions to be considered in a statement of heritage impact 97

7.4. Statement of Heritage Impact 101

8. Conclusions and Recommendations 103

8.1. Conclusions 104

8.2. Recommendations 104

9. References 105

Appendix A 107

Executive Summary

This Heritage Impact Statement (HIS) supports a Planning Proposal for the redevelopment of 84–94 Parramatta Road, Camperdown, into a life sciences research facility and ancillary uses. The proposal, led by Wentworth Capital in partnership with the University of Sydney, seeks amendments to the Sydney Local Environmental Plan 2012 to enable increased building height and floor space ratio, while retaining and adaptively reusing the Inter-war warehouse at 88–90 Parramatta Road.

The HIS assesses the heritage significance of the study area and its surroundings. While the site itself contains no heritage listed items and is not contained within a heritage conservation area (HCA), the Inter-war warehouse at 88–90 Parramatta Road has been assessed as meeting the threshold for heritage significance at a local level due to its historical, aesthetic, rare, research and representative values. The study area is also located within the vicinity of several heritage items and nearby HCAs.

The proposed envelope includes retention of the Inter-war warehouse building within the study area and new built form and massing around, including an adjacent four-storey podium, accommodation of a tower form above, and establishment of an eight-storey life science education building at the rear of the study area. As demonstrated by the reference scheme, the development can address the defined heritage principles to minimise the potential physical and visual impacts by incorporating appropriate setbacks, activating the ground floor of the warehouse building and study area, facilitating structural alignment for the additional built forms, conservation of original fabric, as well as opportunities for interpretation and public engagement.

The HIS concludes that the proposal would have a minor and acceptable impact on the heritage significance of the Inter-war warehouse and surrounding heritage items. Recommendations include further investigation of surviving fabric, sensitive design articulation, and the preparation of a Heritage Interpretation Plan to celebrate the layered history of the site.

.

1. Introduction

1. 1. Introduction

1.1. The Purpose of this report

This Heritage Impact Statement is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

The study area is located within the City of Sydney Local Government Area (LGA) encompasses a five-storey contemporary serviced apartment building (c.2016) at 84-86 Parramatta Road, an Inter-war warehouse building (c.1927) at 88-90 Parramatta Road and a six-storey contemporary research and education building (c. late 1980s) at 92-94 Parramatta Road.

There are no items of local, or State heritage significance contained within the study area, nor are any of the buildings listed on other statutory or non-statutory registers. The study area is however located within the vicinity of several local heritage items and heritage conservation areas (HCAs) listed within Schedule 5 of the Sydney LEP 2012, and State item listed on the NSW State Heritage Register.

Notwithstanding the above, an assessment of its significance of the study area was undertaken (in accordance with the '*Assessing Heritage Significance'* guidelines' dated 2023, by the NSW Government Department of Planning and Environment) and it was established that the Inter-war warehouse building located at 88-90 Parramatta Road, was able to meet the threshold for significance at a local level.

The purpose of this HIS is to identify any potential impacts of the conceptual built form and massing presented within the planning proposal may have on heritage values and fabric of the study area itself, particularly on the heritage values of 88-90 Parramatta Road, as well its impacts on the nearby items of heritage significance.

This assessment is based on the architectural documentation prepared by HDR Architects, in conjunction with input from the broader consultant team and planning framework and describes the site, its environment, the proposed development, and provides an assessment of the heritage impacts.

The HIS has been prepared by Sebastian Gerber-Hood and Kate Wine, in accordance with Clause 5.10 of the Sydney Local Environmental Plan (LEP 2012), and Section 3.9 of the Sydney Development Control Plan (DCP) 2012, and the following guidelines:

- Australia ICOMOS, 2013, *Australia ICOMOS Charter for Places of Cultural Significance and The Burra Charter*.
- Government Architect NSW, 2017, *Better Placed: An integrated design policy for the built environment of New South Wales.*
- Department of Planning & Environment, 2023, *Guidelines for Preparing a Statement of Heritage Impact.*
- Department of Planning & Environment, 2023, *Assessing Heritage Significance: Guidelines for assessing places and objects against the Heritage Council of NSW Criteria.*
- Heritage Council of NSW, 2008, *New Uses for Heritage Places: Guidelines for the Adaptation of Historic Building and Sites.*

1.2. Project background

The following is a summary of the project background as detailed within the Planning Report prepared by Colliers Urban Planning, and submitted with the application:

> *'Wentworth Capital, under a long-term ground lease from the University of Sydney, envision creating a world-class life science and mixed-use campus on the site. The proposal aims to establish Camperdown as Sydney's premier biomedical hub, centred around top-tier life science facilities.*
>
> *Wentworth Capital has an agreement in place with Sydney University to develop the site at 88-94 Parramatta Road, Camperdown with a vision to deliver a thriving life science campus.*
>
> *Life sciences refer to a broad range of scientific and research operations that includes medical research, regenerative medicine, medical technology, advanced technology and computing, digital health and a variety of other biomedical research fields.*
>
> *Detailed research undertaken by Biointellect for Wentworth Capital identifies that Australia's life sciences sector is experiencing rapid growth, driven by advancements in biotech, Medtech, digital health, and clinical services. With over 2,900 organisations and a market value of $25 billion, the sector is supported by strong government investment, world-class research institutions, and a skilled workforce. NSW leads nationally, hosting the highest concentration of life sciences companies, particularly in MedTech and digital health. However, access to specialised infrastructure—such as technical labs, cleanrooms, and prototyping spaces, and lack of private*

sector investment— remains a critical bottleneck in Sydney and Australia more broadly, especially for early-stage companies seeking affordable, scalable facilities.

The proposed life sciences precinct in Camperdown, adjacent to Tech Central, presents a strategic opportunity to address this infrastructure gap. Anchored by the Camperdown-Ultimo Health and Education precinct, University of Sydney and the Sydney Biomedical Accelerator, the opportunity to deliver 34,332m² of floorspace tailored to the needs of life sciences tenants, supporting research, commercialisation, and job creation is substantial. The location offers proximity to hospitals, research institutes, and transport, ideal for attracting domestic and international companies. By enabling colocation, collaboration, and access to talent, the site is positioned to strengthen NSW's innovation ecosystem and enhance Australia's global competitiveness in life sciences.'

Following presentation to the City of Sydney (October 2024) on the initial concept development it was requested that the heritage significance of the study area (in particular, the three-storey warehouse building) be further investigated.

Curio prepared an Assessment of Significance report (dated January 2025) for the study area, and it was established that the existing Inter-war warehouse building at 88-90 Parramatta Road was able to meet the threshold for significance at a local level. The detailed assessment of its significance is reproduced and referenced within Section 5 of this report. The conclusions and recommendations from the assessment of significance are provided within Appendix A.

A pre-Planning Proposal was reviewed by Council officers and presented to Council's Design Advisory Panel on 13 February 2025. The City of Sydney Council issued their feedback on 11 March 2025 which included the following matters which are required to be addressed in order to support the strategic and site-specific merit of any planning proposal request.

- *'It is noted that your heritage assessment identified 88-90 Parramatta Road as being potentially locally significant. It is recommended that the building be retained and adapted and that future detailed design should seek to retain the whole structure. A facade only approach to adaptation would not be supported.*
- *The retention of the 88-90 Parramatta Road building is an opportunity to accommodate the proposed exchange, conference or 'science on display' spaces. '*

The current proposal has been largely informed by pre-DA discussions with the City of Sydney and in response to their feedback, dated 11 March 2025.

1.3. Site identification

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context and lot boundaries are shown at Figure 1-1 to 1-3.

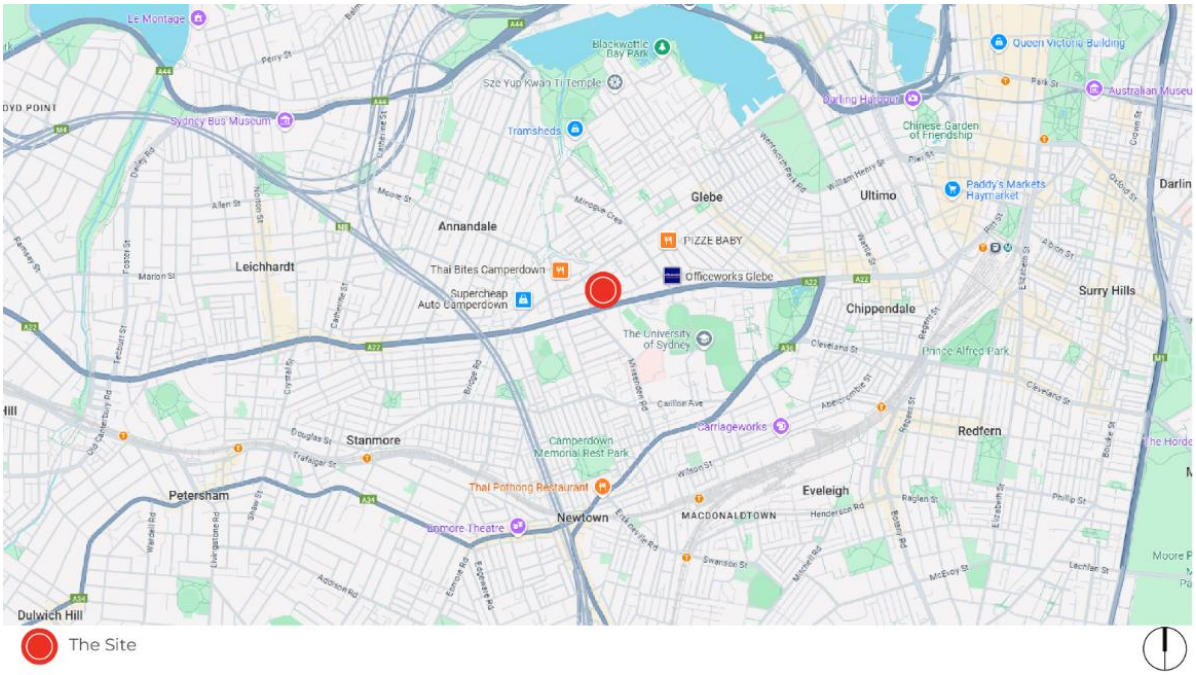


Figure 1-1. Locational context. Source: Google Maps, edits by Colliers Urban Planning



Figure 1-2: Aerial Photograph showing the lot boundary of the study area in red. Source: Six Maps 2024.

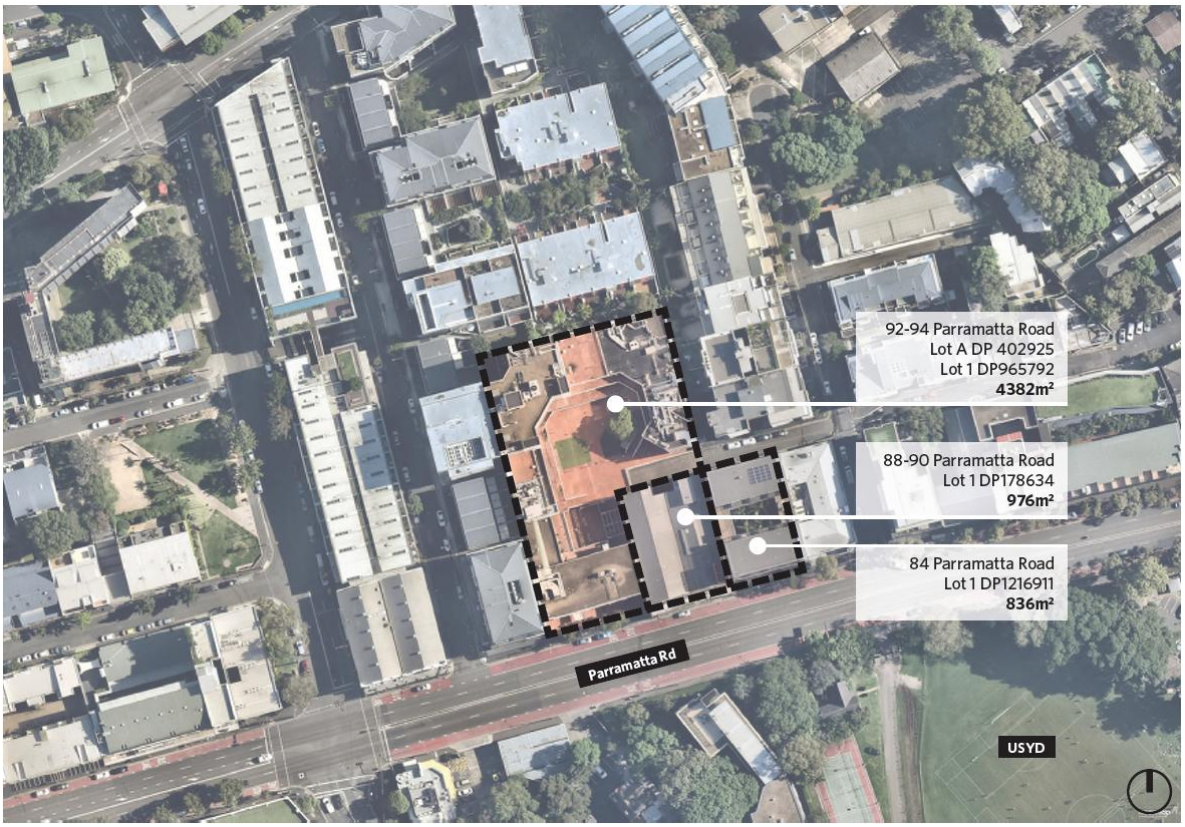


Figure 1-3: Aerial photograph showing the lot boundaries of the study area in red. Source: HDR Architects 2024.

1.4. Limitations and constraints

This Heritage Impact Statement does not include any non-heritage related planning controls or requirements.

1.5. Authorship and acknowledgements

This report was prepared by Sebastian Gerber-Hood, Archaeologist and Heritage Specialist and Kate Wine, Principal Built Heritage, with review by Natalie Vinton, CEO, all of Curio.

2. Statutory Context

2. Statutory Context

2.1. Heritage Statutory Framework

In NSW, heritage items and known or potential archaeological resources are afforded statutory protection under the:

- Environmental Planning and Assessment Act 1979 (NSW) (EPA Act).
- Heritage Act 1977 (NSW) (Heritage Act); and
- National Parks and Wildlife Act 1974 (NSW) (NPW Act).

There are further planning policies and controls that provide a non-statutory role in the protection of environmental heritage. These include development control plans for each local government area. This section of the report discusses the local and State planning context for the site concerning its built heritage values associated with local heritage items and conservation areas in the vicinity of the study area.

2.1.1. Environmental Planning and Assessment Act (NSW) 1979

The NSW Department of Planning administers the EP&A Act 1979, which provides the legislative context for environmental planning instruments to be made to legislate and guide and the process of development and land use. Local heritage items, including known archaeological items, identified Aboriginal Places and heritage conservation areas are protected through listings on Local Environmental Plans (LEPs). The EPA Act also requires that potential Aboriginal and historical, archaeological resources are adequately assessed and considered as part of the development process, following the requirements of the NPW Act and the Heritage Act.

Sydney Local Environmental Plan (LEP) 2012

The study area is located within the City of Sydney local government area (LGA). The Sydney LEP 2012 provides local environmental planning provisions for land within the Sydney LGA. Clause 5.10 of the LEP sets out objectives and planning controls for the conservation of heritage in the City of Sydney Council area, including the conservation of built heritage and archaeological sites.

There are no properties within the study area listed as a heritage item within Schedule 5, Part 1 of the Sydney LEP, and there are no properties within the study area identified as being located within a heritage conservation area, pursuant to Schedule 5, Part 2 of the Sydney LEP.

There are several heritage items and heritage conservation areas located within the vicinity of the study area. These are described in Section 2.1.3 below,

2.1.2. Heritage Act (NSW) 1977

In NSW, heritage items are afforded statutory protection under the NSW Heritage Act 1977 (the Heritage Act). Heritage places and items of importance to the people of New South Wales are listed on the NSW State Heritage Register (SHR). The Heritage Act defines a heritage item as a 'place, building, work, relic, moveable object or precinct'. The Heritage Act is responsible for the conservation and regulation of impacts to items of State heritage significance, with 'State Heritage Significance' defined as being of 'significance to the state in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item'.

2.1.3. Statutory Heritage Listings

The study area at 84-94 Parramatta Road, Camperdown is not a heritage listed item or located within a heritage conservation area. However, it sits directly opposite the north-west corner of the State listed *University of Sydney* (#01974), which is also identified as the *University of Sydney Heritage Conservation Area* (C5). It is located approximately 200m south of the *Hereford and Forest Lodge Heritage Conservation Area* (C33) and located within the vicinity of several individually listed heritage items which include two locally listed terrace houses at nos.12 and 14 Sparkes Street (#I95 and #I96) and the two-storey housing development at 33-45 Pyrmont Bridge Road (#I93). Furthermore, the study area is located approximately 300m east of similarly dated industrial warehouse buildings at 6-10 Mallett Street and 9-11 Layton Street respectively (#I2242 and #I79). The study area heritage items are visible below in Figure 2-2.

Table 2.1: Summary of heritage listings in the vicinity of the subject site.

Item No.	Heritage Register	Item Name	Address
#01974	SHR	University of Sydney, University Colleges and Victoria Park	Corner of Parramatta and City Roads
C5	LEP	University of Sydney Heritage Conservation Area	University of Sydney main campus
#I96	LEP	Terrace House including interior	14 Sparkes Street, Camperdown
#I95	LEP	Terrace House including interior	12 Sparkes Street, Camperdown
#I67	LEP	St John's College, University of Sydney	8A Missenden Road, Camperdown
#I93	LEP	Housing development 'Alexandra Dwellings'	33-45 Pyrmont Bridge Road, Camperdown
C33	LEP	Hereford and Forest Lodge Heritage Conservation Area	Various

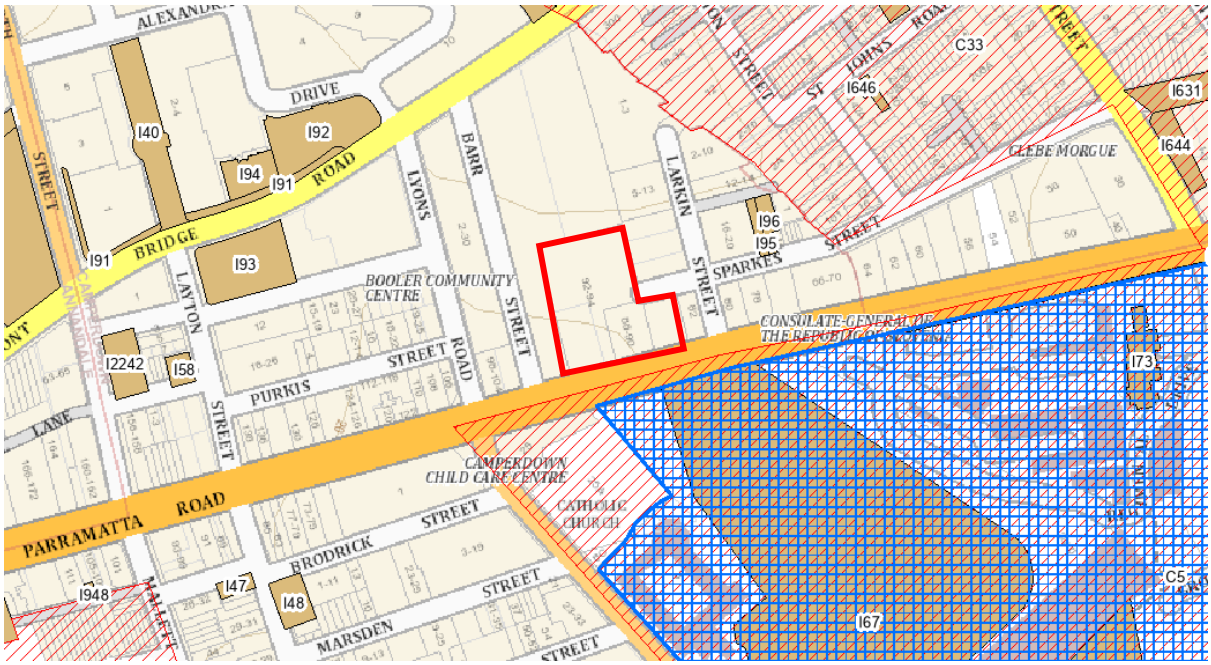


Figure 2-1: Heritage Items (brown) and Conservation Areas in the vicinity of the study area (red hatching). Source: NSW Planning Portal Spatial Viewer, with Curio additions 2024.

2.1.4. Previous studies

There were several recent heritage studies reviewed by Curio as part of the background research for the Assessment of Significance, dated January 2025. These studies included:

- Ina Kirk & Megan Martin 2006, *Study of Inter-War Garages & Service Stations in New South Wales.*
- City Planning Services 2014, *Report on City of Sydney Industrial & Warehouse Buildings Heritage Study.*
- Urban Growth NSW 2016, *Parramatta Road Corridor: Urban Transformation Fine Grain Study.*

Curio noted that the Urban Growth 2016 '*Parramatta Road Corridor: Urban Transformation Fine Grain Study'* for the Parramatta Road corridor highlighted the subject Inter-war warehouse building at 88-90 Parramatta Road as a potential heritage item (refer to Figure 2.3). The site was one of only a few properties highlighted within Camperdown (and only one of two warehouse-type buildings) as having potential significance. The other building was No. 98-104 Parramatta Road which is located approximately 100m to the west. Refer to figures 2-2 and 2-3.

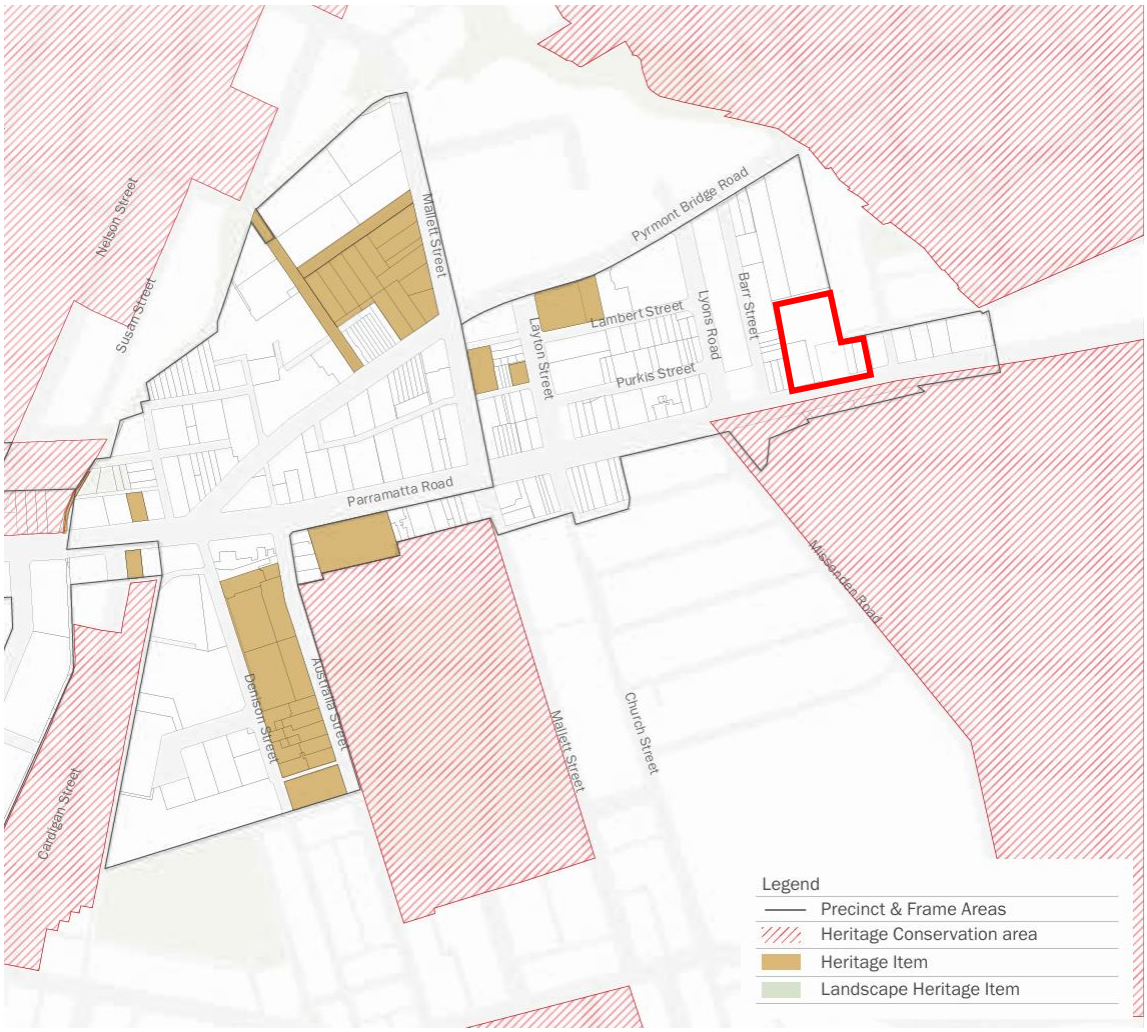


Figure 2-2: Map of Heritage Items and Conservation Areas in the Parramatta Road corridor, Camperdown Precinct. Study area outlined in red. Source: Parramatta Road Corridor – Urban Transformation Fine Grain Study, Urban Growth NSW, 2016. p.51, Curio additions.

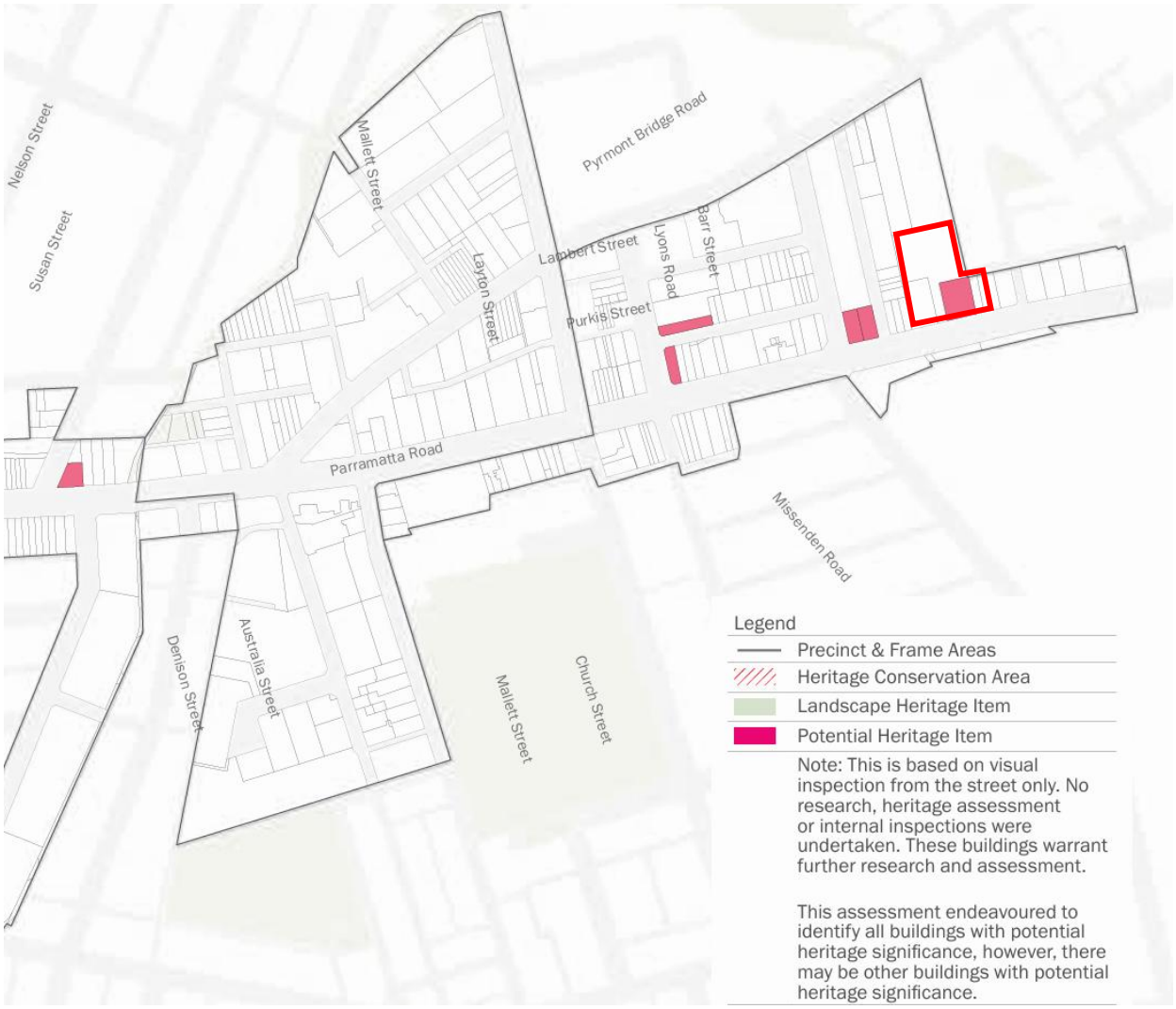


Figure 2-3: Map of Potential Heritage Items in the Parramatta Road corridor, Camperdown Precinct, with 88-90 Parramatta Road highlighted in blue. Study area outlined in red. Source: Parramatta Road Corridor – Urban Transformation Fine Grain Study, Urban Growth NSW, 2016. p.52. Curio additions.

As Curio demonstrated within the attached *'Assessment of Significance',* dated January 2025 (Appendix A), the Inter-war warehouse building at 88-90 Parramatta Road is able to meet the threshold for heritage significance at a local level. Refer to Section 5 of this report for further details on the significance of the study area and items within the vicinity.

3. Historical Summary

3. Historical Summary

This chapter provides a brief summary of the historical themes and context and chronological phases of use and development activity at the subject site to provide historical context.

3.1. Car History of Australia and Parramatta Road

From 1800's until the middle of the 20th century one of the primary signifiers of a family's status in suburban Sydney, and Australia as a whole, was the number and quality of one's horses and associated vehicles, like carriages, buggies and carts. Well-off Sydney residents would travel around the city's roads in large, opulent carriages pulled by multiple horses, controlled by well-dressed coach drivers, while middle-class people would typically be driving their own lighter and less expensive carriages, with shop owners and produce sellers transporting their goods in sturdier, horse-drawn carts. [1]

While the urban poor would often simply walk, hireable horse-driven 'cabs' were available for those that lacked the means or desire to own their own vehicles or horses. Public transport in the form of public stagecoaches, which operated much in the same way that a bus service does today were also available. These carriages, along with other vehicles often filled the streets, travelling through Sydney and out to other settlements and towns, and along major roads like Parramatta Road, until it was replaced by the arrival of the much faster Railway Service in the mid 1800's.[2]

Providing the horses, vehicles, and maintenance for this network of transport was a significant industry in 19th and early 20th century in Sydney, and Parramatta Road's status as one of Sydney's largest and most frequented roads made it a popular location for stables, carriage workshops, and showrooms.

Camperdown and its adjacent suburbs had several such establishments, including B. O'Brien's Saddle Shop, built in 1911 and located between Lyons Road and Layton Street (visible in Figure 3-2 below); Inglis' Horse Bazaar, built in c.1911and located on the site of the current Medical Foundation Building (within the study area), which sold both the horses and vehicles; and businesses like McDonald's Coach Factory and Bennett's Coach Factory (visible in Figures 3-3 and 3-4) operating to the west of the study area, near to the corners of Mallet and Australia Streets, and further to the east closer to Glebe, with business like GH Olding Coach Building Works.

[1] Brian Carroll, 1980, *Getting around Town*. Page 63
[2] Brian Carroll, 1980, *Getting around Town*. Page 64



Figure 3-1: Horse-drawn carriages and carts on George Street, 1900. Note the amount of traffic and the variety of vehicle types. Source: City of Sydney Archives - A-00024391, https://archives.cityofsydney.nsw.gov.au/nodes/view/585036



Figure 3-2: B. O'Brien's Saddle and Harness Shop, located between Lyons Road and Layton Street, just off Parramatta Road, in Camperdown. Source: City of Sydney Archives - A-01205014, https://archives.cityofsydney.nsw.gov.au/nodes/view/1970538



Figure 3-3: Bennett's Coach Factory, at 111 George Street (now Parramatta Road), near the corner of Mallet Street. Source: City of Sydney Archives - A-00039141, https://archives.cityofsydney.nsw.gov.au/nodes/view/677810



Figure 3-4: McDonald Brothers Coach Factory, on the corner of George Street (now Parramatta Road) and Australia Street. Source: City of Sydney Archives, A-00039145, https://archives.cityofsydney.nsw.gov.au/nodes/view/677868

The first 'self-driving carriages', now known as motor-cars, began to appear in Australia the late 19th century, with the first vehicle built in the southern hemisphere being presented in Melbourne in 1897. These early cars had wooden wheels with iron tires, were steered using a side lever, and sold for around 100 pounds. [3] Like many new-fangled technologies, not everyone was convinced of their success, particularly those in the horse and coach business, with the *Coachbuilder and Saddler* claiming in 1897 that *"...those motor cars are very slow in putting in an appearance in Australia...many of the claims made for the new vehicle were made without justification, and that instead of being in a condition to come into sharp competition with the horse, as its sponsors claimed, the motor car is still and is likely to remain for some years, in the bud"* [4] While this prediction seems absurd, in hindsight, cars remained only a luxury product for many years after it, and continued to share the roads with their horse and carriage predecessors until the mid-1920's, when motor cars and motor vehicles began to outnumber other forms of road transport. Ever-advancing, improving and growing in number, motor vehicle use grew rapidly throughout Australia going from 37,000 in 1914, close to 58,000 in 1918, 100,000 by 1921, 500,000 by 1928, and to 820,000 by 1939.[5] It should be noted however that by the beginning of the Second World War, cars were still unattainable by the majority of the Australian population of around 7 million, and during the economic hardships of the war itself new cars were almost impossible to purchase for anyone. [6]

The changing economic and social world of the post-war era meant that cars began to change from a luxury 'toy' to a standard part of suburban life. By the 1950's the motor car had become the ultimate status symbol in post-war Australia, and the greatest representation of the attainable prosperity and level of modernity now available for ordinary people [7]. In 1950 roughly one in 10 households owned a motor car, but by 1960 there were more families that owned cars than those that did not, a figure that would only grow well into the modern era. [8]

Parramatta Road was heavily affected by the rapid rise of the motor-vehicle, both in the form of ever-increasing use by motor- cars and trucks, which required the upgrading and resurfacing of various parts of the road for the increased traffic, but also an adaption of many of its existing businesses from their earlier focus on the selling or maintenance of horses and carriage vehicles[9]. Starting in the 1920's and reaching a now familiar level in the 1940s, Parramatta Road rapidly became the epicentre of the city's motor-car service industry, being home to numerous mechanics, tyre shops, petrol and service stations, and new and used car dealerships.[10] The part of Parramatta Road that runs through Camperdown was also subject to this changing use, housing several motor-vehicle related businesses from the mid-1920s, visible in Sydney's Building and Civic Surveys from 1830 to 1972, as well as photographs from various periods. These sources show that the study area has a consistent connection to this changing vehicle history, and contained several motor-vehicle related businesses after its conversion from a Horse Bazaar and carriage shed, including Sneddon Motors service-station, Newland Motors, Motor Body Assemblers, York Motors, and White Trucks.

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[3] Brian Carroll, 1980, Getting around Town, P. 91
[4] Ibid.
[5] Brian Carroll, 1980, Getting around Town P.97
[6] Ibid.
[7] 'Australia's own car' *Australia in the 1950s*. Accessed from: https://australiainthe1950.weebly.com/cars.html

[8] 'Five decades of motoring in Australia in the 1950s' *Australia for Everyone*. Accessed from: https://www.australiaforeveryone.com.au/motoring-fifties/
[9] City of Sydney Industrial & Warehouse Buildings Heritage Study – Volume 1. p. 27
[10] 'Parramatta Road: A brief history' *Parramatta History and Heritage*. Accessed from: Parramatta Road: A Brief History | Parramatta History and Heritage

3.2. History of the study area

3.2.1. 1900's - Inglis Horse Bazaar

The study area appears to have been largely undeveloped until at least the late 1800s, when it appears in maps as lacking any major structures, aside from the Governor Bourke Hotel (now demolished) which was located in the site's southern-eastern corner, visible in Figure 3-5. At some point around c.1911 the area that makes up the current study area (aside from 84 Parramatta Road), was used for the construction of a 'Horse Bazaar' for the company 'William Inglis and Son', who commenced business from this site in late 1913 for the sale of horses, and buggies and carriages. [11] William Inglis & Son was founded in 1867 and began selling farm produce in George Street and later Pitt Street, including livestock, horses, and other machinery, and are among the oldest and most famous businesses in the horse-racing and livestock industry. [12]

Newspaper sources dating to 1913 indicate that Inglis & Son purchased the 'Camperdown Yards', which they had previously undertaken horse sales within, and constructed several new buildings for their Horse Bazaar before taking up business officially at Camperdown in 1913. This source indicates that there were already uncovered saleyards on what is now the study area during the early 1900's and possibly earlier, and describes the new Horse Bazaar as such:

> *"...A new hotel has been built on the front, and the selling rings, stalls, etc., to ' the extent of about three acres of land, have been covered with expensive stabling, new offices erected, and yards covered in. In fact, this old, dusty centre' has been transformed into what an Indian buyer and traveller declares to be the best horse emporium in the world...Special and expensive provision has been made for the roughbreads, and the sanitation of the place is as perfect as science and money can make it. Around the selling ring is a gallery of seats that will hold a thousand people. Everybody can see the horses in the ring as plainly as if they were out in the open, as very special attention has been paid to the lighting of this, as well as the covered-in yards. Electric power is laid on all over the place for the drafting and managing of horses at night, and provision made for sick and disabled horses."*[13]

A 1911 plan of the proposed design for the Horse Bazaar, as seen in Figure 3-6 and 3-7, gives an indication of what the structure may have looked like from the street and internally, comprising a vehicle shed to the south (roughly where 88 Parramatta Road sits today), stables with a number of stalls to the north and a sale-ring on the site's north-east corner. A bazaar area was located in the centre, with offices to the west and behind the Governor Bourke Hotel, and further stalls in the north-west corner. We were unable to validate the accuracy of the internal layout of the plan, although the central and northern section of the plan appears to align with the footprint visible in later plans and aerial photographs.

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[11] 'Going, Going, Gone!' *Evening News*, Saturday September 1913, Accessed from: https://trove.nla.gov.au/newspaper/article/114780198?searchTerm=Inglis%20horse%20bazaar%20camperdown

[12] 'About Us' *Inglis.* Accessed from https://inglis.com.au/about,

[13] 'A New Horse Bazaar' *Sydney Mail*. Wednesday 1 October 1912. Accessed from: https://trove.nla.gov.au/newspaper/article/165964798?searchTerm=Inglis%20horse%20Bazaar%20camperdown

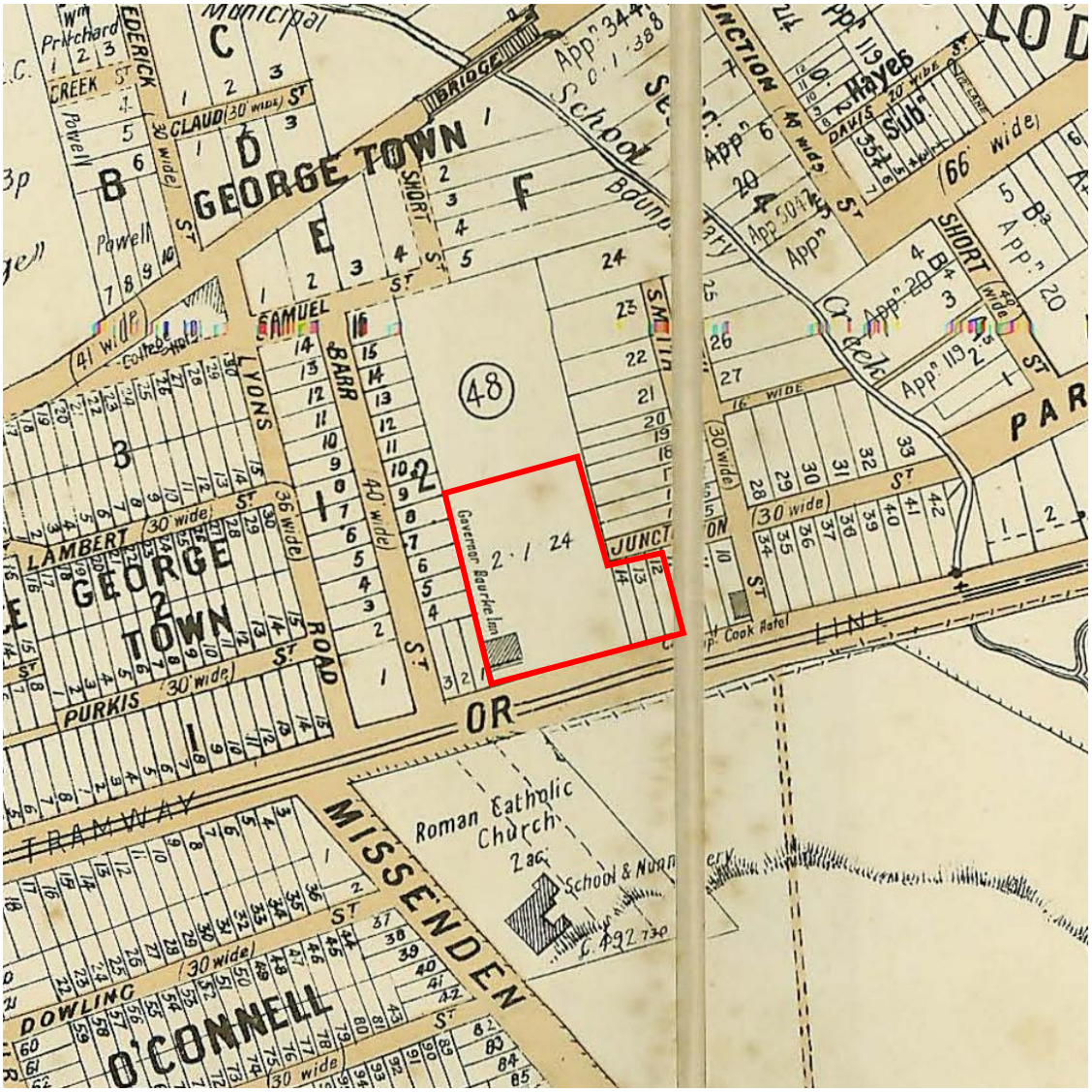


Figure 3-5: 1890 Map of Camperdown, showing the location of the study area by this date, which appears to be largely undeveloped, and possibly used as a horse yard by this date, aside from the Governor Bourke Hotel in the site's south-east corner. Source: Trove - A-00880473, Accessed from https://archives.cityofsydney.nsw.gov.au/nodes/view/1709400

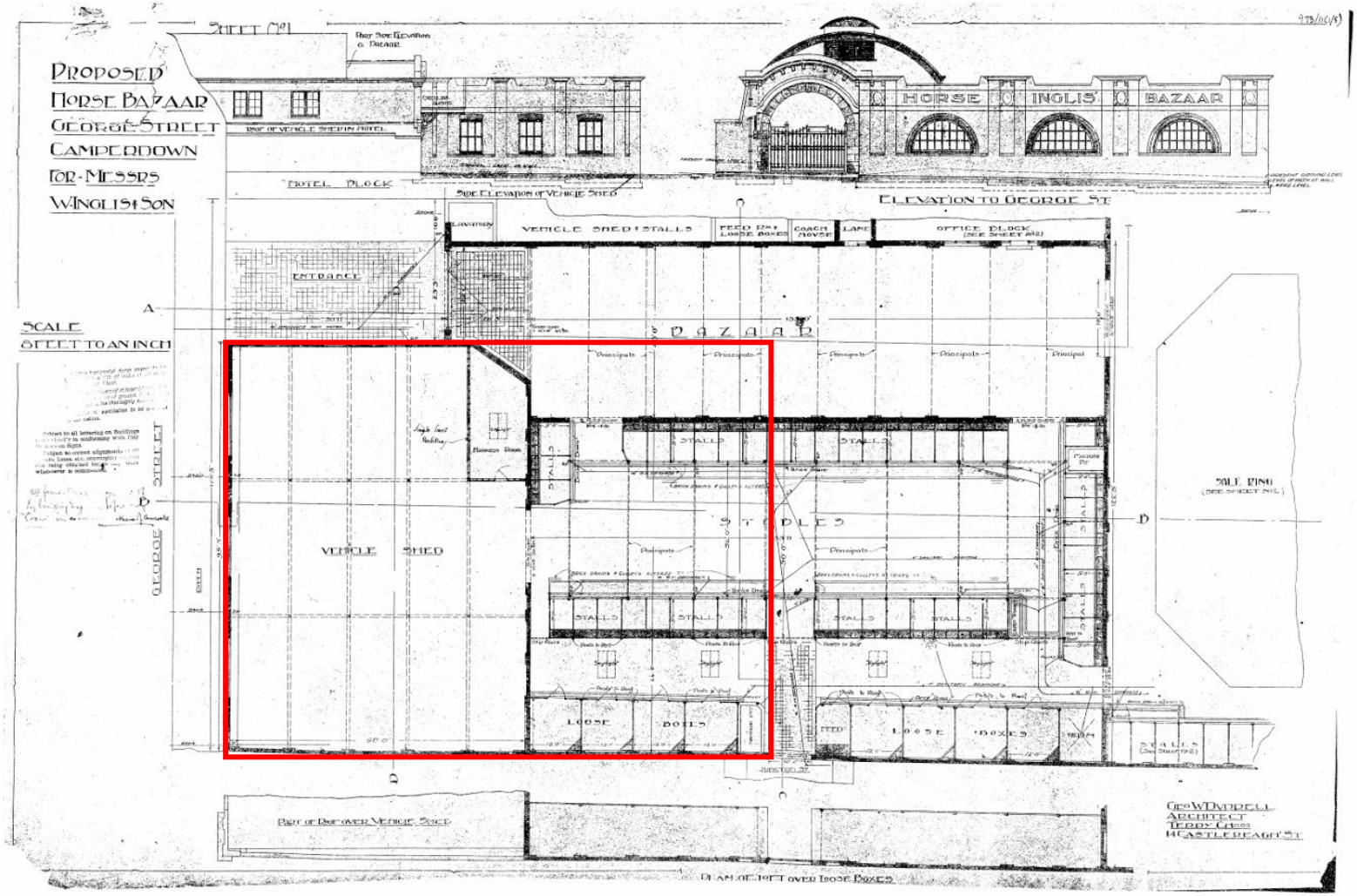


Figure 3-6: Southern half of the proposed plan for the Inglis Horse Bazaar, as well as an elevation showing the southern face along George Street, with the current location of the existing 88 Parramatta Road structure (red). The rest of the plan matches the footprint of the Medical Foundation Building, at 92-94 Parramatta Road, minus the Governor Bourke Hotel. Source: Parramatta R 1911. City of Sydney Archive - A-00568818

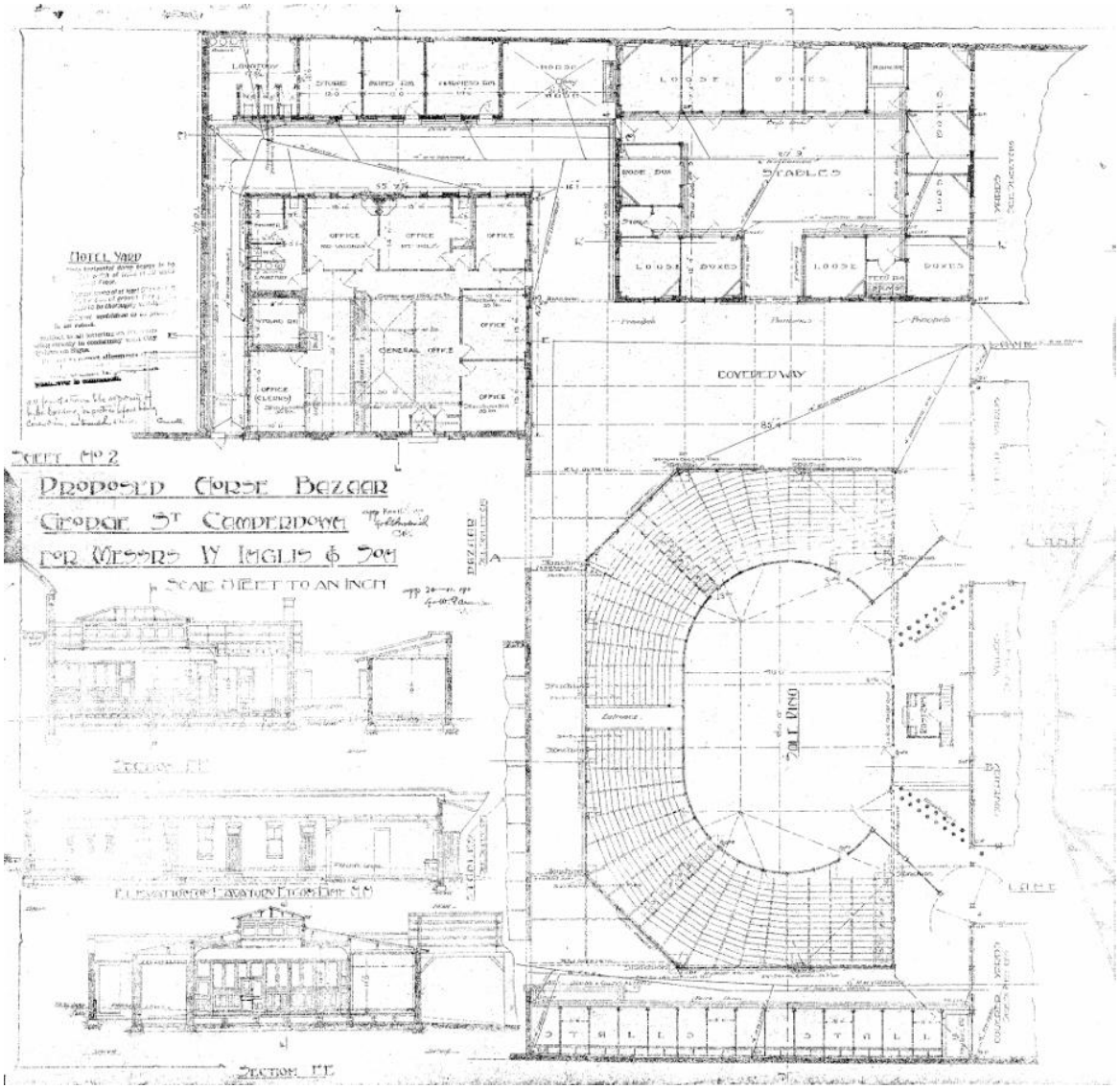


Figure 3-7: Northern half of the proposed plan for the Inglis Horse Bazaar, 1911, showing the north and western boundaries
City of Sydney Archive - A-00568818

3.2.2. 1920s – Sneddon Motors and Newland Motors

The overall study area was utilized as the Inglis Horse Bazaar until at least the early 1920's, when the site was subdivided into two sub-lots and sold at auction, as seen in an advertised subdivision plan dating to 1923 (Figure 3-8).[14] This plan shows that the constructed Horse Bazaar was sub-divided into two halves, both of which now currently sit within the northern half of the study area's Medical Foundation Building (92-94 Parramatta Road), with a further two subdivisions to the north that contain 'covered yards'. The plan also indicates that the final design of the Bazaar had a slightly different layout to the 1911 proposal, namely a much longer entryway from Parramatta Road, and a considerably smaller stall section. The Governor Bourke Hotel and its surrounding open space, as well as an unknown structure located in what is now 84-86 Parramatta Road, are both visible in this plan as well.

[14] Camperdown Subdivision 1923, SLNSW SP.C5 , Z.SP.C5 - Image 28

Furthermore, while the subdivision plan shows the clear presence (via shading and labelling) of the sale-ring, the bazaar, stalls, horse stables, and offices in the buildings northern section, the location of the vehicle shed depicted in the proposed 1911 plan (along with a three-bayed covering), is unshaded. This indicates that the shed was either demolished by this date, or that it was never constructed. It is also possible that the final vehicle shed design was not a substantial enough 'structure' to be depicted in the subdivision plan, being merely a parking yard surrounded by boundary walls with minimal to no covering.

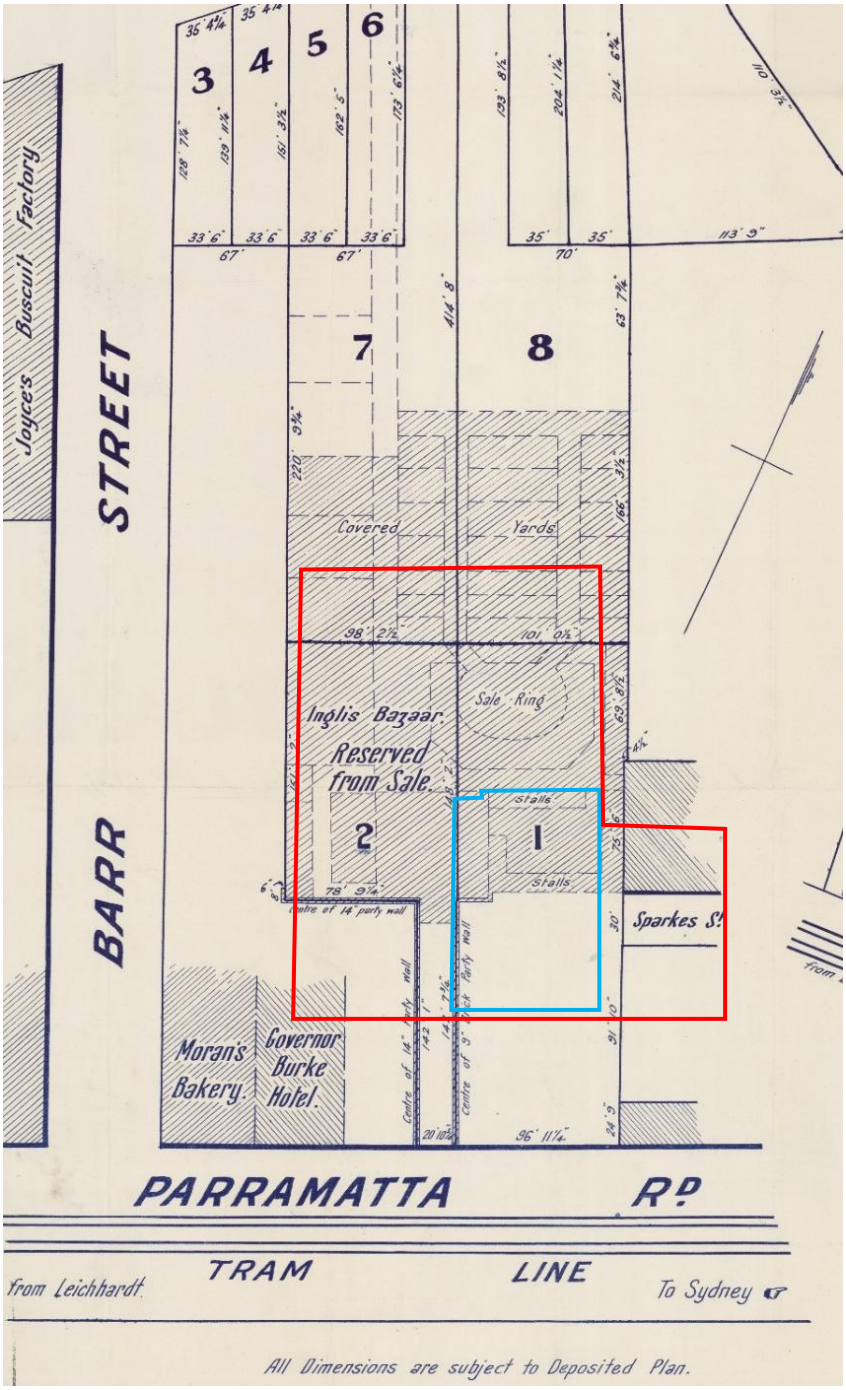


Figure 3-8: 1923 subdivision plan showing the separate lots created out of the Inglis Horse Bazaar, with the study area (red) sitting within Lot 1 and 2, and 88 Parramatta Road making up what appears to be an undeveloped area to the south (blue). Source: Camperdown Subdivision 1923, SLNSW SP.C5, Z.SP.C5 - Image 28

Newspaper sources show that a company called 'Sneddon Motor's' purchased 40,000 square feet of these lots by 1924 (which matches with the total area of Lots 1 and 2), for the construction of a

service station for 'Rugby' type cars[15]. Sneddon Motor's is listed in the Sands Directory as being located in Camperdown, on Parramatta Road by the year 1926 (it is noted that the street numbers are different from their current designation at this date, and that the study area and Parramatta Road surrounds are not listed in any earlier Sands Directories)[16]. Further sources detail the manager as a Mr A.E Tudehope, and describe the Camperdown service station as being used for assembling, finishing, and servicing motor-cars.[17] The Horse Bazaar was mentioned in newspaper articles as still being located in Camperdown in 1926, indicating that Sneddon Motor's likely occupied the majority of the 92-94 and 88 Parramatta Road lot, with William Inglis & Son still operating to the rear in some capacity, possibly in the open 'covered yards' to the rear that are accessible from Bridge Road.[18]

It is possible that Sneddon Motors constructed the building at No 88-90 Parramatta Road immediately after its purchase for use as part of the new service station. It is also possible that the old Inglis vehicle shed (or open space formerly used for this purpose) remained undeveloped during the Sneddon redevelopment, with the service station itself being constructed within the old Horse Bazaar, accessible from Parramatta Road via the narrow driveway to the west of the Governor Bourke Hotel.

The latter scenario is more likely, as the exterior of the Horse Bazaar remained intact until the late 1980s until it was demolished for the construction of the current Medical Foundation Building, as seen in later aerial photographs. Furthermore, a later newspaper article describing the Sneddon service station makes no mention of a building with several floors and lines up more with the mostly ground-level structures seen in the Horse Bazaar, as seen below:

> *"The service station Is admirably laid out for quick despatch of work and is a model of cleanliness and good order. After passing the main entrance cars are run into line to await their turn in the repair department., After repairs or adjustments have been effected, the cars are washed and greased in another department and when ready they are driven to a testing officer. After test the cars are taken to an employee whose duty it is to see that the battery is in good order, the tyre pressure correct and that petrol, oil and water have been supplied as required. These latter services are given free of charge. The cars are then dusted over, if necessary, and placed in a special department waiting for their owners to call for them. Immediately the owner arrives he Is asked to sit down in a comfortable waiting room and in a few moments his car is ready for him in the main street again. The staff Is composed of men with a thorough knowledge of Durant-Rugby products so that a minimum of taken to carrying out client's' order."* [19]

By 1927, the Sands Directory lists Newland A.E, Motor Merchant (listed as 36-40 Parramatta Road), as being located to the east of Sneddon Motors (listed as 42 Parramatta Road), indicating that the lot was possible subdivided again, with the existing Inter-war structure at 88 Parramatta Road likely built

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[15] 'Sneddons Expand' *The Sun*. Saturday 1 March 1924, p/8 Accessed from: https://trove.nla.gov.au/newspaper/article/224581316?searchTerm=Inglis%20horse%20bazaar%20camperdown

[16] Sands Sydney, Suburban and Country Commercial Directory, 1926. p.92

[17] 'Lifelong Knowledge of Motors' *Sunday Times*. Sunday 10 April 1927, p.38. Accessed from: https://trove.nla.gov.au/newspaper/article/128522610?searchTerm=sneddon%20motors%20camperdown

[18] 'Argus for Sale' *Referee*. Wednesday 3 February 1926, p.3. Accessed from: https://trove.nla.gov.au/newspaper/article/128106969?searchTerm=inglis%20bazaar%20camperdown

[19] 'Sneddon's Service' *The Farmer and Settler*. Saturday 9 August 1930, p.13. Accessed from: https://trove.nla.gov.au/newspaper/article/117514980?searchTerm=sneddon%20motors%20camperdown

around this date, for the purpose of selling used motor cars[20]. This is supported by photographs dating to 1926 showing Newland's Used Motor Car and Lorry Specialists advertising their move from the corner of Missenden Road to 36-40 Parramatta Road, as seen in Figure 3-9.



Figure 3-9: 1926 Photograph of what is now 1 Missenden Road, roughly 130m west of the study area, advertising Newland's Used Motor Car and Lorry moving opposite to 36-40 Parramatta Road, now known as 88 Parramatta Road. Source: Newland's Motor's moving, - Smith and Waddington, corner of Missenden and Parramatta Roads Camperdown, 1926, A-00037387

3.2.3. 1930s

By 1931 the 88-90 Parramatta Road section of the study area is listed in the Sands Directory as housing both Sneddon's Motors (at 36-40-42 Parramatta Road) and Newland A.E motor merchants (at 36-40 Parramatta Road).[21] This shows that the existing Inter-war building was possibly shared to some degree by both companies, with Newland's at the very least operating out of the building's eastern bay and garage entrance, and Sneddon's Motors presumably still operating out of the former Horse Bazaar. The Governor Bourke Hotel, located in what is now the south-west corner of the study area, is still present, with photographic evidence showing that it was a two-storey structure with a side driveway and open space behind (refer to Figure 3-12). Several businesses are listed in the Sands Directory as occupying what is now the 84-86 Parramatta Road site, namely Kelaker C.F Electric Engineers and Smith J. & Co Line Sprayers. [22]

By this date the current Inter-war building had been completed, with a 1931 photograph of Parramatta Road showing a 'Newland's Used Car & Lorry' sign located on the buildings eastern face (refer to Figure 3-10). The building has a clear presence in the streetscape, being among the only three-storey buildings on this part of Parramatta Road at this time. By 1938, photographs indicate that the former carriageway immediately to the west of the current, Inter-war structure now contained a two-storey structure covering it (See Figure 3-11) and likely continued to provide road access to the larger service station to the north within the old Horse Bazaar. [23]

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[20] Sands Sydney, Suburban and Country Commercial Directory 1927, p.95
[21] Sands Sydney, Suburban and Country Commercial Directory 1931, p.93
[22] Ibid.
[23] *Governor Bourke Hotel card 2 side 2,* National Archives of Australia, ANU Research Repository. Accessd from https://openresearch-repository.anu.edu.au/entities/anuarchivesitem/8492b71a-87a9-42bf-830b-5d71069c5ae6

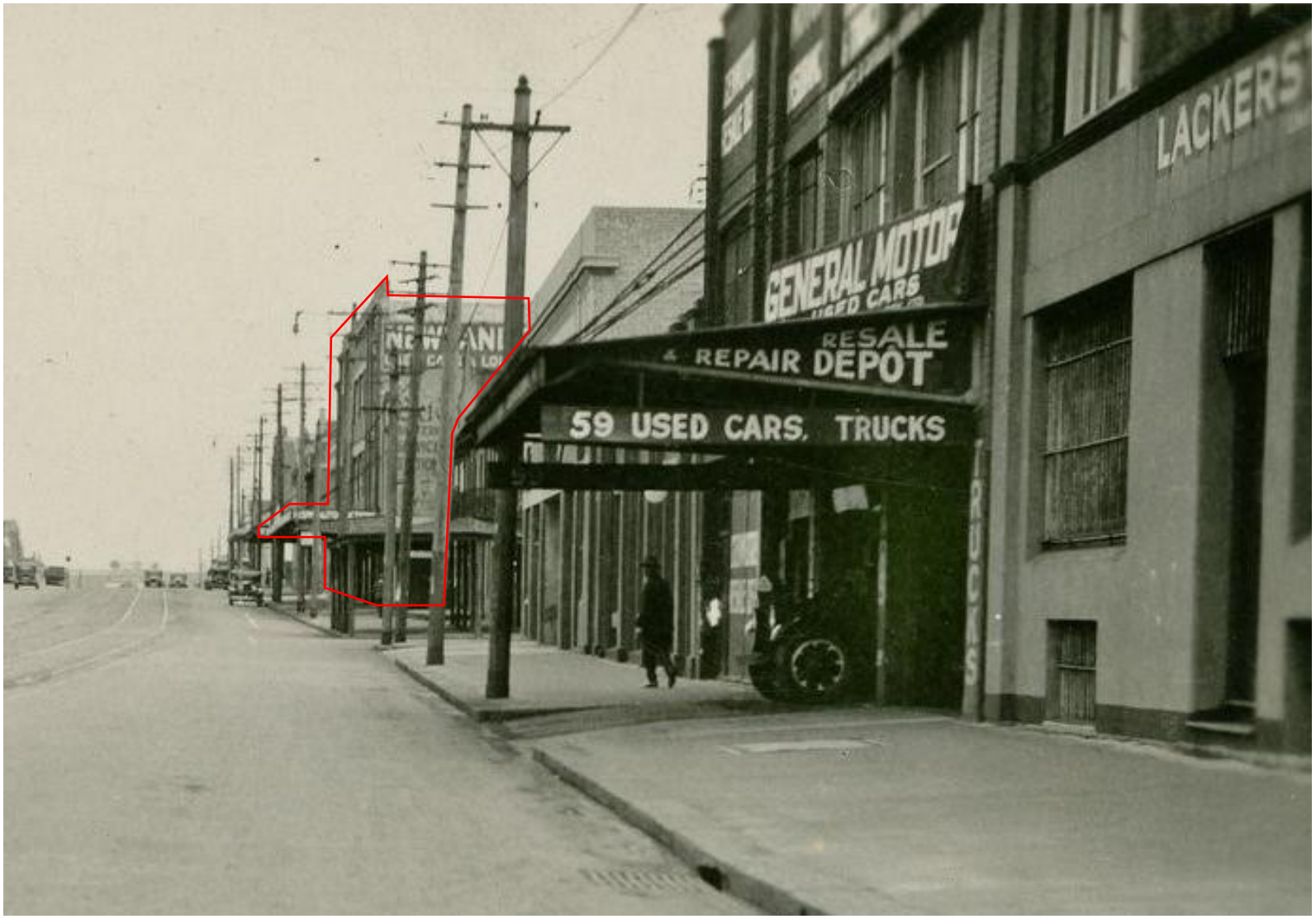


Figure 3-10: Photograph of Parramatta Road, dating to 1931, which shows the presence of Newland's Used Motor Cars and Lorry's on the building's eastern face'. Note the additional motor-car repair and sale shops that surround the study area at this date. Source: Parramatta Road, 1931. Trove A-00055381



Figure 3-11: Governor Bourke Hotel as it appeared in 1930 (top) and 1938 (bottom). Note the presence of a two-storey garage entrance on the right of the 1938 photograph, which likely led to the service station in the former Horse Bazaar. Source: *Governor Bourke Hotel card 2 side 2,* National Archives of Australia.

3.2.4. 1940s-1950s – Motor Body Assemblers and York Motors

The study area appears in aerial photographs dating to 1943 (see Figure 3-20 below), with the thin lot of what is now 92 Parramatta Road visible to the west, likely still providing access to the larger lot to the north. By this date the former Horse Bazaar is still present and is now shown in the 1938-1950 Civic Survey (Figure 3-12) as being utilised by Motor Body Assemblers Pty Ltd, who manufactured buses and other motor vehicles. The same plan shows that the Governor Bourke Hotel is still present, and the 84 Parramatta Road site to the east now houses Barry's Motor

Engineering, which is visible as a saw-tooth roofed warehouse in aerial plans.[24] Plans from the 1949-1970 Building Survey (Figure 3-13) list the former Horse Bazaar site as being used by 'White Trucks Pty Ltd', which may have been the same business under a different trading name, or simply another subsequent business in a similar role. [25]

By at least 1945 the Inter-war building at 88 Paramatta Road appears in Sydney's Building Survey plan as 'York Motors' (see Figure 3-13), who specialised in the selling of passenger car and motor-trucks. This is further supported by later articles dating to 1953 that mentioned York Motors utilising the site at 88-90 Parramatta Road as its commercial division and likely used the site as a showroom to house vehicles.[26] The size of the allotment at No. 88 Parramatta Road also appears to be smaller by the later date and includes only the warehouse building itself, with the rear section (currently a basement driveway) becoming part of the larger, northern lot owned by White Trucks Pty Ltd, as seen in Figure 3-12 and 3-13 below.

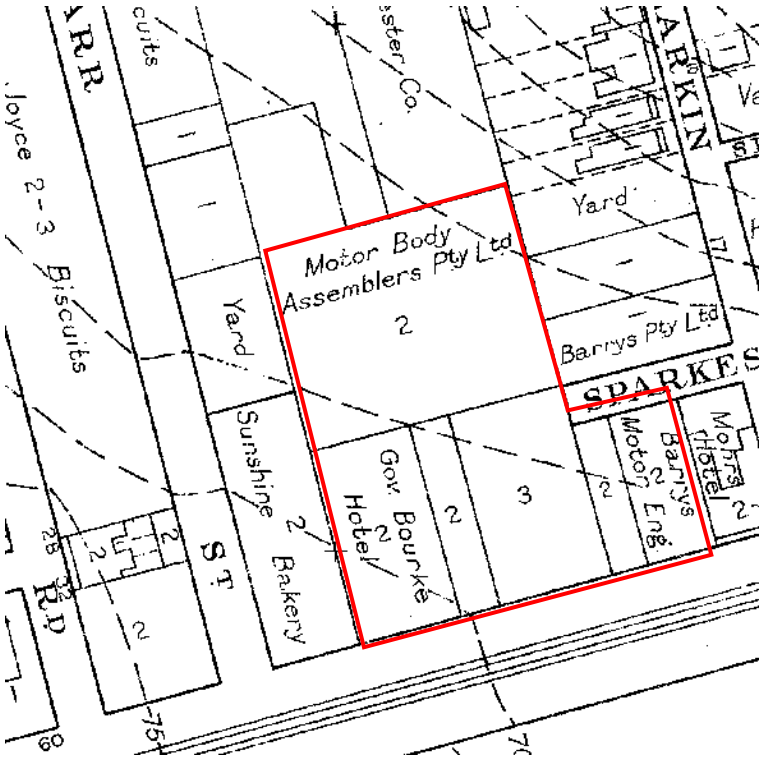


Figure 3-12: 1938-50 Civic Survey, which shows that the former Horse Bazaar now houses 'Motor Body Assemblers', and what is now 84-86 Parramatta Road houses Barry's Motor Engineering. The warehouse at 88 Parramatta Road still has its Sparkes Road entrance as part of its lot by this date. Source: Civic Survey 1938-1950: Map 11Glebe West. City of Sydney Archives - A-00880348

[24] Civic Survey 1938-1950: Map 11Glebe West. City of Sydney Archives - A-00880348
[25] 1949-1972 Building Surveyor's Detail Sheets. Sheet 13 – Camperdown. City of Sydney Archives. A-00880188
[26] 'Motor World on Parade' *Truth*. Sunday 29 March 1953, p.34. Accessed from: https://trove.nla.gov.au/newspaper/article/168044174/16577339

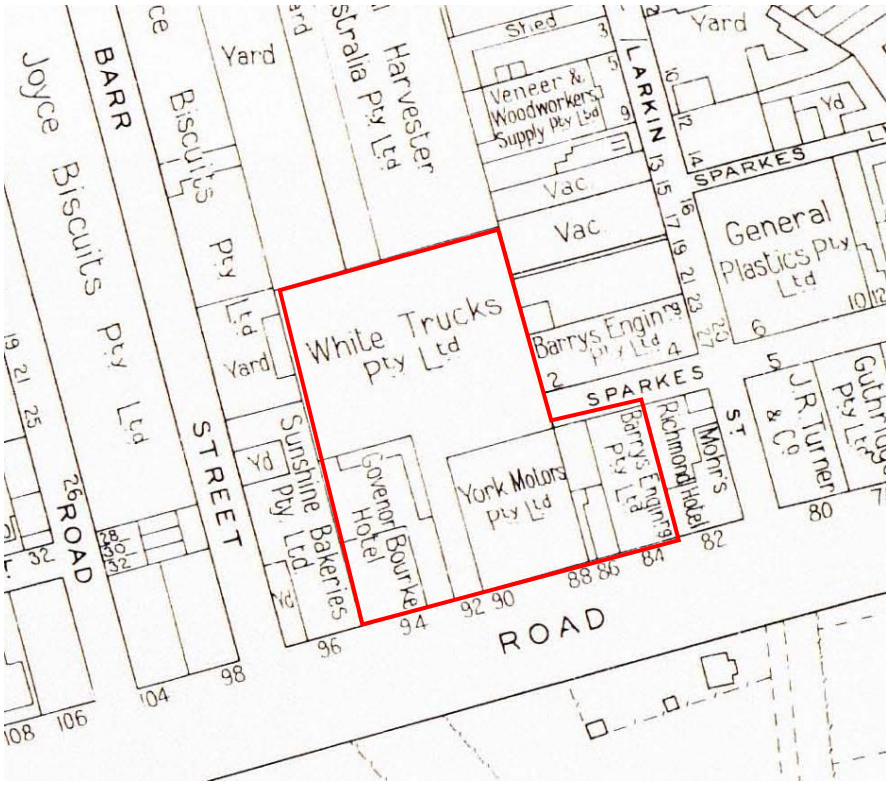


Figure 3-13: 1949-1972 Building Survey, showing that the 92 Parramatta Road now houses White Trucks, 88-90 Parramatta Road now houses York Motors. The lot of 88 Parramatta Road has also now shrunk to no longer include its Sparkes Street entrance. Source: 1949-1972 Building Surveyor's Detail Sheets. Sheet 13 – Camperdown. City of Sydney Archives. A-00880188

3.2.5. 1960'S – 2000's

Photographs from the State Library of NSW dating to 1961 that depict modelling of outfits and fabrics for the 'Eastern Industries Lingerie Division' (EILD) indicate that the EILD was utilising at least one floor of 88 Parramatta Road to some degree by this date (likely as a warehouse for fabrics or office space), and shows that the site was no longer in use for motor-car related businesses. [27] The photographs from this collection were potentially taken somewhere within the warehouse structure, owing to the white-faced brickwork and the design of the wall structure.

Aerial photographs dating to 1962 also show that the structures located in the overall study area remained largely unchanged from previous decades, with the exterior structure of the 1911 Horse Bazaar still intact, the Governor Bourke Hotel still present (although it had undergone considerable development, including a new modern, southern face that covered the former eastern garage entrance, as seen in Figure 3-14). Aerial photographs also show the Inter-war warehouse structure still surrounded by two-storey shed structures to the west and north, and the smaller saw-toothed roof still present to the east (refer to Figure 3-15).

While the use of 84-86 and 90-94 Parramatta Road is unknown at this time, Development Applications dating from 1968 mention a proposal by Singer Australia Ltd, a company dedicated to the production of sewing machines[28], for the use of the first floor of the 88/90 Parramatta Road building as a shop and store, the second floor as an office and storeroom, and the third floor as

[27] Australian Photographic Agency, 1961, 'Eastern Industries Lingerie Division (88 Parramatta Road, Camperdown, N.S.W.)' State Library New South Wales. Accessed from: https://collection.sl.nsw.gov.au/search?subjectIds=pJPexQgK5K10

[28] 'About SINGER Sewing Machines' *Singer*. Accessed from: https://singerco.com.au/about-singer/#:~:text=SINGER%C2%AE%20sewing%20machines%20are,through%20the%20craft%20of%20sewing.

workshop, highlighting at least partial use by this company[29]. Similar inspector cards dating to 1972-73 are lodged under 'Eastern Industries', showing that the garment makers were still using the building by this date, likely alongside Singer, with the cards also outlining work done to partition the first floor, which is likely the timber partitioning still visible at the time of this report being written. [30] Around this date another building inspector card notes that the ground floor has been partitioned.[31]

Building and development applications dating from the early to late 1990s indicate that the 88 Parramatta Road warehouse building was obtained by Alfred Wu and Association by around this date, who made approved requests for refurbishment of the interior[32]. Similar requests for alterations for shop layouts and the demolition and erection of new walls and the relocation of the driveway were made in 1997, both of which were approved. [33] These alterations are likely in reference to the existing grey cement brick walls that divide the garage from the rest of the ground floor. Google Streetview images indicate that the 88-90 Parramatta Road warehouse was subsequently used by Coco Furniture sometime in the 2000's, and then by Glebe Antiques sometime in the 2010's before closing entirely in 2017 and remaining empty and unused until the current day.[34]

Aerial photographs indicate that Horse Bazaar structure was still present by at least 1982, possibly still in use by White Trucks (refer to Figure 3-22). Between this date and 1991, the current Medical Foundation Building was constructed on the sites of both the old Horse Bazaar and the former Governor Bourke Hotel (subsequently demolished). Excavation plans dating to 1988 with the name 'White Horse Development' match the footprint of the current Medical Foundation Building, including the former Governor Bourke Hotel structure, indicating that the new building was likely constructed around 1988-1990 and was designed by Jackson Teece Chesterman Willis.[35]

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[29] *88-90 Parramatta Road Camperdown. Use first floor of premises as a shop and store, second floor as an office & store, third floor as a workshop. Singer Australia Ltd.* City of Sydney Archives - A-00160756. Accessed from https://archives.cityofsydney.nsw.gov.au/nodes/view/797675?keywords=88%2F90+Parramatta+Road&type=all&highlights=WyI4OFwvOTAiLCJQYXJyYW1hdHRhIiwiUm9hZCJd&lsk=546cb03d7106b75fc0fe815547a36201

[30] *Building Inspectors Card: 88/90 Parramatta Road. Partitions 1st & 2nd floors. 2 Cards*. City of Sydney Archives - A-00396262. Accessed from: https://archives.cityofsydney.nsw.gov.au/nodes/view/1618518?keywords=00396262&whole=1&highlights=WyIwMDM5NjI2MiJd

[31] *Building Inspectors Card: 88/90 Parramatta Road. Partitions ground floor. 1 Card.* City of Sydney Archives - A-00396236. Accessed from: https://archives.cityofsydney.nsw.gov.au/nodes/view/1618369?keywords=88%2F90+Parramatta+Road&type=all&highlights=WyI4OFwvOTAiLCJQYXJyYW1hdHRhIiwiUm9hZCJd

[32] *DEVELOPMENT APPLICATION - Catering Aids - 88 - 90 Parramatta Road Camperdown - U90/00809 - Refurbishment Premises - Alfred Wu & Association*. City of Sydney Archives - A-00625241. Accessed from: *https*://archives.cityofsydney.nsw.gov.au/nodes/view/1326817?keywords=88%2F90+Parramatta+Road&type=all&highlights=WyI4OFwvOTAiLCJQYXJyYW1hdHRhIiwiUm9hZCJd

[33] *DEVELOPMENT APPLICATION - 88 - 90 Parramatta Road Camperdown - 28735 - U96/00967 - Demolish Existing Walls And Erect New Ones And Relocate Driveway.* City of Sydney Archives - A-00625022. Accessed from: https://archives.cityofsydney.nsw.gov.au/nodes/view/1325610?keywords=88%2F90+Parramatta+Road&type=all&highlights=WyI4OFwvOTAiLCJQYXJyYW1hdHRhIiwiUm9hZCJd&lsk=546cb03d7106b75fc0fe815547a36201

[34] 'Google Street View, 88 A22' *Google Maps,* 2024.

[35] *Parramatta Road (92-94) Camperdown. Excavation underpinning and shoring only*. City of Sydney Archives - A-00548912. Accessed from:

Similarly, aerial photographs show that the warehouse structure housing Barry's Engineering (84 Parramatta Road) was demolished sometime after 1998 (see Figure 3-23), while the two-storey structure adjacent at 86 Parramatta Road, named 'Emona House' remained standing until sometime between 2014 and 2016. Following this, the remaining structure was also demolished and the entire lot at No. 84-86 Parramatta Road was replaced by a modern, four-storey apartment and commercial building.



Figure 3-14: Governor Bourke Hotel as it appeared in the 1960s, with its eastern driveway now part of the wider structure. Source*: Governor Bourke Hotel card side by side 5*, National Archives of Australia. ANU Repository: Accessed from: https://openresearch-repository.anu.edu.au/entities/anuarchivesitem/a937d777-8d9a-4236-a24a-117990177c06

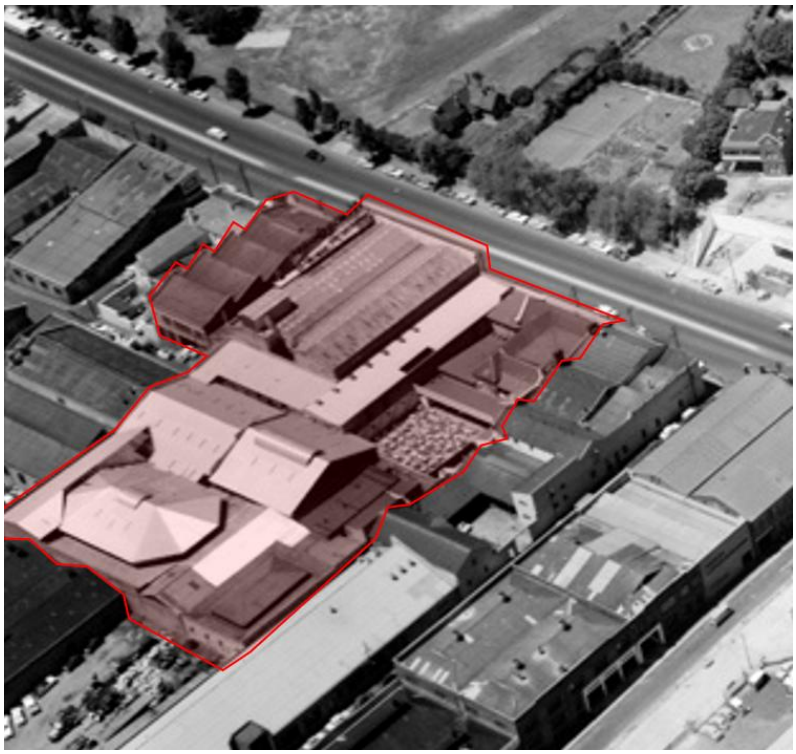


Figure 3-15: 1962 Aerial Photograph facing south-east, showing the buildings within the outline of the currents study area by this date. Source: 29 Milton Kent aerial views of Camellia, Camperdown, Newtown, 1962 SLNSW

https://archives.cityofsydney.nsw.gov.au/nodes/view/1421489?keywords=88+Parramatta+Road&type=all&highlights=WyI4OCIsIlBhcnJhbWF0dGEiLCJSb2FkIl0%3D

4. Physical Analysis

4. Physical Analysis

The study area (84-94 Parramatta Road) comprises three separate buildings, all located along Parramatta Road between Barr Street to the east and Larkin Street to the west. The three structures consist of:

- No. 84-86 Parramatta Road: a five-storey serviced apartment constructed between 2014 and 2016. The building contains a commercial space on the ground floor and a gardened courtyard in the centre. The building is roughly 23m by 38m in its footprint, with entrances towards Parramatta Road to the south and Sparkes Street to the north.

- No. 88-90 Parramatta Road: a 3-storey brick warehouse structure with a 28m by 37m footprint. The building was constructed in the Inter-War period (c.1927) as a motor-car showroom and possibly a service station. More recently, the building has been used as a warehouse and shop for various commercial tenants.

  Internally, the ground floor of the building consists of two predominant areas separated by a contemporary concrete brick wall. The western portion of the ground floor has been considerably altered and comprises a contemporary suspended ceiling, carpeted floors, and potentially concrete cladding to the existing columns. The eastern portion comprises an open plan space with concrete flooring, concrete columns and amenities and store rooms at the northern end.

  The first and second floors appear to be largely unaltered, comprising open plan warehouse rooms with original timber flooring (replaced in part), timber columns. At level 1, the timber beams and joists of the flooring above is visible, and at Level 2 the roof structure is visible. Contemporary amenities including toilets have been installed into both floors at the rear of their floor plates, as well as concrete stair core and central stair access. There is evidence within first and second floor levels of the remnant voids that likely once housed hydraulic car lifts used for the motor showroom.

  The warehouse is built in an Inter-war style that incorporates several architectural features from the Inter-War period (1918-1940s), including aspects of Stripped Classical, Functionalist, and Utilitarian. Notable external features include the dark faced bricks, stripped-classical columned bays and dentils along the upper face, painted concrete lintels, metal Critall windows, and double hipped roofing concealed at the front by a brick parapet.

- No. 92-94 Parramatta Road is a six-storey contemporary research and education building with a roughly 84m by 60m by 50m by 36m footprint, constructed in the late 1980s for the University of Sydney, also known as the 'Medical Foundation Building'. The structure consists of a three storey, unadorned building on its Parramatta Road entrance, with a large, paved entrance nave leading to a wide gated atrium or courtyard. North of this atrium is a seven-storey tower building opposite a two-three storey balcony structure. To the southeast of this section of the building is a carpark entrance that leads directly off Sparkes Street.

The following figures illustrate the buildings within the study area.

4.1. Site Photos

4.1.1. 84-86 Parramatta Road (Apartment)



Figure 4-1: The current apartment complex at 84-86 Parramatta Road. Source: 'Retail/84-86 Parramatta Road, Camperdown' *Oxford*. Accessed from: https://oxfordagency.com.au/commercial_post/retail-84-86-parramatta-road-camperdown-nsw-2050/



Figure 4-2: The interior courtyard of 84-86 Parramatta Road. Source: '84 Parramatta Road' *Property Value.* Accessed from: https://www.propertyvalue.com.au/property/84-parramatta-road-camperdown-nsw-2050/1702496

4.1.2. 88-90 Parramatta Road (Warehouse)



Figure 4-3: Exterior of 88-90 Parramatta Road as it appeared in 2024. Source: Wentworth Capitol 2024.

Ground Floor



Figure 4-4: Interior of 88-90 Parramatta Road's ground floor, facing north-east. Note the False ceiling panels, carpeted floors and potentially concrete-lined columns, which all appear to be modern additions. Source: Curio 2024.



Figure 4-5: Ground Floor of 88-90 Parramatta Road, facing north-west, showing vandalism and graffiti on original brick walls. Source: Curio 2024.



Figure 4-6: Ground Floor of 88-90 Parramatta Road, facing west, showing details of graffiti on original brick walls. Source: Curio 2024.



Figure 4-7: Rear interior of the ground floor of 88-90 Parramatta Road, facing North-West, showing original, hinged Critall windows and garbage chute. Source: Curio 2024.



Figure 4-8: Rear interior of the ground floor of 88-90 Parramatta Road, facing East, showing later brick dividing walls and potentially the original pained concrete flooring of the remainder of the ground floor. Source: Curio 2024



Figure 4-9: Ground-floor garage of 88-90 Parramatta Road, facing South, with original brick external walls, likely original timber ceiling joinery. Source: Curio 2024.



Figure 4-10: Ground-floor garage of 88-90 Parramatta Road, facing South-West, showing later, modern cement-brick dividing walls and potentially later concrete columns, although these may also be contemporary to the original 1920's structure. Source: Curio 2024.

First Floor



Figure 4-11: First floor of 88-90 Parramatta Road, facing North, showing the surviving timber flooring, ceilings, and support columns, with the building's front windows behind the camera. Source: Curio 2024.

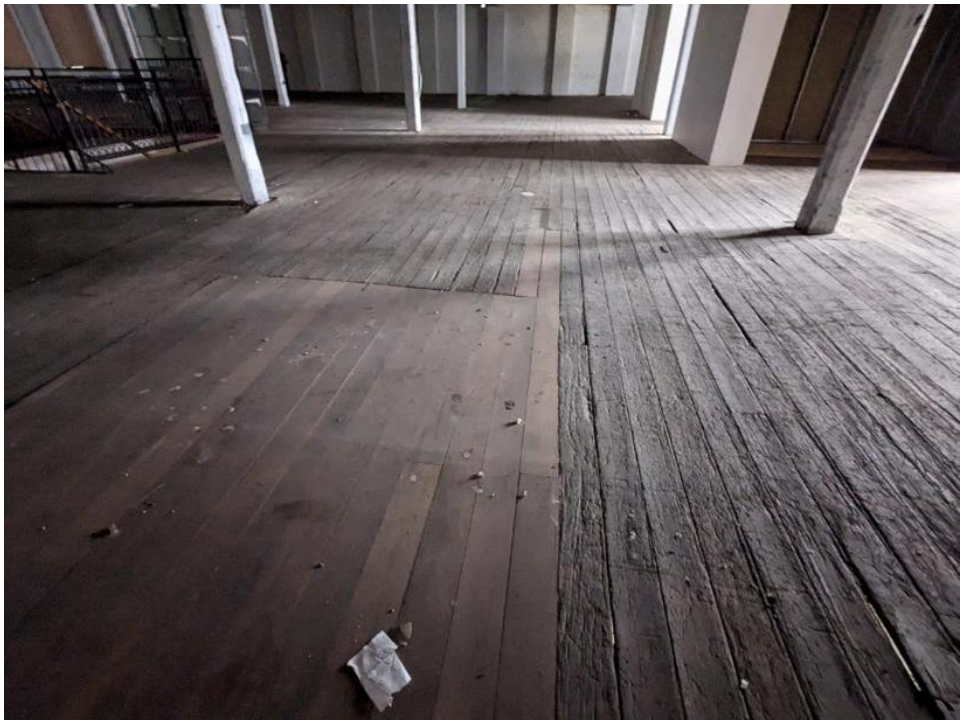


Figure 4-12: First floor of 88-90 Parramatta Road, facing West, showing details of the surviving timber flooring, with noticeable alterations to the left, possibly from a former internal feature or hydraulic car-lift. Source: Curio 2024.



Figure 4-13: First floor of 88-90 Parramatta Road, facing East, showing boarded-up void possibly original used to house a hydraulic car-lift. Source: Curio 2024.



Figure 4-14: First floor of 88-90 Parramatta Road, facing North, showing the original interior brickwork and hinged, Critall windows on the buildings rear face. Source: Curio 2024.



Figure 4-15: First floor of 88-90 Parramatta Road, facing North, showing original timber joinery and underside of flooring. Source: Curio 2024.

Second Floor



Figure 4-16: Second floor of 88-90 Parramatta Road, facing North, showing original timber columns and ceiling beams, with some later ceiling-supports and panels that cover the original wooden flooring. Note the later diving walls to the rear Source: Curio 2024.



Figure 4-17: Second Floor of 88-90 Parramatta Road, facing South, showing the original brickwork and currently boarded--up front windows. Source: Curio 2024.

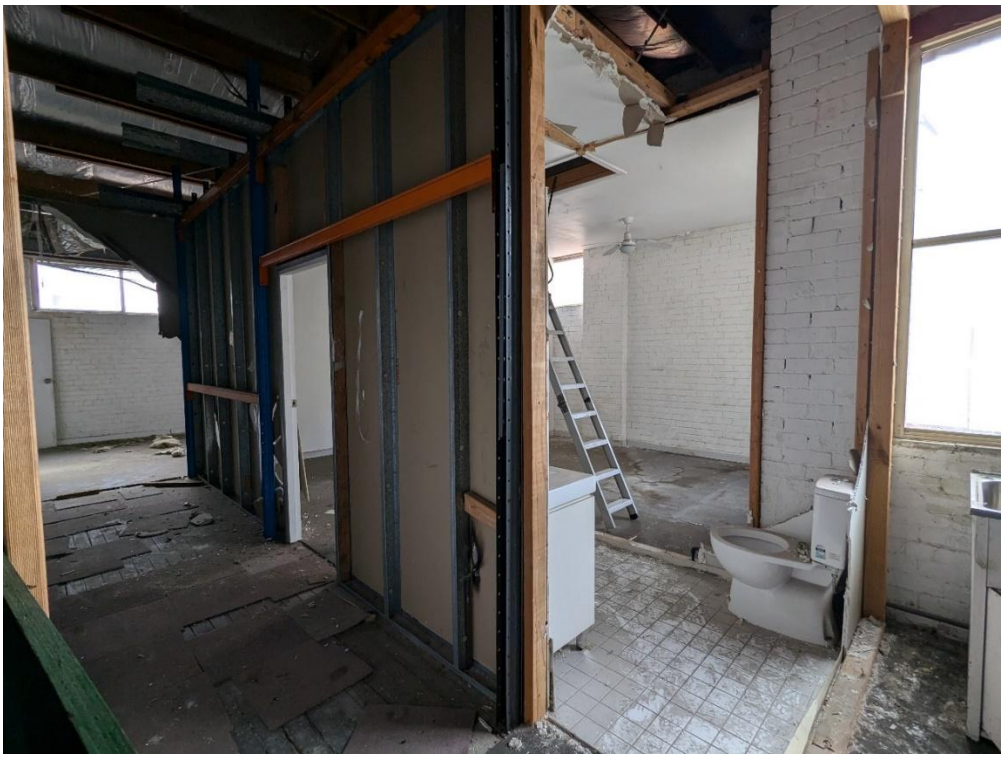


Figure 4-18: Second floor of 88-90 Parramatta Road, facing North, showing later dividing walls and toilet facilities. Source: Curio 2024.

Rear Elevation



Figure 4-19: Rear of 88-90 Parramatta Road, facing South, showing the original brick exterior and windows. Note the lack of decorative elements present on the buildings southern-frontage. Source: Curio 2024.

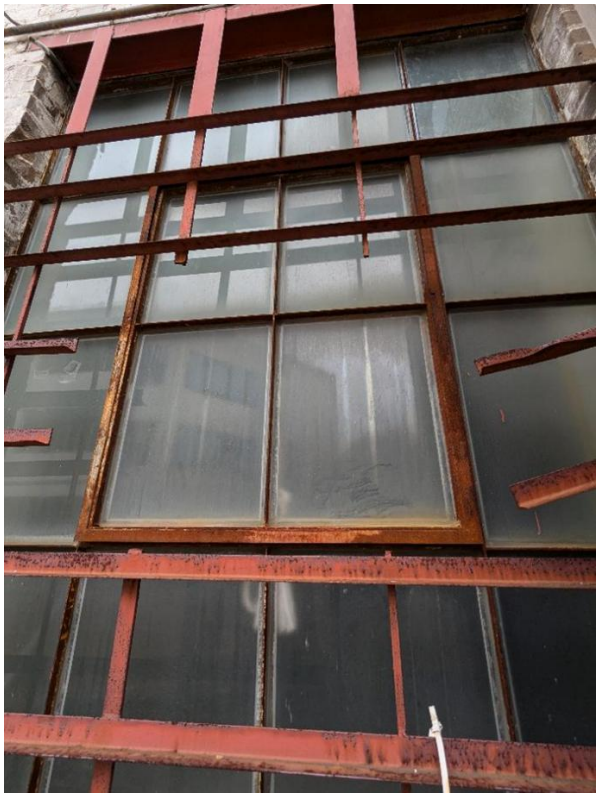


Figure 4-20: Rear of 88-90 Parramatta Road, showing detail of rear original Critall window. Source: Curio 2024.

4.1.3. 92-94 Parramatta Road (Medical Foundation Building)



Figure 4-21: Front entrance of 92-94 Parramatta Road from the street, facing North. Source: Wentworth Capital 2024.



Figure 4-22: Front pedestrian entrance of 92-94 Parramatta Road, facing North. Source: Wentworth Capital 2024.



Figure 4-23: Interior courtyard of 92-94 Parramatta Road, facing North. Source: Wentworth Capital 2024.



Figure 4-24 Interior courtyard of 92-94 Parramatta Road, facing South-West. Source: Wentworth Capital 2024.

5. Heritage Significance

5. Heritage Significance

The '*Assessing Heritage Significance: Guidelines for assessing places and objects against the Heritage Council of NSW criteria'* guidelines (2023) provide a framework for assessing significance of sites and heritage items, with the main aim of producing a succinct statement of significance to summarise an item or site's heritage values.

The NSW heritage assessment criteria provide the following criterion for the assessment of heritage significance.

> *An item will be considered to be of State (or local) heritage significance if, in the opinion of the Heritage Council of NSW, it meets one of more of the following criteria:*
>
> - *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);*
> - *Criterion (b) — an item has strong or special association with the life or works of a person, or group of persons, of importance in the cultural or natural history of NSW (or the cultural or natural history of the local area);*
> - *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);*
> - *Criterion (d) — an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;*
> - *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);*
> - *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);*
> - *Criterion (g) — an item is important in demonstrating the principal characteristics of a class of NSW's (or a class of the local areas'):*
>   - *cultural or natural places; or*
>   - *cultural or natural environments.*

Further to the above criteria, assessment of the heritage significance of an item/place may also be influenced by its level of intactness or physical condition.

5.1. Heritage significance of the study area

As detailed within Section 2 of this report, there are no items of local, or State heritage significance contained within the study area, nor are any of the buildings listed on other statutory or non-statutory registers. The study area is however located within the vicinity of several local heritage items listed within Schedule 5 of the Sydney LEP 2012, and State item listed on the NSW State Heritage Register.

Following an assessment of the significance of the study area, prepared by Curio dated January 2025 (and in accordance with the above Heritage NSW guidelines), the existing Inter-war warehouse building (88-90 Parramatta Road) was assessed as being able to meet the threshold for significance at a local level.

This section provides an extract of the Assessment of Significance report for study area. Subsection 5.1.1 details the assessment of heritage significance for the Inter-war warehouse building, including a statement of significance and details of its condition and integrity; Sub-section 5.1.2 contains a brief assessment of the heritage significance for the additional contemporary buildings at 84-86 Parramatta Road; and Sub-section 5.1.3 contains a brief assessment of the significance of 92-94 Parramatta Road.

5.1.1. Assessment of Significance for 84-94 Parramatta Road, Camperdown

Assessment of 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 Inter-war warehouse building at 88 Parramatta Road is a surviving example of a building constructed to support the cultural and transport history of Camperdown and the commercial evolution of this part of Parramatta Road. The site's previous use as a Horse Bazaar and associated vehicle shed and its evolution to one of the numerous motor vehicle sale and maintenance workshops along Parramatta Road, reflects the early to mid-century transition along arterial roads located on the outskirts of Sydney's central business district, as cars began to dominate the streets and become an increasingly important status symbol and part of the urban culture of the city.

No. 88-90 Parramatta meets the threshold for local historical significance under Criterion A.

Criterion B: An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)

The surviving, Inter-war warehouse building has a moderately close connection to Sneddon's Motors and A.E Motor Merchants, who appear to have either constructed the existing building or were at least its earliest and longest running tenants.

The historical setting of the warehouse building has some connection to William Inglis, the oldest livestock and livestock auctioneer in Australia and due to its historical connection with the adjoining lot to the north (no.92-94 Parramatta Road) which formerly housed a Horse Bazaar and saleyard associated with the former vehicle shed (now occupied by No. 88 Parramatta Road). However, apart from the physical spatial layout of the courtyard, within its immediate context, No.88 Parramatta Road provides no clear evidence of its remaining association with Inglis or the Horse Bazaar, and the building yields no further associations with any notable person or group of persons of importance to the history of Camperdown or NSW.

Furthermore, the historical businesses which occupied the site are not noted to be of importance to the NSW's or Sydney's cultural or natural history. The building does not meet the threshold for State or local historical significance under Criterion B.

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 Inter-war warehouse building is an excellent aesthetic and demonstrative example of a stripped classical warehouse and showroom building and represents both a class and style of building that was once common in this part of Parramatta Road within Camperdown. The building has a distinctive and highly intact Inter-war stripped classical façade with a very high level of integrity that stands out amongst the contemporary buildings that surround it, giving it a unique aesthetic streetscape contribution to this part of Parramatta Road. The raised parapet with decorative, painted

dentils and simple column 'capitols', surviving Inter war awning with decorative, metal-ceilings, well as the unique remnant Inter-war warehouse windows are particularly distinct features that immediately distinguishes the building from its surroundings and highlight its motor-car and warehouse related use.

Notable aesthetic features of its inter-war design include the building's dark faced bricks, unadorned columned bays and decorative classical dentils along the upper face, as well as its painted concrete lintels, metal, hinged Crittall windows, and double-gabled roofing concealed at the front by a parapet. The building's interior is also very intact and of high aesthetic value, aside from its modified ground floor, with the first and second floor containing unique and highly intact internal timber floors, columns and ceilings that provide physical evidence of its warehouse use.

The building meets the threshold for aesthetic significance at a local level under Criterion C.

Criterion D: An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

The Inter-war warehouse building at No. 88-90 Parramatta Road has no known association with a particular community or cultural group for social, cultural or spiritual reasons, and has undergone great shifting and changing ownership and use that diminishes its connection to any one industry or commercial endeavor in the area.

The building does not meet the threshold for State or local historical significance under Criterion D.

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 Inter-war warehouse building at No. 88 Parramatta Road has the potential to contribute to our understanding of how motor car showrooms and warehouses were constructed in early part of the twentieth century, how they operated internally, and how they reflected the commercial motor car culture during Sydney at the time

While the ground floor showroom area has been altered, the walls, windows, and timber detailing on the first and second floors are in good condition. The evidence of former voids and openings within the floors and ceilings that were likely used for hydraulic car-lifts, may also yield unique information about how the motor vehicle businesses operated. The building is one of only a few surviving examples of Inter-war warehouse buildings within Camperdown with others subject to alterations and upgrades for modern motorcar related uses, or adaptively reused/converted into other warehouses, offices or apartments.

No. 88-90 Parramatta Road meets the threshold for local heritage significance under Criterion E.

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)

While Parramatta Road was once filled with motor-car warehouses and showrooms in the surrounding area to the east and west, No. 88-90 Parramatta Road provides a rare surviving example of a stripped-classical showroom and warehouse building dating to the Inter-war period. The building is in good condition with only minor changes and is among only a few surviving examples of this architectural style (greater than two storeys) of building located along this part of Parramatta Road and within the Camperdown area.

Of particular rarity is the structure's hinged Crittall windows and surviving internal timber floors and ceilings on the first and second floor, which likely date to the building's construction in the late 1920s and have survived through various tenants and uses.

No. 88-90 Parramatta Road meets the threshold for local heritage significance under Criterion F.

Criterion G: An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments)

No. 88-90 Parramatta Road is an excellent surviving example of an inter-war, stripped classical warehouse and former motor-car showroom that has been relatively untouched both internally and externally. The buildings multiple, large windows on all three floors, including floor to ceiling, street-level windows on the ground floor, are common features of warehouses and showrooms from this period. The large, open floors of surviving timber panels and high ceilings with timber beams and joinery also demonstrate the building's capacity for storage and presentation and are typical of warehouse style buildings from the Inter-war period before the commonplace use of metal and concrete.

Notable aspects of the building that demonstrate definitive Inter-war stripped classical characteristics include its dark faced bricks, unadorned columned bays and decorative classical dentils along the upper face, as well as its painted concrete lintels, metal, hinged Crittall windows, and double-gabled roofing concealed at the front by a parapet.

No. 88-90 Parramatta Road meets the threshold for local heritage significance under Criterion G.

Integrity and condition

No. 88-90 Parramatta Road is in good condition, with a high level of integrity. The building has an intact façade and brickwork on the outside and interiors, as well as intact timber interior floorboarding and ceiling and floor support beams on the first and second level, which appear to be original and demonstrate the Inter-war features that have remained since the building's original construction.

The ground floor has undergone considerable modern alterations, including the installation of carpeting, new partition walls, potential concrete capping over the original timber columns, and false-ceiling panels installed over a layer of sprayed plastering.

Some damage and deterioration has occurred, although this is predominantly caused by neglect to the façade, which is overgrown with weeds in between the brickwork and has several broken window panels, as well as numerous pieces of graffiti on the windows and in interior walls, likely caused by vandalism from break-ins.

Statement of Significance for 88-90 Parramatta Road – Heritage Significance

No. 88-90 Parramatta Road has historical significance as a surviving example of the commercial history of Camperdown and evolution of this part of Parramatta Road in the early-mid 20th century from being dominated by commercial horse and carriage shops to businesses relating to the maintenance and sale of motor cars. The building provides evidence of the changing social history of Camperdown and Sydney during the early-mid twentieth century, as it highlights the period when motor cars become an increasingly important part of the urban culture of Sydney.

The warehouse has some connection to William Inglis, the oldest livestock seller and auctioneer in Australia, owing to the building's footprint being the site of a vehicle shed for the now demolished Inglis Horse Bazaar, however this connection is tenuous at best, and the current structure has no direct connection to the Bazaar or Inglis himself. The building has a moderately close connection to the businesses of Sneddon's Motors and A.E Motor Merchants, who likely constructed the building for specific use as a motor-car warehouse and showroom. Neither of these businesses are noted to be of any notable importance to NSW's cultural or natural history however, and the building quickly changed hands in the coming decades. In addition, the building has no known association with and particular important community or cultural group for social, cultural or spiritual reasons.

The Inter-war building is a rare and unique demonstrative example of a stripped classical warehouse and showroom building and is among the only surviving buildings of this time and class on this part of Parramatta Road. Other notable surviving showrooms are present nearby, such as No.104 Miller Street (to the west), which similarly retains many of its features. The building contains numerous, large windows on all three floors, including floor to ceiling, ground floor windows, which are common, demonstrative features of motor-car showrooms from this period. The building is of aesthetic and streetscape value with its distinct, stripped-classical façade that stands out amongst the surrounding contemporary buildings, and has several distinct aspects of its architectural style. These features include a raised parapet with decorative, painted dentils and simple column 'capitols', a surviving inter war awning with decorative, metal-ceilings, well as the unique remnant Inter-war warehouse windows. These façade features are in moderate to good condition, with some damaged windows, graffiti and vandalism, and deterioration of the brickwork and are of very high integrity, having been largely untouched from its date of construction.

Internally, the building's ground floor showroom area has been altered considerably, although the warehouse contains well-preserved walls, with a large number of rare, surviving hinged Critall windows. Together with the uniquely preserved timber interiors on the first and second floors, and the likely evidence of and former hydraulic car-lifts, the building's features, both internal and external, provide a rare and unique potential to yield unique information about how these motor car related commercial businesses operated during the early twentieth century, particularly as similar buildings in Camperdown having been significantly altered internally for other commercial, residential or office uses.

Overall, No. 88-90 Parramatta Road has been assessed has meeting the threshold for heritage significance at a local level in accordance with criterions A,C, E, F, and G, for assessing heritage significance in NSW.

Significant view lines

Significant views to the Inter-war warehouse are experienced from the southern (opposite) side of Parramatta Road and looking towards the building from further east and west along Parramatta Road. There are limited views to the building from the north, north-east or north-west. The following figure illustrates these view lines.



Figure 5-1: Significant view lines to Inter-war warehouse. Source: SixMaps, accessed 2025 with Curio additions.

5.1.2. Assessment of Significance for 84-86 Parramatta Road, Camperdown

The following table provides a brief assessment of the heritage significance of the contemporary building at 84-86 Parramatta Road which is located within the study area and in accordance with the Heritage NSW criteria.

Table 5.1: 84-86 Parramatta Road Assessment of Significance

Heritage Criteria	Assessment
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)	84-86 Parramatta Road is a modern apartment building dating to c.2016 and is not of historical importance to the cultural or social history to the local area or NSW. The building does not meet the threshold for Heritage Significance under Criteria A.
Criterion B: An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)	84-86 Parramatta Road has no known associations with any known person or group of importance to either the local area or NSW as a whole. The building does not meet the threshold for Heritage Significance under Criteria B.
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)	84-86 Parramatta Road is a modern apartment complex dating to c.2016 and has no noted aesthetic or creative importance to the local area or NSW as a whole.

	The building does not meet the threshold for Heritage Significance under Criteria C.
Criterion D: An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.	84-94 Parramatta Road has no noted cultural or social connection with any particular community in the local Camperdown Area, or NSW as a whole. The building does not meet the threshold for Heritage Significance under Criteria D.
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)	84-86 Parramatta Road is a modern apartment complex that was erected in c.2016 and has little to no potential to contribute any meaningful information about the cultural history of the local area or NSW. The building does not meet the threshold for Heritage Significance under Criteria E.
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)	84-86 Parramatta Road is not particularly rare or uncommon example of an apartment complex in either the local area or NSW as a whole and contains no unique aspects that highlight it as particularly different or unique from other examples of its type. The building does not meet the threshold for Heritage Significance under Criteria F.
Criterion G: An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments)	84-86 Parramatta Road is not an important or noted demonstrative example of a c.2010 apartment block and lacks any distinctive architectural or design features that would make it uniquely identifiable as a building of its type. The building does not meet the threshold for Heritage Significance under Criteria G.

Statement of Significance for 84-86 Parramatta Road – Not significant

No. 84-86 Parramatta Road is a modern apartment building built in c.2014-2016. It is not listed on any statutory or non-statutory heritage registers and contains no fabric or material that meets the threshold for any of the assessment of significance criteria outlined by Heritage NSW.

The building has been assessed to not meet the threshold for heritage significance at a State or Local level.

Assessment of Significance for 92-94 Parramatta Road

The following table provides a brief assessment of the heritage significance of the contemporary building at 92-94 Parramatta Road, also located within the study area and in accordance with the Heritage NSW criteria.

Table 5.2: 92-94 Parramatta Road Assessment of Significance

Heritage Criteria	Assessment
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)	92-94 Parramatta Road is a modern medical science building that dates to 1988 and has no noted historical importance to the cultural or natural history of either the local Camperdown area or NSW. The building does not meet the threshold for Heritage Significance under Criteria A
Criterion B: An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)	The building at 92-94 Parramatta Road has no noted association with any individual, and aside from inherent connection to the nearby University of Sydney, which constructed and utilizes the building for research and clinical trials, it has no strong association with any group or organization of noted importance to the area of NSW. The building does not meet the threshold for Heritage Significance under Criteria B.
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)	92-94 Parramatta Road is a modern research and science building that dates to the late 1980s and is not a particularly noteworthy aesthetic or technically important building of this type in either the local area of NSW. The building does not meet the threshold for Heritage Significance under Criteria C.
Criterion D: An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.	92-94 Parramatta Road has no noted cultural or social connection with any particular community in the local Camperdown Area, or NSW. The building does not meet the threshold for Heritage Significance under Criteria D.
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)	92-94 Parramatta Road is a very modern medical science building dating to the late 1980's. While medical research and trials undertaken in the building has been of importance to the University of Sydney and NSW, this research has little direct connection to the building itself, and so the structure contains little potential to yield any meaningful information about the cultural or natural history of medical science. The building does not meet the threshold for Heritage Significance under Criteria E.
Criterion F: An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural	92-94 Parramatta Road is not particularly rare or uncommon example of a medical research building

history (or the cultural or natural history of the local area)	in either the local area or NSW as a whole and contains no unique aspects that highlight it as particularly different or unique from other examples of its type. The building does not meet the threshold for Heritage Significance under Criteria F.
Criterion G: An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments)	92-94 Parramatta Road is not an important or noted demonstrative example of a medical science building and lacks any distinctive architectural or design features that would make it immediately identifiable as a building of its type. The building does not meet the threshold for Heritage Significance under Criteria G.

Statement of Significance for 92-94 Parramatta Road – Little to No Heritage Significance

No. 92-94 Parramatta Road is a modern structure built in c.1988 for the University of Sydney for use as a Medical Science Building, known as the Medical Foundation Building, and was designed by Jackson Teece. The building is not listed on any statutory or non-statutory heritage registers, does not contain any notable architectural or aesthetic features, does not demonstrate any particular important technological achievement, is not a rare example of a late 1980s building time and does not meet the threshold for any of the assessing significance criteria outlined by Heritage NSW.

The only structural aspect of questionable heritage value is the southern pedestrian entrance, which passes through an arched 'hallway' leading to the central courtyard (See Figure 5-1 below). While the fabric itself is of no heritage significance, the pathway itself has remained in-use as a long vehicle and now a pedestrian entranceway for more than 110 years, since the site's use as a Horse Bazaar in 1911, its conversion into a long, covered garage pathway to the motor-vehicle service station to the north, before the construction of the 1988 structure and its use as a partially covered pedestrian entrance. The site's Sparkes Street entrance, now leading down to the basement, has a similar 110+ year history of vehicular traffic since its use as an entrance to the stables of the Horse Bazaar and then a covered garage path.

The presence of this pathway, particularly in its status as a maintained 'laneway' around 88 Parramatta Road (formerly the Horse Bazaars carriage shed and then a motor-car warehouse and showroom), should be taken into account when designing any developments.

The building has been assessed has having little to no heritage significance at a State or Local level.

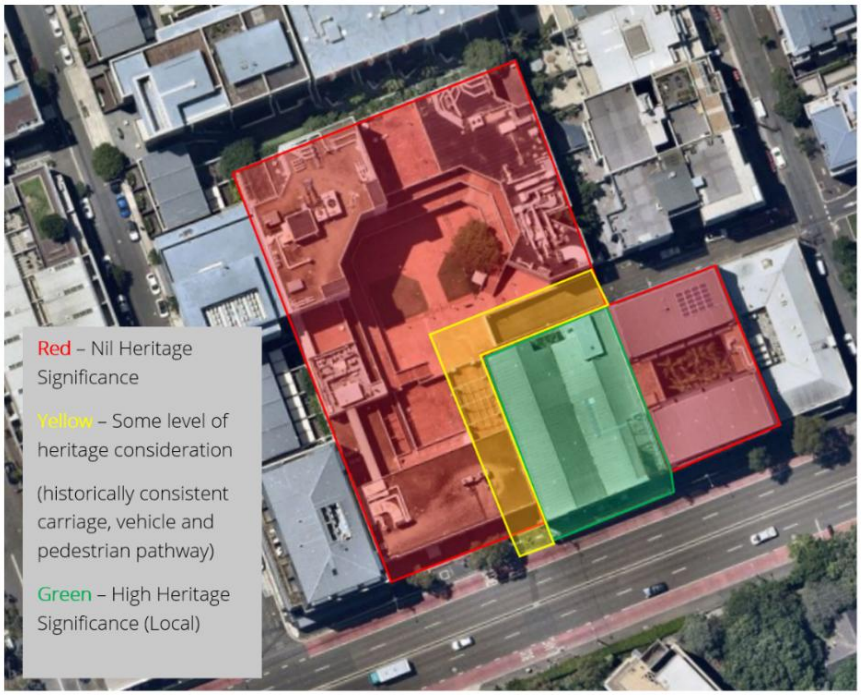


Figure 5-1: Map of Heritage Significance in the 84-94 Parramatta Road study area, showing 84-86 Parramatta Road and 92-94 Parramatta Road as being of no heritage significance (Red), aside from a pedestrian and vehicle entryway corridor that has historical consistency throughout the site's changing use (yellow). 88-90 Parramatta Road has been assessed as being of High Heritage Significance at a local level (Green). Source: Nearmap 2025 with Curio additions.

5.2. Significance of items within the vicinity of study area

The study area at 84-94 Parramatta Road, Camperdown is not listed on any State or Local Heritage Listings nor is it located within a heritage conservation area. The study area is located within the vicinity of a number of heritage items. It sits directly opposite the north-western corner of State Listed '*The University of Sydney, University Colleges and Victoria Park*' (SHR No #01974) boundary curtilage. The item's boundary also includes individual locally listed items and is also encompassed by boundary of the *University of Sydney* Heritage Conservation Area (C5), listed within Schedule 5 Part 2 of the Sydney LEP.

The study areas is located to the south-west of two locally listed terrace houses at 12 and 14 Sparkes Street (SLEP nos. #I95 and #I96) and is within the wider vicinity (approximately 300m) of a large cluster of locally listed heritage sites, including two similarly dated industrial warehouse buildings being '*Former Grace Bros Repository including interiors*' at 6-10 Mallett Street, Camperdown (SLEP #I2242) which are located to the study area's north-west. The study area is also located approximately 200m south west of the *Hereford and Forest Lodge* HCA (C33).

The proximity of the study area to these heritage items is illustrated within Figure 5-2 below. Details of the items and HCAs listed within the closest proximity are provided in Table 5.3.

Table 5.3: Summary of heritage listings in the vicinity of the subject site

Item No.	Heritage Register	Item Name	Address
#01974	SHR	*University of Sydney, University Colleges and Victoria Park*	Corner of Parramatta and City Roads

Item No.	Heritage Register	Item Name	Address
#I67	LEP	*St Johns College, University of Sydney*	10 Missenden Road, Camperdown
#I72	LEP	*JD Stewart Building, University of Sydney including interior*	Part of listed group located at 15A Carillon Avenue, Camperdown
C5	LEP	*University of Sydney*	Camperdown
#I92		*Former Royal Alexandra Hospital for Children "Venables House" including interior and courtyard*	20 Pyrmont Bridge Road
#I91		*Former Royal Alexandra Hospital for Children boundary landscaping*	Pyrmont Bridge Road
#195	LEP	*Terrace House including interior*	12 Sparkes Street
#196	LEP	*Terrace House including interior*	14 Sparkes Street
#193	LEP	*Housing development 'Alexandra Dwellings'*	33-45 Pyrmont Bridge Road
C33	LEP	*Hereford and Forest Lodge Heritage Conservation Area*	Glebe/Forest Lodge

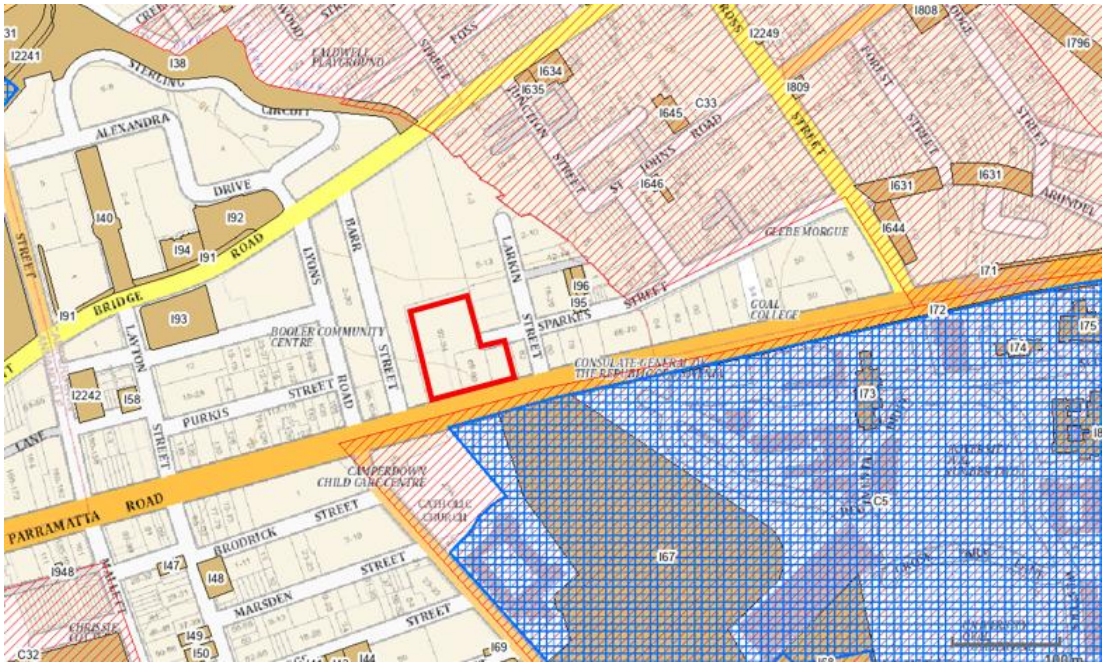


Figure 5-2: Heritage Items (brown) and Conservation Areas in the vicinity of the study area (red hatching). Source: NSW Planning Portal Spatial Viewer, with Curio additions 2024.

The following subsections provide details of the significance of the heritage items located within the vicinity of the study area.

5.2.1. *'The University of Sydney, University Colleges and Victoria Park'* (SHR #01974) and University of Sydney HCA (C5)

The University of Sydney, University Colleges and Victoria Park State heritage listing and heritage conservation area occupies the core portion of university land on the southern side of Parramatta Road, extending from City Road to the east, Missenden Road to the west and Carillon Road to the south. It is located immediately opposite the study area.

T are also numerous individual local heritage items contained within its SHR curtilage and HCA boundary. As detailed within the simplified version of the 'Ranking of Significance for individual buildings' mapping from the University of Sydney Conservation Management Plan (CMP) 2019 (refer to Figure 5-3), the individual buildings are of 'high' to 'exceptional' significance and are generally centrally congregated within the SHR curtilage and located towards its Parramatta Road frontage.

The Sydney LEP 2012 heritage mapping also a collection of local items within its curtilage including *St Johns College* (LEP #I67), and the *JD Stewart Building (I#72)* located within its north western portion. These individual items are described further on in this section of the report.

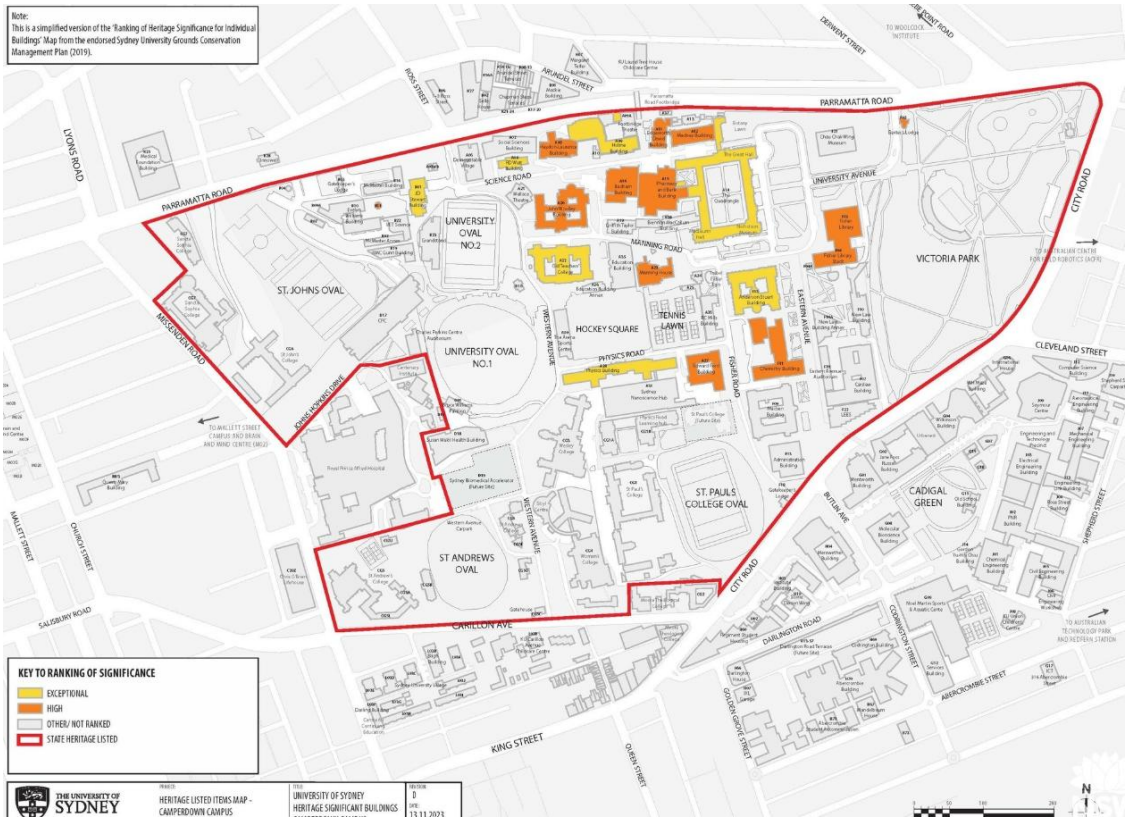


Figure 5-3: University of Sydney Heritage Significance Buildings Camperdown Campus. Rev D dated 13.11.2023 It notes that the map is a simplified version of the 'Ranking of Significance for individual buildings' map from the endorsed Sydney University Grounds CMP dated 2019. Source: NSW State Heritage Register, accessed 2025.

The NSW State Heritage Inventory provides the following description of the University of Sydney State listed item:

> *'The site is bounded by Parramatta Rd, City Rd, Carillon Ave and Missenden Rd, Camperdown (excluding land occupied/owned by Moore Theological College, Prince Alfred Hospital and St Joseph's Church).*

The topography of the place is gently undulating. There is a ridge approximating the line of Eastern Avenue, and the land falls to the east and west away from the ridge. Prior to development, freshwater creeks and ponds formed in the eastern and western gullies off the ridgeline. These areas are (more-or-less) the location of recreational and open spaces.

The place displays the character of university use since the mid nineteenth century. The traditional campus' cultural landscape is an eclectic mix of buildings, open spaces, tree-lined avenues, internal streets and ornamental planting.

Major lawn areas are found in The Quadrangle (to the east of and within the Main Quadrangle Building), the Botany Lawn, the Hockey Square and the various oval and other playing fields such as tennis courts. They provide a strong element of the traditional campus form.

The orientation of the Main Building, and the axis of the view up to it, established two of the most enduring aspects of the planning arrangement of the University, these being the prominence of the ridge, which became Eastern Avenue (north-south axis), and of the east-west axis that extends east along University Avenue and through Victoria Park, and west of the Main Quadrangle Building along Science Road. The axes evolved to include Manning and Physics Road (east-west) and Fisher Road and Western Avenue (north-south)

Women's College:

Architect (later, Sir) John Sulman sited the buildings on grassed terraces so as to afford both prospect and aspect. The design of 'house' and garden was given attention as a unified composition (Edquist, 2008, 167).

Victoria Park:

Victoria Park is a triangular open space bounded by City Road to the south-east and Parramatta Road to the west. It is an inner-city park that retains much of its 19th century 'picturesque' character, particularly the fine balance between massed elements (avenues of trees and plantations) and the resultant voids of open space and water elements.

From the 1850s until the 1940s Sydney University's main entrance avenue was through Victoria Park directly towards the city (to grand sandstone-pillared gates and twinned gate lodges on City Road. This avenue of originally Moreton Bay figs (Ficus macrophylla) specified by Edmund Blacket in his original design has, over time, had infill of Port Jackson figs (F.rubiginosa) and Hill's figs (F.microcarpa var. Hillii), but survives as a strong axial visual element and access across the lake or pond in the park into the University and straight up to the Main Eastern Range's tower and through it, the main Quadrangle. One of the two sandstone Gothic Revival gate lodges survives and has been converted into a cafe and public toilets (Stuart Read, pers.comm., 24/9/2020).

In the centre of the Park is the Victoria Park Pool complex, from mid-20th century. Beside it to its west is a large lake or pond, with a planted island, located where a traditional soakage area was, but landscaped in the Victorian era and revived in the 1950s, further enhanced with wetland habitat plantings in the 2000s (ibid, 2020).

The park is edged along Parramatta Road with a line of Moreton Bay fig trees. It is lined almost continuously along City Road with mixed tree plantings, some being figs, some brush box (Lophostemon confertus), a Canary Island pine (Pinus canariensis), evergreen, holly or Holm oaks (Quercus ilex) and other trees (ibid, 2020).

Plantings of trees within the park's generous grassed open spaces are mixed, and comprise palms (Kentia fosteriana, Lord Howe Island palm), live oaks (Quercus virginiana), brush boxes, figs and evergreen or holm or holly oaks. Some rare species in the park's mature plantings include Lord Howe Island figs (Ficus macrophylla var. columnaris)(2), sawtooth oak (Quercus acutissima) from China, turpentine trees (Syncarpia glomulifera), New tree plantings reinforce surviving traditional ones and have added some richness, including black booyong trees (Argyrodendron actinophylla), sawtooth oaks, live oaks, crepe myrtles (ibid, 2020).

A children's playground area has been installed inside a woodland planting towards the Cleveland Street park entry (ibid, 2020).'[36]

The NSW State Heritage Inventory provides the following Statement of Significance for the State listed item:

'The University of Sydney, University Colleges and Victoria Park is of state historical significance, as a vestige of Governor Phillip's original 1,000 acres (404 ha) 'Kanguroo Ground' Crown reserve of 1790 and for its connection to the 18th century British government's approach to colonialism and its concept of 'terra nullius' as the foundation for dispossession of Aboriginal land in the immediate area of Sydney.

The cultural landscape is of state heritage significance for its ability to demonstrate activities of the colonial era (1792-1855) associated with Grose Farm, convict stockade, and female orphan school.

The University of Sydney is of state historical significance as the first and oldest university in Australia, dating from 1850. Reflecting in the cultural landscape changes in tertiary education, landscape design, institutional architecture, economic development and social attitudes; including pioneering university education for women in NSW (1881) and the establishment of the first university college for women in Australia, Women's College in 1892.

The cultural landscape is aesthetically significant at a state level reflecting directly the influence of E.T. Blacket (1850s), W.L.Vernon (1890s), W.B. Griffin (1910s), Professor L. Wilkinson (1920s) and the Government Architect's Office (1960s) in shaping the place. In particular, Blacket's location of the Great Hall and East Range of the Quadrangle (1854-1862) utilised the site's topography to provide a dramatic presentation of the University on approach from the city, a setting with planning axis that still remains.

The University of Sydney and Victoria Park as connected landscapes have tangible links to Charles Moore, Director of the Royal Botanic Gardens (1848-1896) and subsequent designers using prevalent 19th century theories of landscape design, plant material and horticultural techniques.

The University grounds, more than any other site, reflect Professor Leslie Wilkinson 's work in beautifying and unifying buildings and their settings, along with major contributions to the planning and planting of gardens by Professor E. G. Waterhouse.

Victoria Park is a significant Victorian-era park dedicated in 1870. The park retains substantial components of its formative 19th-century planning and design, including the grand avenue linking City Road and the remaining original gate lodge to the tower of the Main Building of the University.

The provision of sport and leisure facilities across the site have contributing significantly to the retention of open space and green buffers between the built forms of the campus, and are important to the people of Sydney and NSW.

The Main Quadrangle Building, the Anderson Stuart Building and the Gate Lodges, together with St Paul's, St John's and St Andrew's Colleges, as a rare composition, comprise what is the most important group of Gothic and Tudor Revival style architecture in New South Wales and potentially Australia. Together they deliberately evoke the academic traditions and standards of Oxford and Cambridge, as expressed in the University motto ("Sidere Mens Eadem Mutato", meaning, "though the constellation has changed, the spirit remains the same."). The landscape and grounds features associated with these buildings, including Victoria Park, contribute to its values of civic virtue and support the existence and appreciation of their state aesthetic significance.

[36] https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5056444

The University of Sydney holds significance for its role as a site for student activism during the 20th century. In particular, the 1965 Freedom Ride led by Charles Perkins, Vietnam War and conscription protests.

As a long-standing tertiary institution, the University of Sydney's association with eminent men and women who are its graduates, academics and chancellery demonstrates a major contribution to all aspects of Australian society and the nation's development.

The University of Sydney and University Colleges contain one of the densest collections of heraldic representations in NSW and Australia.

The place is of state heritage significance in demonstrating the aspirations of colonial Sydney to shape its own society, polity and ideals; which ultimately led to the establishment of the University of Sydney and University Colleges by Acts of Parliament in 1850 and 1854 respectively that created the university at Grose Farm.

The University of Sydney, University Colleges and Victoria Park has been a major landmark of Sydney and NSW since its inception. It holds substantial social values and associations, and is held in high esteem for a range of affiliated communities and groups as an iconic place of historic, academic, cultural, sporting, recreational and social pursuits and events.

The intactness of the groupings of buildings and landscapes across the history of the development of the site represents a microcosm of the development of architectural design, town planning and landscape design in New South Wales and Australia.'

University of Sydney 'Grounds Conservation Management Plan (Revised)', dated April 2017

As illustrated within the 'Grounds Conservation Management Plan (Revised)', prepared by Clive Lucus Stapleton & Partners (CMP 2017), the study area forms part of the item's wider curtilage and its visual setting. Section 6 of the CMP sets out its Development and Conservation Policies. Policies 1-3 relate to 'Defining the Place', which sets out the context and visual relationship between the study area and the item, and are discussed below.

> *Policy 1: The extent of the Place, that is the University owned land across the Camperdown - Darlington Campus, is defined by the red line as shown in Figure 1.3. on page 5*

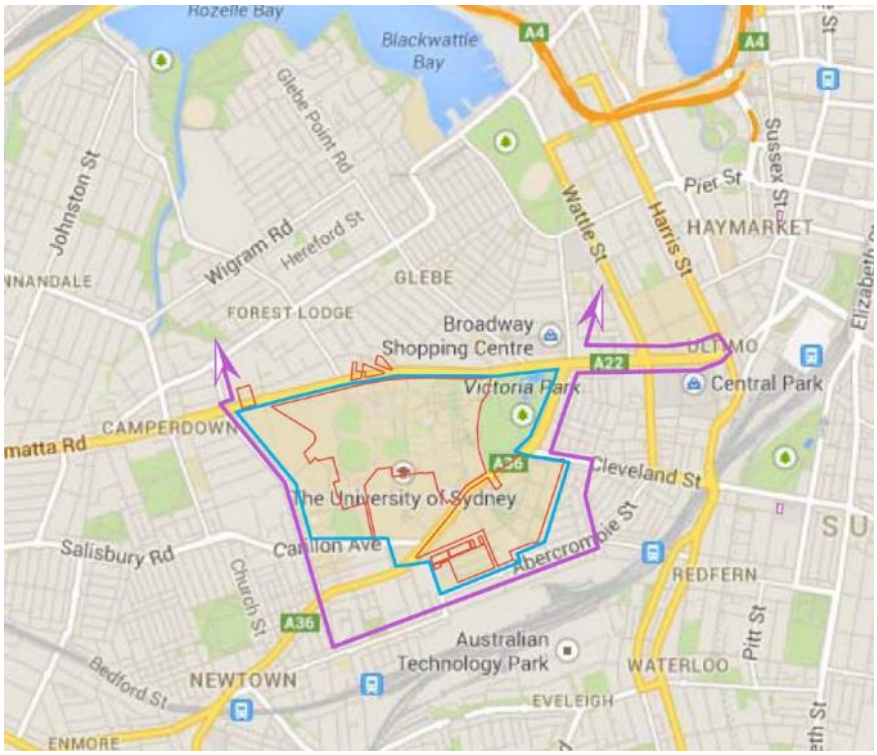


Figure 5-4: Extract of Figure 6.1 of CMP '*Definition of the University, the Expanded Curtilage and its Visual Setting and relevant considerations (the location of each campus is outlined in red)*'. Source: CMP 2017, page 129.

Within its definition of the university's expanded curtilage and visual setting it states:

> *'From a visual and historical perspective, the curtilage of University of Sydney is perceived by the community to encompass an area far greater than the boundaries of its titled land. The expanded curtilage includes the University lands, the University Colleges, Royal Prince Alfred Hospital and Victoria Park. (see Section 1.7)*
>
> *For clarity and planning purposes the extent of the visual setting of the place should be clearly defined. Given the level of significance of the University, the setting should be considered the area in which development may have an adverse impact on the place*
>
> *• To the east views of the University are available throughout the suburbs of Darlington and Chippendale and down Broadway from the city of Sydney.*
>
> *• To the west views of the University are available from along the length of Missenden Road in the suburb of Camperdown.*
>
> *• Missenden Road is an historic road and defines the broader site boundary of the University encompassing the Royal Prince Alfred Hospital and a number of residential colleges.*
>
> *• To the north views are available from a substantial distance given the placement of the Main Quadrangle Building and Eastern Avenue buildings on the top of a ridge. In addition, Parramatta Road forms part of the historic boundaries of the place with areas of development and expansion historically associated to the University.*
>
> *• To the south, the setting of the place encompasses the suburb of Darlington including Darlington Campus and extends further south to the include areas of development to the north historically associated with the University. As the identified setting of the place is a large area, encompassing*

residential and commercial areas throughout a number of suburbs in the district, it is known to contain a range of other heritage items (of local and state significance). Although not necessarily related to the University of Sydney, these other items of cultural significance should be recognised by the University in any future planning for the place.

Policy 2: The expanded curtilage of the Place is defined by the blue line as shown in Figure 6.1, whereas the visual setting of the place is defined by the purple line.

Policy 3: The managers of the place should attempt to recognise and respect any culturally significant attributes that the Expanded Curtilage and the Visual Setting contain.[37]

Significant views and view corridors associated with the university grounds are also highlighted within Policy 15 of the CMP (refer to extract in Figure 5-5 below) and primarily relate to views looking in a north-south and east-west direction through the main campus. Closer and longer views towards the item are also appreciated from the north, east, west and east along Parramatta Road.

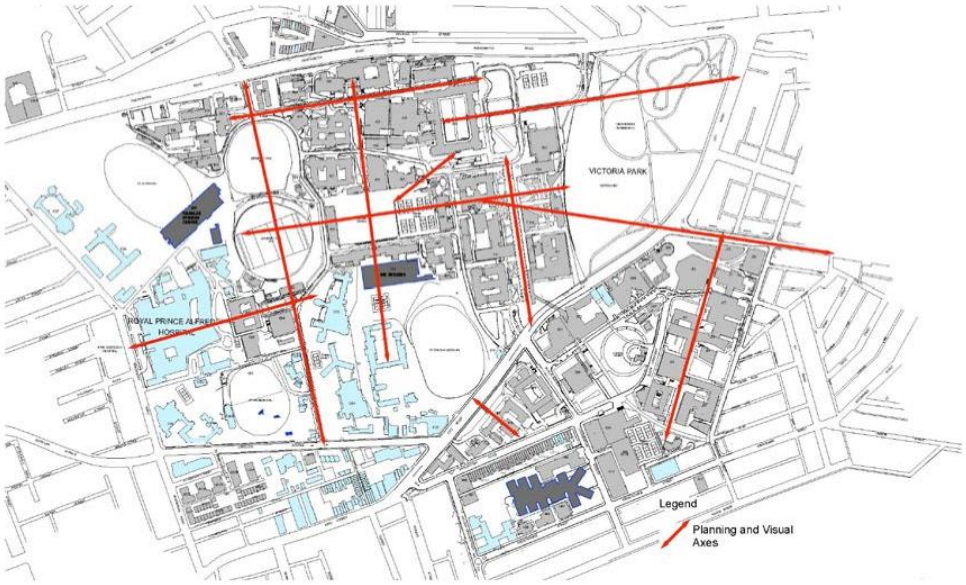


Figure 6.1 Planning and Visual Axes

Figure 5-5: Planning and Visual Axes Sydney University Grounds CMP dated 2019 pg. 134

5.2.2. *'St John's College, University of Sydney'* (LEP #I67)

The item is located western portion of the university grounds, and its northern boundary lies immediately opposite the study area (approximately 25m to the south). Its curtilage comprises the St Johns College building, a three storey sandstone Gothic Revival building (which has been extended to the south), a central driveway extending from Parramatta Road, and grassed lawn within its northern setback bounded by a metal palisade style fence with stone posts.

The NSW State Heritage Inventory provides the following description of the item:

[37] The Planning Team, The University of Sydney Grounds Conservation Management Plan, April 2019

The main college comprises a large three storey complex built of sandstone. The original building is built in an imposing Gothic Revival style with later 20th century stone clad additions being constructed in a more modern interpretation of that style and a 2009 sandstone wing fronting Missenden Road which has created a central quadrangle. The northern wing and central section were constructed in 1862 which contain the principal internal spaces of the complex, the Great Hall, The Chapel and Brennan Hall. The tower was added in 1937. There were four storey extensions carried out in the 20th century - the 1938 Wing designed by Hennessy and Hennessy Co, the Menzies Wing (1962) by McDonnell, Mar and Anderson Architects, the Polding Wing (1967) by McDonnell and Mar Architects. The 2009 building, known as the Hintz Block, was designed by Altis Architecture.

With its later tower and wings developed on the "H" plan layout of Wardell, the college is complete and retains most of its original large spatial setting including a gatehouse and early trees.

The college houses an outstanding collection of original and later furnishings, pictures, liturgical vessels, missals, vestments, sacramental objects, historic archives, library of books and statues.

The main entry driveway to the college is from Parramatta Road. Highlighting this entry, is a sandstone Gate Lodge built in 1909-10, when Parramatta Road was widened, and stone gate piers and gates, which were reconstructed in 1916.

The principle presentation of the lodge is to the entry driveway to the college. Of single storey in scale, the exterior of the lodge comprises of course rubble stone walls with dressed quoins and sills, and a dressed stringcourse at sill level. Windows are timber casements and there is a label mould over the southern gable wall window. There are two porches, with skillion roofs, on the north and southern sides of the building. The roof has been reclad with concrete tiles and the chimneys have been removed.

The Parramatta Road entry to the college is defined by two vehicular gates affixed to two sandstone pillars with carved St John's College Coat of Arms and decorative caps, flanked on either side by pedestrian iron gates and smaller sandstone piers. Lights to the piers have been removed. Curved sections of palisade fence with spear tops and top rails adjoin the outer piers. Phoenix palms originally lined the driveway but only one survives.

The large grounds provide an impressive setting for the college buildings allowing distant views, particularly from Parramatta Road.

The NSW State Heritage Inventory provides the following Statement of Significance for St Johns College, University of Sydney:

'St John's College is the second oldest University College in Australia and has been in continuous occupation of this site since 1863. The College is a landmark building for Australian Catholic Church as a representation for equality with other denominations in NSW and as the culmination of the Catholic education system. The ambitious size and halting progress of the buildings is evidence of the tension between the aspirations of the Church hierarchy and the resources of the Catholic community. The buildings have strong associations with the many important 19th century and 20th century architects, scholars, as well as with many important figures of catholic lay and clerical history in New South Wales and Australia. The college has exceptional social significance to its large body of alumni, and present students and staff, church and community leaders.

The buildings form the grandest and most distinguished university college complex in NSW being a showcase for catholic achievement in the arts. The main building is one of the best examples of Gothic Revival Architecture in Australia and is a realisation of A.W.N. Pugin's medieval ideas for the True principals of pointed architecture realised by leading church architects of the 19th century, William Wardell and Edmund Blacket. It has an outstanding chapel, library and great hall arranged around a spectacular stone imperial

stair. With its later tower and wings developed on the "H" plan layout of Wardell, the college is complete and retains most of its original large spatial setting including a gatehouse and early trees.[38]

The building, including its wings and tower, is visible within longer views from Parramatta Road. Tower spires and a portion of the building's western wing are visible from Missenden Road (refer to figures 5-6 and 5-7).



Figure 5-6: View of St John's College (LEP #I67) as seen from Parramatta Road. Source: Google Maps Streetview, accessed 2025.



Figure 5-7: View of St John's College (LEP #I67) as seen from Missenden Road. Source: Google Maps Streetview, accessed 2025.

5.2.3. *Site landscaping University of Sydney* (LEP #I72)

The landscaping item comprises the landscaping and fences along Paramatta Road, including gates and columns. The item extends along the northern boundary of the core university grounds which lies approximately 25m south of the study area.

[38] https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2420058

The State Heritage Register provides the following description for the item:

> *'Site landscaping includes perimeter fence, Ross Street, Parramatta Road and City Road gates and sandstone pillars, pergola of two Doric columns and fountains.*
>
> *The Doric columns are a pair of 3/4 fluted Doric columns re-sited as pergola columns. A piece of Wilkinsonian Mediterranean atmospherics contributing to the character of the area.'*

The NSW State Heritage Inventory provides the following description for the item:

> *'Site landscaping includes perimeter fence, Ross Street, Parramatta Road and City Road gates and sandstone pillars, pergola of two Doric columns and fountains.'*

Views of the item are largely experienced from the public domain Parramatta Road. Views to the significant elements within the fence line are visible from closer views, while the mature trees are visible from longer views looking east and west along Parramatta Road.



Figure 5-8: Site Landscaping (LEP #I72) as seen from Missenden Road. Source: Google Maps Streetview, accessed 2025.

5.2.4. *JD Stewart Building, University of Sydney including interior* (LEP #I73)

The JD Stewart building (c.1910-1912) is located within the core university grounds and approximately 300m to the south east of the study area.

The NSW State Heritage Inventory provides the following description of the item:

> *'A two storey Federation Arts and Crafts style building which retains many of its original features including the sandstone piers to the entrance, the carving and lettering (Veterinary Science) over the doorway, the brickwork with sandstone trim to windows, coping and crenellated parapet to the semicircular room over the entrance (originally part of the library). Other features such as the main doors including the Art Nouveau style door, furniture and small pane windows also survive. The roof is slate with lead ridging and finials.'*

The NSW State Heritage Inventory provides the following Statement of Significance for the JD Steward Building:

> *'The first purpose-built building for the newly established Veterinary Science, in continuous use for that purpose since 1912 and one of a diminishing number of buildings still used for its original purpose.*
>
> *One of the subjects introduced into the curriculum in the early 20th century in recognition of the need for a high standard of training and research in areas of major significance to agricultural and pastoral growth and hence to the national economy.*
>
> *One of the unusual and carefully detailed Federation Arts and Crafts style Science faculties to be constructed along Science Road, designed by the NSW Government Architects branch under Walter Liberty Vernon.'*[39]

There are limited views of the item available from Parramatta Road due to the intervening significant mature trees and landscaping which run along the University's northern boundary. The building is principally appreciated from within the university grounds and the Western Avenue internal road.



Figure 5-9: View of JD Steward Building as seen from Western Avenue. Source: Google Maps Streetview, accessed 2025.

5.2.5. Terrace House including interior, 12 Sparkes Street and Terrace House including interior, 14 Sparkes Street (LEP #I94 and #I95)

The two heritage items lie approximately 80m to the east of the study area. No. 12 and no. 14 are a pair of two storey Victorian terraces which are situated on the northern side of Sparkes Street.

The State Heritage Register provides the following description of No.12 Sparkes Street.

> *'The building is a two storey mid-Victorian terrace house. It is constructed of rendered brickwork on a sandstone base with a corrugated metal gabled roof and a face brick chimney with two terracotta chimney pots. At ground floor level there is a single double hung window with a rendered and corbelled sill and a single four paneled front door with fanlight above. There are two pairs of timber French doors with fanlights at first floor level and evidence of flashings of the removed verandah.*
>
> *The single storey rear skillion wing comprises two sections, the kitchen which adjoins the main part of the terrace, and a narrower and lower bathroom section. There is a small brick outhouse adjoining what would have been the original rear property boundary.'*
>
> *Fronting Sparkes Lane is a gate and double carport.*

[39] https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2431023

Internally the original room layout is largely intact. Significant internal fabric includes original/early timber joinery, fireplace breasts and ceilings.'

The NSW State Heritage Inventory provides the following Statement of Significance for the item:

'Carinya dates from the key period of development for Camperdown and is a representative example of a mid-Victorian terrace which is largely intact externally and makes a positive contribution to the streetscape.[40]

The State Heritage Register provides the following description of No.14 Sparkes Street.

'The building is a two storey Victorian terrace house constructed of rendered brickwork with rendered detailing and a semi-circular parapet, inscribed with the date AD 1881, screening a corrugated metal skillion roof. The ground floor features a blind window and door and the first floor a central pair of French doors with Juliet balcony.'

At the rear there is a sandstone and brick addition that extends to Sparkes Lane.'

The NSW State Heritage Inventory provides the following Statement of Significance for the item:

'The building dates from the key period of development for Camperdown and is a representative example of a Victorian terrace which makes a positive contribution to the streetscape.[41]

Significant views to the items are primarily available from their Sparkes Street frontage, as shown in Figure 5.10 below.



Figure 5-10: 12 and 14 Sparkes Street (LEP #I94 and #I95) as seen from the opposite side of Sparkes Street. Source: wwww.realestate.com.au, accessed 2025.

5.2.6. Former Royal Alexandra Hospital for Children "Venables House" including interior and courtyard (LEP #I92)

The item is located at No, 20 Pyrmont Bridge Road on its northern side. The item lies approximately 160m to the north west of the study area. The NSW State Heritage Inventory provides the following description for the item:

'Royal Alexandra Hospital for Children Group includes Venables House, two and four storey Federation building, c. 1909 and 4 storey building built 1921-1926. Venables House is a complex of interconnecting load bearing dark brick buildings of 2-4 storeys. The building was connected by a covered walkway of similar dark

[40] https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2421296

[41] https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2421297

brick construction to the 4 storey Clinical School Building towards the rear. The building has an internal courtyard with a fountain, enclosed by building on all sides. On the internal facades surrounding the courtyard are covered verandahs with archway openings providing a view of the courtyard. The building features timber-framed double-hung windows. The first "L" shaped part of the building was constructed in 1909 to original 1903 plans, with major extensions undertaken in 1921, and a further 4 storey connected building built adjoining, on the corner of Pyrmont Bridge Road, in 1926.'

The NSW State Heritage Inventory provides the following Statement of Significance for the item:

'Venables House contributes to an understanding of the development and operation of the former Royal Alexandra Hospital for Children. It is one of the original Hospital buildings planned in 1903, though not built till 1909, and extended in the 1920s. The building operated as nurses' quarters from 1909, and evidences the functioning of Hospitals in the early 20th century, with nurses accommodated on site. Venables House has particular historical association with Miss Nora Venables, 1897 matron of the Hospital at its Glebe site and who was still in charge of nurses when the Hospital moved to Camperdown, as the building was named in appreciation of her services to the Hospital. The original hospital buildings, including the original "L" shaped section of Venables House, have aesthetic significance for their architectural style and purpose built design by Kent & Budden architects in 1903. The site and surviving hospital buildings including Venables House have social significance to the local and NSW community due to long association with children's health provision. Venables House is representative of nurses homes which were built as part of early 20th century Hospital complexes.'

Views of the item are largely appreciated from its Pyrmont Bridge Road frontage.



Figure 5-11: View Royal Alexandra Hospital for Children Group includes Venables House. Source: State Heritage Inventory, accessed 2025.

5.2.7. Housing development 'Alexandra Dwellings' (#I93)

Th item is located approximately 180m to west of the study area and comprises a two-storey residential development dating from the Inter-war period. The NSW State Heritage Inventory provides the following description for the item:

'Alexandra Dwellings is an Inter-War Georgian Revival style residential flat building group arranged in a "U" Shape around half a city block. It was originally intended to line to whole block but with the onset of the

Great Depression this did not proceed. It comprises 11 free standing pavilions, eight of which containing semi -detached pairs, two, at the eastern end, being typical semi -detached pairs except they are linked towards the rear to single two storey dwellings, and one, fronting Layton Street, being a shop with residence above. Each pavilion is symmetrical in composition and largely intact.

The buildings feature polychrome brick work, with mainly pale yellow face brickwork with contrasting red brick details including narrow brick quoins to corners, header window heads and sills. There are hipped unglazed terracotta tile roofs with relatively wide boxed eaves but no chimneys. Windows are either paired or single assemblies of double hung six pane sashes. There are concrete planter boxes supported on stepped brick brackets to most of the upper floor windows on street elevations.

A plaque on the Pyrmont Bridge Road elevation of the western most building reads, "This tablet was erected 14th November 1927 to commemorate the opening of the Alexandra Dwellings. Alderman J.H. Mostyn, Lord Mayor, W.G. Layton, Town Clerk".

The typical pattern is for each two storey dwelling to be entered from a narrow side passageway which has a small timber roof over spanning the gap between the two blocks. There are two storey timber verandahs to the rear which are now mostly enclosed with fibrous cement sheeting. Each dwelling has a large rear yard.

The ground floor of each dwelling comprises a small centrally placed entrance and stair hall, a front facing living room, kitchen, bathroom, laundry and verandah. The first floors comprise central stair and landing, main bedroom fronting the street and two smaller bedrooms to the rear each opening onto a first floor balcony. Detailing is very simple, with some original joinery surviving including timber skirtings, picture rails, high waisted doors, glazed doors and timber balustrades to the top landing of the stairs. Original ceilings appear to have all been replaced.'

The NSW State Heritage Inventory provides the following Statement of Significance for the item:

'Alexandra Dwellings are of historical and social significance as a rare example of early public housing initiated by the City of Sydney Council and designed by the City Architect's Department. They demonstrate the inter-war experimentation with different forms of medium density public housing. The design of two storey dwellings, mostly detached, with rear yards, appears to be an attempt to provide a more suburban family alterative alternative to the apartment type dwellings seen in earlier City Council Public housing developments at Strickland Building in Chippendale completed in 1914, Ways Terrace in Pyrmont in 1925 and at Dowling Street Woolloomooloo in 1925.

The Alexandra Dwellings are associated with Robert Hargreaves Brodrick who held the position of City Architect and City Building Surveyor through 30 years of expansion of the City Architect and City Surveyors Department, and demonstrate the further development of Brodrick's talents as an innovative urban designer and his flexibility as a designer of medium density housing.

The Alexandra Dwellings are of aesthetic significance as a modest example of the inter-war Georgian architectural style, the harmony and rhythm of which contributes greatly to the Pyrmont Bridge Road streetscape in this location.

The Alexandra Dwellings provides evidence of an early example of planning for public housing of a domestic scale, which included the provision of a shop and a hierarchical provision of both private and shared public open space, the formalisation of the latter being curtailed by the onset of the Great Depression, and the open space remaining as landscaped parkland around the adjacent high rise 'Johanna O'Dea Court' completed circa 1960.'

The item is predominantly appreciated from the public domain along Pyrmont Bridge Road and Lambert Street. With parts of the building visible from Layton Street.



Figure 5-12: View of *Housing development 'Alexandra Dwellings'*. Source: Google Streetview, accessed 2025.

5.2.8. Hereford and Forest Lodge Significance (LEP #C33)

Hereford and Forest Lodge Conservation Area has local significance and is located approximately 100m to the north east of the study area. Views to the HCA are largely experienced from the streets within and those which immediately bound the HCA. The State Heritage Inventory provides the following Statement of Significance for the HCA.

> *Hereford and Forest Lodge Conservation Area has historic significance for its rare surviving early residential development Swiss Cottages (c. 1842) and Glenwood (c. 1837). The area possesses the ability to evidence early villa estates; Hereford (c. 1829), Rosebank (c. 1832) and Forest Lodge (c. 1836) and their incremental subdivision.*
>
> *The conservation area is also of historic significance for a number of important civic and institutional buildings such as St James' Church and School, Forest Lodge Public School, Glebe Fire Station and Glebe Town Hall. Considerable social significance arises out of the presence and use of these buildings for over 100 years. The Town Hall also provides evidence of the incorporation of the Municipality of Glebe in 1859.*
>
> *Hereford and Forest Lodge Conservation Area has aesthetic significance for its ability to illustrate various periods of development and architectural styles and building types (some of a very early date), and its landscape qualities. Residential development, encouraged by the tram extension in Hereford/ Forest Lodge, reflects the varied character of historic subdivisions, divided by the historic and aesthetically important Bridge Road. The predominant Victorian character is supported by several other important historic layers. The diverse social mix that is reflected in the building stock and inherent to the character of the suburb.*
>
> *The area contains a number of aesthetically significant and prominent buildings such as the Glebe Town Hall, Glebe Fire Station, St James' Church, the former Glebe Presbyterian Church as well as a number of villas particularly in Bridge Road such as Reussdale.*
>
> *The area has rarity value for the survival of early pre 1860s residential development so close to the city centre.*



5-13: View looking south west along Mitchell Street with HCA showing existing character. Source: Google Streetview, accessed 2025.



5-14: View looking south west along St Johns Road with HCA showing existing character. Source: Google Streetview, accessed 2025.

6. Proposed Development

6. Proposed Concept Plan

6.1. Planning Proposal details

The Planning Proposal is for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

Architectural drawings prepared by HDR Architects illustrate the proposed form and are submitted with the application.

6.2. Pre-Planning Proposal design development

Curio understands that the overarching proposed vision for the study area and indicative built form options for the redevelopment of the site, were presented to the City of Sydney in October 2024.

The options involved the demolition of all buildings on the combined site, creation of a stepped podium massing along Parramatta Road (ranging from 25m to 30m) and a central tower form (with a maximum option of 69m) and a setback of 7.5m from the front building line. Refer to Figure 6-17.

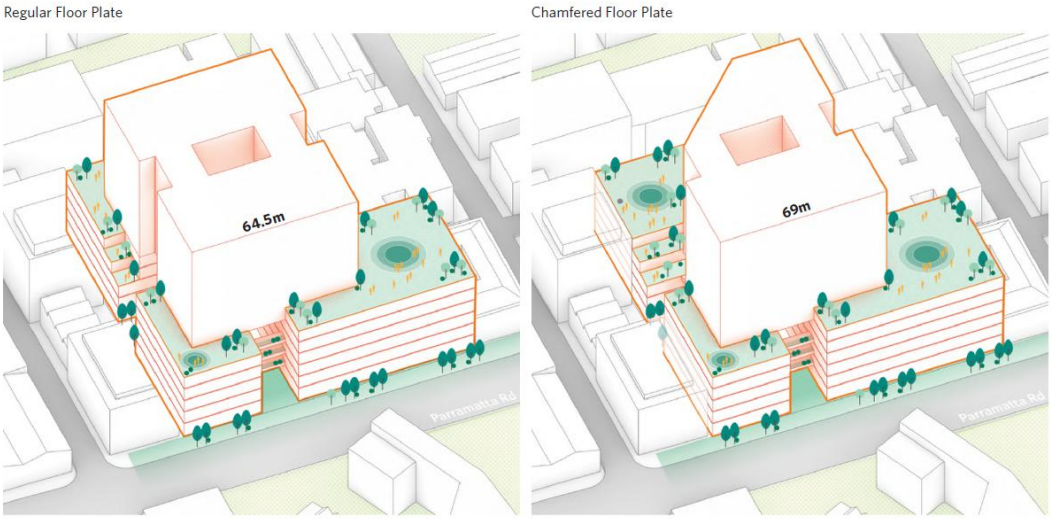


Figure 6-17: Wentworth Capital _ Area 53 Life Science Planning Proposal Design Report 11.10.24. Source: HDR Architects 2024.

Council raised several matters regarding the proposal, including the need for additional information to be provided on the level of heritage significance of the Inter-war warehouse building located within the study area and its condition. They also acknowledged the need for the protection of solar access to the neighbouring residential development. Curio Projects were engaged by Wentworth Capital to prepare an Assessment of Significance for the study area. The assessment (refer to Section 5 of this report and Appendix A) was submitted as part of the pre-Planning Proposal package, which was subsequently presented to the City of Sydney, and presented to the Design Advisory Panel on 13 February 2025.

As detailed within Section 1 of this report, the City of Sydney Council issued their feedback on 11 March 2025, which included the following:

- *'It is noted that your heritage assessment identified 88-90 Parramatta Road as being potentially locally significant. It is recommended that the building be retained and adapted and that future detailed design should seek to retain the whole structure. A facade only approach to adaptation would not be supported.*
- *The retention of the 88-90 Parramatta Road building is an opportunity to accommodate the proposed exchange, conference or 'science on display' spaces. '*

Further development of the design was undertaken to incorporate the above feedback. In addition, there was a strong emphasis on protecting neighbouring residential amenity and minimising overshadowing caused by the tower. Options to retain the warehouse and integrate a tower form into the development evolved further.

Three design concepts were explored to integrate a tower form above the warehouse as podium structure, noting that the tower placement orientated towards the Parramatta Road frontage would also have the least environmental impact on neighbouring dwellings. These options included a floating tower form; tower landing on the warehouse and new podium; and extension to the podium with tower above. Each of the concepts explored a different spatial and structural relationship between the tower and the warehouse, offering varied visual and functional impacts. Refer to Figure 6-18 below.

Option D1.B - Warehouse/Podium Integration Options
View 2

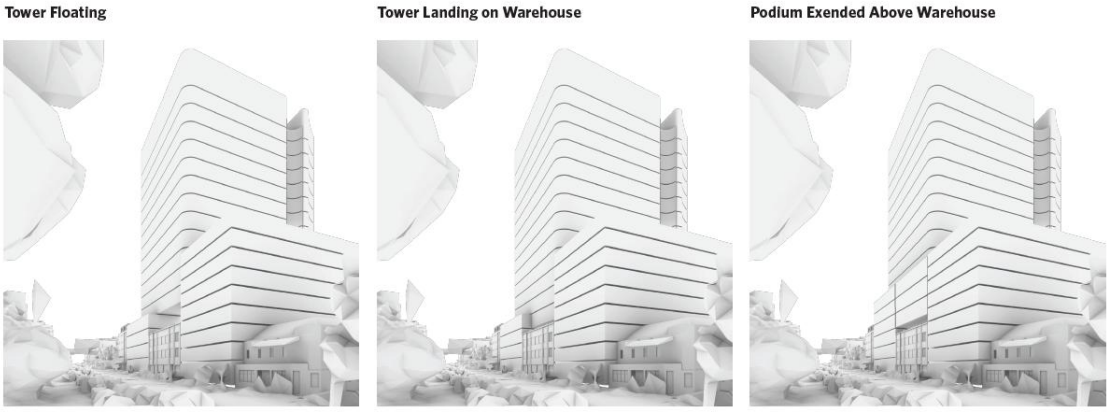


Figure 6-18: Life Science Hub Design Report April 2025. Source: HDR Architects 2024.

Consideration of the layout of the built form within the site and its relationship to the warehouse were also considered to explore how the building could be used as conference or exhibition space within the development. The design options looked at configuring the entrances to the warehouse from the Parramatta Road frontage in order to facilitate a complementary use and provide opportunities for site permeability. Refer to Figure 6-19.

Option D1.B - Entrance / Arcade Variations

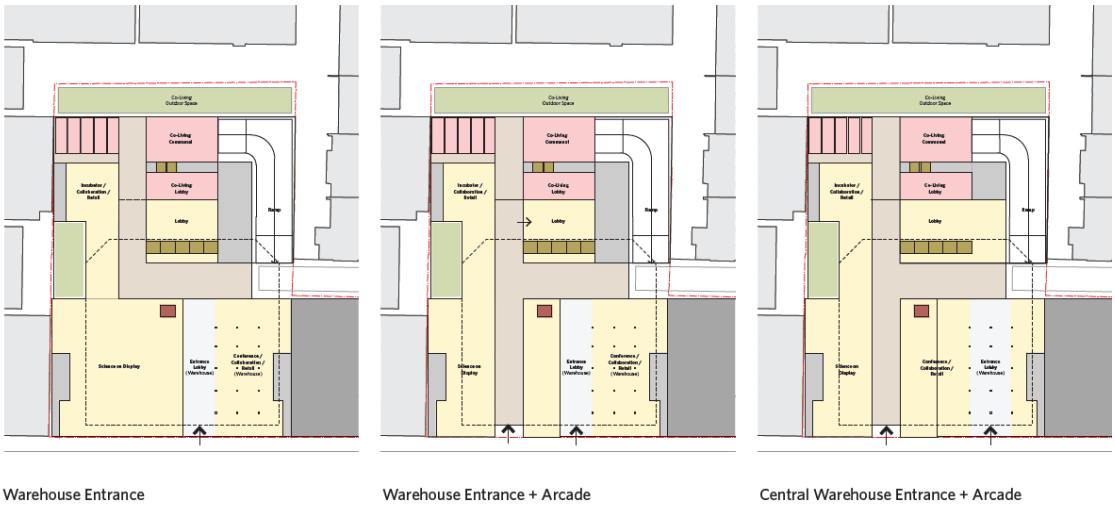


Figure 6-19: Life Science Hub Design Report April 2025. Source: HDR Architects 2024

Following a meeting with HDR Architects on 6 May 2025, Curio provided further advice on these options and helped establish overarching heritage design principles to ensure the effective integration of the Inter-war warehouse building, and conserve and celebrate the historical significance of the study area while helping to achieve the future vision for the site:

The key heritage design principles considered are:

1. Retain and adapt
   Preserve the building's overall volume, street-facing façade, and internal spatial character, adapting it for contemporary use within the life sciences precinct.

2. Prioritise heritage interpretation
   Utilise the building for public-facing uses such as exhibitions or conferences, to celebrate and interpret its historical and architectural significance.

3. Respect visual curtilage
   Set back any new tower elements to conserve the roof form and maintain legibility of the Inter-war building from Parramatta Road and key view corridors, where possible.

4. Minimise physical intervention
   Locate structural supports in the eastern and western zones to avoid impact to significant interiors, and concrete demolition/adaptive reuse in key existing modified areas for services and access, where possible.

5. Enhance natural light and ventilation
   Retain original northern and southern windows at upper levels to support both heritage values and environmental performance objectives.

6. Activate the ground plane
   Reconfigure the altered ground floor to provide a pedestrian link and a welcoming public interface while allowing for adaptive reuse of original circulation elements.

7. Heritage Impact Analysis and Assessment

7. Heritage Impact Assessment

The proposed concept plan has been prepared to support the redevelopment of the study area and will comprise all three properties within the study area for the purposes of a new life sciences precinct. The proposal seeks an amendment to the Sydney LEP 2012 to enable an increase in the allowable maximum floor space within the study area, and an increase in the allowable maximum building height (to 80 metres). The concept plan envelope includes a new life sciences tower, adaptive re-use of the Inter-war warehouse, a new life sciences education facility and the reuse of and additions to the adjacent serviced apartments.

The proposed envelope and massing for the new life science precinct has been developed in accordance with the recommendations set out by the City of Sydney's Design Advisory Panel within the Pre-Planning Proposal feedback (13 February) and to meet the future education, innovation and research and accommodation requirements for the precinct, while at the same time being able to incorporate and address heritage principals and excellence in design.

The concept plan proposes to retain the existing Inter-war warehouse building at 88-90 Parramatta Road, retain the existing contemporary serviced apartments at 84-86 Parramatta Road, allow for increased permeability and access through the site from Parramatta Road and enhance its frontage to the public domain; as well as ensure environmental impacts (such as overshadowing) to neighbouring properties are minimized by the appropriate placement of the tower form.

As detailed within the Urban Design Report prepared by HDR and demonstrated within the reference scheme submitted with the proposal, the heritage design principles (described within Section 6.2) have helped inform the proposed concept plan envelope.

7.1. Heritage impact of proposal on study area

The following sub-sections provide an assessment of the impact of the proposed envelope layout and massing on the significance of the study area, and in particular the proposal's impact on the Inter-war warehouse building at 88-90 Parramatta Road, and with reference to the heritage design principles outlined above.

7.1.1. Impacts of proposed built form, scale and massing

The concept proposal involves the retention of two buildings within the combined site. These are the Inter-war warehouse at 88-90 Parramatta Road, and the five-storey serviced apartment building at 84-86 Parramatta Road, and which immediately adjoins the warehouse to its east.

The proposed new built forms include a four-storey podium building fronting Parramatta Road (within the south-western corner of the site) and an eight-storey life science education building, which extends along the northern side of the study area. Three (3) levels of basement will be provided within the existing boundaries of 92-94 Parramatta Road (two lower levels for parking). The proposal also includes the addition of three (3) new floor levels to the existing five storey serviced apartment building at 84-86 Parramatta Road. A new tower form is proposed to sit above the existing warehouse building, at 88-90 Parramatta Road.

Conceptual layout

The proposed layout of new built forms within the study area have been designed to respect the heritage values of the site. They will provide a defined street wall with the opportunity to activate the Parramatta Road frontage; increase site permeability from the Parramatta Road frontage, conserve

the site's recognised heritage values, and ensure that the residential amenity of the neighbouring development (with particular regard to solar access) is retained.

The proposed conceptual layout of the new built forms and key vehicle and pedestrian access links will provide opportunities for areas of open space and landscaping, as well as opportunities for historical interpretation. The new life sciences education building is also sited with a setback from the northern boundary and additional landscaped communal areas can be accommodated centrally within the site, and at Level 2. Vehicle access to the site will be via Sparkes Street (off Larkin Street) and a mixed of uses will be located at ground floor level, within areas where they are most accessible.

A new pedestrian access point is proposed from Parramatta Road which will extend towards the north through the site and bisect the education building. While it is recognised this new laneway will not the follow the exact location of the original carriageway which historically existed through the study area linking Parramatta Road to the former Inglis Horse Bazaar and sale yard (c.1911); its axis will run parallel to this historical link, which in turn creates opportunities to include interpretation of both its former location, and use.

Scale and massing

As detailed earlier, the proposed scale and massing of the conceptual built forms within the study area have been designed to enable appropriate uplift for the research and education function of the new life sciences precinct and its ancillary uses, while at the same time achieve the objectives for conserving the historical values contained within the site, and minimising environmental impacts on the existing neighbouring residential development.

The concept proposal involves the retention of the existing three storey Inter-war warehouse building (assessed as having local heritage significance - refer to Section 5 of this report) and its reuse the life sciences building entrance '*science on display'* and/or conference area to support the new research and innovation function of the precinct. Further details of its how this can be achieved, and its anticipated adaptation are demonstrated within the reference scheme and discussed in Section 7.1.2 below.

A new 15 storey (plus 2 plant levels) tower form (80m high) is proposed to sit above the existing warehouse building and extend over part of the new adjacent four storey podium building proposed to occupy the south western corner of the study area. As demonstrated within the reference scheme provided, the tower can be setback from the building's front elevation and eastern sides by 3m, and setback 9m from the western elevation. The tower could also be designed so it largely cantilevers over the existing building conserving its historical pitched roof form.

As detailed within Section 6 of this report, the proposed location of the tower was subject to extensive design development to ensure that it could be accommodated within the site in a manner which conserves the Inter-war warehouse building, facilitates the new research/innovation and science labs while also conserving the sun access planes required for nearby residential development including No.96 Parramatta Road (to the west) and No.17-27 Larkin Street to the north east.

Although the tower will be a visible and dominant feature of the site, the incorporation of a setback from the front building line, and its centralised footprint will enable the Inter-war warehouse building to continue to be interpreted and appreciated within the Parramatta Road streetscape.

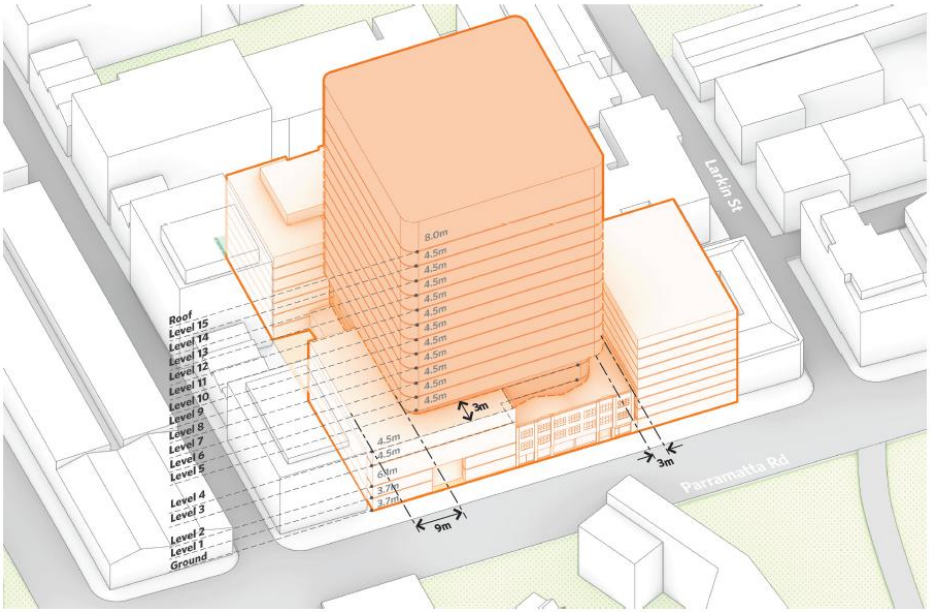


Figure 7-1 : Extract from Section 6 of Urban Design Report: Define Tower Massing – Design Principles. Source: HDR Architects, October 2025

A new four storey podium building is proposed to replace the existing building at 92-94 Parramatta Road within the south western corner of the study area with the intention to accommodate conference and/or retail uses. The building will form part of the structural base of the tower above. The setting back of the tower form above will enable further opportunities for landscaping to be incorporated at the podium roof top level.

The proposed scale and massing of the new built forms are also able to support the historical concentration and pattern of development along this portion of the Parramatta Road corridor. The setting back of the new tower form from the southern frontage, construction of built forms of compatible heights would be able to conserve the visual curtilage of the Inter-war building, its original form and presentation to the street.

As demonstrated within the reference scheme and discussed further on in this report, the proposed massing of the tower form and adjacent podium could also conserve the buildings physical and structural fabric, including its original roof structure. It is also anticipated that the new four storey podium building would be able to accommodate much of the structural loading required for the tower building, as well as any new required mechanical services and core access areas, further minimising the need for unnecessary physical intervention to the warehouse.

The new 8 storey life science education building located towards the rear of the study area will be compatible with the 5 and 6 storey scale of development within its immediate context (fronting Barr Street to the north and west). The new education building will be substantially setback from Parramatta Road and setback from the rear of the warehouse building with opportunities for landscaping at ground and second floor levels, conserving its immediate setting within the site.

Defined street wall

The proposed retention of the Inter-war warehouse building, the adjacent serviced apartment building and the introduction of a new four storey podium building within the south western corner will create a defined street wall along the Parramatta Road frontage, Their lower level massing will be generally compatible with the three-storey scale of the Inter-war warehouse, and will provide a

human scale to the development and enable to the ground floor activation, supporting the mixed-use character of the area.

While the incorporation of the additional three storeys to 84-86 Parramatta Road (total eight storey's) will be noticeable within views from the east, it is also appreciated that the building's future design can incorporate articulation and materiality to ensure it sits comfortably within the visual context of the Inter-war warehouse building.

The proposed envelope is able to support the heritage values of the site by encouraging activation the ground floor plane of the warehouse building, incorporating a pedestrian link through the site from its Parramatta Road frontage and providing opportunities for retail and mixed uses within the ground floor areas of adjacent buildings.

7.1.2. Physical impacts on Inter-war warehouse at 88-90 Parramatta Road

The proposed retention of the three storey Inter-war warehouse and integration into the site as functional and publicly accessible space to support the new life science's precinct will have a positive impact on the significance of the site as a whole. As demonstrated by the reference scheme the proposal would be able to enable conservation of the building's physical form and provide opportunities to support and celebrate its historical values as a recognisable early twentieth century building within its contemporary context. The reference scheme also demonstrates how a pedestrian link from Parramatta Road can be incorporated at ground floor level, and how 'science on display' opportunities can be created within its ground and upper levels.

It is recognised that anticipated new use for the building and its incorporation into the site would require physical adaptation to support its effective adaptation and connection, enhance the building's presence within the streetscape and support the additional tower form and massing. The following provides an assessment of the potential impacts of works anticipated to support the building's adaptive reuse for its inclusion, as demonstrated within the reference scheme.

<u>Activation of ground floor</u>

Activation of the ground floor plane of the warehouse building can provide an entry point to the precinct and publicly accessible pedestrian access link from Parramatta Road through to the centre of the site.

As detailed within Section 4 of this report, the existing ground floor of the warehouse has been substantially modified overtime. On the western side of the ground floor is noticeable late twentieth century fabric such as carpet over the concrete floor, concrete lined columns, and installation of a suspended ceiling with steel panelling. The internal face of the original western wall remains evident although it has been painted over and graffitied. The eastern side of the ground floor area also comprises concrete flooring, concrete columns, however the original ceiling joists remain visible. The eastern half of the ground floor is also currently partitioned off with a later addition brick wall.

Due to the extent of existing modification within the ground floor area, the reference scheme demonstrates how the proposal could revitalise the space and provide an accessible corridor which will have a neutral to positive impact on the fabric of the building. There are opportunities to remove the unsympathetic later twentieth century finishes and structures which currently divide the space and enhance natural light opportunities from the northern and southern ends of the building. Opening the space would create a welcoming public interface for the precinct and allow for its effective utilisation for exhibition and conferences, and substantial opportunities to support heritage interpretation.

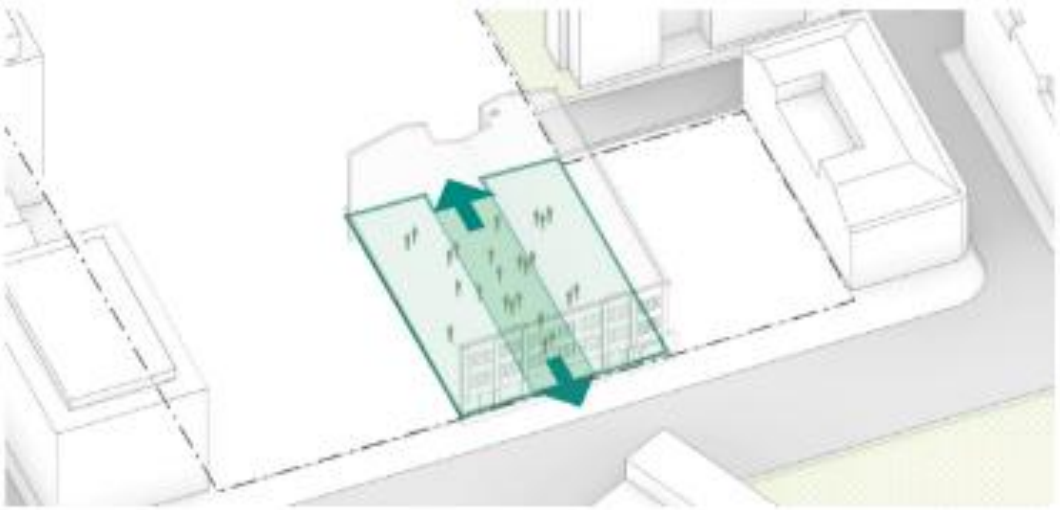


Figure 7-2 : Extract from Section 6 of Urban Design Report: Retaining Heritage Warehouse – Design Principles. Source: HDR Architects, July 2025

The activation of the ground floor area would also require the incorporation of vertical transport, for access to the upper levels of the building. The location of lift and stair access can be situated away from the central corridor to enable a clear central spine running north south through the building.

It was unclear during site investigations the extent of surviving original fabric along the ground floor front façade, however the provision of a central opening from Parramatta Road would enhance activation along the frontage and provides an opportunity to re-use the pattern of glazed openings which would be commensurate with the building's original shopfront/showroom style and access at the ground floor.

Creation of central void

The reference scheme design incorporates the creation of a new central void space within the building to facilitate the building's role as a welcoming entrance to the new life sciences precinct. The void is proposed within the Level 1 floor area and would require the removal of timber flooring to enable a double height view of the buildings structure from the ground floor level.

The new void would be centrally located within Level 1, setback from the southern and northern windows and designed to align with existing warehouse column grid. Refer to Figure 7-3 below. While the removal of the timber flooring within Level 1 would have a physical impact on the building's original surviving fabric, the works would only affect a portion of the floor area at first floor level only and would ensure that Level 2 remains intact and functional and continues to allow for the interpretation of its original spatial layout and surviving features.

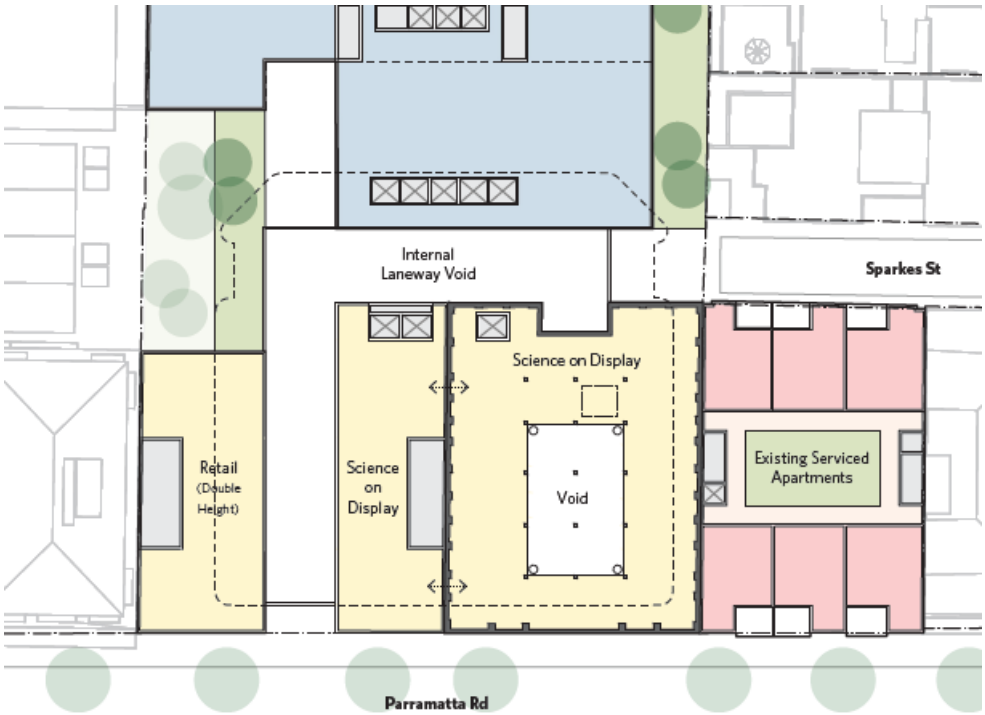


Figure 7-3: Extract from Architectural drawing set – Level 1: HDR Architects, October 2025

The void area would also provide opportunities for internal vertical views, enhance natural light and ventilation to the ground and first floor areas and enable the building's internal structure and former use to remain interpretable. Should the inclusion of a void be adopted as part of the future design for the building, Curio recommends that consideration be given to the retention of some of the original timber floor beams within this area to remain in situ, to provide further visual interpretation of its original floor structure.

Structural support for tower form above

As detailed earlier in this report, the proposed envelope involves the development of a 15 storey (80m) tower form above the Inter-war warehouse building. As previously discussed, the location of the tower was determined in response to feedback from the City of Sydney and their request for the development to conserve sun access to neighbouring residential development. The proposed tower form would be setback from the building's front elevation, but it would also require some intervention to the existing building and its roof form with the introduction of structural supports.

As part of the design development for the reference scheme, the structural supports for the tower have been placed in locations to minimise their physical impact on the fabric of the warehouse building. As illustrated in Figure 7-4 below, the new structural columns can be aligned with, and sit adjacent to, the existing columns in four separate places as they pass through the building. The existing columns can be retained and conserved in situ and can remain clearly visible and legible as original.

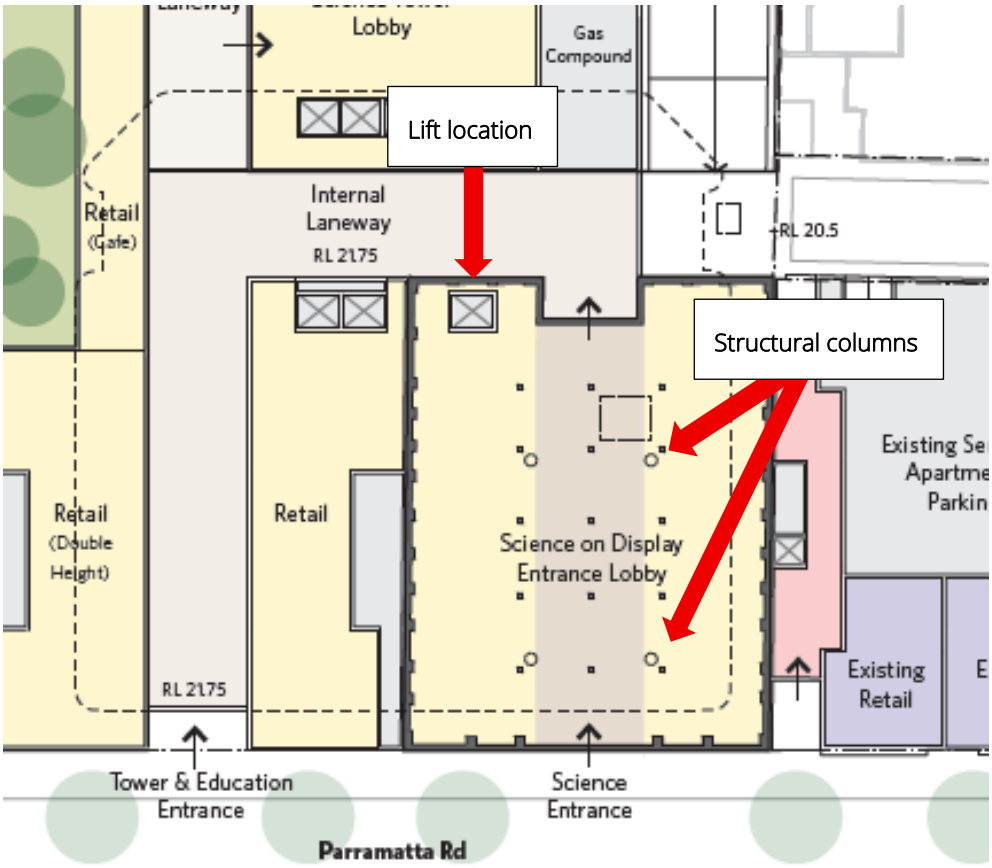


Figure 7-4 : Extract from Architectural drawing set – Ground level showing indicative location of new structural columns: HDR Architects, July 2025

With this approach, it is anticipated that the new structural columns will require limited and localised penetrations at roof top level, conserving the majority of its original twin bay pitched roof form as well as its existing internal timber roof trusses, which contribute substantially to the building's aesthetic significance. It is also anticipated that the columns, or areas of penetration would not be significantly noticeable within principal view lines along Parramatta Road due to their setback from the existing brick parapet which runs along the roof level of the front façade, and which is proposed to be retained.

The incorporation of the structural supports for the tower form above would require some intervention to the fabric of the building, however the impacts would be of a limited and localised nature and potentially reversible. The reference scheme demonstrates a reasonable design response to facilitate the tower development and its required location (towards the southern portion of the study area) in order to minimise impacts on the neighbouring residential amenity.

Incorporation of vertical transport

The adaptive re-use of the warehouse and its incorporation as a conference space and '*science on display*' area to support the function for the new life sciences precinct would also require the introduction of vertical access through the building. Notwithstanding the proposed void area in Level 1 (as previously discussed), it is proposed that new penetrations through the floor levels should be kept to a minimum.

Curio provided preliminary heritage advice to HDR and Wentworth Capital which noted that there are existing areas within the building which have been modified in the past to create vertical access (such as fire stairs), and that new work and alterations should be concentrated to these areas, and concentrated to the eastern and western zones of the building in order to conserve the central spine and the internal spatial arrangements. It was also noted that the eastern and western side walls could provide for new openings to enhance access opportunities to the precinct without compromising the building's integrity.

As detailed earlier in this assessment, the proposed envelope involves the construction of a new podium building adjacent to the warehouse and located within the south western portion of the study area. The new podium structure will immediately adjoin the western elevation of the warehouse building and as such provides an effective opportunity for the new services and vertical access to be accommodated within its built form, which can also be accessed by a new opening within its shared wall. In addition, new lift services for the warehouse building can be accommodated within its north western corner, to the rear of existing fire stairs, provided it is also setback from the existing windows along the rear elevation. Refer to Figure 7-4 above.

Interpretation opportunities

The proposal to adaptively re-use the warehouse as a principal building entrance, conference and/or exhibition space for the new life sciences precinct will also provide substantial opportunities to incorporate heritage interpretation within the study area and throughout the building which will conserve its significance and provide visual links to its past.

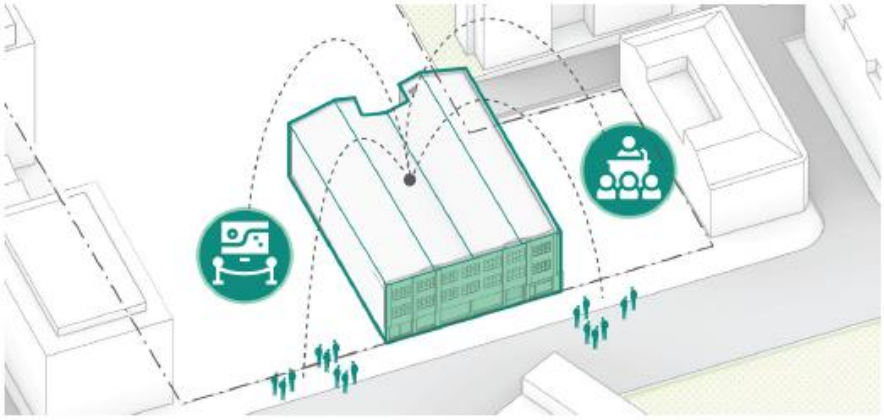


Figure 7-5 : Extract from Heritage Design Principles - Adaptive Reuse of the Warehouse: HDR Architects, July 2025

The internal spatial layout of the building and its activation of the ground floor and facilitation of pedestrian access link through the building will provide extensive areas at ground, first and second floor levels to accommodate heritage interpretation. Interpretation through the ground floor could include the incorporation of informative/interactive displays and artwork which reflect the building (and precinct's) historical uses, and which could also be compatible with its proposed use for 'science on display'. The internal fit-out of the ground floor could also incorporate visual links to the past using the site's existing features, for example, the reinstatement of the former car lift within the

ground floor plan could provide an interesting and exciting visual link to the building's historical associations as a former car showroom for Newland A.E motor merchants (and later York Motors).

7.1.3. Impacts on setting and views

The proposed envelope massing has been designed to consider the setting and significant view lines of the Inter-war warehouse building at 88-90 Parramatta Road. The siting and layout of the built forms have been designed to enhance accessibility through the site by creating access through the warehouse building to open spaces and a network of laneways and so the development can positively address its Parramatta Road frontage and present science and research to the public domain.

A new laneway is proposed to be created within the ground floor of the new podium building (adjacent to the warehouse), extending north from the Parramatta Road frontage through the centre of the site. Activation of the ground floor plane of the warehouse building would also open up opportunities for this north-south axis corridor to be interpreted, conserving its setting and the historical permeability of the site.

The redevelopment of the site would also incorporate landscaping within and around the study area and public domain improvements along Parramatta Road which would complement its wider visual setting and the landscaped grounds of the University of Sydney. Public domain enhancement along Parramatta Road would also complement the immediate setting of the warehouse building and be commensurate with the envisioned transformation and transport upgrades to Parramatta Road.

The inclusion of the four storey podium development, immediately to the east, and the retention of the serviced apartment building located immediately to the east would define the podium frontage, support the conservation of the street wall and its uniform proportions, and provide for a development which would be compatible in scale with the existing warehouse building and the established grain along Parramatta Road.

As demonstrated within the reference scheme, the new tower form above the existing warehouse building and the adjacent podium could incorporate a 3m setback from the Parramatta Road frontage and additional setbacks from the east and western side building lines. These would provide an opportunity to conserve the building's established setting and legibility as part of the former pattern of development along the streetscape.

As detailed within Section 5.1 of this report, the significant views towards the site are from vantage points on the opposite side of Parramatta Road, and from further east and west along the Parramatta Road carriageway. Longer views towards the study area and No.88-90 Parramatta Road are available from further east and west and from the University of Sydney grounds to the south. The proposed built form and massing of the tower and the introduction of a compatibly scaled podium addition would enable the original warehouse building to continue to be appreciated and interpreted within approaching views from Parramatta Road. Refer to Figure 7-6 below. Impacts of longer views experienced from the University of Sydney are discussed in Section 7.3.



Figure 7-6: Extract from Section 8 of Urban Design Report: Visual Impact Assessment: 8.2 Parramatta Rd Looking West. Source: HDR Architects, July 2025

Parramatta Rd Looking East



Figure 7-7: Extract from Section 8 of Urban Design Report: Visual Impact Assessment: 8.3 Parramatta Rd Looking East. Source: HDR Architects, July 2025

It is acknowledged that there are some existing longer views towards the study area which are experienced from further north west and from further east. However, the existing buildings are substantially obscured from these vantage points by intervening medium density development, and there are no views available to the three storey Inter-war warehouse building. As shown in figures 7-8 and 7-9 below, views of the proposed built forms within these longer view corridors would be limited to the top levels of the education building and the tower forms only.

Lambert St Looking East



Figure 7-8: Extract from Section 8 of Urban Design Report: Visual Impact Assessment: 8.6 Lambert St Looking East. Source: HDR Architects, July 2025

Barr St Looking South



Figure 7-9 : Extract from Section 8 of Urban Design Report: Visual Impact Assessment: 8.5 Barr St Looking South. Source: HDR Architects, July 2025

7.2. Heritage impact on items within the vicinity

The study area is located within the vicinity of a number of heritage items being of local and State significance. Details of the closest items are provided within Section 5 of this report.

7.2.1. Heritage items within close proximity

'*The University of Sydney, University Colleges and Victoria* Park' (SHR #01974 and LEP #C5), and the local heritage items (*St John's College, University of Sydney*' Item#I67, '*JD Stewart Building, University of Sydney including interior*' item #I73; and '*Site landscaping University of Sydney*' item #I72) contained within its boundaries and located within the northern portion of the SHR curtilage, share the most critical visual and spatial relationship with the study area. The study area, although part of the University campus grounds, is not located within its SHR curtilage.

The study area forms part of '*The University of Sydney, University Colleges and Victoria* Park' State heritage item's immediate setting and context. In its policies, the CMP outlines that the Parramatta Road forms part the University's historical boundaries which includes its associated areas of development and expansion. The CMP also identifies that the study area falls within the visual setting of the item, and as such, it is also situated within the visual and historic setting of the local heritage items (described above) contained within the SHR boundaries.

While the CMP highlights that the University of Sydney State heritage item is largely appreciated from views within its curtilage and within view corridors looking north-south and east-west direction through the main campus. It is noted that there are some closer and longer views towards the item also appreciated from further the east, west, and opposite side of Parramatta Road.

The proposed envelope would have an acceptable visual impact on the setting of the State heritage item and local items contained within its curtilage. Although the new development would be visible from the item's northern boundary, the retention of the warehouse building would complement its wider historic setting, and the creation of a podium and tower massing would define a street wall compatible in scale and proportion to the existing grain of development along the northern side of the carriageway. The setting back of the tower above the podium would help to reduce the tower's visual dominance within closer views towards the item from Parramatta Road to the east and west, and those experienced the item's northern boundary, immediately opposite.

Furthermore, the proposed reuse of the Inter-war warehouse, activation of its ground floor, provision of access to the study area, public domain enhancements (along the Parramatta Road frontage), and the potential for incorporation of interpretation would enhance and complement the historical setting of the item.

The proposed built form envelope would be visible within longer views experienced from within the university grounds, and as demonstrated in Figure 7-10, the tower element and part of the adjacent serviced apartments would be particularly noticeable within the skyline and within the views looking north/north west from St Johns Oval. However, the proposal would not interrupt significant internal axis views within the campus looking in a north-south or east-west direction. In addition, the individual significant items within its curtilage would continue to be able to be appreciated within their immediate setting, and views across the major lawn areas, including from the Quadrangle, Hockey Square and various central ovals and playing fields would remain unchanged.



Figure 7-10: Extract from Section 8 of Urban Design Report: Visual Impact Assessment: 8.4 USyd Campus Looking North. Source: HDR Architects, July 2025

It is further acknowledged that the proposed built form uplift of the study area forms an important component of the future vision for Tech Central as part of the strategic planning framework for the Camperdown Activity node. As the development would be subject to an architectural design competition, Curio recognises that there is an opportunity for the detailed design of the new development to comprise a style and materiality which can complement the University's significant cultural landscape and its historical setting.

7.2.2. Heritage items and HCAs within the wider vicinity

The following table addresses the potential heritage impacts on the heritage items' location within the wider vicinity.

Item/HCA No.	Item/HCA name & Address	Assessment
LEP #I92 & #I91	*Former Royal Alexandra Hospital for Children "Venables House" including interior and courtyard* *Former Royal Alexandra Hospital for Children boundary landscaping* Pyrmont Bridge Road. 20 Pyrmont Bridge Road	As detailed within Section 5 of this report, the items are located approximately 160m north west of the study area. Views to and from the study area are currently obscured by substantial development located along Pyrmont Bridge Road and Lyons Road. The items are largely appreciated from its immediate street frontages along Pyrmont Bridge Road and Alexandra Drive to the east. The proposal would have no impact on their setting or significant views.
LEP #195 & #196	*Terrace House including interior* *Terrace House including interior* *12 and 14 Sparks Street*	The two items are located approximately 80m to the east of the study area. The two storey terraces are largely appreciated from their immediate frontage within Sparkes Street. There are no longer views towards the items. There are existing views looking west along Sparkes Street towards the rear of the study area. While partial views of the proposed 8 storey life science education building at the rear of the site, and parts of the tower element are likely to be visible from this vantage point, they would not impact the immediate visual setting of the items due to their

		considerable distance and their compatibility with the existing built form and context with the Sparkes Street streetscape. Refer to Figure 7-11 below.  Figure 7-11 : Looking west along Sparkes Street towards study area. Source: Google Streetview, accessed July 2025.
LEP C33	*Hereford and Forest Lodge Heritage Conservation Area* Glebe/Forest Lodge	The HCA is located to the north east of the study area and is characterised by mix of Victorian and early twentieth century residential development and its landscape qualities. Its aesthetic and historical significance is largely appreciated at a human scale from within its streetscapes. The study area is located approximately 100m to the south west and although there may be glimpses of the tower element visible from vantage points within the HCA, the proposal is unlikely to have any impact on its significant character and setting or detract from its ability to be appreciated from the public domain within its network of streets.

7.3. NSW Guidelines for Preparing a Statement of Heritage Impact

The following assessment table is structured against the relevant questions to be considered in a Statement of Heritage Impact, based on the NSW *Guidelines for Preparing a Statement of Heritage Impact (June 2023)*.

Although the Inter-war warehouse at 88-90 Parramatta Road is not listed as a heritage item within Schedule 5, Part 1 of the Sydney LEP 2012, the building is considered to have heritage value and is able to meet the threshold for significance at local level. Refer to Section 5 of this report. In view of this, the following questions have been addressed accordingly.

Heritage NSW Questions to be considered in a statement of heritage impact	
4.1 Matters for consideration	
Do the proposed works include removal of unsympathetic alterations and additions? How does this benefit or impact the heritage item and its significance?	The adaptive re-use of the Inter-war warehouse and its incorporation into the new life sciences precinct redevelopment would involve the alterations and fit out at all levels and removal of later addition unsympathetic fabric at ground floor level to activate the site and provide level access from Parramatta Road through the site which would enhance the building's presence within the streetscape and its contribution to the study area as a whole.

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?	As discussed in Section 7 of this report, the proposed envelope has been designed with a compatible podium addition, and setback tower element which would be able to respect the setting of the Inter-war warehouse building and significant views experienced from the east, west and south. There will be opportunities following concept approval for incorporation of design articulation, consideration of materiality and further massaging of the built form to further mitigate any visual impacts.
Are the proposed works part of a broader scope of works? Does this proposal relate to any previous or future works? If so, what cumulative impact (positive and/or adverse) will these works have on the heritage significance of the item?	Yes, the proposal involves the redevelopment of the whole study area for the purposes of a life sciences innovation precinct. The warehouse will be repurposed and adapted for conferences and exhibitions (science on display). The adaptive reuse of the building also provides opportunities for incorporation of interpretation within the building and for the site, which would have a positive impact on its significance.
Are the proposed works to a heritage item that is also significant for its Aboriginal cultural heritage values? If so, have experts in Aboriginal cultural heritage been consulted? Has the applicant checked if any other approvals or a separate process to evaluate the potential for impacts is required?	Aboriginal Due Diligence Assessment has been prepared and accompanies this application.
Do the proposed works trigger a change of use classification under the National construction code that may result in prescriptive building requirements? If so, have options that avoid impact on the heritage values been investigated?	The proposal incorporates the retention and adaptive reuse of the Inter-war warehouse building (currently vacant) as part of the life sciences precinct, and for its potential use for conferences and exhibitions and as a precinct entrance. Its adaptation would require a change in its NCC classification of use and also likely require changes to access and fire services through the building. The reference scheme demonstrates that the proposal can incorporate alterations, which have been designed to facilitate this change of use. New services and stairs can be located within the adjacent (new) podium structure, and vertical lift transportation can be accommodated to the rear and side of the central access spine, to conserve the building's internal spatial qualities.
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?	The current concept proposal is for a Planning Proposal and is a State Significant Development. While the Sydney DCP has not been considered, the proposal has been designed to respond to the strategic context and vision for Tech Central and the Parramatta Road Corridor.
Will the proposed works result in adverse heritage impact? If so, how will this be avoided, minimised or mitigated?	As discussed within this report, and demonstrated within the reference scheme, the proposal can respect and conserve the heritage values of the Inter-war warehouse building, incorporating careful and considered alterations and adaptation for its new use. Stage 2 of the development will provide further opportunities to refine the design, incorporate articulation, interpretation,

	landscaping and materiality which can further address its setting and contribution to the study area and Parramatta Road streetscape.
Considerations for specific types of work: Alterations and additions	
Do the proposed works comply with Article 22 of The Burra Charter, specifically Practice note article 22 — new work (Australia ICOMOS 2013b)?	The proposal involves the redevelopment of the whole study area for a new life sciences precinct. The existing Inter-war warehouse building would be retained adaptively re-used for the purposes of conferences and exhibition space and as demonstrated within the reference scheme can incorporate sensitive approach to enable new services and fit-out while respecting the buildings existing features. New development around the warehouse building would include a new podium building with tower form above and new life science education building to the rear of the site. The new built forms would be subject to a design competition and would need to comply with Article 22 of the Burra Charter.
Are the proposed alterations/additions sympathetic to the heritage item? In what way (e.g. form, proportion, scale, design, materials)?	As discussed with Section 7 of this report and demonstrated within the reference scheme, the proposed works to the warehouse building can respect its original fabric and spatial qualities. New services, vertical transport and structural supports can be carefully positioned away from central access and internal view lines, the new void opening to the floor at Level 1 can be accommodated to affect only a portion of the original flooring yet also enhance opportunities for light and space within the ground floor activated/public access space. The roof structure, and the second-floor level can be retained and conserved enabling appreciation of the original trusses and roof system.
Will the proposed works impact on the significant fabric, design or layout, significant garden setting, landscape and trees or on the heritage item's setting or any significant views?	There is no significant garden setting of the existing warehouse building, however, as demonstrated within the reference scheme the new development would involve new areas of landscaping within the site, as well as along the Parramatta Road frontage and improved public domain amenity, access and enhanced sightlines.
How have the impact of the alterations/additions on the heritage item been minimised?	As demonstrated within the reference scheme, the proposal can incorporate the following: – Conserving original fabric and spaces by limiting the extend of the void area to Level 1 only and keeping Level 2 intact. – Aligning the void area with existing warehouse column grid. – Setting the void area back from the southern façade, to allow users to engage with the windows and to enable the spatial qualities of the first floor to remain interpretable. – Indicative placement of tower structural columns as they pass through the warehouse to be aligned with the existing columns. – Locate the new stair core to the new podium building adjacent. – The new warehouse lift location within the north western corner of the building, and away from the existing windows. – The new podium form to the west designed to a compatible scale to the existing warehouse building.

	– The new tower form above to be setback from the front building line.
Are the additions sited on any known or potentially significant archaeological relics? If yes, has specialist advice from archaeologists been sought? How will the impact be avoided or mitigated?	An archaeological assessment has not been undertaken.
Considerations for specific types of work: Change of use	
Does the existing use contribute to the significance of the heritage item? Why is the change of use proposed?	The Inter-war warehouse is currently vacant. The previous most recent use was for commercial purposes as an antiques store.
Will the change of use have an impact on the significance of the heritage item?	The proposed change of use of the warehouse would have a positive impact on the significance of the building as it would enable substantial opportunities for its appreciation and interpretation and provide an opportunity to positively integrate as functioning component within the new precinct.
Will the change of use require changes to the fabric or significant elements? How does that impact significance of the heritage item?	As detailed above, the proposal would require internal alterations to facilitate its adaptive reuse as a conference and exhibition space and entrance lobby including installation of services and structural columns to support the tower form above. As demonstrated within the reference scheme, its adaptation can incorporate a sensitive approach to minimise intervention to original warehouse fabric while also enabling its enhanced internal qualities. access and functionality.
Considerations for specific types of work: Access	
Will the heritage item be accessed by the public? If so, has the advice of an access consultant been sought to investigate options of Disability Discrimination Act compliant access that may have least impact on the heritage item?	The Inter-war warehouse building would be accessible by the public. Consideration of compliance with DDA would be considered as part of the design development for Stage 2.
Considerations for specific types of work: Interpretation	
Will the proposed works contribute to a continued understanding of the heritage item's history and significance?	The proposal significantly enhances opportunities to provide interpretation within the building and around the site, and an opportunity to include the history of the context of the study area.
Can interpretive features be integrated into the design?	Interpretation can be provided through the building. For example, the re-use and/display using the former car lift within Level 1. It is recommended that a heritage interpretation plan is prepared in conjunction with the design development for Stage 2.

Considerations for specific types of work: Works adjacent to a heritage item or within the heritage conservation area (listed on an LEP)	
Will the proposed works affect the heritage significance of the adjacent heritage item or the heritage conservation area?	As discussed in Section 7 of the report, the fabric, setting and views of the heritage items within the vicinity and wider vicinity of the study area would be retained and conserved.
Will the proposed works affect views to, and from, the heritage item? If yes, how will the impact be mitigated?	The proposed envelope would respect the existing pattern of development along Parramatta Road in terms of its scale and grain ensuring closer views from the University of Sydney can be conserved. The tower element, although visible within longer views looking northwest can incorporate a future design and articulation which would ensure a sympathetic backdrop to the nearby items within their significant landscape setting.
Will the proposed works impact on the integrity or the streetscape of the heritage conservation area?	In addition to the visual impacts discussed above in relation to the University of Sydney grounds, the study area lies approximately 100m to the southwest of the Hereford and Forest Lodge HCA. Significant views of the HCA are largely contained within its streets or those on its boundary, and the proposal would not be substantially visible within longer view corridors.

7.4. Statement of Heritage Impact

The development concept would retain two existing buildings on the site: an Inter-war warehouse at 88–90 Parramatta Road and a five-storey serviced apartment building at 84–86 Parramatta Road with new built form additions comprising an eight-storey life science education building with three basement levels, a four-storey podium building at the southwestern corner and a 15-storey tower (plus two plant levels) which would sit above the new podium and Inter-war warehouse forms. The serviced apartment building would also gain three additional floors.

The proposed massing balances modern development and heritage conservation. The 15-storey tower is strategically set back from the warehouse's principal building lines to preserve its pitched roof and street-facing façade, and its footprint would maintain solar access for nearby residences.

The proposed layout has been designed to respect the heritage values of the study area and enhance street activation and permeability. The retention of the warehouse and adjacent apartment building, along with the new podium structure would also establish a defined street wall along Parramatta Road and encourage public access through the site. The landscaped communal areas, open spaces, and pedestrian and vehicular access points would also provide opportunities for historical interpretation integrated into its design. The eight-storey education building at the rear aligns with the surrounding five to six-storey built form context to the north and would be set back from Parramatta Road to preserve the warehouse's setting.

As demonstrated within the reference scheme, the proposed physical interventions to the Inter-war warehouse building can be designed in a sensitive manner to respect the building's form character and represents a balanced approach to integrating modern development while conserving historical significance. The new central void within Level 1 of the Inter-war warehouse building can create a welcoming entrance for the life sciences precinct, enhance visibility and natural light to the building's internal structure, conserve the spatial integrity, and allow for the continued interpretation of the building's historic layout. In addition, the new structural columns to support the tower can be

carefully positioned to align with existing structural points to minimise its internal and external physical impacts and conserve the building's aesthetic value. Furthermore, new services can be located within the contemporary additions to the west, and vertical transport elements can be located away from key heritage elements and the central access spine.

The proposed development is considered to have an acceptable visual impact on the heritage setting and the heritage items within the vicinity. The built form envelope would respect the scale and rhythm of surrounding development along Parramatta Road, and the tower's setback would reduce its visual dominance within key viewpoints, including those from the northern boundary of the University of Sydney SHR item and from Parramatta Road to the east and west.

Although the tower and adjacent serviced apartments would be visible in longer views from within the University of Sydney campus (particularly from St John's Oval) they would not obstruct significant internal view corridors or diminish appreciation of key heritage items and open spaces like the Quadrangle and central playing fields.

Overall the proposal is able to positively integrate the historically sensitive area with the contemporary research and residential functions, conserving the area's key historical elements while introducing vibrant new uses and public realm improvements.

8. Conclusions and Recommendations

8. Conclusions and Recommendations

8.1. Conclusions

The proposal presents a rare and meaningful opportunity to fuse the rich, layered history of Parramatta Road with the future of science and innovation. The proposed retention of Inter-war warehouse, its sensitive adaptation and reuse and integration as a functional space to support the new life science's precinct would have a positive impact on the significance of the site as a whole by enabling conservation of its physical form, patina, and spatial character to support and celebrate its historical values, while and at the same time, providing opportunities to become a vibrant civic, conference and exhibition space.

The retention of the warehouse building and the scale of the podium addition and setback of the tower form respect the rhythm of development along Parramatta Road and would reduce its visual dominance from key viewpoints. The lower-scale frontage supports pedestrian engagement and mixed-use activation, and the public domain improvements and interpretive elements would further enhance the site's historical character. In addition, thoughtful future design and materiality would help it blend with the heritage context.

As demonstrated within the reference scheme, the proposal is anticipated to have a minor and acceptable physical impact on the fabric of the warehouse building in order to facilitate the new use and its effective integration into the life sciences precinct. The conceptual built forms and their massing would be able to conserve the setting and significant view lines of the warehouse building and would be able to contribute positively to the precinct's future identity.

8.2. Recommendations

In addition to the above conclusions, Curio make the following recommendations:

- Future design of the tower form should incorporate appropriate setbacks and connections to ensure that the built form and physical fabric of the Inter-war warehouse is able to be conserved in accordance with the established heritage design principles (contained within Section 6.2 of this report).
- Further investigations are required to understand the extent of surviving fabric along the ground floor of the front façade of the Inter-war warehouse, and any surviving elements should be assessed with regard to their condition and considered for incorporation within the future design.
- The new void at first floor level would require the removal of timber flooring. Future design development should consider the retention of some of the timber floor beams to provide visual interpretation of the original floor structure.
- Future design of the new podium building at 92-94 Parramatta Road and design of the alterations to the existing serviced apartment building at No.84-86 Parramatta Road should incorporate articulation and materiality which complements the setting of the Inter-war warehouse building.
- A Heritage Interpretation Plan should be prepared in conjunction with the future detailed design development for the site to ensure that the heritage values are thoroughly integrated, and its significance appropriately recognised.

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Appendix A

Extract from Curio Projects 2025, Assessment of Heritage Significance – 84-94 Parramatta Road Camperdown: Section 6. Conclusions and Recommendations

6. Conclusions and Recommendations

Conclusions

- The Medical Foundation Building at No. 92-94 Parramatta Road was originally a large structure known as 'Inglis's Horse Bazaar' and was used to house and sell horses and coaches. The general structure remained after the Horse Bazaar ended its use sometime in the late 1920's but retained its commercial use as a Car and Truck service station business until its demolition in the late 1980's, alongside the adjacent Governor Bourke Hotel. The current Medical Foundation Building was constructed in c.1988 on the footprint of these two buildings for medical science-related education and research for the University of Sydney.

- The apartment building located at No. 84-86 Parramatta Road was constructed sometime around 2014-2016, and was built on two lots that previously contained a two-story building called 'Emona House' and a two-storey, saw toothed warehouse that was used by Barry's Motor Engineering.

- No. 88-90 Parramatta Road appears to have been constructed in the late 1920's to early 1930s, as a car showroom and warehouse, as part of a subdivision of 'Sneddon's Motors' which operated out of the former Horse Bazaar to the north. Previously this area was likely utilised as the Vehicle Shed for the adjacent Horse Bazaar. By the 1950's the warehouse was utilised by 'York Motors' as a commercial space, before it's motor-vehicle use ended in the 1960s, with the site having consistently changing owners and use as a warehouse for a variety of commercial businesses.

- The warehouse building is of notable heritage significance as a rare, surviving example of an Inter-war motor-car warehouse and showroom. The building type once made up a significant part of this area of Parramatta Road during the early to mid twentieth century but most have since been demolished or significantly altered. Of particular note is the building's surviving hinged, Critall windows, unpainted and largely unaltered stripped-classical façade, with its dark faced bricks, unadorned columned bays, decorative classical dentils, painted concrete lintels, and double-gabled roofing conceled by a parapet. The building also comprises surviving internal timber floors and ceilings on the first and second floor, with potential evidence for hydraulic car lifts in the form of voids in the floors and ceilings.

- These surviving historical fabric and features of the building's original Inter-war form, both internally and externally, have the potential to yield additional information and research which can contribute to an understanding of how these motor-car warehouse and showroom buildings operated and served their associated businesses. Furthermore, the building is a unique and iconic part of the Parramatta Road streetscape in this part of Camperdown, standing out amongst the surrounding modern buildings. The external facade has also been noted as being of potential heritage significance in the 2016 Fine Grain Study of Parramatta Road.

- No. 92-94 Parramatta Road has been assessed as having little to no heritage significance and does not meet the threshold for local or state heritage significance under any of the seven criteria provided by the NSW Heritage Council.

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- No. 84-86 Parramatta Road has been assessed as having no heritage significance and does not meet the threshold for local or state heritage significance under any of the seven criteria provided by the NSW Heritage Council

- No. 88-90 Parramatta Road has been assessed has having high heritage significance at a local level, and meets the threshold for significance under criterion A, E, F, and G provided by the NSW Heritage Council.

.

Recommendations

- Curio recommends that the future development to the study area incorporate the conservation of the warehouse building at No. 88 Parramatta Road. Its identified significance should be considered within the future architectural design of the Life Science Hub Redevelopment. Similar nearby structures, such as No. 104 Parramatta Road, formerly a motor-vehicle showroom and warehouse and now a café and motorcycle shop, provide good examples of adaptive re-use that have retained a large amount of heritage fabric.

- Further heritage assessments, in the form of a Heritage Impact Statement, should be undertaken to determine the level of impact that the subsequent design of the Life Science Hub will have on the heritage fabric of the No. 88-90 Parramatta Road warehouse building.

- Curio also recommends that the space now currently occupied by a covered pathway and basement road directly to the west and north of the heritage warehouse, is retained as a vehicle or pedestrian pathway in some manner, due to its history of continued use as an open and then covered pathway for carriages and horses, motor-cars, and pedestrians for nearly 110 years, through several phases of use and architectural development.

- An interpretation plan should be developed to highlight and celebrate the rich history of the 84-94 Parramatta Road site, notably to explain the history of the now demolished Horse Bazaar/Service station, and Motor-Car showroom.

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Attachment A11

Flood risk assessment

ARUP
80 YEARS

Wentworth Capital

Life Sciences Hub, 84-94 Parramatta Road, Camperdown

Flood Risk Assessment Technical Memo

Reference: 304985-00

G | 29 September 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

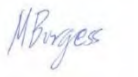
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Contents

Glossary 5

Acronyms 5

1. Introduction 6
1.1 Site Description 7
1.2 Purpose of memo 9
1.3 Objectives 9
2. Review of Existing Conditions 10
2.1 Site catchment context 10
2.2 Topographic survey 11
2.3 Existing Veriu building 11
2.4 Previous flood studies 13
2.5 Existing stormwater infrastructure 17
2.6 Existing emergency management plans 17
3. Relevant Legislation/Flood Design Criteria 18
3.1 Sydney Local Environmental Plan (LEP) 2012 18
3.2 Flood planning level requirements 18
3.3 Other relevant guidelines and policies 19
4. Existing Flood Behaviour 20
4.1 Discussion on results from Johnstons Creek Flood Study 20
4.2 Revised baseline model results 21
4.3 Climate change assessment 27
4.4 Assessment of 0.2% and 0.05% AEP flood events 29
5. Proposed Development 30
6. Flood impact and risk assessment 32
6.1 Flood impacts 32
6.2 Flood planning level requirements 32
6.3 Veriu building entrance flood risk assessment 36
7. Flood Emergency Management and Evacuation 40
8. Conclusion 41

Tables

Table 1 Flood Planning Level Requirements (Extracted from the City of Sydney *Interim Floodplain Management Policy*) 19

Table 2 Peak Depths and Flood Levels - Comparison of Original (Council) vs. revised baseline flood model results 23

Table 3 Comparison of peak water levels under climate change scenarios against baseline 28

Table 4 Comparison of peak water levels for 1% AEP, 0.2% AEP and 0.05% AEP events 28

Table 5 Flood planning level compliance summary (Locations shown in Figure 23) 34
Table 6 Veriu building entrance flood risk table 37

Figures

Figure 1 Locational Context 7
Figure 2 Site Location 8
Figure 3 Ground Floor Plan - Life Sciences Hub Camperdown. Entrance locations marked up on plan (Source: Wentworth Capital (Issue July 2026)) 9
Figure 4: Johnstons Catchment CoS Council Extents (Johnstons Creek Catchment Flood Study, 2015, CoS) 10
Figure 5 Site Topography 11
Figure 6 Existing Veriu building ground floor plan. Floor levels and main entrance locations marked up for clarity 13
Figure 7 Peak Flood Depths 1% AEP Event (Johnstons Creek Catchment Flood Study, 2015, CoS) 15
Figure 8 Peak Flood Depths PMF Event (Johnstons Creek Catchment Flood Study, 2015, CoS) 15
Figure 9 Hydraulic Hazard 1% AEP Event (Johnstons Creek Catchment Flood Study, 2015, CoS) 16
Figure 10 Hydraulic Hazard PMF Event (Johnstons Creek Catchment Flood Study, 2015, CoS) 16
Figure 11 Existing Stormwater Network 17
Figure 12 Veriu building site prior to construction, viewed from Parramatta Road (Source: Google Streetview, December 2009) 21
Figure 13 Veriu building viewed from Parramatta Road (Source: Google Streetview, December 2024) 21
Figure 14 Reporting Point locations 22
Figure 15 Combined Flood Hazard Curves (Smith et al, 2014) 24
Figure 16 Combined Hazard Civers - Vulnerability Thresholds (Smith et al, 2014) 24
Figure 17 Revised Baseline Flood Model Peak Flood Depths – 1% AEP Event 25
Figure 18 Revised Baseline Flood Model Peak Flood Depths – PMF Event 25
Figure 19 Revised Baseline Flood Model Peak Flood Hazard – 1% AEP Event 26
Figure 20 Revised Baseline Flood Model Peak Flood Hazard – PMF Event 26
Figure 21 Planning Envelope for proposed development 30
Figure 22 Proposed development - 3D perspective (Source: Wentworth Capital) 31
Figure 23 Ground Floor Plan - Life Sciences Hub Camperdown. Entrance locations marked up on plan (Source: Wentworth Capital (Issue July 2026)) 32

Glossary

Term	Meaning
Annual Exceedance Probability (AEP)	The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. 1% AEP flood is approximately equal to 1 in 100 year Average Recurrence Interval (ARI) flood event (or simply 100 year flood). It has 1% chance of occurring in a given year.
Australian Height Datum (AHD)	A common national plan of level corresponding approximately to mean sea level.
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrence of a flood as big as or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 100 year ARI flood event occurs on average once every 100 years
Basement Car Parking or Below-Ground Car Parking	The car parking area generally below ground level where inundation of the surrounding areas may raise water levels above the entry level to the basement, resulting in inundation. Basement car parks are areas where the means of drainage of accumulated water in the car park has an outflow discharge capacity significantly less than the potential inflow capacity.
Extreme Flood	An estimate of the probable maximum flood (PMF), which is the largest flood that could conceivably occur at a particular location, generally estimated from the probable maximum precipitation (PMP). Generally it is not physically or economically possible to provide complete protection against this event.
Flood Planning Level (FPL)	The combinations of flood levels and freeboards selected for floodplain risk management purposes, as determined in flood studies and floodplain risk management studies and plans.
Floodplain	The area of land which is subject to inundation of floods up to and including the probable maximum flood (PMF) event. (Interim Floodplain Management Policy 2014)
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation.
Probable Maximum Precipitation (PMP)	The greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986). It is the primary input to the estimation of the probable maximum flood.

Acronyms

Acronym	Definition
AEP	Annual Exceedance Probability
ARI	Average Recurrence Interval
ARR	Australian Rainfall and Runoff
BoM	Bureau of Meteorology
BYDA	Before You Dig Australia
CoS	City of Sydney
DCP	Development Control Plan
DEM	Digital Elevation Model

Acronym	Definition
EMPLAN	Emergency Management Plan
FFL	Finished Floor level
FPL	Flood Planning Level
FSR	Floor Space Ratio
GFA	Gross Floor Area
LEP	Local Environmental Plan
LGA	Local Government Area
LiDAR	Light Detection and Ranging
mAHD	Metres above Australian Height Datum
NSW	New South Wales
PMF	Probable Maximum Flood
SSP	Shared Socioeconomic Pathway
SWC	Sydney Water Corporation

1. Introduction

This Flood and Risk Assessment Technical Memo is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the Sydney Local Environmental Plan 2012 for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown.

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88 – 94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site-specific provision for 88-94 Parramatta Road that enables up to 6.5:1 floor space ratio for non-residential uses only.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.5:1 floor space ratio (retaining the existing MU1 Mixed Use zone)
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

1.1 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1.

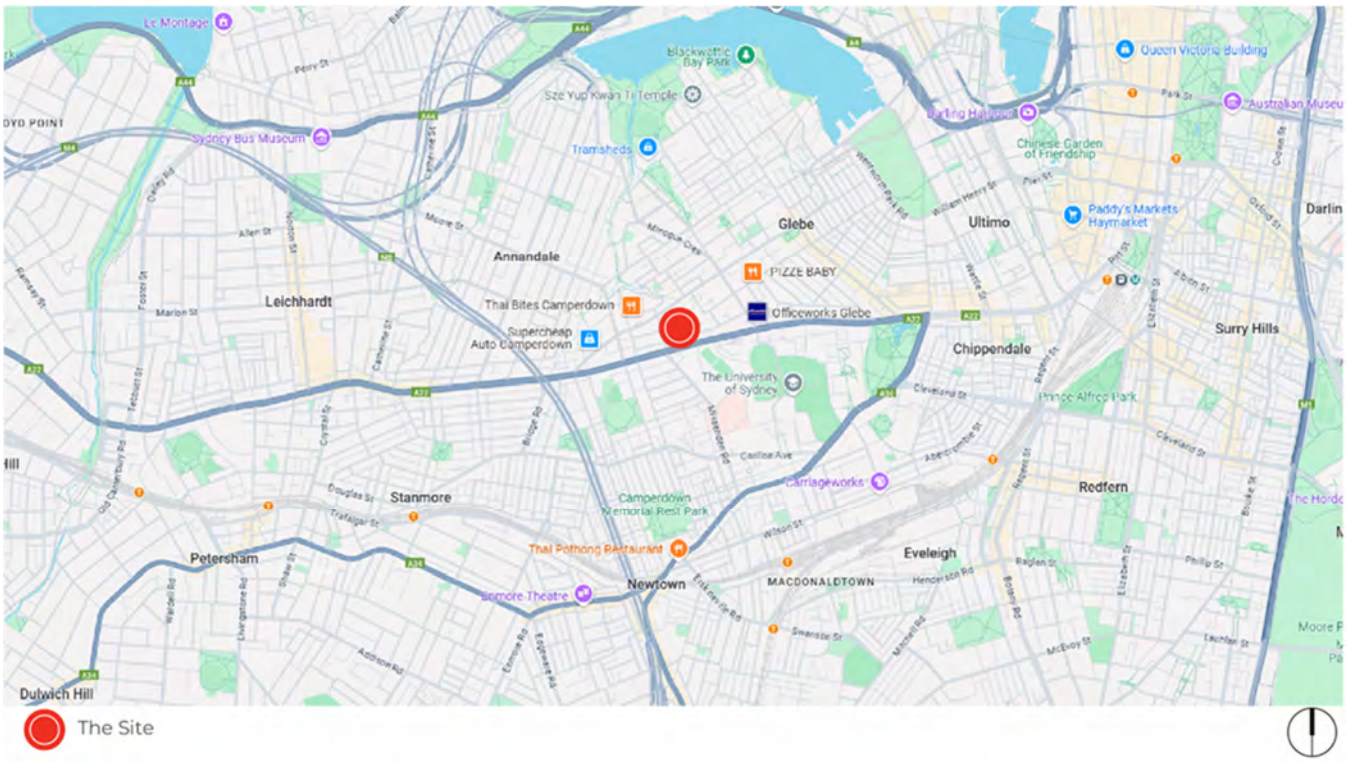


Figure 1 Locational Context

Source: Google Maps, edits by Collier Urban Planning.

An additional map showing the site location is provided in Figure 2.

The proposed development comprises of:

- **Life Science Tower Block** - 27,685 m^2 GFA, 15 storeys + 2 plant levels & 3 basement levels (80 m height)
- **Ancillary Life Science Block** – 6,647 m^2 GFA, 8 storeys (29.7 m height)
- **Serviced Apartments Block (Veriu)** – 3,545 m^2 GFA, 9 storeys – 6 existing + 3 additional (29.3 m height)

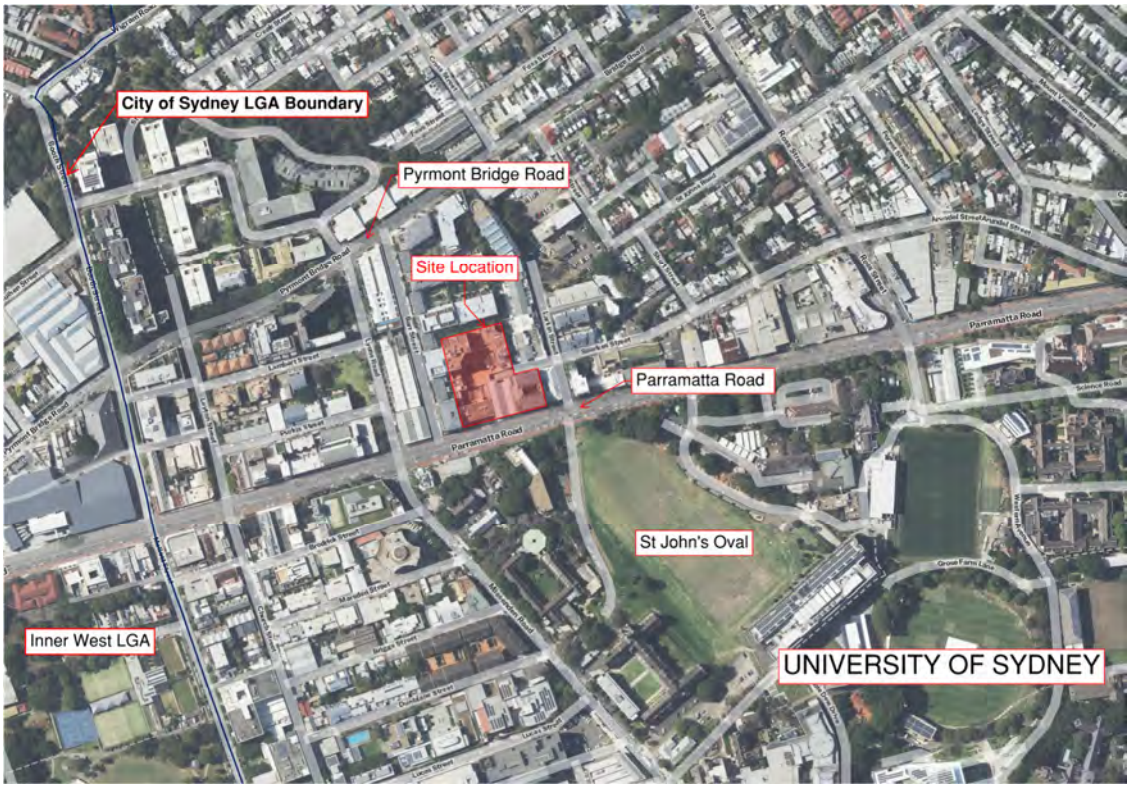


Figure 2 Site Location

To undertake the floor level assessment for the proposed development, the reference locations shown in Figure 3 have been identified as potential ingress points. These have been identified based on the ground floor plan provided in the *Camperdown Life Sciences - Reference Scheme Summary Plans 02.10.25.pdf* document, and drawings of the existing Veriu Building at 84 – 86 Parramatta Road (which is proposed to remain, with additional 3 storeys). It is understood the existing ground floor levels for the Veriu building and the adjacent warehouse (88 – 90 Parramatta Road) are being retained and incorporated into the proposed development.

Compliance with the Flood Planning Level Criteria is discussed in Section 6.2. The current architectural drawings are indicative only and the layout may be refined at future stages of design.

The following information has been provided by the architect of relevance to this assessment:

- No change is proposed to ground floor levels of the existing Veriu Building
- The ground floor of the existing warehouse at 88 – 90 Parramatta Road is to be retained, with access provided to the internal laneway at the rear of the building
- The proposed elevator within the science building entrance lobby services the upper floors only and does not connect to the basement levels
- The elevators proposed in the retail section of the science lobby can be raised to match the internal walkway level of 21.75 m AHD should there be a risk of floodwater affecting the elevator shafts. The elevators are proposed to connect to the basement floor levels.

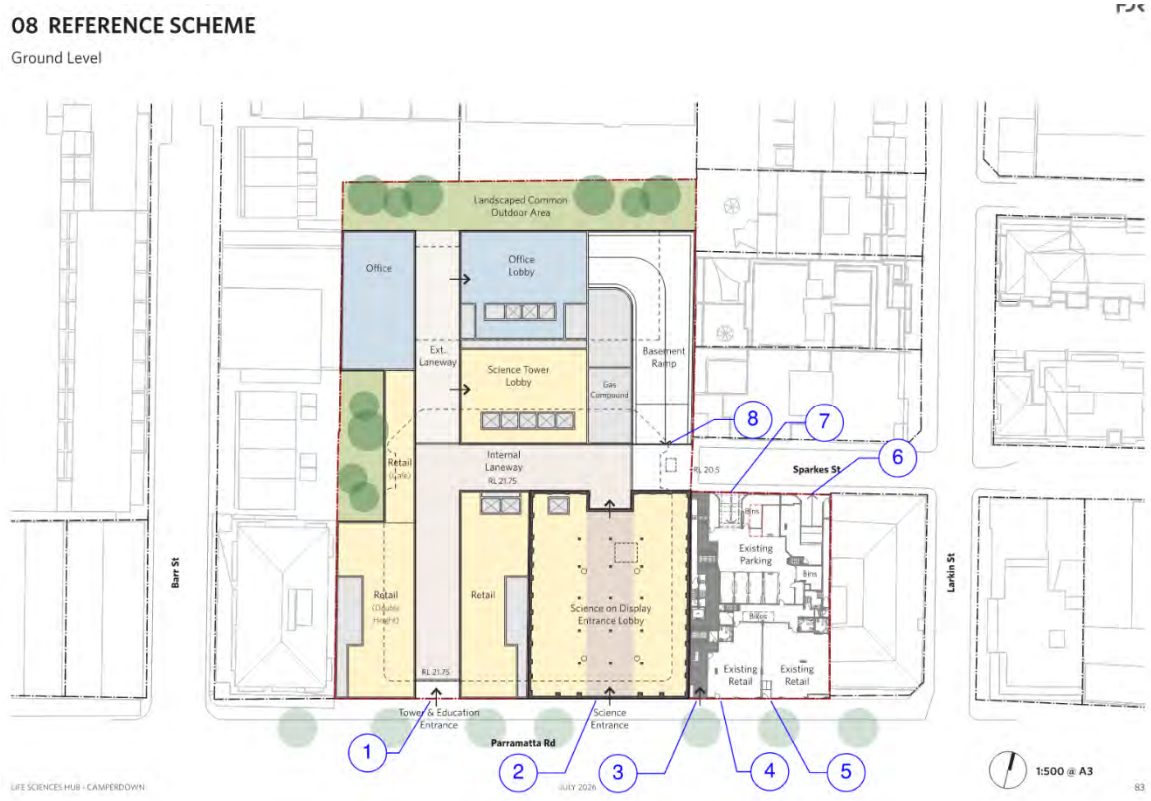


Figure 3 Ground Floor Plan - Life Sciences Hub Camperdown. Entrance locations marked up on plan (Source: Wentworth Capital (Issue July 2026))

1.2 Purpose of memo

The purpose of this technical memo is to provide an overview of flood risk to the site, and outline flooding constraints and likely flood planning implications for the proposed development.

Flooding advice is based on a desktop review of:

- Johnstons Creek Catchment Flood Study, Final Report, September 2015, WMAwater;
- Interim Floodplain Management Policy, May 2014, CoS Council;
- Sydney Development Control Plan 2012;
- Sydney Local Environmental Plan 2012;

1.3 Objectives

The key objectives of this flood assessment are to:

- Review the relevant flood studies and model results around the site;
- Review the existing site topography, external catchments and existing stormwater infrastructure in the immediate vicinity of the site;
- Review the relevant Council flood risk management policies that may apply to the site;
- Identification of Flood Planning Level Requirements;
- Identify existing emergency management strategies.
- Updates to flood model and run to establish existing baseline;
- Provide a description of risk to development and users; and
- Provide comment on potential emergency response strategy.

2. Review of Existing Conditions

2.1 Site catchment context

The site is situated within Johnstons Creek Catchment, which spans both the City of Syndey (CoS) and Inner West Local Government Areas (LGA). The proposed development site lies completely within the CoS LGA.

The site is located approximately halfway down the Johnstons Creek catchment. The catchment generally slopes from south to north, with steeper topography in upper areas, before the becoming relatively flat further down the catchment, particularly near Rozelle Bay.

The topography of the Johnstons Creek catchment within the CoS LGA is shown in Figure 4.

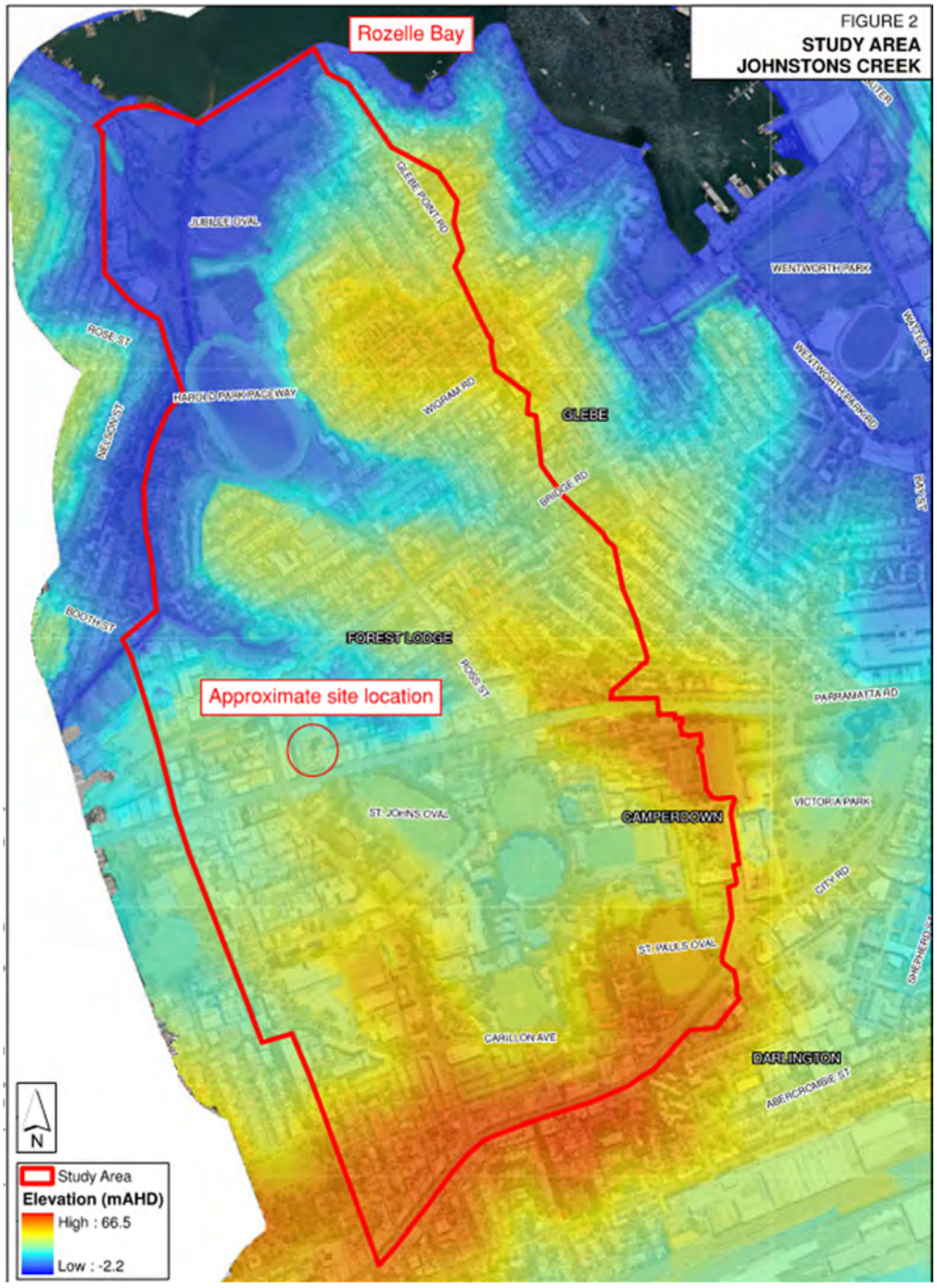


Figure 4: Johnstons Catchment CoS Council Extents (Johnstons Creek Catchment Flood Study, 2015, CoS)

2.2 Topographic survey

Topographic survey of the site area was undertaken by Crux Surveying Australia in August 2024. The topographic survey covers the Barr Street, Larkin Street and Sparkes Street corridors adjacent to the site, the footpath and kerb side lane along Parramatta Road, the existing vehicular entrance driveway and the internal open space area.

Along the southern frontage of the site (on Parramatta Road), the survey illustrates the surface slopes from west to east, with elevations ranging from 21.9 m AHD down to 20.1 m AHD along the site boundary.

Ground levels within the internal open space areas within the site (at 92 Parramatta Road) generally range from 21.5 m AHD to 22.0 m AHD. There is a crest elevation of 22.0 m AHD at the internal walkway entrance at Parramatta Road.

The existing vehicular entrance (at Sparkes Street) has a crest level of approximately 20.0 m AHD where the driveway begins to ramp down towards the car park. The ground surface slopes away from the crest elevation to the east, towards the intersection of Sparkes Street and Larkin Street. Elevations range from 20.0 m AHD at the eastern boundary to 18.3 m AHD at the intersection.

Figure 5 illustrates the topographic survey at the site.

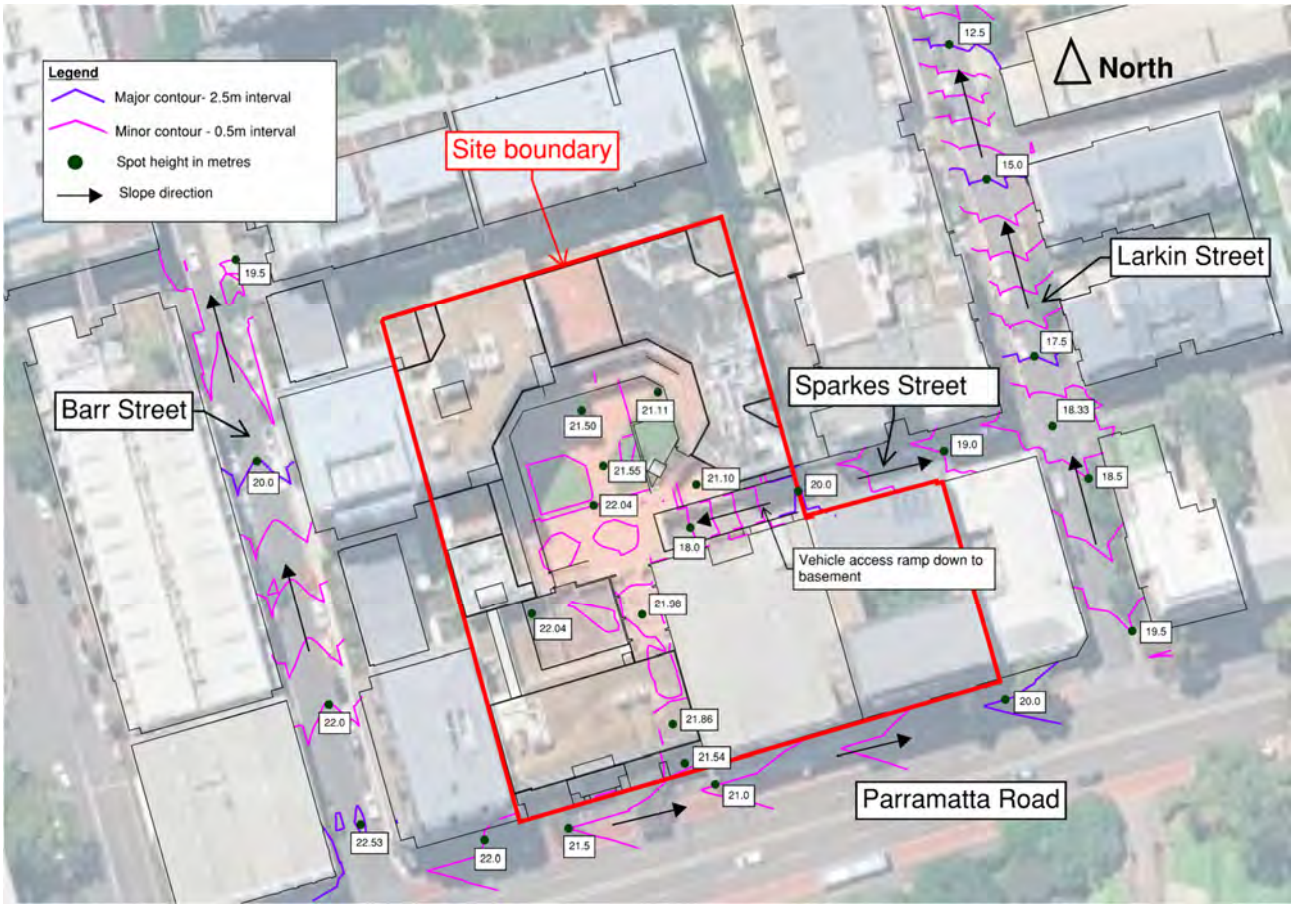


Figure 5 Site Topography

2.3 Existing Veriu building

Drawings for the existing Veriu apartment building were provided to compare the floor levels against the CoS flood planning requirements. A screenshot of the ground floor plan is shown in Figure 6.

The following was noted from a review of the ground floor plan

- The general ground floor level is stated as 20.66 m AHD, however there are locally raised areas within the ground floor for the residential lobby, essential services and storage areas.

- The essential services and storage area levels are illustrated to be 21.60 m AHD.
- The residential lobby does not have a floor level specified on the latest revision of the drawing (revision P). However a previous revision of the drawing (revision N, accessed from the City of Sydney DA portal, reference D/2014/69/B) indicates the floor level of the residential lobby to be 21.60 m AHD, consistent with the other raised ground floor areas (essential services and storage areas). There are no changes between the two drawing revisions to suggest the floor level of the residential lobby has changed.
- The eastern car park entrance at Sparkes Street provides entry to the to the basement level (17.56 m AHD), but has a raised threshold before descending to the basement. The raised threshold level is not specified on the existing plans, however an elevation of 19.71 m AHD is shown at the ramp in the topographic survey.
- The western car park entrance ramps up from the street level to the ground floor level, at 20.66 m AHD.
- There are three entrances from the Parramatta Road into the Veriu building; two to retail areas, and one to the residential lobby. The ground floor level is assumed to be 20.66 m AHD at all entrance locations, with the residential lobby raised internally within the building beyond the western entrance.
- Additional entrances or points of ingress at Sparkes Street (at the northern side of the building) include:
  - Egress corridor from fire stair/amenities area, with the FFL set at the ground level (20.66 m AHD) at the top of the internal stairs
  - Pedestrian entrance to residential lobby. FFL set at 20.66m AHD at top of internal stairs.
  - Two access points to the waste collection store room, with FFL's estimated from survey to be at approximately 19.6 m AHD and 19.4 m AHD. Note the waste collection store room is lowered from the remainder of the ground floor, with an internal ramp up to the car park at 20.66 m AHD
  - Fire hydrant/diesel pump room access, with the FFL estimated from survey at 19.4 m AHD based on survey; and
  - Egress corridor from fire stairs, with the FFL set at the ground level (20.66 m AHD) at the top of the internal stairs.

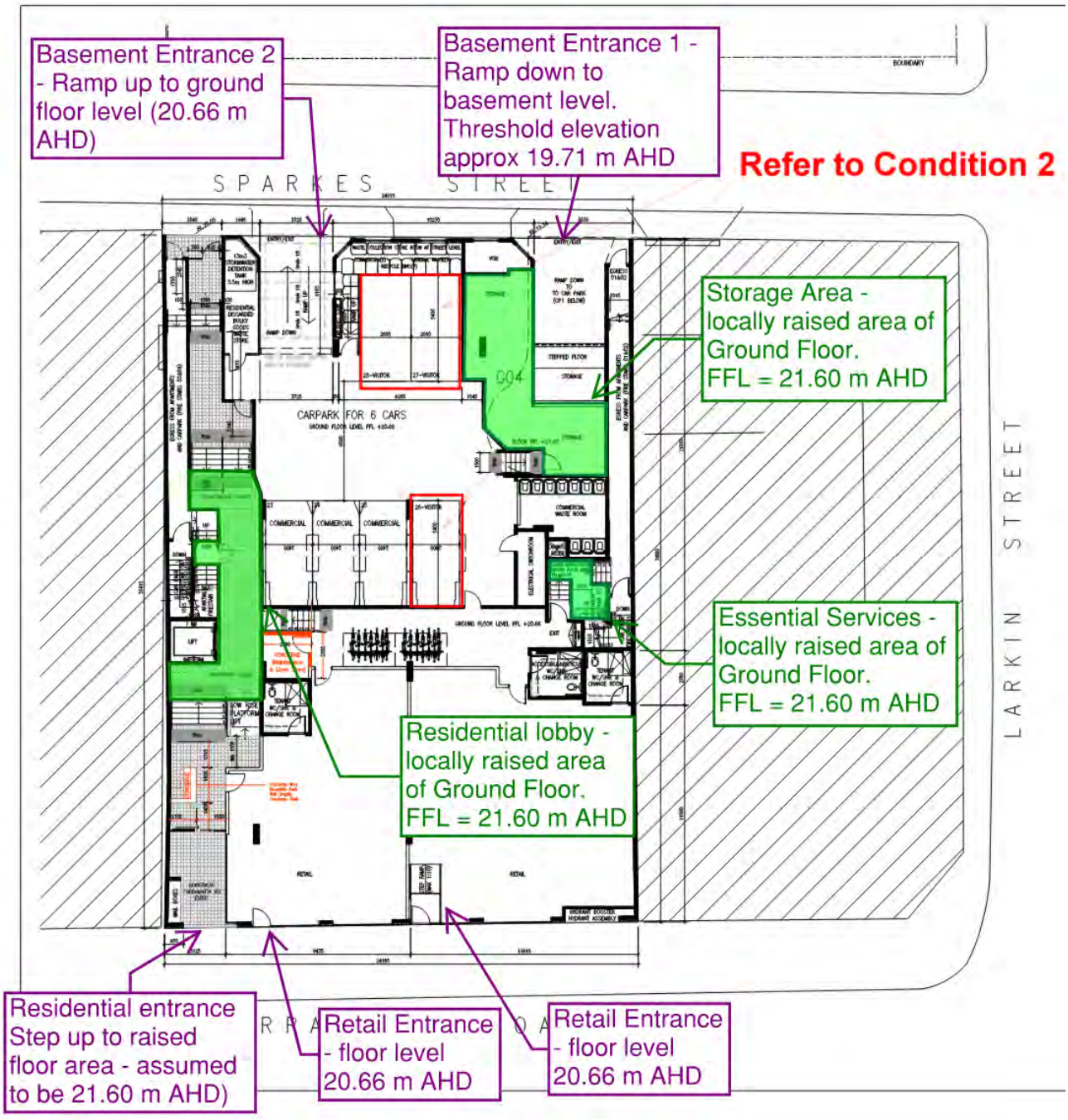


Figure 6 Existing Veriu building ground floor plan. Floor levels and main entrance locations marked up for clarity

2.4 Previous flood studies

The flood study relevant to this development is the Johnstons Creek Catchment Flood Study, completed by WMAwater in September 2015 on behalf of the CoS.

Mapping illustrating peak flood depths, flood levels, velocities and provisional hazard is provided in the flood study report for a range of design flood events.

Flood mapping from the Johnstons Creek Catchment Flood Study has been re-produced below:

- Peak Flood Depths – 1% AEP Event (Figure 7);
- Peak Flood Depths – PMF (Figure 8);

- Provisional Hydraulic Hazard – 1% AEP (Figure 9);
- Provisional Hydraulic Hazard – PMF (Figure 10);

Discussion on the flood mapping in the Council Study is contained in Section 4.1.

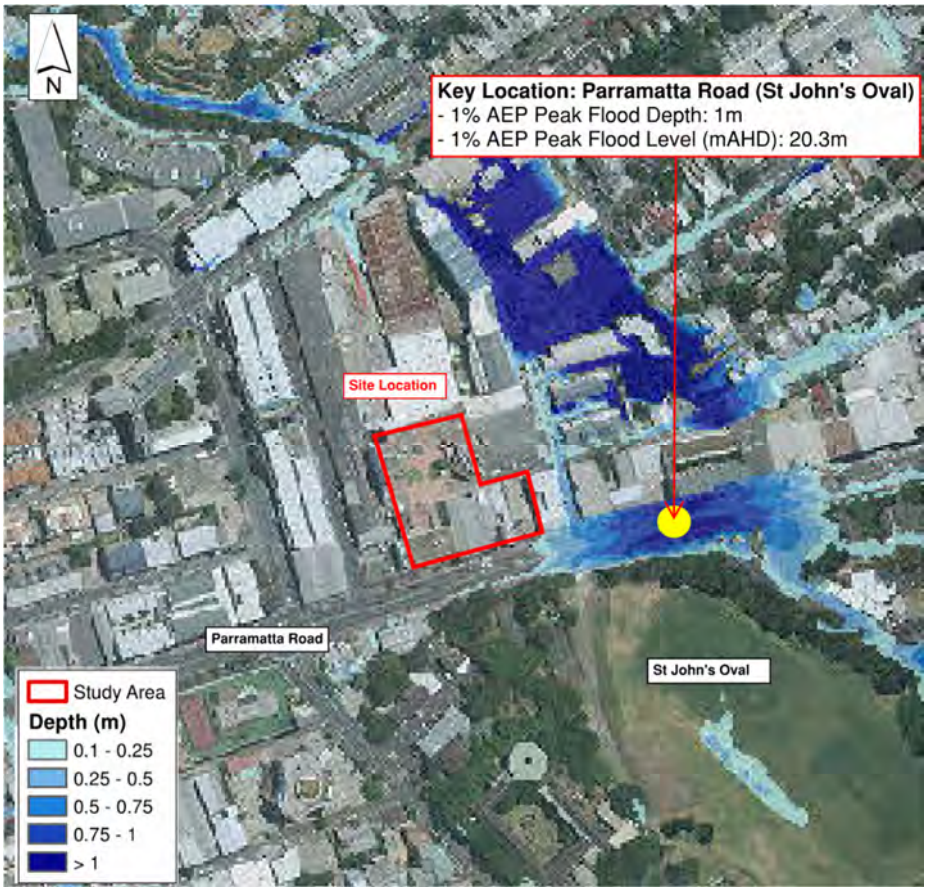


Figure 7 Peak Flood Depths 1% AEP Event (Johnstons Creek Catchment Flood Study, 2015, CoS)

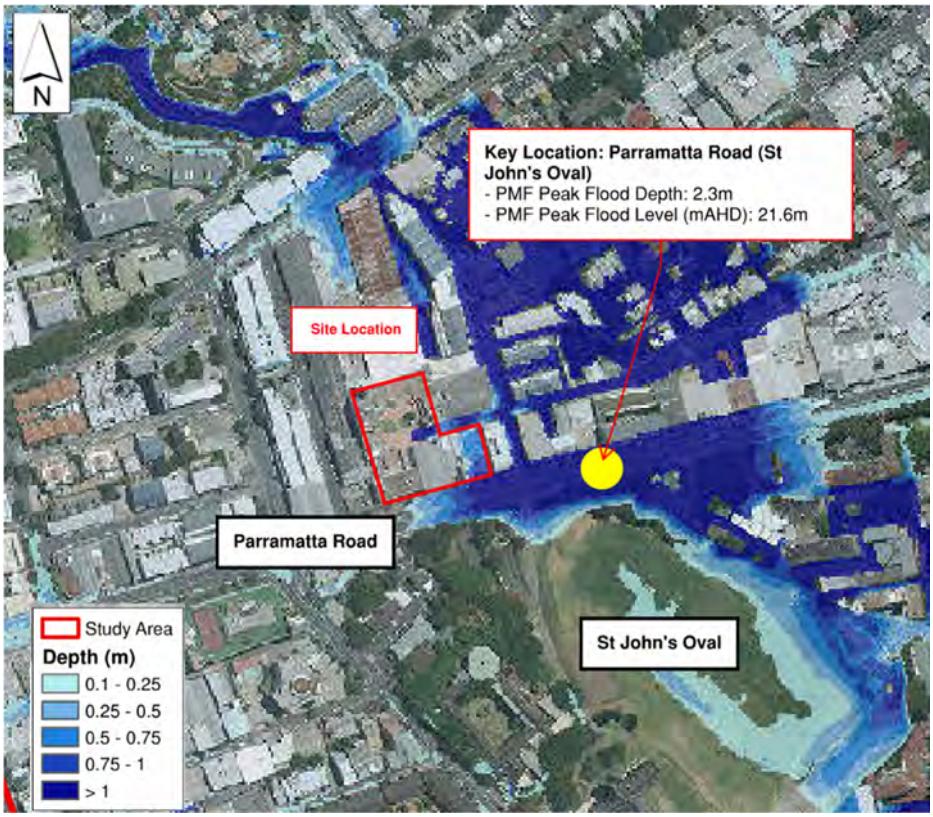


Figure 8 Peak Flood Depths PMF Event (Johnstons Creek Catchment Flood Study, 2015, CoS)

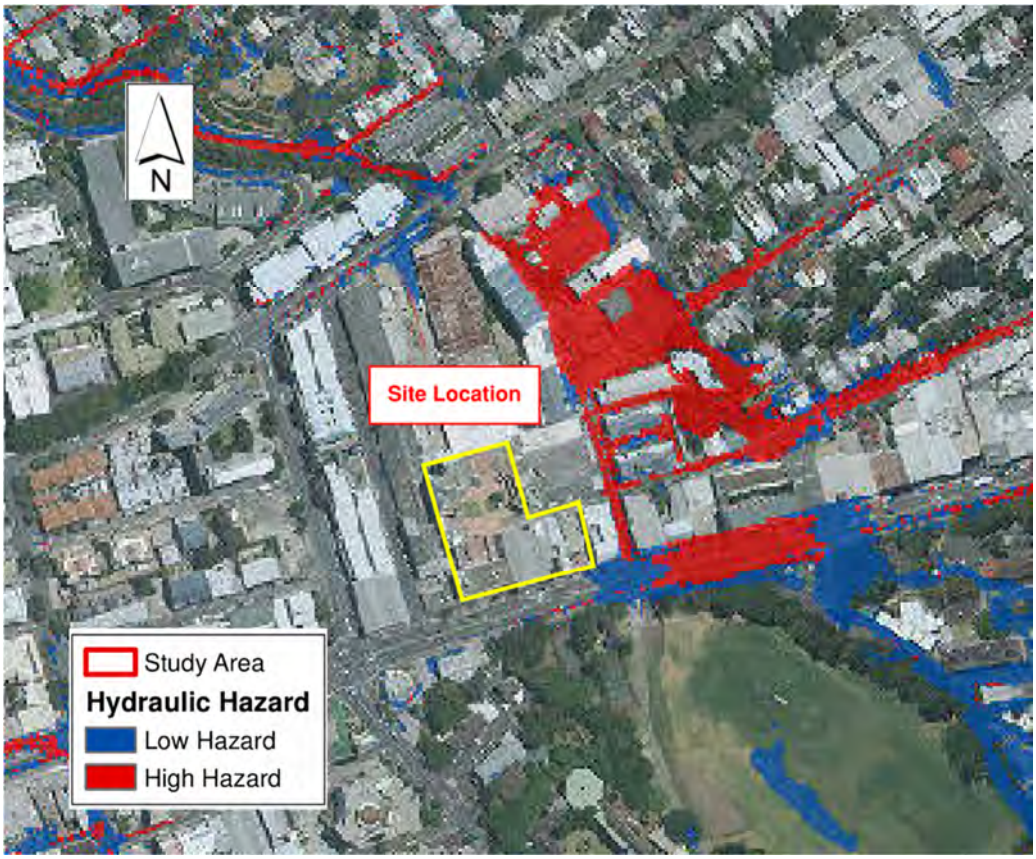


Figure 9 Hydraulic Hazard 1% AEP Event (Johnstons Creek Catchment Flood Study, 2015, CoS)

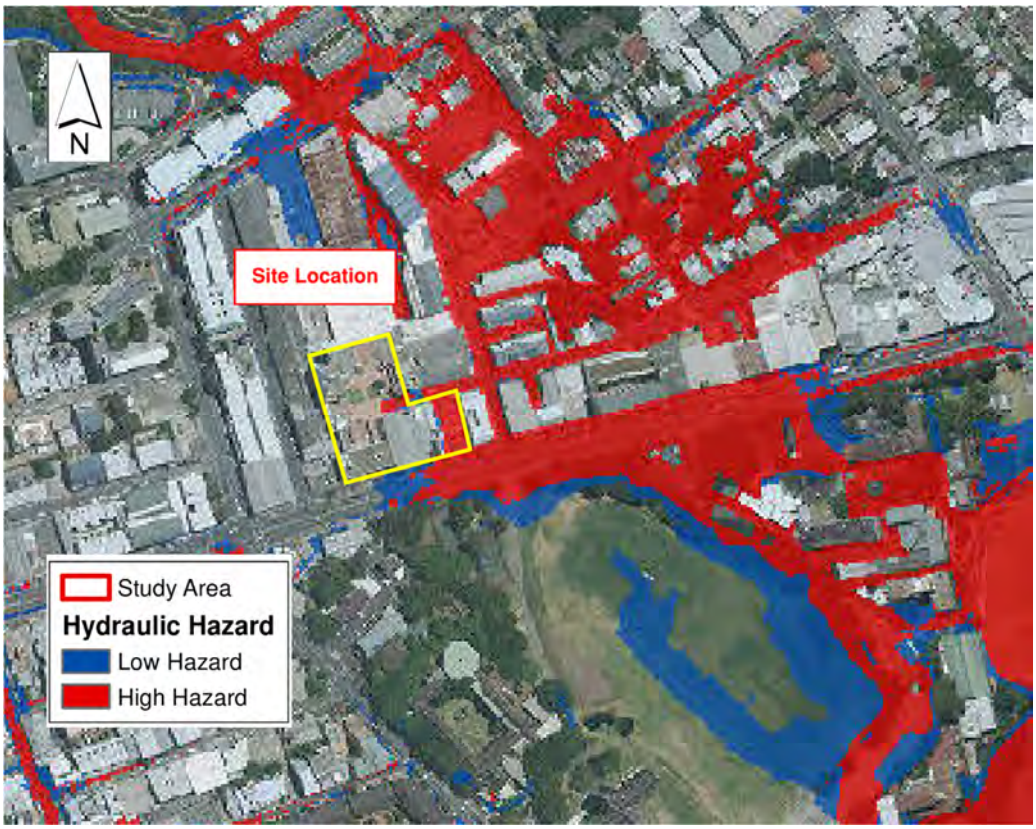


Figure 10 Hydraulic Hazard PMF Event (Johnstons Creek Catchment Flood Study, 2015, CoS)

2.5 Existing stormwater infrastructure

Information on existing stormwater infrastructure surrounding the site was obtained from:

- Responses from a Before You Dig Australia (BYDA) enquiry made on the 29 May 2025;
- Subsurface utilities investigation conducted by Crux Surveying Australia, dated 24 August 2024;
- Johnstons Creek Catchment Flood Study, Final Report, September 2015;
- Google street view at and surrounding the site location.

Existing stormwater infrastructure surrounding the site belongs to CoS and is shown in Figure 11. Further information on the stormwater can be found in the *Life Sciences Hub, 84-94 Parramatta Road, Camperdown Water Cycle & Stormwater Management Technical memo*.

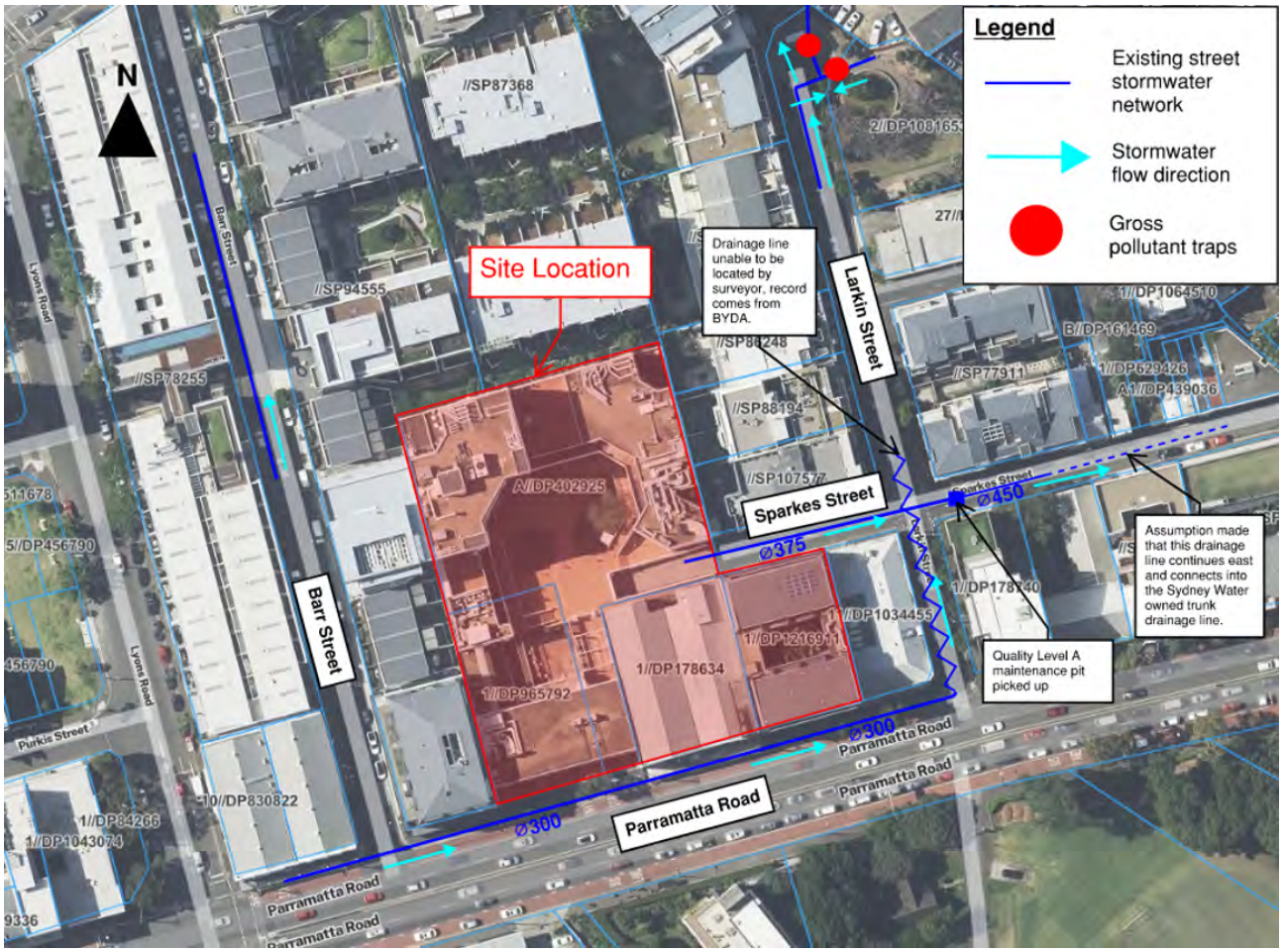


Figure 11 Existing Stormwater Network

2.6 Existing emergency management plans

The City of Sydney has a publicly available *Local Emergency Management Plan (EMPLAN), January 2025* that details arrangements for the prevention of, preparation for, response to, and recovery from emergencies within the LGA. In this plan reference is made to the State Flood Emergency sub plan in the case of flooding, the *NSW State Flood Plan, December 2024*. This plan sets out the prevention, preparation, response and initial recovery arrangements for flooding in NSW.

The University of Sydney also has a *University of Sydney Response Plan (UERP)*. Information relating to management of flood emergencies is limited, and only refers to the Site Emergency Liaison Officer liaison with emergency services when called to attend to a hazard.

It is understood there no site-specific flood emergency response plans exist for the current buildings.

3. Relevant Legislation/Flood Design Criteria

3.1 Sydney Local Environmental Plan (LEP) 2012

The Sydney LEP stipulates several requirements concerning flood planning, which are stated below:

5.21 Flood Planning

(1) The objectives of this clause are as follows—

(a) to minimise the flood risk to life and property associated with the use of land,

(b) to allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,

(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,

(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.

(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—

(a) is compatible with the flood function and behaviour on the land, and

(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and

(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and

(d) incorporates appropriate measures to manage risk to life in the event of a flood, and

(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.

(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—

(a) the impact of the development on projected changes to flood behaviour as a result of climate change,

(b) the intended design and scale of buildings resulting from the development,

(c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,

(d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.

3.2 Flood planning level requirements

According to the City of Sydney *Interim Floodplain Management Policy,* Flood Planning Level (FPL) is defined as: "*The combinations of flood levels and freeboards selected for floodplain risk management purposes, as determined in flood studies and floodplain risk management studies and plans."*

The FPL refers to the permissible minimum building floor level or threshold level. For below-ground parking, the FPL refers to the minimum level at each access point, including ventilation ducts, windows, light wells, lift shaft openings, risers, services pits and stairwells.

The CoS Interim Floodplain Management Policy provides Flood Planning Level criteria based on the development type, and the "type of flooding" present at the Site.

Details of the relevant flood planning level criteria are included in Table 1, as extracted from the *Interim Floodplain Management Policy*.

Table 1 Flood Planning Level Requirements (Extracted from the City of Sydney *Interim Floodplain Management Policy*)

Development	Flood Planning Level (FPL)
Residential – habitable rooms subject to mainstream or local drainage flooding	1% AEP flood level + 0.5 m or Two times the depth of flow with a minimum of 0.3 m above the surrounding surface if the depth of flow in the 1% AEP flood is less than 0.25 m.
Residential – habitable rooms outside floodplain	0.3 m above the surrounding surface
Residential – non-habitable rooms such as laundry or garage (excluding below-ground car parks) subject to mainstream or local drainage flooding	1% AEP flood level
Industrial or commercial – business subject to mainstream or local drainage flooding	Merits approach with a minimum of the 1% AEP flood level
Industrial or commercial – retail floor levels subject to mainstream or local drainage flooding	Merits approach with a minimum of the 1% AEP flood level. The development must demonstrate a reasonable balance between flood protection and urban design outcomes for street level activation.
Below-ground car park subject to mainstream or local drainage flooding*	1% AEP flood level + 0.5 m or the PMF (whichever is the higher)
Below-ground car park outside floodplain*	0.3 m above the surrounding surface

* The criteria for below ground car parks includes any intended use for spaces located below the surrounding surface levels e.g. car parking, retail, commercial uses, plant etc.

3.3 Other relevant guidelines and policies

A summary of the relevant flood related guidelines relevant to the proposal is provided below:

- NSW Flood Prone Land Policy (Department of Planning and Environment, June 2023)
- NSW Flood Risk Management Manual (Department of Planning and Environment, June 2023), including supporting guidelines:
  - Flood Impact and Risk Assessment (LU01)
  - Flood Function (FB02)
  - Flood Hazard (FB03)
  - Support for Emergency Management Planning (EM01)
- Considering Flooding in Land Use Planning Guideline (Department of Planning, Housing and Infrastructure, 2026)
- Ministerial Direction – Priority 5.7 Flooding (NSW Government, 1 July 2026)
- Shelter in Place Guideline for flash flooding (Department of Planning, Housing and Infrastructure, 2025)
- Climate Change Scenario Guidelines – Draft for Consultation (Department of Planning, Housing and Infrastructure, February 2026)

4. Existing Flood Behaviour

4.1 Discussion on results from Johnstons Creek Flood Study

Flood modelling files for the flood (TUFLOW) modelling undertaken for the Johnstons Creek Flood Study were provided by CoS for the purpose of this flood risk assessment. The flood model was re-run to confirm the results grids re-produced those illustrated in the flood maps in the flood study report.

The results indicate the site is located on the fringe of a floodplain area located east of the site. Flooding is predicted to occur once the capacity of the trunk drainage line conveying runoff from the upstream catchment is exceeded. This is particularly pertinent within trapped localised sag points (e.g. Parramatta Road), from which surface flows cannot easily escape. Larkin Street (to the east of the site) acts as an overland flow path corridor once the water level within the trapped sag at Parramatta Road ponds high enough to drain away to the north. This overland flow path is activated in events as frequent as the 20% AEP.

The setup of the Johnstons Creek flood model was noted to contain some limitations in the vicinity of the site area:

- The Veriu building (84 – 86 Parramatta Road) appears to have been a vacant lot at the time the Johnstons Creek flood study was prepared. Flood mapping presented in the report illustrates the Veriu building site to be within an overland flow path for the PMF event. The existing Veriu building occupies nearly the entire lot and the building would now prevent surface flows draining through the site (refer Figure 12 and Figure 13)
- Local stormwater elements (pits/pipes) were deactivated in the flood model files provided by Council. For this assessment, pits and pipes within surrounding road corridors (Parramatta Road, Larkin Street and Barr Street) have been incorporated into the model.
- The PMF event rainfall inputs in the flood model did not match the PMF rainfall depths in the Johnstons Creek flood study report. The rainfall depths documented in the Johnstons Creek report were noted to be correct, and subsequently rainfall inputs for the PMF were updated in the flood model to match the report values.
- The categorisation of flood hazard was noted to be as per the guidance provided in the 2005 NSW Floodplain Development Manual. This guidance for flood hazard has since been superseded, and revised general flood hazard categorisations have been prepared in accordance with the latest guidance.

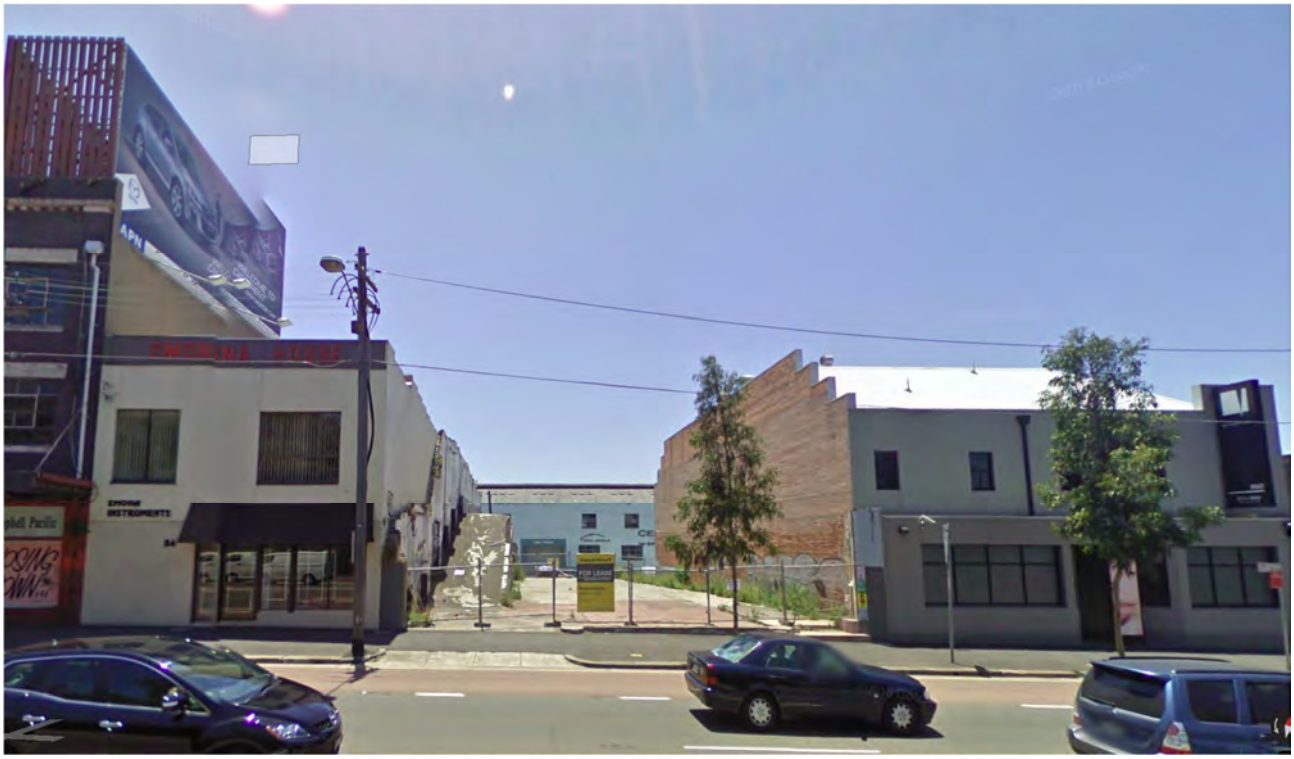


Figure 12 Veriu building site prior to construction, viewed from Parramatta Road (Source: Google Streetview, December 2009)

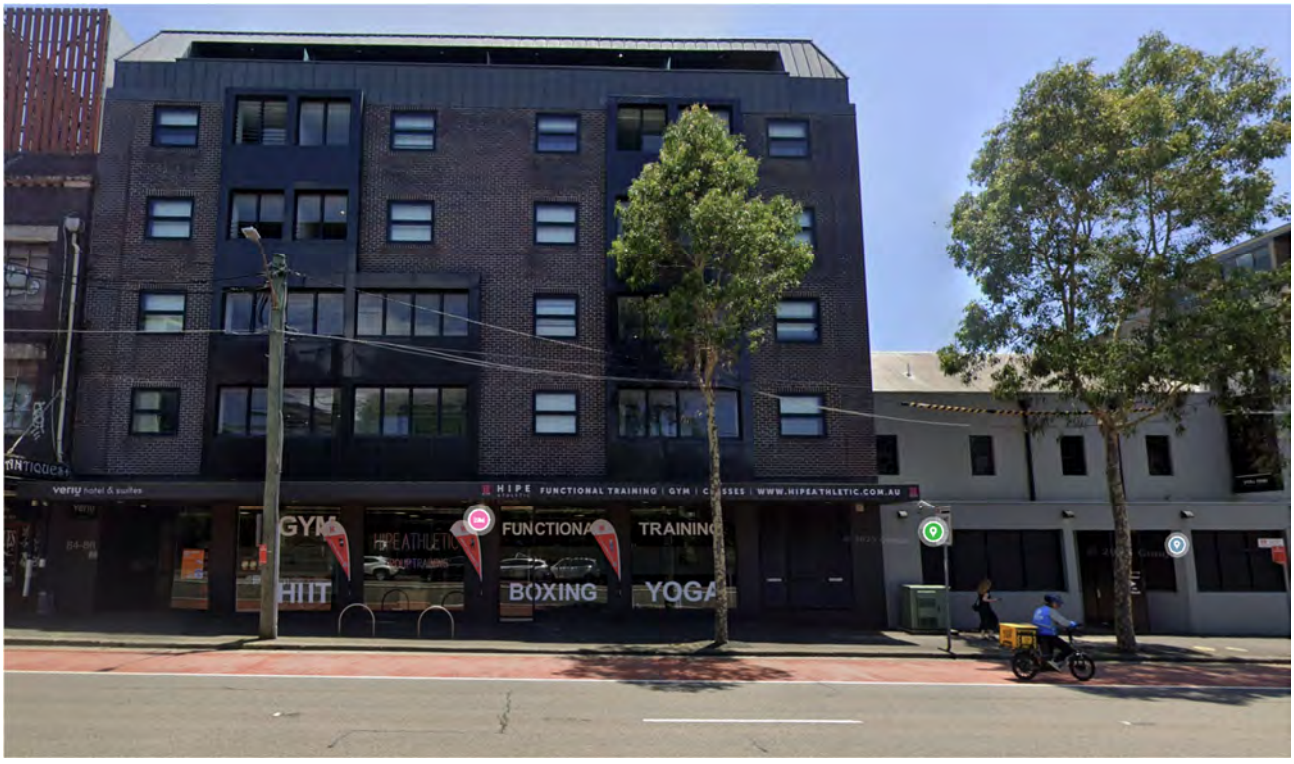


Figure 13 Veriu building viewed from Parramatta Road (Source: Google Streetview, December 2024)

4.2 Revised baseline model results

The flood model was re-run incorporating updates to address the limitations identified in the previous section, to generate revised flood results for the site area. The following conclusions were drawn following the model updates.

- Peak flood levels in the 1% AEP event were relatively similar to those reported in the Council flood study report. Reductions in peak flood level of up to 0.03 m are reported from the revised model compared to the original model. This is likely due to the inclusion of the local stormwater elements in the revised model.
- The flood extent for the PMF was no longer shown to be impacting the existing basement entrance at Sparkes Street, due to the overland flow path through the Veriu building site being blocked in the revised flood model. The peak flood level within Sparkes Street (adjacent to the basement entrance) in the revised flood model is approximately 0.31 m lower for the PMF compared to the original flood model.
- The peak flood level for the PMF event within the Parramatta Road corridor is approximately 0.17 m higher in the revised flood model, compared to the original model results, due to the removal of the overland flow path through the Veriu building. The revised peak PMF level at Parramatta Road is 21.72 m AHD.
- Flood hazard within the Parramatta Road corridor is categorised as H4 (unsafe for vehicles and people) in the PMF event. Note this is primarily driven by high flood depths with the road corridors.

A comparison of peak flood levels between the original flood model provided by Council and the revised baseline flood model is shown in Table 2. Reporting point locations are shown in Figure 14.

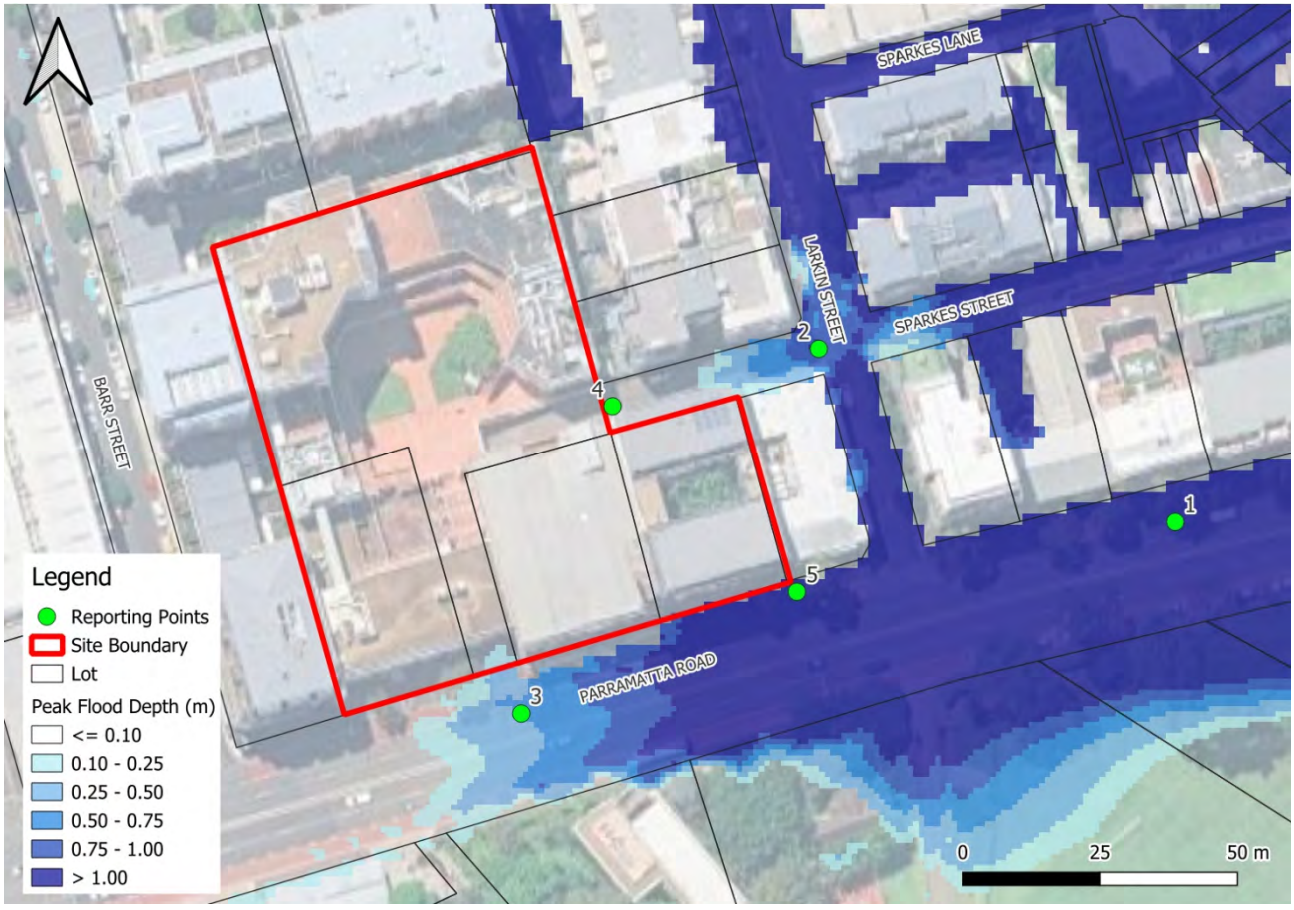


Figure 14 Reporting Point locations

Table 2 Peak Depths and Flood Levels - Comparison of Original (Council) vs. revised baseline flood model results

Reporting Point	1% AEP				PMF			
	Depths		Water Levels		Depths		Water Levels	
	Council	Revised	Council	Revised	Council	Revised	Council	Revised
1	1.04	1.03	20.31	20.30	2.29	2.45	21.56	21.72
2	0.15	0.12	18.58	18.55	1.36	1.05	19.79	19.48
3	Not Flooded	Not Flooded	Not Flooded	Not Flooded	0.34	0.51	21.55	21.72
4	Not Flooded	Not Flooded	Not Flooded	Not Flooded	0.71	Not Flooded	20.63	Not Flooded
5	0.11	0.10	20.30	20.30	1.32	1.53	21.51	21.72

Figure 17 and Figure 18 illustrate the peak flood depths for the 1% AEP and PMF events respectively from the revised baseline model. Note the flood extent both events remains similar to those documented in the Johnstons Creek Flood Study, with the exception of the change in the extent of the PMF previously noted in Sparkes Street.

The classification of hydraulic hazard was updated in line with the general flood hazard curves available in ARR 2019. Hydraulic hazard classification criteria are illustrated in Figure 15, and hazard vulnerability thresholds are illustrated in Figure 16.

Figure 19 and Figure 20 illustrate the hydraulic hazard for the 1% AEP and PMF events respectively from the revised baseline flood model.

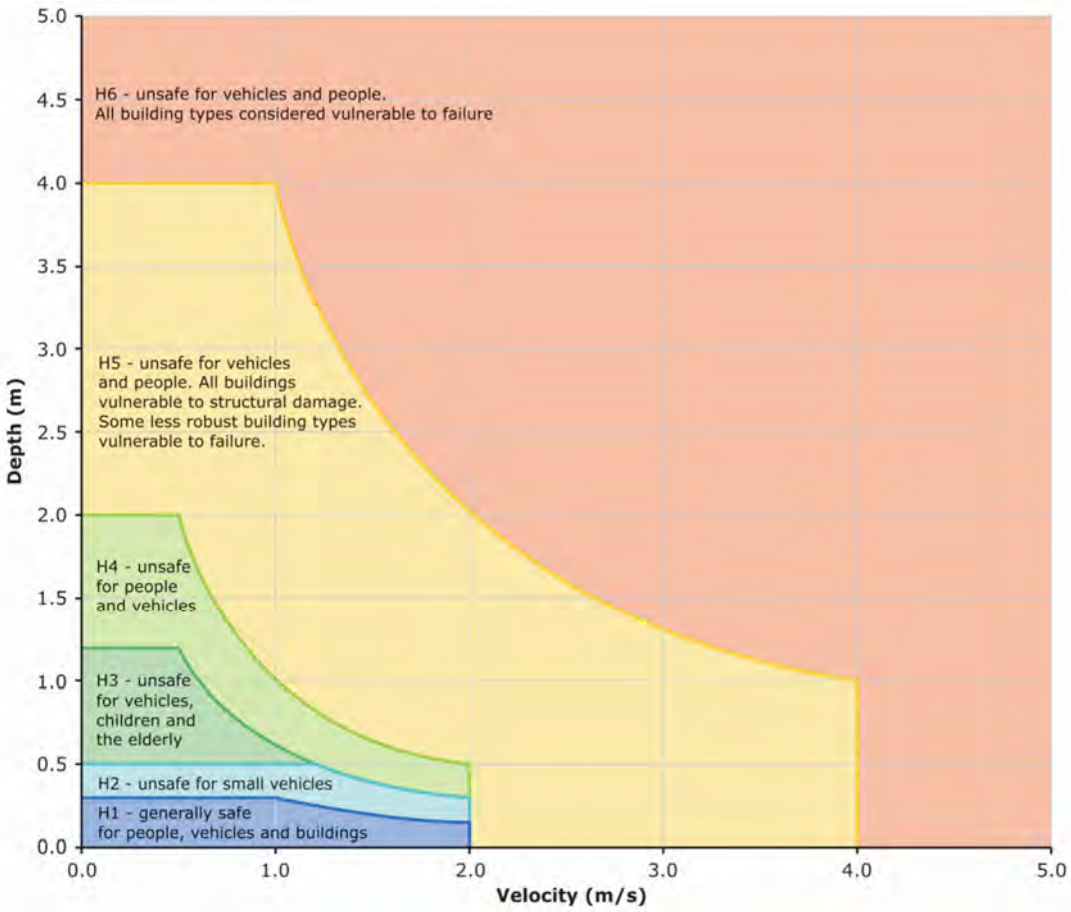


Figure 15 Combined Flood Hazard Curves (Smith et al, 2014)

Hazard Vulnerability Classification	Description
H1	Generally safe for vehicles, people and buildings.
H2	Unsafe for small vehicles.
H3	Unsafe for vehicles. children and the elderly.
H4	Unsafe for vehicles and people.
H5	Unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust buildings subject to failure.
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure.

Figure 16 Combined Hazard Civers - Vulnerability Thresholds (Smith et al, 2014)



Figure 17 Revised Baseline Flood Model Peak Flood Depths – 1% AEP Event

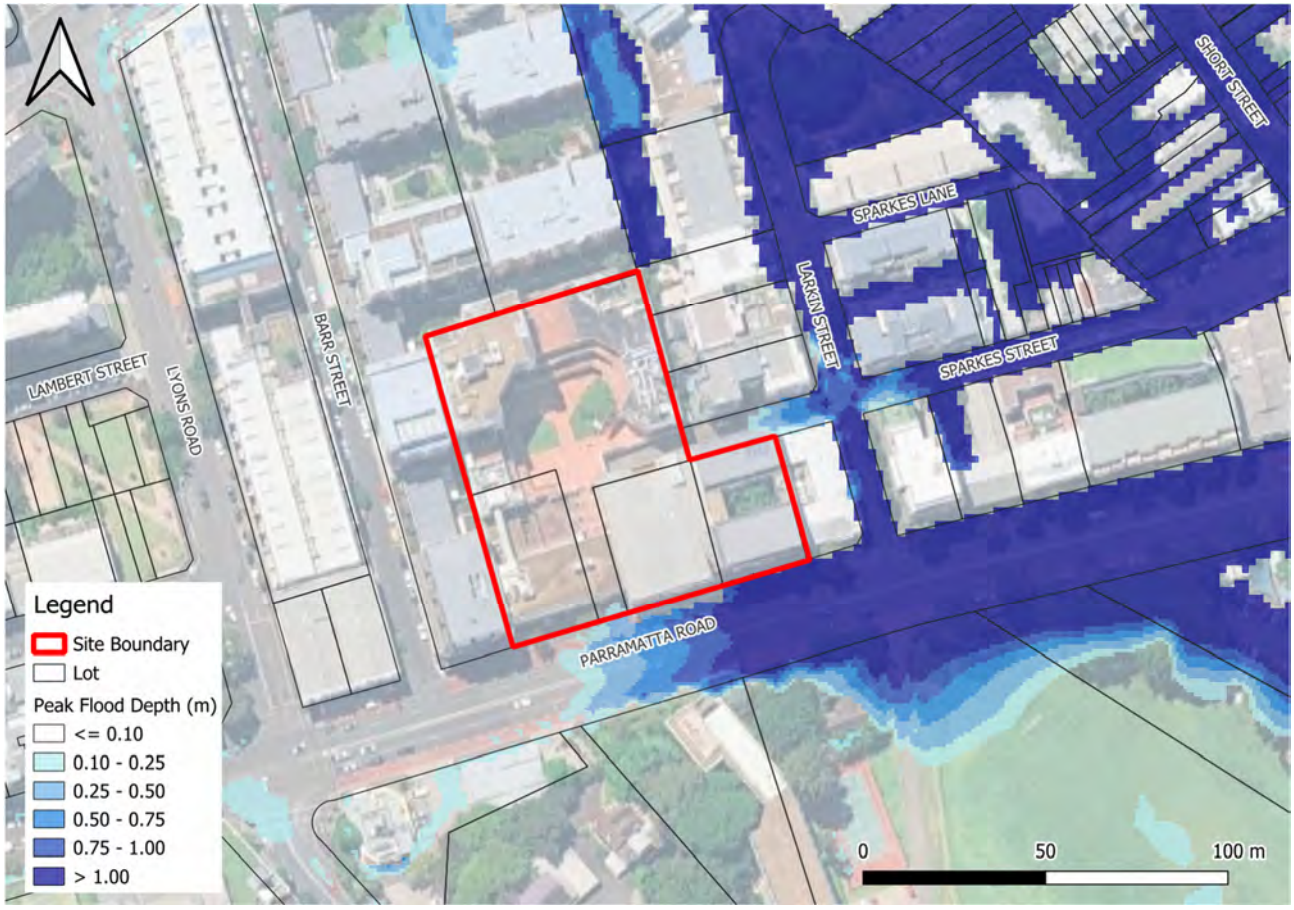


Figure 18 Revised Baseline Flood Model Peak Flood Depths – PMF Event



Figure 19 Revised Baseline Flood Model Peak Flood Hazard – 1% AEP Event



Figure 20 Revised Baseline Flood Model Peak Flood Hazard – PMF Event

4.3 Climate change assessment

The Johnstons Creek Catchment Floodplain Risk Management Study pre-dates the latest revision of Australian Rainfall and Runoff 2019 (version 4.2, August 2024), which contains significant updates to guidance on the impacts of climate change on rainfall intensities. The most important of these updates in relation to the proposed development are summarised below.

- Rainfall increase factors have generally increased for most climate change pathways from the previous (interim) guidance.
- Rainfall increases are to be applied to the Probable Maximum Flood, which is a change from previous guidance (in which PMF rainfall was not increased due to climate change)

To understand the sensitivity of peak flood levels to the predicted impacts of climate change under the updated guidance in ARR 2019, the 1% AEP and PMF events were run for the following climate change scenarios:

- SSP2 4.5 Year 2030
- SSP2 4.5 Year 2100
- SSP3 7.0 Year 2100.

Rainfall and hydrologic loss inputs in the flood model were scaled up by the applicable climate change factors available on the ARR 2019 data hub. The site is not subject to impacts resulting from future sea level rise.

A comparison of peak flood levels for the baseline and the climate change scenarios above is provided in Table 3. Reporting point locations are shown in Figure 14.

The results indicate the baseline 1% AEP flood levels are predicted to increase due to climate change impacts by:

- Up to 0.07 m under a SSP2 4.5 (Year 2030) scenario
- Up to 0.16 m under a SSP2 4.5 (Year 2100) scenario
- Up to 0.25 m under an SSP3 7.0 (Year 2100) scenario.

In the PMF, peak flood levels are predicted to increase due to climate change by:

- Up to 0.25 m under an SSP 4.5 (Year 2030) scenario
- Up to 0.53 m under an SSP 4.5 (Year 2100) scenario
- Up to 0.81 m under a SSP3 7.0 (Year 2100) scenario.

One finding of the sensitivity analysis is that the ground floor levels across the site area are not predicted to be flooded in the 1% AEP event, even under a SSP3 7.0 (Year 2100) climate change scenario. The lowest ground floor level is within the existing Veriu building at 20.66 m AHD, which is 0.11m above the predicted 1% AEP (SSP3 7.0 Year 2100) flood level. The impacts of climate change on the PMF level are more significant as evidenced by the larger increases in flood levels.

Whilst climate change is required to be considered under the CoS LEP (5.21 Flood Planning), it is assumed that flood planning level requirements in the CoS Interim Floodplain Management Policy refer to baseline flood levels derived from the CoS flood study. This will need to be confirmed with CoS. It is noted that all existing FFL's are above the peak flood levels under a 1% AEP plus climate change (SSP3 7.0 2100) scenario; therefore the site is not at significant risk of flooding in the 1% AEP event, even accounting for future climate change.

Table 3 Comparison of peak water levels under climate change scenarios against baseline

Point	1% AEP							PMF						
	Baseline	CC SSP2 4.5 (2030)	CC SSP2 4.5 (2100)	CC SSP3 7.0 (2100)	SSP2 4.5 (2030) Increase from Baseline	SSP2 4.5 (2100) Increase from Baseline	SSP3 7.0 (2100) Increase from Baseline	Baseline	CC SSP2 4.5 (2030)	CC SSP2 4.5 (2100)	CC SSP3 7.0 (2100)	SSP2 4.5 (2030) Increase from Baseline	SSP2 4.5 (2100) Increase from Baseline	SSP3 7.0 (2100) Increase from Baseline
1	20.30	20.37	20.46	20.54	0.07	0.16	0.25	21.72	21.97	22.26	22.53	0.25	0.53	0.81
2	18.55	18.59	18.65	18.71	0.04	0.10	0.16	19.48	19.73	19.88	20.04	0.25	0.40	0.56
3	Not Flooded	Not Flooded	Not Flooded	Not Flooded	N/A	N/A	N/A	21.72	21.97	22.25	22.53	0.25	0.53	0.81
4	Not Flooded	Not Flooded	Not Flooded	Not Flooded	N/A	N/A	N/A	Not Flooded	Not Flooded	Not Flooded	Not Flooded	N/A	N/A	N/A
5	20.30	20.37	20.46	20.55	0.07	0.16	0.25	21.72	21.97	22.25	22.53	0.25	0.53	0.81

Table 4 Comparison of peak water levels for 1% AEP, 0.2% AEP and 0.05% AEP events

Point	1% AEP				0.2% AEP				0.05% AEP			
	Baseline	CC SSP2 4.5 (2030)	CC SSP2 4.5 (2100)	CC SSP3 7.0 (2100)	Baseline	CC SSP2 4.5 (2030)	CC SSP2 4.5 (2100)	CC SSP3 7.0 (2100)	Baseline	CC SSP2 4.5 (2030)	CC SSP2 4.5 (2100)	CC SSP3 7.0 (2100)
1	20.30	20.37	20.46	20.54	20.46	20.56	20.67	20.78	20.62	20.73	20.86	20.99
2	18.55	18.59	18.65	18.71	18.65	18.71	18.78	18.84	18.74	18.82	18.85	18.96
3	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded
4	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded	Not Flooded
5	20.30	20.37	20.46	20.55	20.46	20.56	20.67	20.77	20.62	20.73	20.85	20.99

4.4 Assessment of 0.2% and 0.05% AEP flood events

To further understand flood risk to the proposed development, the flood model was run for the 0.2% AEP (1 in 500 year) and 0.05% AEP (1 in 2000 year) events to assess the flood immunity for these events. Results of this assessment for the reporting points in Figure 14 are presented in Table 4. The climate change scenarios listed in section 4.3 have also been run for the 0.2% and 0.05% AEP events.

The results indicate:

- Peak flood levels in the 0.05% AEP event are below the FFL for the proposed Life Sciences Tower and Office Block (21.75 m AHD), including when accounting for future climate change
- The ground floor of the Veriu building (20.66 m AHD) is above the peak flood level in the 0.05% AEP event under baseline rainfalls, but is predicted to be 0.07m below the 0.05% AEP flood level under the SSP2 4.5 Year 2030 scenario, and 0.33m below the 0.05% AEP level under a SSP3 7.0 Year 2100 scenario. It is also marginally below the 0.2% AEP flood levels under either a SSP2 4.5 Year 2100 or SSP3 7.0 Year 2100 climate change scenario.
- The locally raised sections of the ground floor in the Veriu Building (FFL 21.60 m AHD) remain above the 0.05% AEP flood level in all climate change scenarios assessed.

Whilst the lower ground floor area of the Veriu Building is predicted to be impacted by flooding in the 0.2% and 0.05% AEP events under future climate change scenarios, the maximum depth of water above the ground floor level (0.33 m) does not present a significant hazard to occupants in these events.

5. Proposed Development

Figure 21 illustrates the planning envelope for the Planning Proposal being prepared for the site. This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

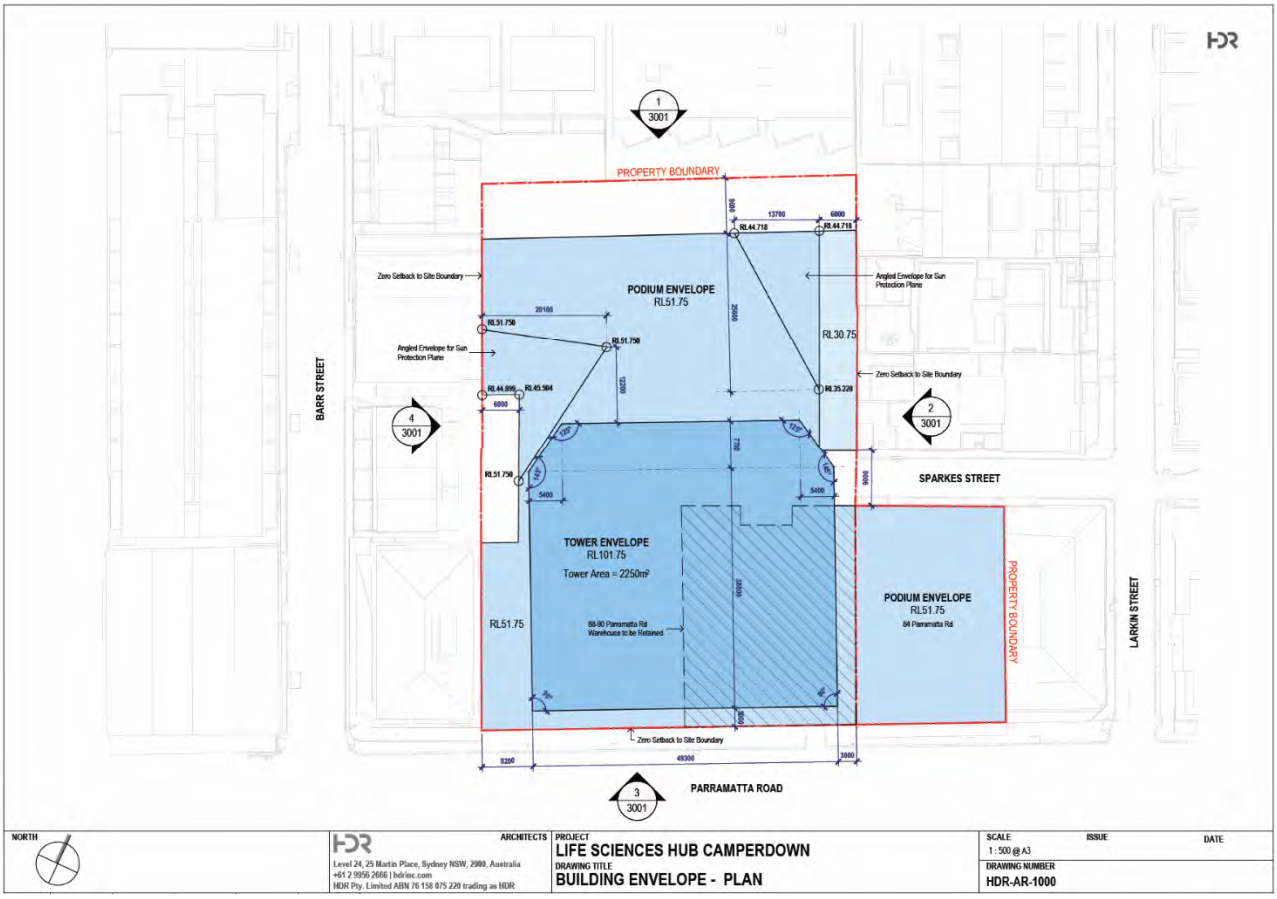


Figure 21 Planning Envelope for proposed development

A reference design developed in line with the planning envelope is illustrated in Figure 22. The development comprises:

- **Life Science Tower Block** - 27,685 m^2 GFA, 15 storeys + 2 plant levels & 3 basement levels (80 m height)
- **Ancillary Life Science Block** – 6,647 m^2 GFA, 8 storeys (29.7 m height)
- **Serviced Apartments Block (Veriu)** – 3,545 m^2 GFA, 9 storeys – 6 existing + 3 additional (29.3 m height)

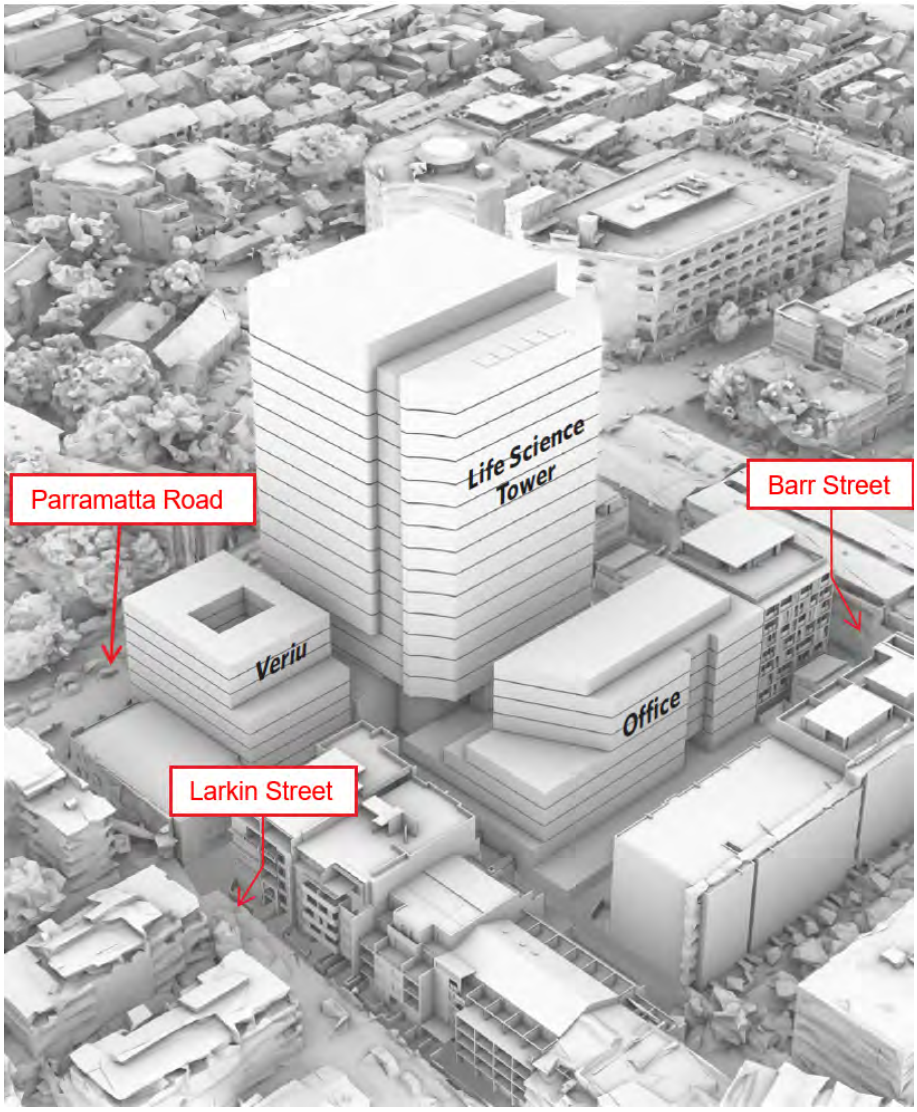


Figure 22 Proposed development - 3D perspective (Source: Wentworth Capital)

For the purpose of this technical memo, finished floor levels have been adopted based on the reference design drawings to assess flood planning level compliance against the CoS Interim Floodplain Management Policy requirements. This provides a means of identifying flooding constraints for the planning envelope and demonstrating a potential means of achieving the CoS flood planning level requirements.

Figure 23 illustrates the ground floor plan of the proposed development, based on the reference design drawings. The following information has been provided with respect to ground floor levels:

- No change is proposed to ground floor levels of the existing Veriu Building
- The ground floor of the existing warehouse at 88 – 90 Parramatta Road is to be retained, with access provided to the elevated internal laneway at the rear of the building
- The proposed elevator within the science building entrance lobby services the upper floors only and does not connect to the basement levels
- The elevators proposed in the retail section of the science lobby can be raised to match the internal walkway level of 21.75 m AHD should there be a risk of floodwater affecting the elevator shafts. The elevators are proposed to connect to the basement floor levels.

The layout of the proposed development is not significantly different to the existing site. As the existing site consists almost entirely of impervious area, it is anticipated there will not be any increased runoff from the proposed development compared with existing conditions. The building frontages adjacent to the floodplain area (along the southern and eastern sides of the site) are also not proposed to change from existing. No new

overland flow paths are proposed as part of the new development (noting the internal walkway is located above the PMF level), and there is no impact of the development on any existing overland flow paths.

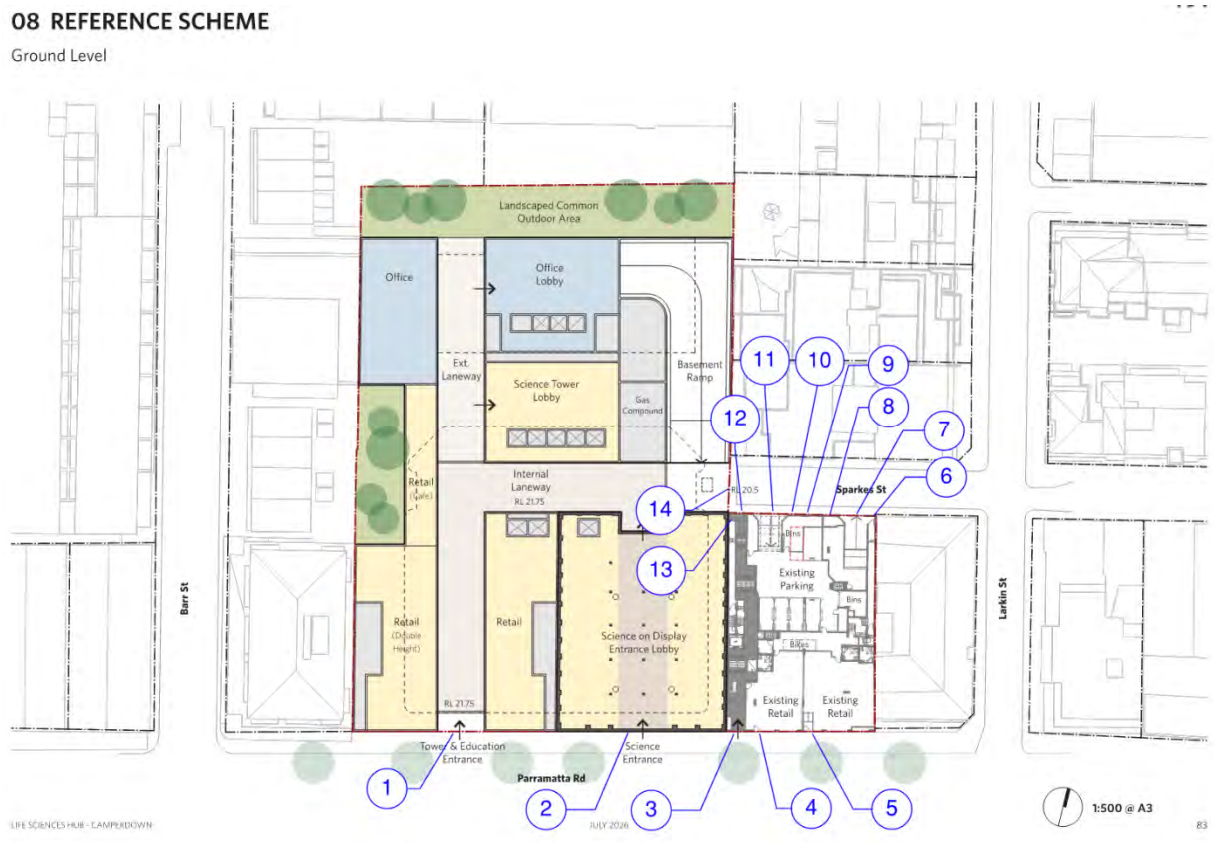


Figure 23 Ground Floor Plan - Life Sciences Hub Camperdown. Entrance locations marked up on plan (Source: Wentworth Capital (Issue July 2026))

6. Flood impact and risk assessment

6.1 Flood impacts

As the proposed Life Sciences Hub reference design is contained to within the existing building footprint, will not increase runoff compared to existing conditions, does not result in any new overland flow paths (noting the internal walkway is located above the PMF level) or block existing overland flow paths, the proposed development will not result in any changes to the flood behaviour in the external catchment. That is, the proposed development does not result in any changes to peak flood levels, or flood hazard outside the site area. Modelling of a proposed case flood model scenario was therefore deemed unnecessary, since flood results will be identical to those under existing conditions, as reported in Section 4.2.

It may be necessary to undertake modelling of the proposed case scenario should there be any alterations to the proposed design, or if any works are proposed to the public domain outside the building footprint.

6.2 Flood planning level requirements

The flood planning level (FPL) refers to the minimum building floor level or threshold level. For below-ground parking or basement levels, the FPL refers to the minimum level at each access point, including ventilation ducts, windows, light wells, lift shaft openings risers, service pits and stairwells.

Table 5 provides a summary of the floor level compliance for the reference design, based on the baseline flood results presented in this assessment.

The table illustrates that all entrances to the new Life Sciences Tower and Life Science Education blocks achieve the requisite flood planning level for the stated purpose of each portion of the development. The internal walkway level of 21.75 m AHD has been positioned at an elevation above the PMF level to help achieve the Flood Planning Level requirements, and can facilitate evacuation of the portions of the development impacted in extreme flood events.

Based on the reference design, it is understood that no lift shafts are proposed to connect to the basement floor levels from the life science lobby, which is subject to flooding in extreme flood events such as the PMF. An elevator proposed within the science lobby is understood to service the upper storeys of the building only and not connect to the basement. A second elevator within the retail area to the west of the science lobby, which is understood to be servicing the basement floors for the development, will need to be raised internally above the PMF level to achieve compliance with the Flood Planning Requirements in the CoS Interim Floodplain Management Policy, concerning ingress points to below-ground car parks.

The entrance threshold level at the new basement car park entrance off Sparkes Street (20.50 m AHD) is over 1 metre above the PMF level emanating from the intersection of Larkin Street and Sparkes Street to the east (19.43 m AHD).

The only entrances which are not compliant with the FPL's in the CoS Interim Floodplain Management Policy are:

- The existing residential entrance to the Veriu building, in which the PMF level exceeds the raised ground floor level for the residential portion of the building by 0.12 m (21.60 m AHD). It is noted that there is lift and stairwell access to the basement level provided from the residential lobby, and
- The fire pump room at Sparkes Street, which has a minor non-compliance to the PMF level (0.01 m).

Further discussion on the flood risk to the Veriu building is in Section 6.3.

Whilst the majority of building entrance levels are located above the PMF, the proposed structure is nonetheless impacted by flooding in very rare to extreme flood events, particularly at the Parramatta Road frontage. Appropriate design measures, including the use of flood-compatible materials, will need to be incorporated in the design of the building.

Note the flood planning assessment is based on the reference design only for the purpose of this Planning Proposal, and greater detail on the placement of lifts and internal building floor levels will be provided once the design has been further developed. The intent of the flood planning level assessment for this Planning Proposal is to demonstrate a potential approach that can be considered for a future DA, and provide a means of demonstrating that compliance with the CoS Interim Floodplain Management Policy can be achieved.

The envelope scheme illustrated in Figure 21 will need to achieve the minimum flood planning levels outlined in Table 5. Note that the flood planning level assessment undertaken for this report is based on the reference scheme provided, and that a more detailed assessment will need to be undertaken prior to DA submission.

Table 5 Flood planning level compliance summary (Locations shown in Figure 23)

Location	Description	FPL Criteria	FFL /Threshold level (m AHD)	1% AEP Level (m AHD)	1% AEP Level + 0.5 m (m AHD)	PMF Level (m AHD)	Compliance with CoS FPL Criteria?	Comments
1	New Life Sciences Building - Internal Walkway	Basement Penetration - greater of 1% AEP + 0.5m or PMF	21.75	Not Flooded	Not Applicable	21.72	Yes	Above PMF level
2	New Life Sciences Building - Entrance Lobby	Ground Level - 1% AEP	21.38^1	Not Flooded	Not Applicable	21.72	Yes	Part of Life Sciences building. Existing floor level assumed retained; no connections to basement levels within retail area.
3	Veriu Building Residential Lobby	Basement Penetration - greater of 1% AEP + 0.5m or PMF	21.60	Not Flooded	Not Applicable	21.72	No	Existing building. Slightly below PMF level. Depth of water above the raised ground floor areas approx. 120 mm. Low risk to building occupants.
4	Veriu Building - Retail Entrance 1	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	21.72	Yes	Existing building – assumed to be retained as retail area.
5	Veriu Building - Retail Entrance 2	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	21.72	Yes	Existing building – assumed to be retained as retail area.
6	Veriu Building - Fire Egress 1	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.66	Not Flooded	Not Applicable	19.37	Yes	Entrance at street level - stair up to ground floor within entrance
7	Veriu Building - Car Park Entrance 1	Basement Penetration - greater of 1% AEP + 0.5m or PMF	19.71^1	Not Flooded	Not Applicable	19.42	Yes	Threshold level above PMF level
8	Veriu Building - Fire Pump Room	Basement Penetration - greater of 1% AEP + 0.5m or PMF	19.40^1	Not Flooded	Not Applicable	19.41	No	Minor non-compliance in the PMF event – 0.01m above the FFL. Relatively low risk.

827

Location	Description	FPL Criteria	FFL /Threshold level (m AHD)	1% AEP Level (m AHD)	1% AEP Level + 0.5 m (m AHD)	PMF Level (m AHD)	Compliance with CoS FPL Criteria?	Comments
9	Veriu Building – Waste Collection 1	Ground Level - 1% AEP	19.40^1	Not Flooded	Not Applicable	19.43	Yes	Not flooded in 1% AEP; no means for flooding to spill to basement due to internal ramping within ground floor
10	Veriu Building – Waste Collection 2	Ground Level - 1% AEP	19.60^1	Not Flooded	Not Applicable	Not Flooded	Yes	Not flooded in 1% AEP; above PMF level
11	Veriu Building - Car Park Entrance 2	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Internal ramp up to ground floor car park - Above PMF level
12	Veriu Building – Pedestrian Entrance	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Internal ramp up to ground floor – above PMF level
13	Veriu Building - Fire Egress 2	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Internal stair up to ground floor – above PMF level
14	New Life Science Building Basement Car Park Entrance	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.50	Not Flooded	Not Applicable	Not Flooded	Yes	Outside of floodplain at Sparkes Street - Above PMF level

^1 Estimated based on topographic survey from external footpath levels. Requires verification.

6.3 Veriu building entrance flood risk assessment

The existing Veriu building is proposed to be retained for this Planning Proposal. Flood planning levels (based on historical rainfall inputs) are compliant at all entrances shown in the reference design plans, with the exception of the existing residential entrance to the Veriu building off Parramatta Road, and the fire pump room entrance at Sparkes Street

It is likely the raised portions of the ground floor in the Veriu building were designed to achieve an elevation above the PMF level, based on results presented in the Johnstons Creek flood study report. Updates made to the flood model for this assessment have resulted in the PMF level increasing to 21.72 m AHD, due to the overland flow path through the Veriu site (formerly a vacant lot) being closed off and restricting surface flow draining away from the Parramatta Road sag point. This change results in a flood depth in the PMF of 0.12 m above the raised ground floor areas at the Veriu building.

The ground floor of the Veriu building is not proposed to be altered as part of this Planning Proposal. Since the building has been shown to experience some degree of flooding under the revised assessment, the flood risk to occupants of the building has been reviewed in further detail, including a review of the finished floor levels against peak flood levels under current (Year 2030) and future (Year 2100) climate change scenarios.

A review of flood levels all ingress locations at the existing Veriu building is provided in Table 6. Refer to Appendix A for a plan layout of entrance locations.

The results from this review include:

- The Veriu building is predicted to be immune to flooding in the 1% AEP event under both the SSP2 4.5 and SSP3 7.0 climate change scenarios for current (2030) and future (2100) time horizons.
- The majority of entrances remain compliant with flood planning level requirements under both current and future climate change scenarios when reviewed against the City of Sydney's Interim Floodplain Management Policy. The only exceptions to this are at:
  - The residential lobby entrance at Parramatta Road, which is inundated in PMF events under baseline conditions.
  - The fire pump room entrance at Sparkes Street (treated as a basement entrance), which is predicted to be inundated in the PMF event under both 2030 and 2100 climate change scenarios, and
  - The eastern basement car park entrance at Sparkes Street (closest to the eastern side of the building), which has an estimated raised threshold level of 19.71 m AHD, is compliant under a 2030 climate change scenario, but is predicted to be overtopped under both SSP2 4.5 and SSP3 7.0 Year 2100 climate change scenarios.

Table 6 Veriu building entrance flood risk table

Entrance	FPL Criteria	FFL/ Threshold Level	SSP2 4.5 Year 2030				SSP2 4.5 Year 2100				SSP3 7.0 Year 2100			
			1% AEP	1% AEP + 0.5m	PMF	Compliant	1% AEP	1% AEP + 0.5m	PMF	Compliant	1% AEP	1% AEP + 0.5m	PMF	Compliant
Residential Lobby	Basement Penetration - greater of 1% AEP + 0.5m or PMF	21.60	Not Flooded	Not Applicable	21.96	No	Not Flooded	Not Applicable	22.25	No	Not Flooded	Not Applicable	22.52	No
Retail Entrance 1	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	21.96	Yes	Not Flooded	Not Applicable	22.25	Yes	20.56	21.06	22.52	Yes
Retail Entrance 2	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	21.96	Yes	20.45	20.95	22.25	Yes	20.55	21.05	22.52	Yes
Fire Egress 1	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.66	Not Flooded	Not Applicable	19.56	Yes	Not Flooded	Not Applicable	19.76	Yes	Not Flooded	Not Applicable	19.84	Yes
Car Park Entrance 1	Basement Penetration - greater of 1% AEP + 0.5m or PMF	19.71^1	Not Flooded	Not Applicable	19.60	Yes	Not Flooded	Not Applicable	19.79	No	Not Flooded	Not Applicable	19.87	No
Fire Pump Room	Basement Penetration - greater of 1% AEP + 0.5m or PMF	19.40^1	Not Flooded	Not Applicable	19.56	No	Not Flooded	Not Applicable	19.73	No	Not Flooded	Not Applicable	19.83	No
Waste Collection 1	Ground Level - 1% AEP	19.40^1	Not Flooded	Not Applicable	19.53	Yes	Not Flooded	Not Applicable	19.72	Yes	Not Flooded	Not Applicable	19.84	Yes

Entrance	FPL Criteria	FFL/ Threshold Level	SSP2 4.5 Year 2030				SSP2 4.5 Year 2100				SSP3 7.0 Year 2100			
			1% AEP	1% AEP + 0.5m	PMF	Compliant	1% AEP	1% AEP + 0.5m	PMF	Compliant	1% AEP	1% AEP + 0.5m	PMF	Compliant
Waste Collection 2	Ground Level - 1% AEP	19.60^1	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	19.72	Yes	Not Flooded	Not Applicable	19.86	Yes
Car Park Entrance 2	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	19.85	Yes
Pedestrian Entrance	Ground Level - 1% AEP	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	Not Flooded	Yes
Fire Egress 2	Basement Penetration - greater of 1% AEP + 0.5m or PMF	20.66	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	Not Flooded	Yes	Not Flooded	Not Applicable	Not Flooded	Yes

^1 Estimated based on topographic survey from external footpath levels. Requires verification.

The consequences of an extreme flood occurring at the Veriu building include:

- Potential risk to life of building occupants (residents, plus any staff or visitors in the building, including in the retail areas)
- Damage to the building and any equipment stored on the ground floor.

The flood risk to the Veriu building is an existing risk (that is, exists regardless of the proposed development). Flood modelling undertaken provides the following insights regarding flood risk at the existing site:

- The baseline 1% AEP flood level in Parramatta Road is 20.30 m AHD, which is approximately 0.36 m below the general ground floor level (20.66 m AHD) and 1.30 m below the locally raised ground floor areas (21.60 m AHD).
- Under the most severe climate change scenario (SSP3 7.0 Year 2100) simulated for this assessment, the 1% AEP flood level is 20.55 m AHD; approximately 0.11 m below the general ground floor level (20.66 m AHD), and 1.05 m below locally raised ground floor areas (21.60 m AHD) within the building.
- Under a SSP2 4.5 Year 2100 climate change scenario, flood depths above the general ground floor level (20.66 m AHD) are predicted to be 0.01 m in the 0.2% AEP event, and 0.20 m in the 0.05% AEP event. The raised portions of the ground floor (21.60 m AHD) are predicted to be 0.74 m above the 0.05% AEP level under a SSP2 4.5 Year 2100 climate change scenario
- Under a SSP3 7.0 Year 2100 climate change scenario, flood depths above the general ground floor level (20.66m AHD) are predicted to be 0.12 m in the 0.2% AEP event, and 0.33 m in the 0.05% AEP event. The raised portions of the ground floor (21.60 m AHD) are predicted to be 0.61 m above the 0.05% AEP level under a SSP3 7.0 Year 2100 climate change scenario
- Under a baseline PMF scenario, the peak flood level is approximately 0.12 m above the locally raised portions of the ground floor of the building. This depth of water would not result in a significant hazard to users in the absence of any significant velocity (effectively in the H1 category under the general flood hazard categorisation). Peak velocity within the Parramatta Road corridor is less than 1 m/s in the PMF event.
- Under a SSP2 4.5 Year 2100 PMF scenario, the peak flood level is approximately 0.66 m above the locally raised portions of the ground floor of the building; whilst in the SSP3 7.0 Year 2100 PMF scenario the peak flood level is approximately 0.93 m above the locally raised portions of the ground floor of the building. This depth of water would be classified as H3 (unsafe for vehicles, children and the elderly) in the absence of any significant velocity.
- The time from the onset of rainfall to the peak PMF level is approximately 1.5 hours for the critical duration storm.
- The duration of flooding within Parramatta Road in the PMF is similar to the duration of the rainfall event (that is, the Parramatta Road sag drains out relatively quickly once rainfall has ceased in the catchment).

Given the low probability of flooding affecting the raised ground floor areas of the Veriu building (flood immunity of greater than the 0.05% AEP event), it is anticipated that flood risk to the existing Veriu building can be addressed through operational and emergency risk management plans for the building. This plan could consider evacuation to higher flood levels within the building and restrictions on what can be stored in the areas of the building subject to flooding. Note that the increase in the number of occupants within the Veriu building resulting from the proposal will not materially change the means by which the building responds to flood risk, compared to the existing conditions.

7. Flood Emergency Management and Evacuation

The proposed life sciences research facility (comprising the life sciences tower and life science education blocks) is largely unaffected by flooding based on the revised baseline model results prepared for this assessment. The ground floor level of the new buildings is set above the PMF level emanating from the trapped sag point at Parramatta Road. However as portions of the development are flood-affected in extreme flood events, suitable consideration will need to be given to flood emergency management in line with guidance in the *Support for Emergency Planning* (EM01) guideline.

The guideline notes there are two flood evacuation responses available for the site:

- Evacuation of the building to an off-site location; and
- Shelter-in-Place within a building (i.e. vertical evacuation).

Off-site evacuation is preferable to shelter-in-place if the evacuation can be safely executed for a given site. However a shelter-in-place strategy may be a suitable option under certain conditions, particularly where available warning time to evacuate off-site is limited, and conducting an off-site evacuation may expose occupants to more risk compared with remaining within the building at a refuge area above the PMF level.

For the life sciences tower and life science education portions of the development, should the need to evacuate arise, occupants can evacuate via the internal walkway to Parramatta Road, then move off the site towards the intersection of Parramatta Road and Lyons Road. This evacuation route provides a continuously rising route away from the site.

The life sciences lobby and retail areas, which utilise the existing warehouse building, are predicted to be impacted in extreme flood events, such as the PMF. For this portion of the development, evacuation can be achieved through directing occupants to leave via the rear of the warehouse building and up to the internal walkway level (of 21.75 m AHD), which is above the PMF level. Occupants may then exit the facility and away from the site west along Parramatta Road as described above.

Flood emergency management for the Veriu building may be treated separately from the remainder of the proposed development, since ground floor of the building is predicted to be impacted by flooding in extreme events, and there is no route available away from the building should the peak PMF level be reached. Evacuation off-site could be a feasible option, since there is rising road access away from the Veriu building to a safe refuge location west of the site. This can be investigated prior to the future SSDA submission since this is the preferred flood evacuation option.

However, a shelter-in-place flood response strategy may be more suitable for the Veriu building, noting the majority of occupants will be in the residential areas above the ground floor, and conducting an off-site evacuation may expose occupants to a greater risk compared with taking refuge in the apartments, or within common areas on level 01 or above. In such a scenario, ground floor occupants within the retail spaces would need to evacuate vertically up the internal staircases to reach Level 01 before sheltering in place.

Should a shelter in place strategy be considered for the Veriu building, the requirements set out in the *Shelter in Place Guideline for Flash Flooding* (DPHI, 2025) should be reviewed and any implications for the design of the building should be established. However, with reference to the consideration in the shelter in place guideline, the proposed development:

- Does not contain any sensitive or critical facilities which are incompatible with a shelter in place flood emergency response strategy
- Is a brownfield site (i.e. an existing building within a floodplain)
- Is not in a location where developed flood warning systems exist for the wider catchment
- Flood behaviour at the site meets the definition of flash flooding, in that flooding occurs within 6 hours from the onset of rainfall, and the isolation period is less than 12 hours
- All floor above the ground floor (level 01 and above) are above the PMF level, and there is access available from floors below the PMF to level 01 by internal stairwells.

- The GFA above the ground floor level (assumed to be inundated in a PMF) is approximately 3,160 m^2. This is sufficient space to accommodate the anticipated occupants of the building should the need to shelter in place arise (noting the guideline requires a minimum of 2 m^2 per person). Note the proposal incorporates an additional 910 m^2 of floor area, entirely above the PMF level, and the increase in occupancy of the Veriu building (due to the additional 3 storeys) will not change or impact the ability for a shelter in place flood emergency response to be conducted, compared with the existing condition.
- The proposed vertical expansion of the Veriu Building is entirely above the PMF level

Structural soundness for the PMF will need to be reviewed, however it is anticipated the building will be structurally sound in the PMF given the scale and construction of the existing building, and the relatively low flood velocities.

Some design measures may need to be incorporated to into the development to facilitate a shelter in place response strategy. However both the existing Veriu building and the proposed vertical extension will contain sufficient floor space above the PMF level for the number of occupants of the building, protection from weather and suitable personal hygiene facilities.

Further assessment of flood emergency management and evacuation will be required as the design progresses. In particular, it should be noted that the revised peak flood levels for the PMF in the Parramatta Road corridor may have implications for the flood emergency management response, since the PMF level from the original Council flood study is predicted to be 0.12 m higher in the revised baseline flood model, and up to 0.93 m under the SSP3 7.0 Year 2100 climate change scenario. A Flood Emergency Response Plan (FERP) can be prepared at a later design stage in accordance with the NSW Flood Risk Management Manual and other relevant guidelines (particularly the *Support for Emergency Planning* (EM01)), outlining the flood emergency response procedure for the building.

For the purpose of the planning proposal, the commentary above (based on the reference scheme) demonstrates that feasible emergency management strategies can be implemented to manage flood risk for extreme flood events at the site.

8. Conclusion

This flood and risk assessment technical memo has been undertaken based on the flood model utilised for the Johnstons Creek Catchment Flood Study, completed by WMAwater in September 2015 on behalf of the CoS. Arup has made updates to the flood model following review to establish revised baseline flood levels for the site which are in line with the present-day site conditions. A reference design consistent with the planning envelope shown in Figure 21 has been reviewed and assessed against the flood planning criteria in the CoS Interim Floodplain Management Policy.

For the purpose of the planning proposal, the flood assessment has resulted in the following conclusions:

- Peak flood levels at the site for in the 1% AEP event were relatively similar to those reported in the Johnstons Creek Catchment Flood Study report, prepared for CoS.
- The existing buildings within the site area are not impacted by the 1% AEP flood level.
- The PMF has been shown to not be impacting the existing basement car park entrance at Sparkes Street, due to the overland flow path through the Veriu building site being blocked in the revised baseline flood model.
- The peak flood level for the PMF event within the Parramatta Road corridor is approximately 0.17 m higher than reported in the Johnstons Creek Catchment Flood Study. The revised PMF level in Parramatta Road predicted to be 21.72 m AHD, which has increased due to removal of the overland flow path through the Veriu building site.
- As the proposed Life Sciences Hub development is contained to within the existing building envelope, will not increase runoff compared to existing conditions, and no new overland flow paths are created or

blocked, the proposed development will not result in any changes to the flood behaviour (that is, will not result in impacts to peak flood levels or hazard) outside the extent of the site area.

- The assessment indicates that all entrances to the new Life Sciences Tower and Life Sciences Education blocks (but excluding the Veriu building) achieve the flood planning level requirements in the CoS Interim Floodplain Management Policy. The internal walkway level of 21.75 m AHD has been positioned at an elevation above the PMF level to help achieve the Flood Planning Level requirements. It is understood the new lift connecting the ground floor of the warehouse building to the basement floors will be raised above the PMF flood level to achieve the Flood Planning Requirements; this will be considered in further detail at future design stages.
- The only entrances not compliant with the CoS FPL requirements is the existing residential entrance to the Veriu building, in which the PMF level (21.72 m AHD) is above the raised ground floor level for the residential portion of the building (21.60 m AHD), and the fire pump room at Sparkes Street, which has a minor non-compliance to the PMF level (0.01 m).
- Given the low probability of flooding affecting the raised ground floor areas of the Veriu building (flood immunity of greater than the 0.05% AEP event), it is anticipated that flood risk to the Veriu building can be addressed through operational and emergency risk management plans for the building.
- Flood emergency management for the portions of the site affected by flooding (which are areas retaining the existing ground levels) will need to be considered in further detail at future stages. Where off-site evacuation is feasible, this should be the preferred flood emergency response strategy.
- A shelter-in-place flood emergency response strategy may be appropriate for the Veriu Building. Should a shelter-in-place strategy be considered for the Veriu building, the requirements in the *Shelter in Place Guideline for Flash Flooding* (DPHI, 2025) should be reviewed and any implications for the design of the building should be established. However shelter in place is likely to be a suitable flood evacuation response for the Veriu building given there is sufficient space available within the upper floors of the building including the proposed expansion, to safely accommodate the occupants of the building (The GFA above the ground floor level is approximately 3,160 m^2).
- It is assumed that flood planning level requirements in the CoS Interim Floodplain Management Policy refer to baseline flood levels from the CoS flood model (i.e. do not require climate change impacts to be incorporated into the FPL estimates). Sensitivity testing undertaken for this assessment indicates the 1% AEP flood level does not impact the proposed floor levels under an SSP3 7.0 Year 2100 climate change scenario, and therefore the site is not at significant risk of flooding in the 1% AEP event due to future climate change impacts. It is noted that significant increases in the PMF level are predicted under climate change scenarios.

Based on the assessment of the reference design, the following recommendations have been provided with regards to the future design of the proposed development:

- Ground Floor levels for the Life Science Tower and Life Science Education blocks should be set above the PMF level (excluding the existing warehouse building which is being retained). This will allow for compliance with the CoS Interim Floodplain Management Policy to basement entrances, allow for a flood-free evacuation route from the development in the PMF, and avoid creating any new overland flow paths.
- The entrance to the basement car park of Sparkes Street should remain above the PMF level to achieve compliance with the CoS Interim Floodplain Management Policy
- For the existing warehouse building, access to a flood-free level (i.e. above the PMF level) should be provided through the rear of the building to allow for evacuation of occupants in extreme flood events.
- Flood emergency response requirements for the existing Veriu building should be reviewed at later stages to understand implications for the design of the redevelopment of the building.

Appendix A

Veriu building entrance – flood level plan

New Life Science Building Basement Car Park Entrance

FFL	20.50
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	Not Flooded	Yes
SSP2 4.5 2030	Not Flooded	Not Flooded	Yes
SSP2 4.5 2100	Not Flooded	Not Flooded	Yes
SSP3 7.0 2100	Not Flooded	Not Flooded	Yes

Waste Collection 2

FFL	19.60
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	Not Flooded	Yes
SSP2 4.5 2030	Not Flooded	Not Flooded	Yes
SSP2 4.5 2100	Not Flooded	19.72	Yes
SSP3 7.0 2100	Not Flooded	19.86	Yes

Waste Collection 1

FFL	19.40
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	19.43	Yes
SSP2 4.5 2030	Not Flooded	19.53	Yes
SSP2 4.5 2100	Not Flooded	19.72	Yes
SSP3 7.0 2100	Not Flooded	19.84	Yes

Refer to Condition 2

SPARKES STREET

Fire Pump Room

FFL	19.40
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	19.41	No
SSP2 4.5 2030	Not Flooded	19.56	No
SSP2 4.5 2100	Not Flooded	19.73	No
SSP3 7.0 2100	Not Flooded	19.83	No

Veriu Basement Car Park Entrance 2

FFL	20.66
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	Not Flooded	Yes
SSP2 4.5 2030	Not Flooded	Not Flooded	Yes
SSP2 4.5 2100	Not Flooded	Not Flooded	Yes
SSP3 7.0 2100	Not Flooded	19.85	Yes

Fire Egress 1

FFL	20.66
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	19.37	Yes
SSP2 4.5 2030	Not Flooded	19.56	Yes
SSP2 4.5 2100	Not Flooded	19.76	Yes
SSP3 7.0 2100	Not Flooded	19.84	Yes

Pedestrian Entrance

FFL	20.66
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	Not Flooded	Yes
SSP2 4.5 2030	Not Flooded	Not Flooded	Yes
SSP2 4.5 2100	Not Flooded	Not Flooded	Yes
SSP3 7.0 2100	Not Flooded	Not Flooded	Yes

Veriu Basement Car Park Entrance 1

FFL	19.71
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	19.42	Yes
SSP2 4.5 2030	Not Flooded	19.60	Yes
SSP2 4.5 2100	Not Flooded	19.79	No
SSP3 7.0 2100	Not Flooded	19.87	No

Fire Egress 2

FFL	20.66
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	Not Flooded	Yes
SSP2 4.5 2030	Not Flooded	Not Flooded	Yes
SSP2 4.5 2100	Not Flooded	Not Flooded	Yes
SSP3 7.0 2100	Not Flooded	Not Flooded	Yes

Veriu Apartment Residential Lobby

FFL	21.60
Criteria	Basement Penetration - greater of 1% AEP + 0.5m or PMF

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	21.72	No
SSP2 4.5 2030	Not Flooded	21.96	No
SSP2 4.5 2100	Not Flooded	22.25	No
SSP3 7.0 2100	Not Flooded	22.52	No

Retail Entrance 1

FFL	20.66
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	21.72	Yes
SSP2 4.5 2030	Not Flooded	21.96	Yes
SSP2 4.5 2100	Not Flooded	22.25	Yes
SSP3 7.0 2100	20.56	22.52	Yes

Retail Entrance 2

FFL	20.66
Criteria	Ground Level - 1% AEP

	1% AEP	PMF	FPL Compliance
Historical	Not Flooded	21.72	Yes
SSP2 4.5 2030	Not Flooded	21.96	Yes
SSP2 4.5 2100	20.45	22.25	Yes
SSP3 7.0 2100	20.55	22.52	Yes

NOTES:
FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED READINGS "IF IN DOUBT, ASK"

Issue	Amendment	Date
P	Serviced Apartment DA	10.6.2015

CITY OF SYDNEY
PLANNING DIVISION

APPROVAL

D/2015/961
22/09/2015
These plans should be read in conjunction with the decision notice

84 - 86 PARRAMATTA RD, CAMPERDOWN

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CLIENT
SASCO DEVELOPMENTS
Proposed Change of Use:
Residential Units to Serviced Apartments

DRAWING
84-86 PARRAMATTA RD
GROUND FLOOR PLAN

SCALE 1:100 @ A1 DATE 10.6.2015
PROJECT 873 ISSUE DATE 10.6.2015
STAGE DA2 A020 REVISION P

837

Attachment A12

Aviation impact assessment

WENTWORTH

CAPITAL

AVIATION IMPACT ASSESSMENT REPORT



AIRSPACE IMPLICATIONS DUE TO THE CONSTRUCTION OF THE LIFE SCIENCES HUB

PREPARED BY:

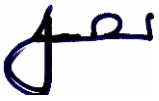
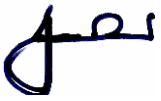
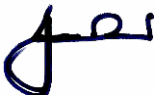
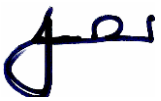
AviPro

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ABN: 94 154 052 883

Revision 1.2

AviPro
Document Verification
Page 1 of 1

Job title:	Aviation Impact Assessment Report: Life Sciences Hub
Document title:	AIA – LSH
Document ref:	LSH 1.2

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V1.0	4 Jul 25	Description	Initial issue AIA - DRAFT		
			Prepared by	**Checked by**	**Approved by**
		Name	J.W. Stark		
		Signature			
Revision	Date	File name			
V1.1	15 Jul 25	Description	Revised post-client review.		
			Prepared by	**Checked by**	**Approved by**
		Name	J.W. Stark	S.J. Graham	S.J. Graham
		Signature			
Revision	Date	File name			
V1.2	26 Sep 25	Description	Revised introductory text.		
			Prepared by	**Checked by**	**Approved by**
		Name	J.W. Stark	S.J. Graham	S.J. Graham
		Signature			
Revision	Date	File name			
		Description			
			Prepared by	**Checked by**	**Approved by**
		Name			
		Signature			
Revision	Date	File name			
		Description			
			Prepared by	**Checked by**	**Approved by**
		Name			
		Signature			

This Report on the airspace implications, both during and following construction of the proposed Life Sciences Hub (LSH) development is prepared for Wentworth Capital acting on behalf of Spark Sub TC Pty Ltd, by Resolution Response Pty. Ltd. ABN: 94 154 052 883, trading as 'AviPro'.

The Report relates to the coordination aspects associated with prescribed/protected airspace at Sydney (Kingsford-Smith) Aerodrome and the Helicopter Landing Site (HLS) at Royal Prince Alfred Hospital (RPAH) due to the establishment and site design of the proposed LSH. It is intended to inform design and planning.

Contents

1. EXECUTIVE SUMMARY 6
2. BACKGROUND 7
2.1. Introduction 7
2.2. Site description 7
2.3. Background Material 8
2.4. Methodology 8
2.5. Explanation of Terms 9
2.6. Applicable Abbreviations 12
2.7. List of Figures 13
2.8. List of Images 13
3. GENERAL AIRSPACE REQUIREMENTS AND CONSIDERATIONS 14
3.1. Purpose of this Section 14
3.2. Airspace Regulation in Australia – Federally-Leased Aerodromes 14
3.3. Airspace Regulation in Australia – Non-Federally-Leased Aerodromes 14
3.4. Civil Aviation (Buildings Control) Regulations 1988 14
3.5. Airspace Management in Australia – Heliports and Helicopter Landing Sites 14
3.6. Helicopter Routes 15
3.7. Tall Structures 15
3.8. State Government Requirements 15
3.9. Local Government Requirements 15
3.10. Obstacle Limitation Surfaces 16
3.11. Procedures for Air Navigation – Aircraft Operations (PANS-OPS) Surfaces 16
3.12. Radar Terrain Clearance Charts 17
4. SPECIFIC LSH DEVELOPMENT CONSIDERATIONS 18
4.1. The proposed LSH development location 18
4.2. The proposed LSH development Elevation 18
4.3. Local Government Requirements 19
4.4. General Airspace Overhead the proposed LSH development 19
4.5. Application of the Civil Aviation (Buildings Control) Regulations 1988 19
4.6. The Sydney (Kingsford-Smith) Aerodrome OLS Overlay 20
4.7. Impact on the Sydney (Kingsford-Smith) Aerodrome OLS 20
4.8. The Sydney (Kingsford-Smith) Aerodrome PANS-OPS Overlay 21
4.9. Impact on the Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces 21
4.10. The Sydney Aerodrome Radar Terrain Clearance Chart (RTCC) Overlay 21
4.11. Impact on the Sydney Aerodrome RTCC 22
4.12. Overall impacts on Sydney (Kingsford-Smith) Aerodrome OLS, PANS-OPS and RTCC 22
4.13. Impact on the RPA Hospital HLS 22
4.14. Impact on Helicopter Routes 23
4.15. Tall Structure Considerations 23
4.16. Construction Crane Considerations 24

4.17. Deductions: Airspace, Cranes, Obstructions and HLSs 24
4.18. Authority Consultation 25
4.19. Cumulative Impacts 25
4.20. Mitigations 25
4.21. Conclusion 25
4.22. Recommendations 25

1. EXECUTIVE SUMMARY

The aim of this report is to provide insights into aviation impacts of the proposed Life Sciences Hub (LSH) development on the aviation operations into and out of Sydney (Kingsford-Smith) Aerodrome and the Royal Prince Alfred Hospital (RPAH) HLS. Noting that a reference scheme and planning envelope are presented for review, the report analyses the likely impact of a completed building, and any likely associated construction cranes, on the aviation activities mentioned above.

The following key outcomes arose from the analysis:

- The proposed LSH development, once constructed, will not intrude into either the:
  - Sydney Radar Terrain Clearance Chart (RTCC), or
  - Sydney (Kingsford-Smith) Aerodrome Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS surfaces).
- The proposed LSH development, once constructed, **will** intrude into the Sydney (Kingsford-Smith) Aerodrome Obstacle Limitation Surfaces (OLS).
- The proposed LSH development construction crane(s) will not intrude into the:
  - Sydney RTCC, or
  - Sydney (Kingsford-Smith) Aerodrome PANS-OPS surfaces.
- The proposed LSH development construction crane(s) **will** intrude into the Sydney (Kingsford-Smith) Aerodrome OLS.
- The proposed LSH development, once constructed, will not impact the approach and departure paths of either the:
  - RPAH temporary HLS, or
  - new RPAH HLS.
- The proposed LSH development, once constructed, will not require aviation-standard obstacle lighting.
- The proposed LSH development construction crane(s) will require NSW Ministry of Health (MoH) HLS-standard obstacle lighting (due to HLS proximity).
- The proposed LSH development and its construction crane(s) will require formal assessment by the Civil Aviation Safety Authority (CASA).
- The proposed LSH development, as built, must be advised to Airservices Australia as being in excess of 45m above ground level.

The proposed LSH development, including its construction crane(s), will not adversely impact aviation safety in relation to the RPAH HLS (new or temporary). The proposed LSH development, including its construction crane(s), may adversely impact aviation safety in relation to Sydney (Kingsford-Smith) Aerodrome. Approvals will be required for the building and construction crane(s) to intrude into the the Sydney (Kingsford-Smith) Aerodrome OLS if it/they are planned to be above approximately 93 AHD, which is obviously going to be the case. The construction crane(s) will require NSW MoH HLS-specific aviation obstacle lighting which exceeds the CASA standard. (See Mitigations at Section 4.20.) A competed building will be notifiable to Airservices Australia as a building in excess of 45m above ground level.

The cumulative impacts of this proposed development on aviation operations to either Sydney Airport or the RPAH campus are negligible. This is one of several developments on or adjacent to the RPAH or USYD campuses that will be underway simultaneously. The building is further away, but higher than, the new RPAH east tower. Because the proposed LSH development is behind the lift core and overrun for the new RPAH HLS, helicopters will not approach or depart to or from the direction of the proposed LSH. From an air traffic and airspace management perspective the proposed LSH can be viewed as an independent or standalone development.

No consultation has been undertaken with any airspace authorities or any airport in relation to this proposed development. Prior to lodgment of a Development Application (DA), early consultation with CASA is highly recommended for this proposed development due to its elevation.

2. BACKGROUND

2.1. Introduction

This Aviation Impact Assessment (AIA) Report is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan (LEP) 2012* for the introduction a new site-specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown.

This Planning Proposal seeks approval for the amendment of FSR and Height of Buildings in the Sydney LEP 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site-specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Ethos Urban.

2.2. Site description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1 and the site is shown at Image 1.

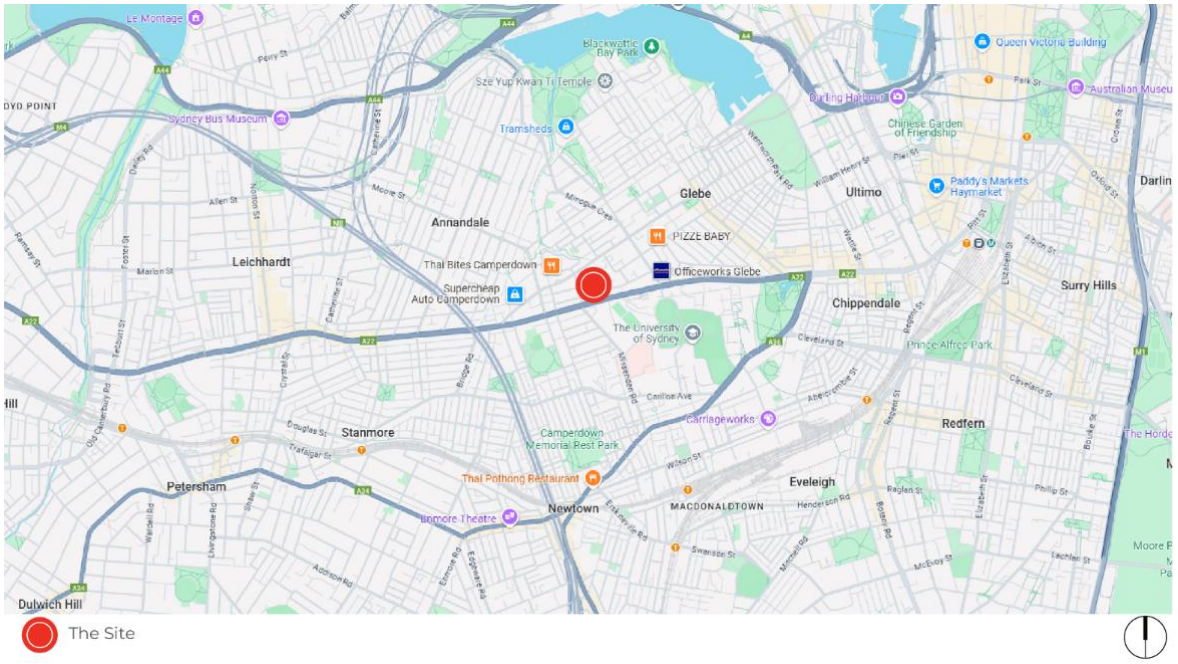


Figure 1: Locational Context



Image 1: The Site

2.3. Background Material

Reference material drawn and provided by HDR in support of the report include early planning designs and concept drawings.

2.4. Methodology

Criteria from all relevant references were assessed, with the Sydney Airport airspace overlays and the Royal Prince Alfred Hospital HLS approach and departure path design used as the primary tools.

2.5. Explanation of Terms

Aircraft. Refers to both aeroplanes (fixed wing) and helicopters (rotorcraft).

Approach and Departure Path (IFR). The flight track helicopters follow when landing at or departing from the FATO of an HLS under the Instrument Flight Rules. The IFR approach and departure path extends upwards and outwards from the edge of the FATO safety area with an obstacle free gradient of 2.6^0/4.5%/ 1:22.2 (22.2 units horizontal in 1 unit vertical), to a height of 152m above the FATO at a distance of ~3,386 m. The approach and departure path commences at the forward edge of the FATO safety area at a width of 34m, and increases in width uniformly to 152m m above the elevation of FATO surface at a distance of ~3,386 m.

Approach/Departure Path (VFR). The flight track helicopters follow when landing at or departing from the FATO of an HLS. Updated standards to align with ICAO requirements now has the VFR (day and) night approach and departure path extending upwards from the forward edge of the FATO safety area with an obstacle free gradient of 2.6^0/4.5%/ 1:22.2 (22.2 units horizontal in 1 unit vertical), to a height of 152m above the FATO at a distance of ~3,386 m. The approach and departure path commences at the forward edge of the FATO safety area at a width of 34m, and expands uniformly, laterally at an angle of 8.7^0/15%/1:12.8 to a total width of 140 m, then remains parallel to a distance of ~3,386m, where the height is 152 m above the elevation of FATO surface.

Design Helicopter. The Agusta AW139 contracted to the NSW Ambulance. The type reflects the latest generation Performance Class 1 capable helicopters used in HEMS and reflects the maximum weight and maximum contact load/minimum contact area. The design helicopter has a maximum all up mass of 7 tonnes, however for HLS design purposes it is assumed the helicopter will never exceed 6.8 tonnes on the HLS.

D Value (Overall Length). The distance from the tip of the main rotor tip plane path to the tip of the tail rotor tip plane path or the fin if further aft, of the Design Helicopter.

Elevated Helicopter Landing Site. An HLS located on a roof top or some other elevated structure where the Ground Effect Area/Touchdown and Lift-off Area (TLOF) is at least 2.5m above ground level.

Final Approach. The reduction of height and airspeed to arrive over a predetermined point above the FATO of an HLS.

Final Approach and Takeoff Area (FATO). A defined area over which the final phase of the approach to a hover, or a landing is completed and from which the takeoff is initiated. For the purposes of these guidelines, the specification of 1.5 x D Value or Overall Length of the Design Helicopter is used and equates to 25m. diameter. Area to be load bearing.

Ground Taxi. The surface movement of a wheeled helicopter under its own power with wheels touching the ground.

Hazard to Air Navigation. Any object having a substantial adverse effect upon the safe and efficient use of the navigable airspace by aircraft, upon the operation of air navigation facilities, or upon existing or planned airport/heliport capacity.

Helicopter Landing Site (HLS). One or more may also be known as a **Heliport**. The area of land, water or a structure used or intended to be used for the landing and takeoff of helicopters, together with appurtenant buildings and facilities.

Helicopter Landing Site Elevation. At an HLS without a precision approach, the HLS elevation is the highest point of the FATO expressed as the distance above mean sea level.

Helicopter Landing Site PC1 Survey Reference Point. A position at the forward edge of the FATO safety area in the centre of the approach and departure path, from which the PC1 survey at 2.6º (4.5%) is initiated.

Helicopter Landing Site Reference Point (HRP). The geographic position of the HLS expressed as the latitude and longitude at the centre of the FATO.

Hospital Helicopter Landing Site. HLS limited to serving helicopters engaged in air ambulance, or other hospital related functions.

Note:

*A designated HLS located at a hospital or medical facility is an emergency services HLS and **not** a medical emergency site.*

Heliport. Two or more co-existing helicopter landing sites (HLS). There are no implications for operating a heliport as opposed to an HLS, other than having a "Heliport Operations Manual" rather than an "HLS Operations Manual" which would address the various interactions and interoperability (aviation, clinical etc) at the dual sites.

Hover Taxi. The movement of a helicopter above the surface, generally at a wheel/skid height of approximately one metre. For facility design purposes, a skid-equipped helicopter is assumed to hover-taxi.

Landing and Lift Off Area (LLA). A load-bearing, nominally paved area, normally located in the centre of the TLOF, on which helicopters land and lift off. Minimum dimensions are based upon a 1 x metre clearance around the undercarriage contact points of the Design Helicopter.

Lift Off. To raise the helicopter into the air.

Movement. A landing or a lift off of a helicopter.

Object Identification Surface. The OIS are a set of imaginary surfaces associated with a heliport. They define the volume of airspace that should ideally be kept free from obstacles in order to minimise the danger to a helicopter during an entirely visual approach.

Obstacle Limitation Surface. The OLS are a set of imaginary surfaces associated with an aerodrome. They define the volume of airspace that should ideally be kept free from obstacles in order to minimise the danger to aircraft during an entirely visual approach.

Obstruction to Air Navigation. Any fixed or mobile object, including a parked helicopter, which impinges the approach/departure surface or the transitional surfaces.

Parking Pad. The paved centre portion of a parking position, normally adjacent to an HLS.

Performance Class 1 (PC1). Similar to Category A requirements. For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to land within the rejected take-off distance available, or safely continue the flight to an appropriate landing area, depending on when the failure occurs. For an elevated HLS, the reject area is that area within the FATO (25 m. diameter) and therefore this area is to be load bearing. PC1 also requires Civil Aviation Safety Authority (CASA) approved flight path surveys to/from the HLS.

Performance Class 2 (PC2). For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to safety continue the flight, except when the failure occurs early during the take-off manoeuvres, in which case a forced landing may be required. PC2 also requires CASA approved flight path surveys to/from the HLS.

Performance Class 2 With Exposure (PC2WE). PC2WE is very similar to PC2 as mentioned above. The primary difference is that there need not be any provision for a suitable forced landing area during the take-off and landing phases of flight, within the designated exposure period for the rotorcraft. PC2WE offers operators alternative mitigation strategies based on: a defined exposure time limit, demonstrated engine reliability, engine maintenance standards, pilot procedures and training, and operator risk assessments. Specific approval to operate with exposure is required from CASA and will require a number of mitigation strategies from the operator to gain that approval.

Performance Class 3 (PC3). For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit at any time during the flight, a forced landing:

- in the case of multi-engine rotorcraft – may be required; or
- in the case of single-engine rotorcraft – will be required.

Pilot Activated Lighting (PAL). A PAL system utilises a hospital-based VHF radio and timed switching device, activated by the pilot via a radio transmission on a pre-set frequency, to turn on the associated HLS lighting.

Prior Permission Required (PPR) HLSs. An HLS developed for exclusive use of the owner and persons authorized by the owner, i.e. a hospital-based emergency services HLS.

Note:

The HLS owner and the HEMS operator are to ensure that all pilots are thoroughly knowledgeable with the HLS (including such features as approach/departure path characteristics, preferred heading, facility limitations, lighting, obstacles in the area, size of the facility, etc.). This is addressed as part of the HLS commissioning process.

Rotor Downwash. The volume of air moved downward by the action of the rotating main rotor blades. When this air strikes the ground or some other surface, it causes a turbulent outflow of air from beneath the helicopter.

Safety Area. A defined area on an HLS surrounding the FATO intended to reduce the risk of damage to helicopters accidentally diverging from the FATO. This area should be free of objects, other than those frangible mounted objects required for air navigation purposes. The Safety Area for the Design Helicopter extends 4.5 m. beyond the FATO perimeter forming a 34 m. X 34 m. square or a 34m. diameter circle.

Safety Net. Surrounds the outer edge of a rooftop HLS. It is to be a minimum of 1.5 m. wide and have a load carrying capacity of not less than 122 kg/m^2. The outer edge is not to project above the HLS deck, and slope back and down to the deck edge at approximately 10 degrees, and not more than 20 degrees. Both the inside and outside edges of the safety net are to be secured to a solid structure.

Shielded Obstruction. A proposed or existing obstruction that does **not** need to be marked or lit due to its close proximity to another obstruction whose highest point is at the same or higher elevation.

Take off. To accelerate and commence climb at the relevant climb speed.

Take off Position. A load bearing, generally paved area, normally located on the centreline and at the edge of the TLOF, from which the helicopter takes off. Typically, there are two such positions at the edge of the TLOF, one for each of two takeoff or arrival directions.

Touchdown and Lift-off Area (TLOF). A load bearing, generally paved area, normally centred in the FATO, on which the helicopter lands or takes off, and that provides ground effect for a helicopter rotor system. Size is based on 1 x main rotor diameter of Design Helicopter, and is 14m diameter.

Transitional Surfaces. Starts from the side edges of the FATO safety area parallel to the approach and departure path centre line, and extends upwards and outwards (to the sides) at a slope of 2:1 (two-units horizontal in one-unit vertical or 26.6°) to a height of 45m above the elevation of the FATO surface. Further, from the forward edge of the side transitional surfaces, the transitional surface joins the outer edges of the approach and departure surface, and proceeds upwards and outwards until the outer edges are 152m wide at ~3386m which corresponds with the end of the approach and departure surface.

Unshielded Obstruction. A proposed or existing obstruction that may need to be marked or lit since it is **not** in close proximity to another marked and lit obstruction whose highest point is at the same or higher elevation.

2.6. Applicable Abbreviations

Acronym	Meaning
AC	Advisory Circular (from Aviation Regulator)
ACC	Aeromedical Control Centre (HQ Eveleigh). Responsible for control and tasking of HEMS
CASA	Civil Aviation Safety Authority (Australia)
CASRs	Civil Aviation Safety Regulations (1998) Australia
CBD	Central Business District
CTR	Control Zone (Air Traffic)
DCP	Development Control Plan
DDO	Design and Development Overlay
ERSA	Enroute Supplement Australia
FAA	Federal Aviation Administration, USA
FATO	Final approach and Take-Off Area (1.5 x helicopter length)
GPS	Global Positioning System
HEMS	Helicopter Emergency Medical Service
HLS	Helicopter Landing Site
HLSRO	HLS Reporting Officer (Airservices requirement)
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions - requiring flight under IFR
LEP	Local Environment Plan
MoH	Ministry of Health NSW
MTOW	Maximum Take Off Weight
NOTAM	Notice to Airmen. Issued by Airservices in relation to airspace and navigation warnings
NVG	Night Vision Goggle(s)
OIS	Object Identification Surface(s) (Heliport/HLS)
OLS	Obstacle Limitation Surface(s) (Aerodrome)
PC1	Performance Class 1
PC2	Performance Class 2
PC2(WE)	Performance Class 2 (With Exposure)
PC3	Performance Class 3
RD	Main Rotor Diameter
RPA	Royal Prince Alfred
RPAH	Royal Prince Alfred Hospital
RTCC	Radar Terrain Clearance Chart
SACL	Sydney Airport Corporation Limited
SARPS	Standards and Recommended Practices developed by ICAO and promulgated in the Annexes to the Convention of International Civil Aviation

Acronym	Meaning
TDP	Takeoff Decision Point (Category A/Performance Class 1 operations)
TLOF	Touch Down and Lift Off Area. Load bearing min. 1 x main rotor diameter.
VFR	Visual Flight Rules
VHF	Very High Frequency radio
VMC	Visual Meteorological Conditions - allowing flight under VFR
V_{TOSS}	Take off Safety Speed

2.7. List of Figures

Figure	Description
1	Locational Context
2	Example of Obstacle Limitation Surfaces
3	Example of PANS-OPS Surfaces
4	Example of a Radar Terrain Clearance Chart
5	Location of the proposed LSH development building
6	Elevation of the proposed LSH development
7	Sydney (Kingsford-Smith) Aerodrome General Airspace
8	Sydney (Kingsford-Smith) Aerodrome Obstacle Limitation Surfaces (1)
9	Sydney (Kingsford-Smith) Aerodrome Obstacle Limitation Surfaces (2)
10	Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces (1)
11	Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces (2)
12	The proposed LSH development within the Sydney RTCC
13	New RPA Hospital HLS Approach and Departure Paths
14	The Erskineville 5 Helicopter Route

2.8. List of Images

Image	Description
1	The Site

3. GENERAL AIRSPACE REQUIREMENTS AND CONSIDERATIONS

3.1. Purpose of this Section

It is important that the reader has a good understanding of the fundamentals of airspace protection for aerodromes and heliports/HLSs in order to be able to understand the analysis later in this report. Section 3 provides this general overview.

3.2. Airspace Regulation in Australia – Federally-Leased Aerodromes

At Australia's 21 Federally-leased aerodromes, approvals will be required if prescribed or protected airspace could be impinged. The normal contact for this process is through the owner or operator of the relevant aerodrome upon which the airspace is centred.

Prescribed airspace includes an airport's Obstacle Limitation Surfaces (OLS) involving a set of imaginary surfaces associated with an aerodrome that should be kept free of obstacles. Additionally, the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces that takes account of the airspace associated with aircraft instrument procedures, and the airspace associated with the Radar Terrain Clearance Chart (RTCC) must be considered.

The Airports (Protection of Airspace) Regulations (APARs) 1996 differentiate between "short-term" (less than 3 months) and "long-term" controlled activities. The APARs provide for the airport operator to approve short-term controlled activities that penetrate the OLS, and for the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts for approval of long-term controlled activities and those short-term controlled activities referred to it by the airport operator. However, the airport operator must refer short-term PANS-OPS infringements to the Department for approval. Long term intrusions of the PANS-OPS surface are prohibited.

3.3. Airspace Regulation in Australia – Non-Federally-Leased Aerodromes

A similar but more abbreviated system applies at all Australian aerodromes that are not Federally-leased. CASA and Airservices Australia still make assessments of the impacts on protected airspace, but the aerodrome owner/operator is the sole decision-maker (with advice from the two agencies/authorities).

3.4. Civil Aviation (Buildings Control) Regulations 1988

The Civil Aviation (Buildings Control) Regulations 1988, known as the BCRs, have been largely superseded by the APARs in the guidance they provide, however they still exist and any building that is planned to be erected in the vicinity of Sydney, Bankstown, Melbourne, Moorabbin, Essendon or Adelaide aerodromes is subject to them. The BCRs provide three different levels for which notifications must be made – 25 ft (7.5m) above ground level, 50 ft (15m) above ground level and 150ft (45m) above ground level.

3.5. Airspace Management in Australia – Heliports and Helicopter Landing Sites

Rules or regulations applicable to the design, construction or placement of HLSs within Australia are contained in Advisory Circular (AC) 139.R-01 Guidelines for heliports - design and operation and AC 91-29 Guidelines for helicopters – suitable places to takeoff and land. These ACs work in tandem with Civil Aviation Safety Regulation (CASR) 91.410 which places the onus on the helicopter pilot to determine the suitability of a landing site. CASA continues to aim towards publishing CASR Sub-part 139.R which will eventually regulate heliports and HLS' in Australia.

Because no Federal or State (NSW) legislation is in place to protect VFR approach and departure paths and the transitional surfaces associated with hospital HLSs, in May 2018, the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications issued Guideline H: Protecting Strategically Important Helicopter Landing Sites under the National Airports Safeguarding Framework (NASF). Whilst this publication has no legal effect in NSW as yet, its content is gradually being aligned within the NSW MoH Guidelines for Hospital Helicopter Landing Sites in NSW.

3.6. Helicopter Routes

In addition to considering the impacts on heliports, HLSs and their associated approach and departure paths (see paragraph 3.5) it is also necessary to consider special routes designed for, and used by, helicopters to navigate the complex airspace around major aerodromes. These routes are typically associated with key destinations such as aerodromes, heliports and hospitals. Details of these routes can be found in the Sydney (Kingsford-Smith) Aerodrome entry of the Enroute Supplement Australia (ERSA).

3.7. Tall Structures

CASA Advisory Circular (AC) 139.E-01 Reporting of Tall Structures provides guidance on what needs to be reported.

Regulation 139.165 (Notifying CASA of certain proposed objects or structures) of Civil Aviation Safety Regulations Part 139 states: “This regulation applies if a person proposes to construct or erect an object or structure that…will have a height of 100 metres or more above ground level…or is of a kind prescribed by the Part 139 Manual of Standards.” This is done through Airservices Australia.

3.8. State Government Requirements

There are no specific articles of legislation for aerodromes in NSW. Matters pertaining to aerodromes are governed under the guise of State environmental legislation. The various legislative/regulatory requirements relating to HLSs in NSW are complex. Current regulation excludes emergency service landing sites from the definition of “designated development” in the Environmental Planning and Assessment Regulation (which otherwise includes most HLSs). Generally, hospital HLSs are considered “ancillary-uses” to hospital purposes and are thus not separate “development”. The same cannot necessarily be said about off-site emergency medical HLSs, e.g. local sports fields.

Whilst not an aviation requirement, cranes may need access to airspace above neighbouring properties in which case the NSW Access to Neighbouring Land Act 2000 may apply.

3.9. Local Government Requirements

For Federally-leased aerodromes, requirements emanate from the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996.

The Airports (Protection of Airspace) Regulations 1996 differentiate between short-term (less than 3 months) and long-term controlled activities. The Regulations provide for the airport operator to approve short-term controlled activities that penetrate the OLS, and for the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications for approval of long-term controlled activities and those short-term controlled activities referred to it by the airport operator. However, the airport operator must refer short-term PANS-OPS intrusions to the Department for approval. Long term intrusions of the PANS-OPS surface are prohibited.

Where an aerodrome is owned or operated by a Local Government Authority (LGA) or other entity, local government requirements for airspace protection are normally included in a Local Environment Plan (LEP), Development Control Plan (DCP) or similar document.

3.10. Obstacle Limitation Surfaces

The objective of the OLS is to define a volume of airspace in proximity to the airport which should be kept free of obstacles that may endanger aircraft in visual operations, or during the visual stages of an instrument approach.

The intention is not to restrict or prohibit all obstacles, but to ensure that either existing or potential obstacles are examined for their impact on aircraft operations and that their presence is properly taken into account. Since they are relevant to visual operations, it may sometimes be sufficient to ensure that the obstacle is conspicuous to pilots, and this may require that the obstacle be marked or lit.

In reality, there is little issue with breaching the OLS as pilots will be visual with the obstruction and can work on “see and avoid” principles. OLS at a multi-runway aerodrome look akin to Figure 2 below:

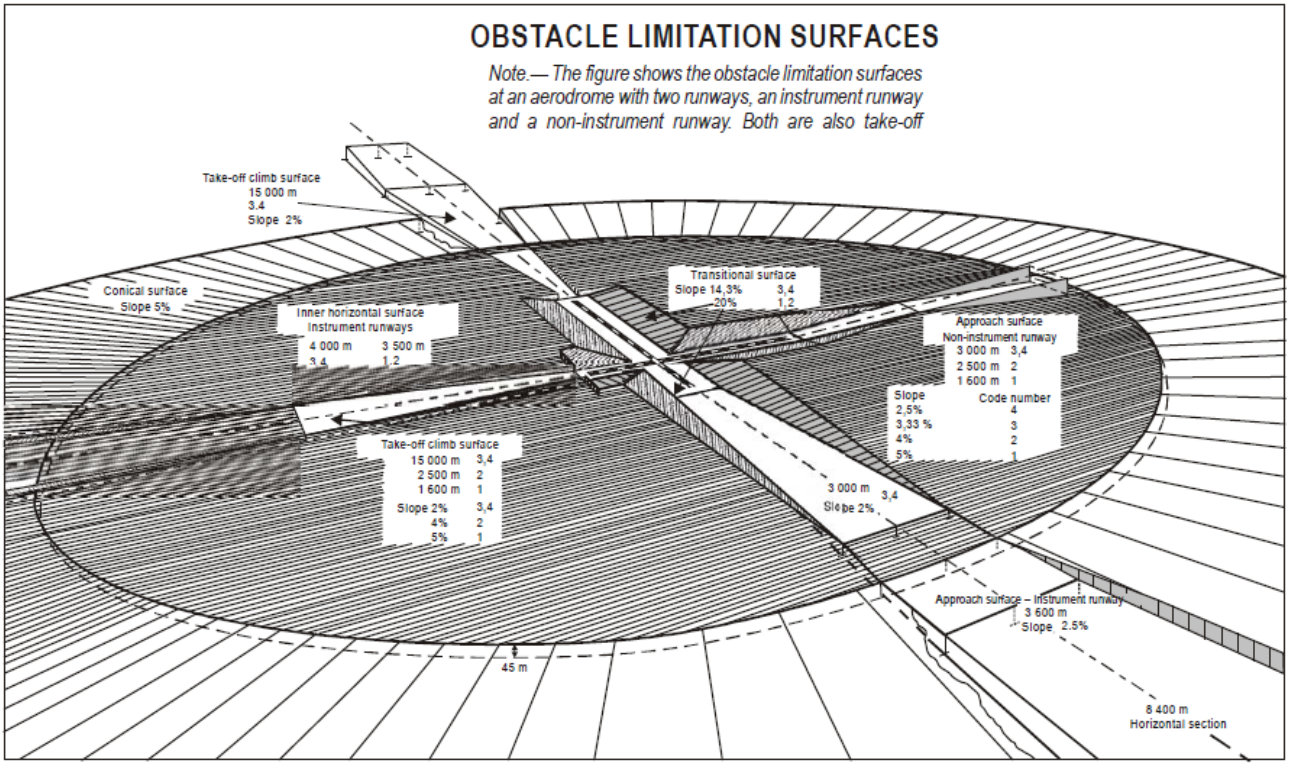


Figure 2: Example of Obstacle Limitation Surfaces

3.11. Procedures for Air Navigation – Aircraft Operations (PANS-OPS) Surfaces

PANS-OPS surfaces detail essential areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations.

The instrument flight procedures enable pilots to either descend from the high enroute environment of cruise type flight to establish visual contact with the landing runway, or climb from the runway to the enroute environment, with a prescribed safe margin above terrain and obstacles, by use of aircraft instruments and radio navigation aids or GPS in conditions where the pilot cannot maintain visual contact with the terrain and obstacles due to inclement weather conditions.

Pilots must be protected against protrusions into the PANS-OPS surfaces as they have no way of avoiding obstructions if they get off track and they cannot see such obstructions.

PANS-OPS surfaces are constructed differently to OLS however they serve a similar purpose. An example of PANS-OPS surfaces is in Figure 3 below:

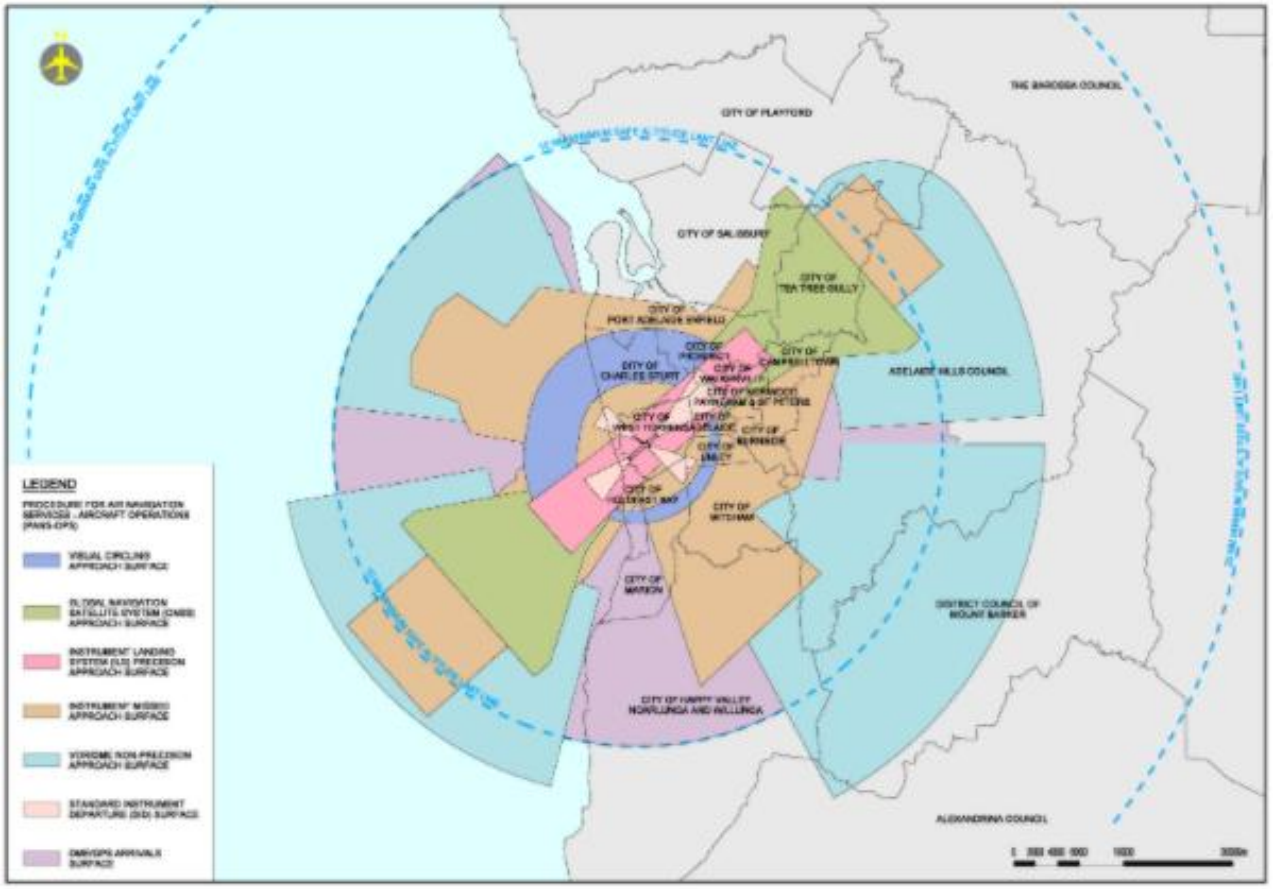


Figure 3: Example of PANS-OPS Surfaces

3.12. Radar Terrain Clearance Charts

The Radar Terrain Clearance Chart defines an area in the vicinity of an aerodrome, in which the minimum safe levels allocated by an Air Traffic Controller (ATC) vectoring Instrument Flight Rules (IFR) flights with Primary and/or Secondary Surveillance RADAR equipment have been predetermined. The figure shown on the chart is the lowest altitude which an ATC may assign to a pilot. An example of an RTCC is in Figure 4 below:

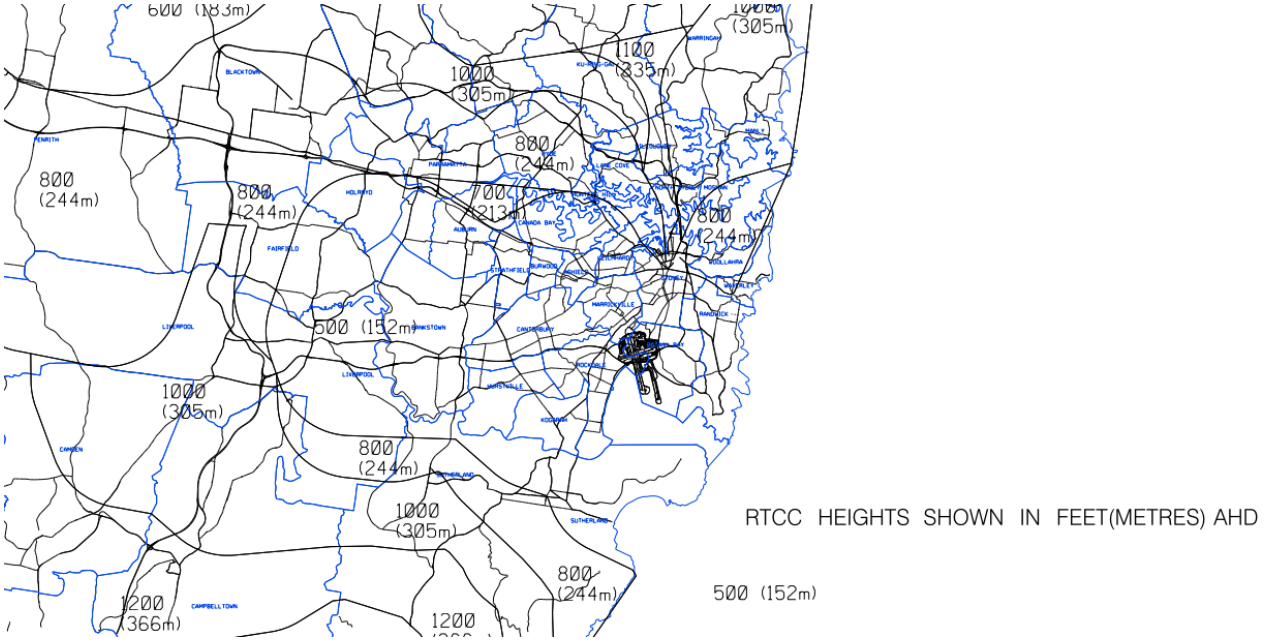


Figure 4: Example of a Radar Terrain Clearance Chart (RTCC)

4. SPECIFIC LSH DEVELOPMENT CONSIDERATIONS

4.1. The proposed LSH development location

The location of the lot of the proposed LSH development footprint is shown in Figure 5 below. It is approximately 5 km from Sydney (Kingsford-Smith) Aerodrome and close to the strategically important HLS at RPAH.

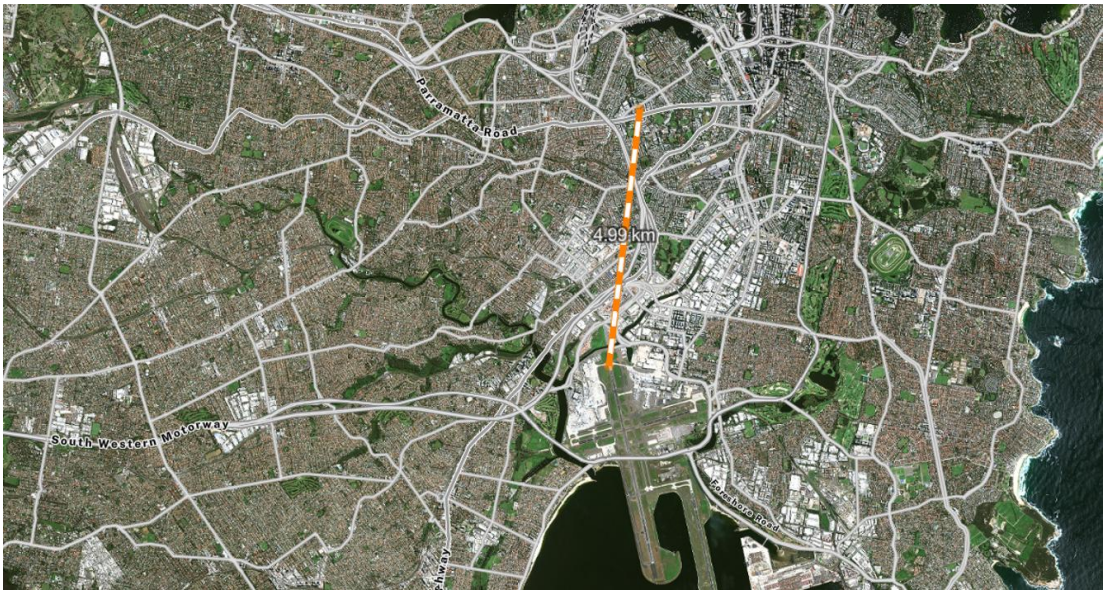


Figure 5: Location of the proposed LSH development building

4.2. The proposed LSH development Elevation

The proposed development is planned to be built to approximately RL 101.75 (see Figure 6 below).

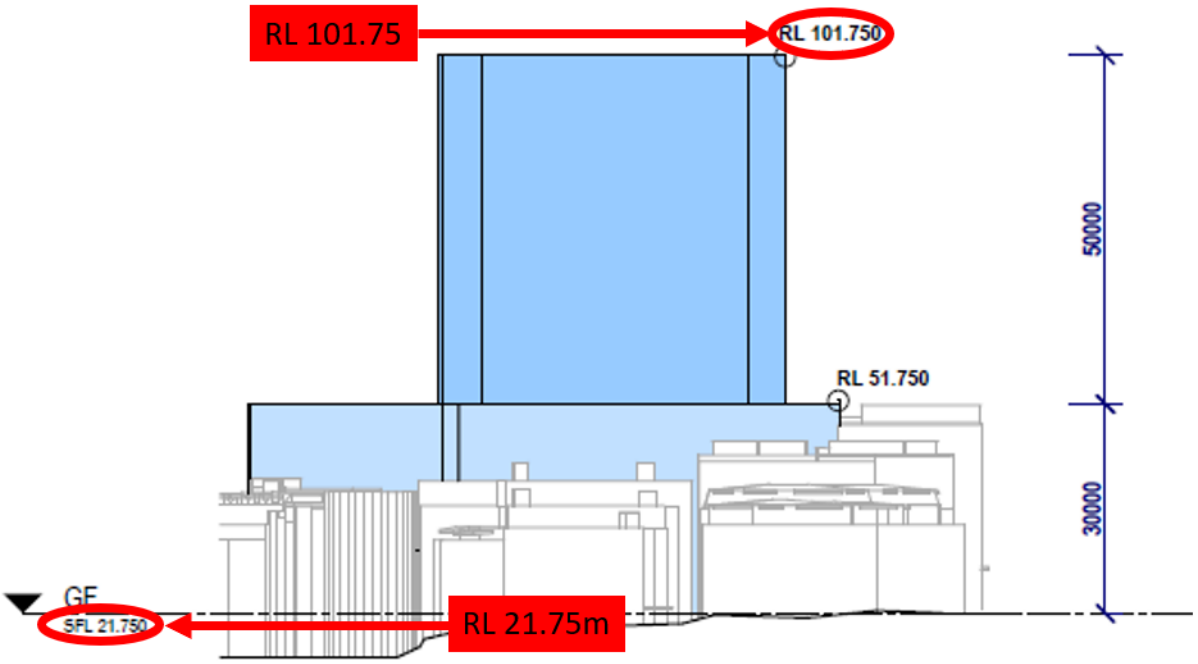


Figure 6: Elevation of the proposed LSH development

4.3. Local Government Requirements

Clause 7.16 of the Sydney Local Environment Plan 2012 states that one objective of the Clause is “to provide for the effective and on-going operation of the Sydney (Kingsford-Smith) Airport by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport.”

In this case, the term “Limitation or Operations Surface” means “the Obstacle Limitation Surface or the Procedures for Air Navigation Services Operations Surface as shown on the Obstacle Limitation Surface Map or the Procedures for Air Navigation Services Operations Surface Map for the Sydney (Kingsford-Smith) Airport.”

Further, Clause 7.16. states that “If a development application is received and the consent authority is satisfied that the proposed development will penetrate the Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.”

4.4. General Airspace Overhead the proposed LSH development

The proposed LSH development sits to the south-western edge of the Sydney City Central Business District and within the Sydney Aerodrome’s Control Zone (CTR). See Figure 7 below. Implication of the airspace issues are discussed later in this report.

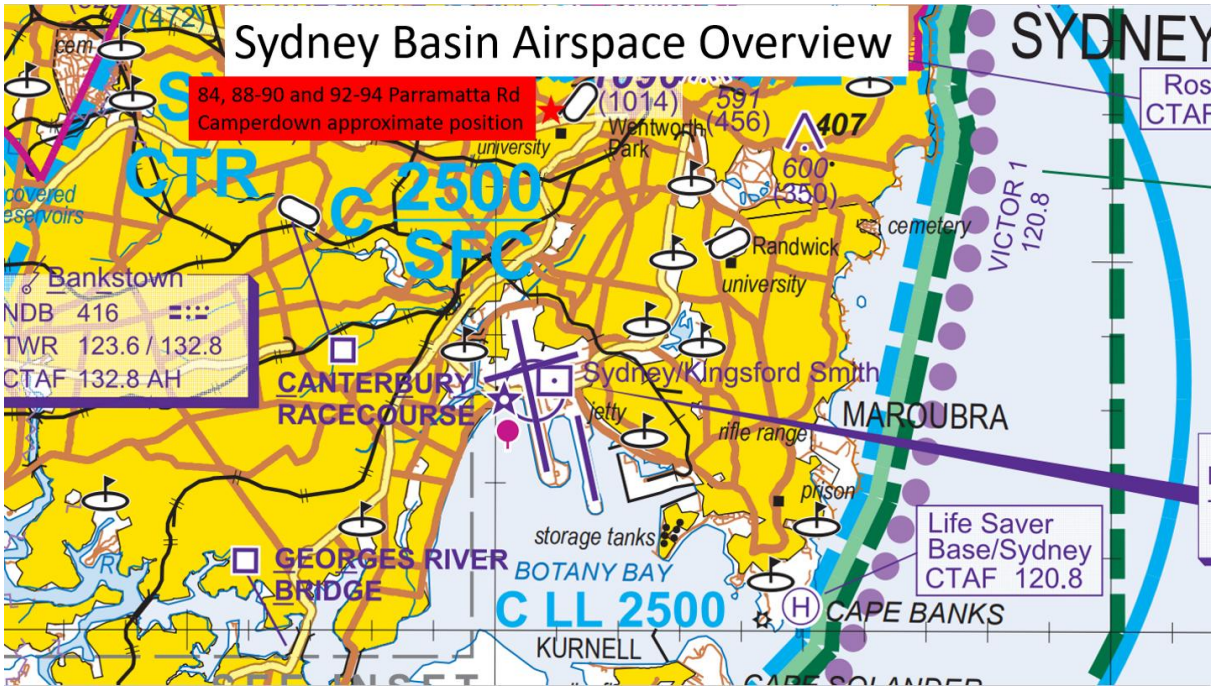


Figure 7: Sydney (Kingsford-Smith) Aerodrome General Airspace

4.5. Application of the Civil Aviation (Buildings Control) Regulations 1988

The position of the proposed LSH development falls within the 50 ft (15m) above ground level zone of the BCRs. Regardless of any other airspace requirements, the proposed development must be advised to Sydney Airport Corporation Limited (SACL). SACL will incorporate the advice into other related activities pertaining to potential penetration of prescribed airspace. This is discussed further below.

4.6. The Sydney (Kingsford-Smith) Aerodrome OLS Overlay

The Sydney (Kingsford-Smith) Aerodrome OLS is depicted in Figures 8 and 9 below. The approximate location of the proposed LSH development is also indicated.

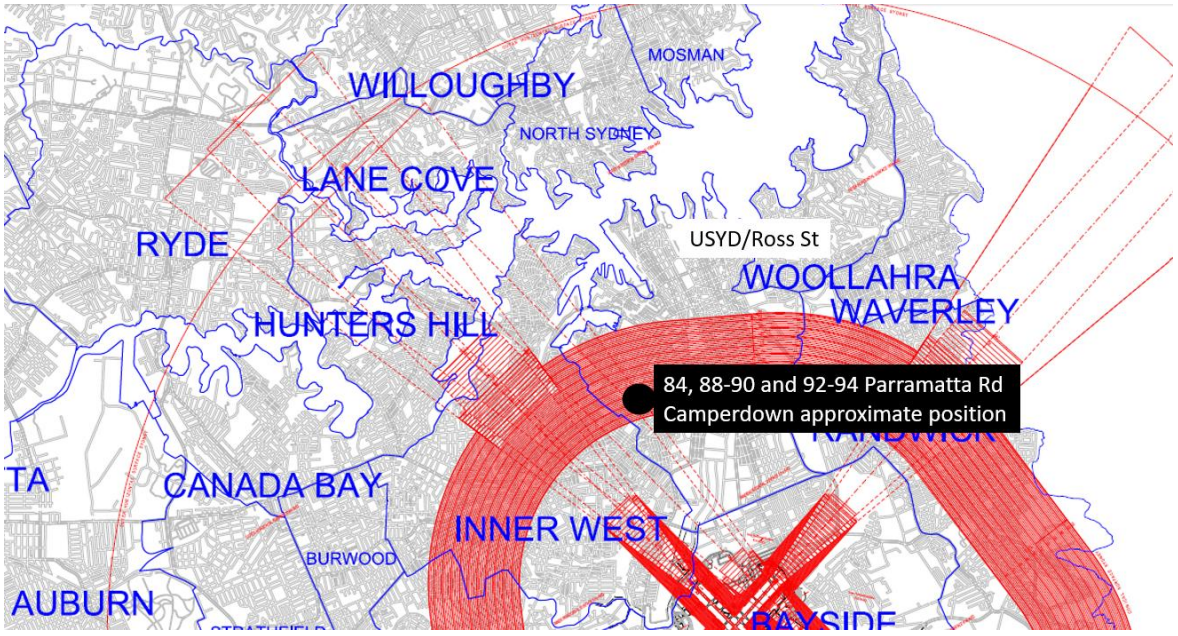


Figure 8: Sydney (Kingsford-Smith) Aerodrome Obstacle Limitation Surfaces (1)

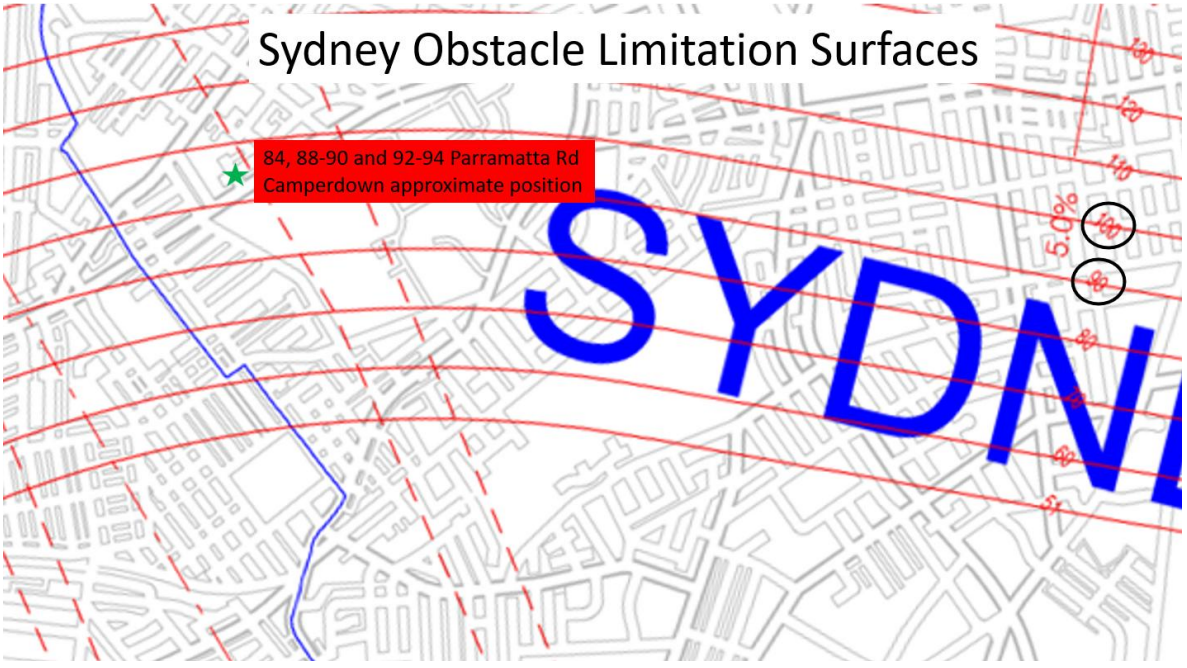


Figure 9: Sydney (Kingsford-Smith) Aerodrome Obstacle Limitation Surfaces (2)

4.7. Impact on the Sydney (Kingsford-Smith) Aerodrome OLS

The proposed LSH development would enter the Sydney (Kingsford-Smith) Aerodrome OLS from approximately 93 AHD. Because the proposed LSH development is currently investigating a maximum elevation of RL 101.75, it would be strongly advisable to seek a CASA assessment of the proposed development in the near future to confirm there is not going to be any unacceptable OLS penetration by the building.

4.8. The Sydney (Kingsford-Smith) Aerodrome PANS-OPS Overlay

The Sydney (Kingsford-Smith) Aerodrome PANS-OPS is depicted in Figures 10 and 11 below. The approximate location of the proposed LSH development is also indicated.

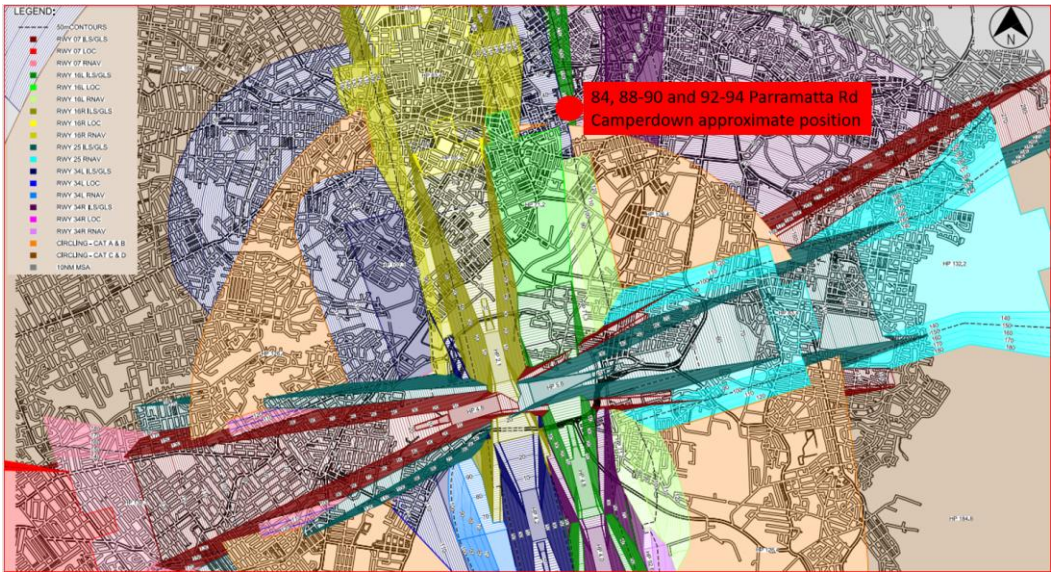


Figure 10: Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces (1)

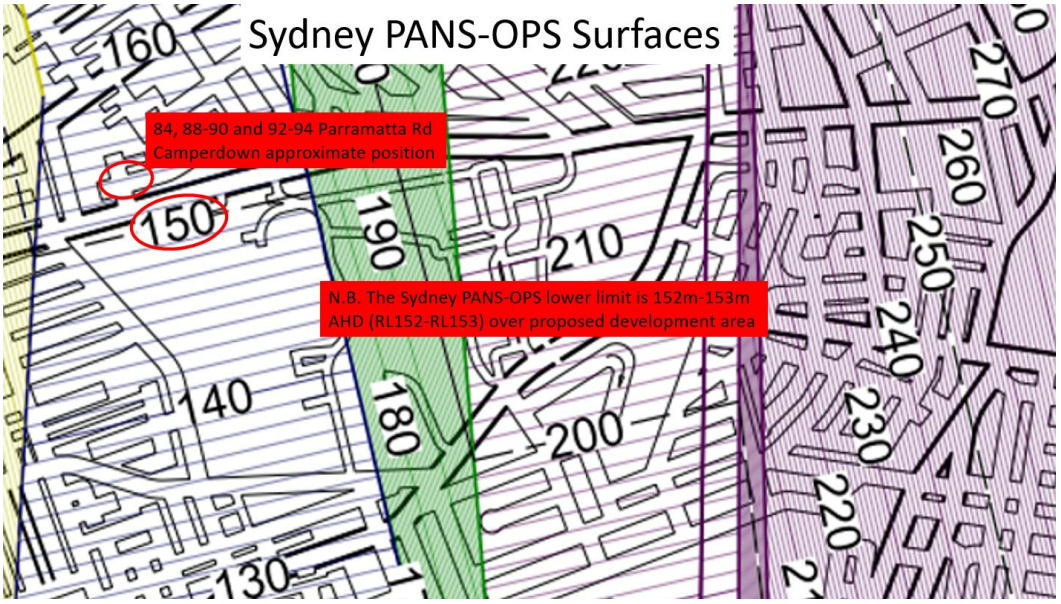


Figure 11: Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces (2)

4.9. Impact on the Sydney (Kingsford-Smith) Aerodrome PANS-OPS Surfaces

The Sydney (Kingsford-Smith) Aerodrome PANS-OPS surfaces extend over the proposed LSH development at approximately 152-153 AHD. There will be no intrusion (including construction cranes) for an RL 101.75 building.

4.10. The Sydney Aerodrome Radar Terrain Clearance Chart (RTCC) Overlay

The Sydney Aerodrome RTCC overlay is depicted in Figure 12 and 13 below. The approximate location of the proposed LSH is also indicated.

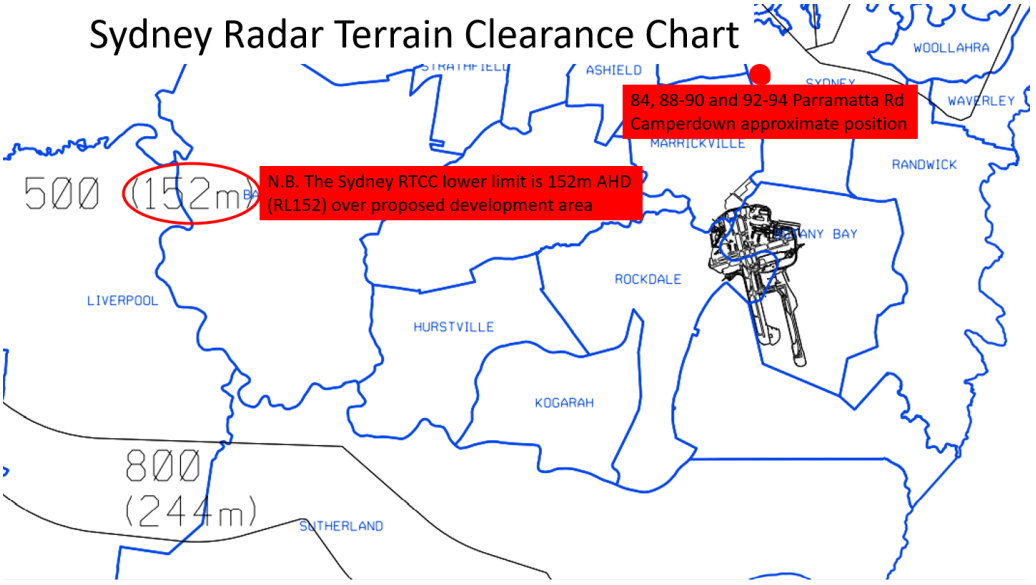


Figure 12: The proposed LSH development within the Sydney RTCC

4.11. Impact on the Sydney Aerodrome RTCC

At its current height, the proposed LSH development will be well below the RTCC lower level for the area of 152m AHD. Construction cranes will need to remain below RL 152.

4.12. Overall impacts on Sydney (Kingsford-Smith) Aerodrome OLS, PANS-OPS and RTCC

The development is most unlikely to intrude into the Sydney (Kingsford-Smith) Aerodrome OLS, PANS-OPS surfaces or RTCC. Construction cranes will definitely need to intrude into the OLS. Construction cranes must avoid intruding into the PANS-OPS and RTCC surfaces.

4.13. Impact on the RPA Hospital HLS

There is one strategically important HLS within close proximity to the proposed LSH at RPAH. See Figure 13 below.

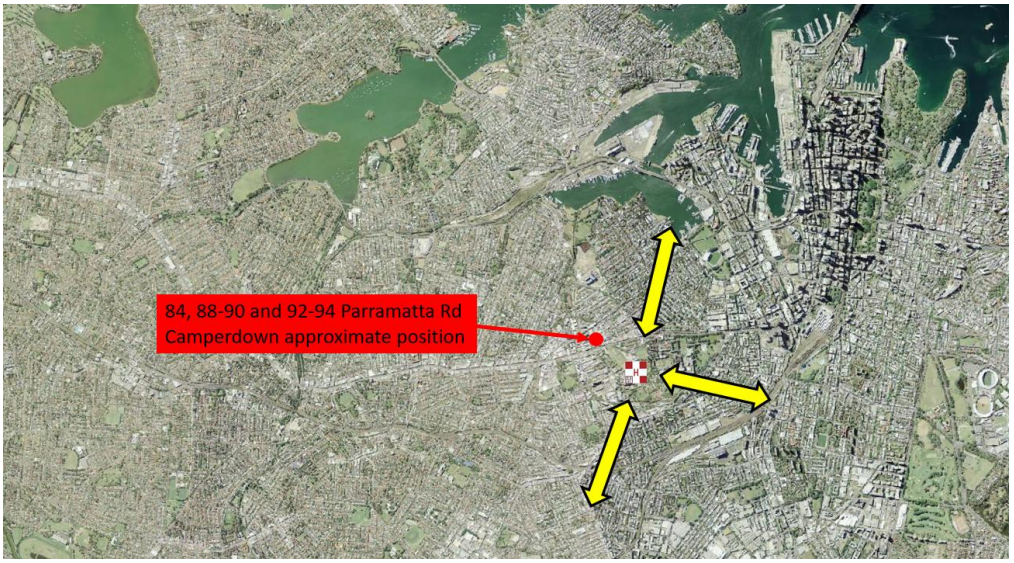


Figure 13: New RPA Hospital HLS Approach and Departure Paths

None of the approach and departure paths that will be surveyed for the new RPAH HLS will transit towards the proposed LSH development. The new HLS deck will be at RL 86.38 or 86.38 AHD which is approximately 15m lower than the proposed LSH. A tower crane used to construct the proposed LSH building will be somewhat proximate to, and significantly higher than, the RPAH HLS and will therefore need to be lit appropriately to avoid collision at night and in low visibility. The new RPAH HLS is expected to be operational some time in late 2026 at the earliest. Until then, a temporary HLS will be in use at RPAH and the cranes(s) for the building for the proposed LSH will not impact that temporary HLS given its shielded location behind (to the south) the Queen Mary Building.

4.14. Impact on Helicopter Routes

The proposed LSH development will not impact any helicopter routes. There is only one helicopter route in the Enroute Supplement - Australia (ERSA) that enters and leaves the Sydney Aerodrome CTR near the site of the proposed LSH development. The Erskineville route requires helicopters to track via Darling Harbour, to Central Railway Station and Redfern Railway Station; or to follow that route in reverse. This route avoids the inner west of Sydney where the proposed LSH development is located. See Figure 14 below.



Figure 14: The Erskineville 5 Helicopter Route

4.15. Tall Structure Considerations

CASA AC 139.E-01 v1.0 Reporting of tall structures dated December 2021 states that “Any object that extends to a height of 100 m or more above local ground level, must be notified to CASA by the proponent or owner.” At less than 100 m above ground level, this building need not be notified to CASA for “tall structure” assessment. AC 139.E-01 v1.0 also states that “the RAAF and Airservices Australia require information on structures that are 30 m or more above ground level - within 30 km of an aerodrome or 45 m or more above ground level elsewhere for the RAAF, or 30 m or more above ground level elsewhere for Airservices Australia.” This building therefore will need to be notified to Airservices Australia as a tall structure.

4.16. Construction Crane Considerations

The Guidelines require cranes to be lit when "in the vicinity" of a Hospital HLS. The illumination requirements for cranes in the vicinity of a Hospital HLS are detailed below. It should be noted that there are no specified lighting requirements for mobile cranes however a similar level of safety should be applied for these as would be applied for tower cranes.

As a minimum for all tower [hammerhead] cranes:

- top of crane A frame or cabin: medium intensity flashing red obstruction light;
- both ends of Jib: medium intensity flashing red obstruction light
- along Jib: line of white LED fluoro on a PE cell along the full length of the jib, and
- tower section: stairway lights or spot lights attached to the top of the tower pointing down and onto the tower (not up into pilot eyes).

As a minimum for all luffing cranes:

- top of crane A-frame or cabin: medium intensity red obstruction light;
- end of Jib: medium intensity red obstruction light;
- along Jib: line of white LED fluoro on a PE cell along the full length of the jib; and
- tower section: stairway lights or spot lights attached to the top of the tower pointing down and onto the tower (not up into pilot eyes).

The LED jib fluoro lights are to be LED weather proof emergency fluoros controlled via a PE cell with a minimum 90 minute battery back-up.

4.17. Deductions: Airspace, Cranes, Obstructions and HLSs

The following key deductions can be made:

- The proposed LSH development, once constructed, will not intrude into either the:
  - Sydney RTCC, or
  - Sydney (Kingsford-Smith) Aerodrome PANS-OPS surfaces.
- The proposed LSH development, once constructed, **will** intrude into the Sydney (Kingsford-Smith) Aerodrome OLS.
- The proposed LSH development construction crane(s) will not intrude into the:
  - Sydney RTCC, or
  - Sydney (Kingsford-Smith) Aerodrome PANS-OPS surfaces.
- The proposed LSH development construction crane(s) **will** intrude into the Sydney (Kingsford-Smith) Aerodrome OLS.
- The proposed LSH development, once constructed, will not impact the approach and departure paths of either the:
  - RPAH temporary HLS, or
  - new RPAH HLS.
- The proposed LSH development, once constructed, will not require aviation-standard obstacle lighting.
- The proposed LSH development construction crane(s) will require NSW MoH HLS-standard obstacle lighting (due to HLS proximity).
- The proposed LSH development and its construction crane(s) will require formal assessment by CASA.
- The proposed LSH development, as built, must be advised to Airservices Australia as being in excess of 45m above ground level.

4.18. Authority Consultation

No consultation has been undertaken with any airspace authorities or any airport in relation to this proposed development. Prior to lodgment of a Development Application (DA), early consultation with CASA is highly recommended for this proposed development due to its elevation.

4.19. Cumulative Impacts

The cumulative impacts of this proposed development on aviation operations to either Sydney Airport or the RPAH campus are negligible. This is one of several developments on or adjacent to the RPAH or USYD campuses that will be underway simultaneously. The building is further away than, but higher than, the new RPAH east tower. Because the proposed LSH development is behind the lift core and overrun for the new RPAH HLS, helicopters will not approach or depart to or from the direction of the proposed LSH. From an air traffic and airspace management perspective the proposed LSH can be viewed as an independent or standalone development.

4.20. Mitigations

There is nothing significant to mitigate in relation to aviation impact and airspace protection matters for the proposed LSH development. Aviation-standard obstacle lighting for construction crane(s) are routine issues that are considered on all projects in the vicinity of aerodromes, helicopter landing sites or helicopter routes. See Table 1 below.

Project Stage	Mitigation Measures	Relevant Section
C	Crane lighting to NSW MoH standards.	4.16-4.17

Table 1: Mitigation Measures

4.21. Conclusion

The proposed LSH development, including its construction crane(s), will not adversely impact aviation safety in relation to the RPAH HLS (new or temporary). The proposed LSH development, including its construction crane(s), may adversely impact aviation safety in relation to Sydney (Kingsford-Smith) Aerodrome. Approvals will be required for the tower and construction crane(s) to intrude into the the Sydney (Kingsford-Smith) Aerodrome OLS if it/they are planned to be above approximately 93 AHD, which is obviously going to be the case. The construction crane(s) will require NSW MoH HLS-specific aviation obstacle lighting which exceeds the CASA standard. A competed building will be notifiable to Airservices Australia as a building in excess of 45m above ground level.

4.22. Recommendations

Ensure that the proposed LSH development construction tower crane(s) is/are fitted with NSW MoH HLS-specific aviation obstacle lighting. If operating at night or in low visibility, ensure that the proposed LSH development construction mobile crane(s) is/are fitted with NSW MoH HLS-specific aviation obstacle lighting.

Attachment A13

Preliminary public art plan

LIFE SCIENCES HUB

84 – 94 PARRAMATTA ROAD, CAMPERDOWN

PRELIMINARY PUBLIC ART PLAN

Prepared by

Amanda Sharrad, Public Art Curator

June 2025

865

CONTENTS

- Introduction
- Location & Site
- Planning Context
- Context Analysis
- Life Sciences Hub Development Design
- Public Art Vision & Objectives
- Public Art Curatorial Direction
- Public Art Opportunities
- Public Art Benchmarks
- Commissioning Process & Selection Criteria
- Public Art Budget & Program
- Commissioning Considerations

866

INTRODUCTION

This Preliminary Public Art Plan has been developed by Public Art Curator Amanda Sharrad on behalf of the developer Wentworth Capital for the Sydney University Life Sciences Hub development. The public art curator provides a public art vision, objectives and opportunities for public art throughout the development.

A procurement and commissioning process is provided for engaging the best possible and most appropriate artists for the public art opportunities identified. The public art commissioning program aligns development and installation of the public art with the building construction program and formal approval milestones.

This Preliminary Public Art Plan is consistent with current City of Sydney planning policies and plans of management that pertain to public art throughout the city such as the City of Sydney Guidelines for Public Art in Private Development. As such, the budget allocation for public art is commensurate with the scale and nature of the development at 1% of the development cost in keeping with the City of Sydney Guidelines.

Commissioning considerations are provided to address longevity, care and maintenance of the public artworks, a nominated lifespan of the artworks commensurate with the building materiality.

Most important to the quality, excellence and artistic integrity of the public art, is to engage a suitably qualified public art curator to implement this Preliminary Public Art Plan, and to drive and manage the artist selection and commissioning process through to completion of the installed artwork. A curator facilitates leading commissioning processes that allow for collaboration between the developer, design teams, artists and key external stakeholders such as the City of Sydney.

PLANNING INTRODUCTION

This Preliminary Public Art Plan is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

A new maximum building height of part 80 metres, part 30 metres.

A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.

A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.

Retention of the existing warehouse at 88-90 Parramatta Road.

Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

A new mapped maximum height of 30 metres.

A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.

Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

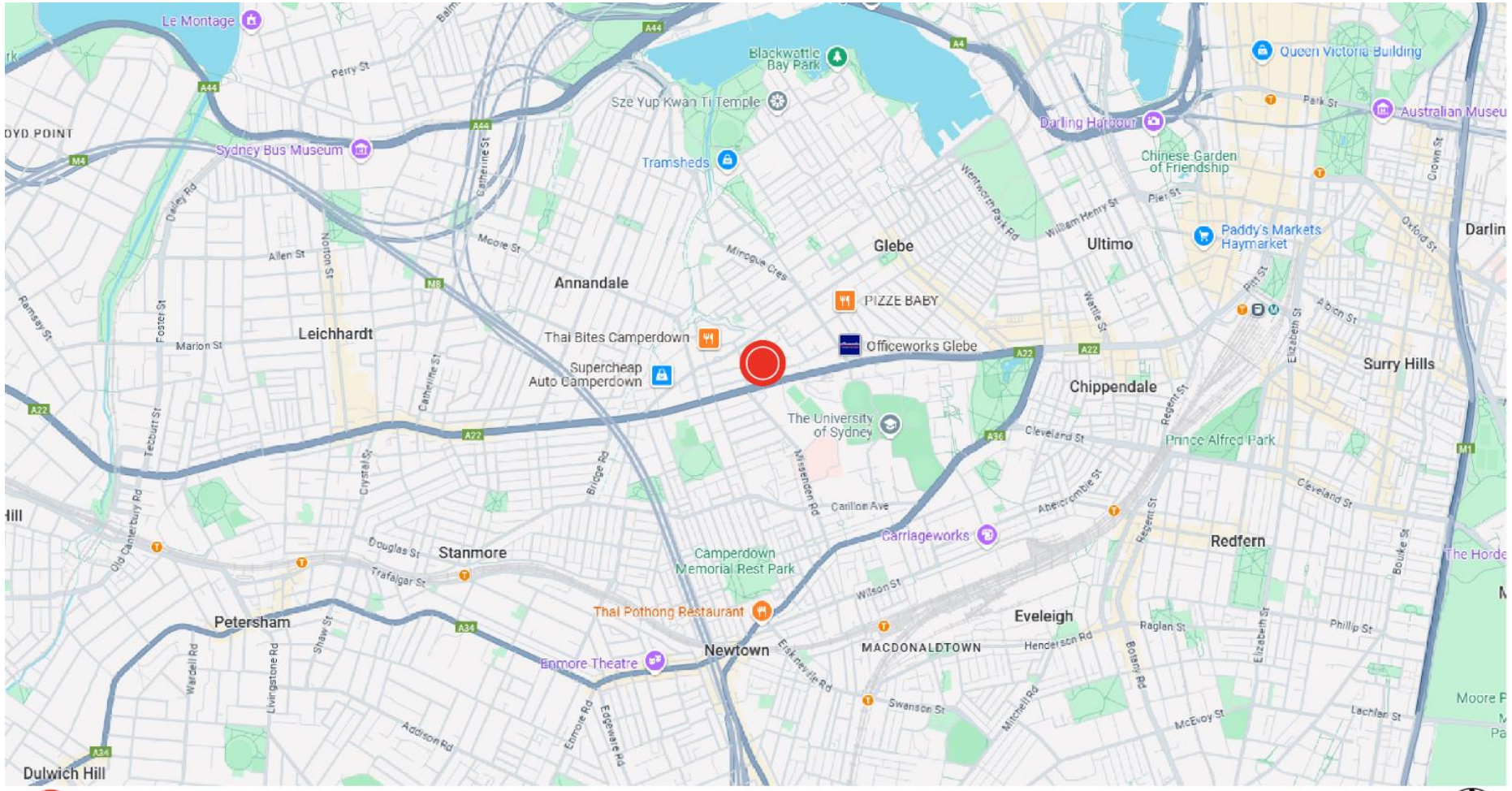
Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Ethos Urban.

Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of educational and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

LOCATION & SITE



Google Map edits courtesy Ethos Urban

CONTEXT ANALYSIS: PLANNING CONTEXT

The site for the development is located at 84 – 94 Parramatta Road in Camperdown.

This Preliminary Public Art Plan has been developed in accordance with relevant planning principals identified in the City of Sydney public art and urban planning policies and guidelines including:

- *City Art Public Art Strategy*
- *City of Sydney Public Art Policy*
- City of Sydney *Interim Guidelines for Public Art in Private developments*
- *Guidelines for Acquisitions and Deaccessions*
- *Sustainable Sydney 2030 – 2050 Continuing the Vision*

The City of Sydney's guiding principles have been considered in development of this Plan including promoting high quality public art in new development. The public art aims to enhance the development and create a superior amenity whilst activating the space that houses it. The artwork will engage with and reflect the diverse Sydney community to meet and exceed their demands and expectations into the future.

"The City's Public Art Policy provides a framework of principles to support the City's commitment to the experience of art in the strategic planning of the city and the implementation of Sustainable Sydney 2030."

The city of Sydney's *Interim Guidelines for Public Art in Private developments* require unique public art to be specifically commissioned for a development and site that exhibits:

- Standards of excellence and innovation;
- Integrity;
- Relevance and appropriateness to the context of its site;
- Consistency with current planning, heritage and environmental policies and plans of management;
- Consideration of public safety and the public's access to and use of the public domain;
- Consideration of maintenance and durability. and needs of future generations.

The public art will support Sydney's thriving and diverse cultural life and the vision outlined in *Sustainable Sydney 2030 – 2050* as a city that is green, global and connected.

CONTEXT ANALYSIS: CONTEMPORARY & FUTURE

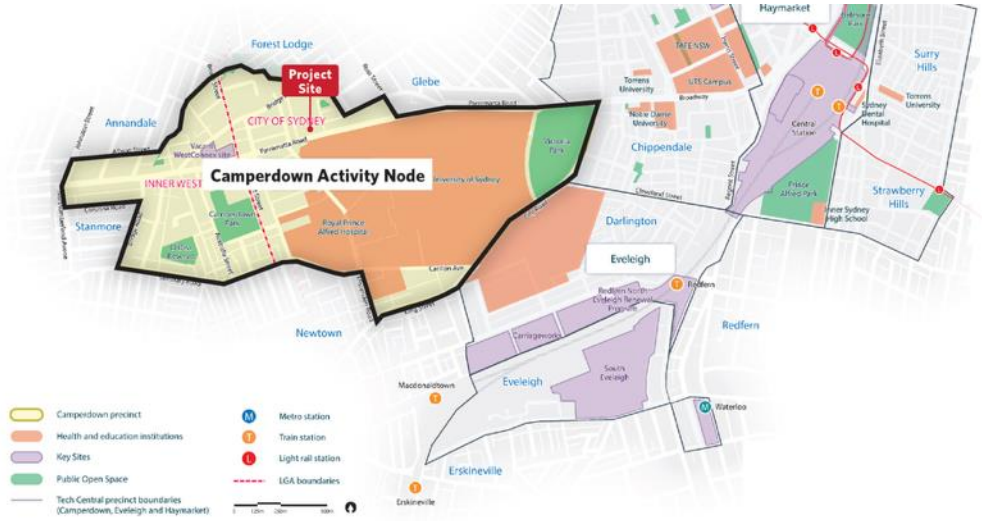
The Life Sciences Hub will be a catalyst for the regeneration of Parramatta Road that is a continuation of the civic spine from Circular Quay through the CBD and down Parramatta Road.

We envisage transforming and revitalising Broadway, our city's western gateway, as a green link with more space for people to walk and ride bikes. This will support the area's evolution into Sydney's innovation and education precinct. Sustainable Sydney 2030 – 2050.

The hub will sit along Parramatta Road opposite the University of Sydney and Royal Prince Alfred Hospital, and just down from Central Park and the new Tech Central precinct. The Life Sciences Hub is designed to meet the specific needs of the science and innovation industry, leading to the creation of new life science jobs and wider economic benefits for the city.

This is a vibrant, innovative, young, thriving and creative part of Sydney with easy access to public transport and high pedestrian traffic throughout the neighbouring village feel of Glebe and the University campus and parks. The surrounding urban milieu of restaurants, cafes and shops caters for a diverse community and student university life. The laneways through the proposal development will add to this fine grain character of the area, as a continuation of the City of Sydney's vision for "laneway commons" .

Residents, workers (current and future), students and visitors come to this inner part of Sydney for a variety of reasons and cultural experiences providing an engaged audience for public art.







CONTEXT ANALYSIS: CULTURAL

Parramatta Road follows a Heritage First Nations walking track from Gadigal to Wangal and Kameygal Country. Knowledge of Country was used to guide travel and a sustained life along the way as the First Nations community used the track to visit family, collect food and attend ceremony.

The site sits in the geological place of Hawkesbury Sandstone and woodland, and the once tidal Blackwattle creek nearby created a place where salt and fresh water met and a fertile area for First Nations communities.

Camperdown and Sydney University house innovative public art, and there are a variety of nearby gallery spaces and creative studios. The chain of high-quality public art along Paramatta Road extends from Haymarket's new public art by Hiromi Tango, soon be joined by artworks at Atlassian Central by Brook Andrew and Soo Sunny Park, past Central Park's art by Pipilotti Rist and Ugo Rondinone, to Sydney University's public artworks D Harding, Judy Watson and Robert Andrew.

To the south alongside Carriageworks, Technology Park has included a number of well integrated innovative art projects such as the First Nations Native Rooftop Farm by Yerrabingin and public art in the landscape by Nell. The City of Sydney's Green Square Town Centre includes excellence in public art by Maria Fernanda Cardoso, Kerrie Poliness, Tobias Rehberger, Jonathan Jones and Claire Healy and Sean Cordeiro.

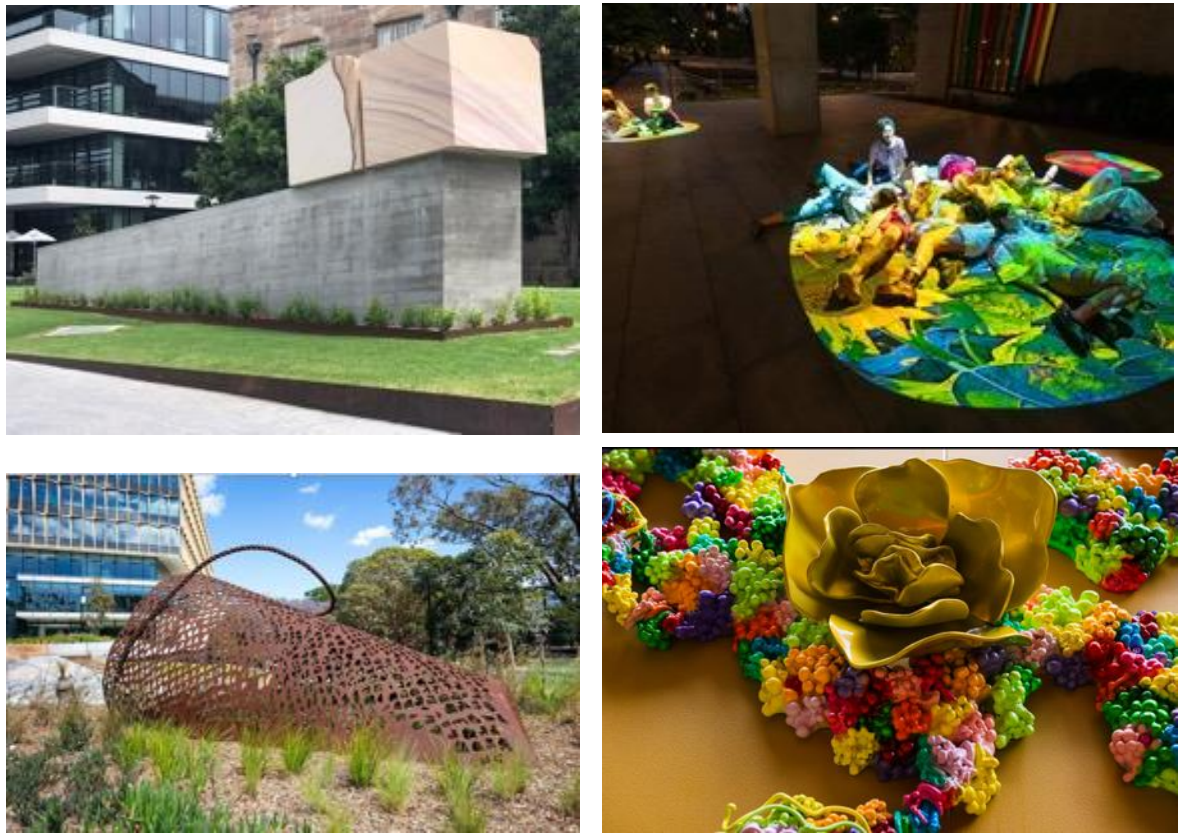


Image clockwise from above left: *Spine*, D Harding, Sydney University; *Sparkling Pond, Bold Colour Groove & Tender*, Pipilotti Rist, Central Park; *Peony Dream,* Hiromi Tango, Haymarket; *jugama,* Judy Watson, Sydney University.

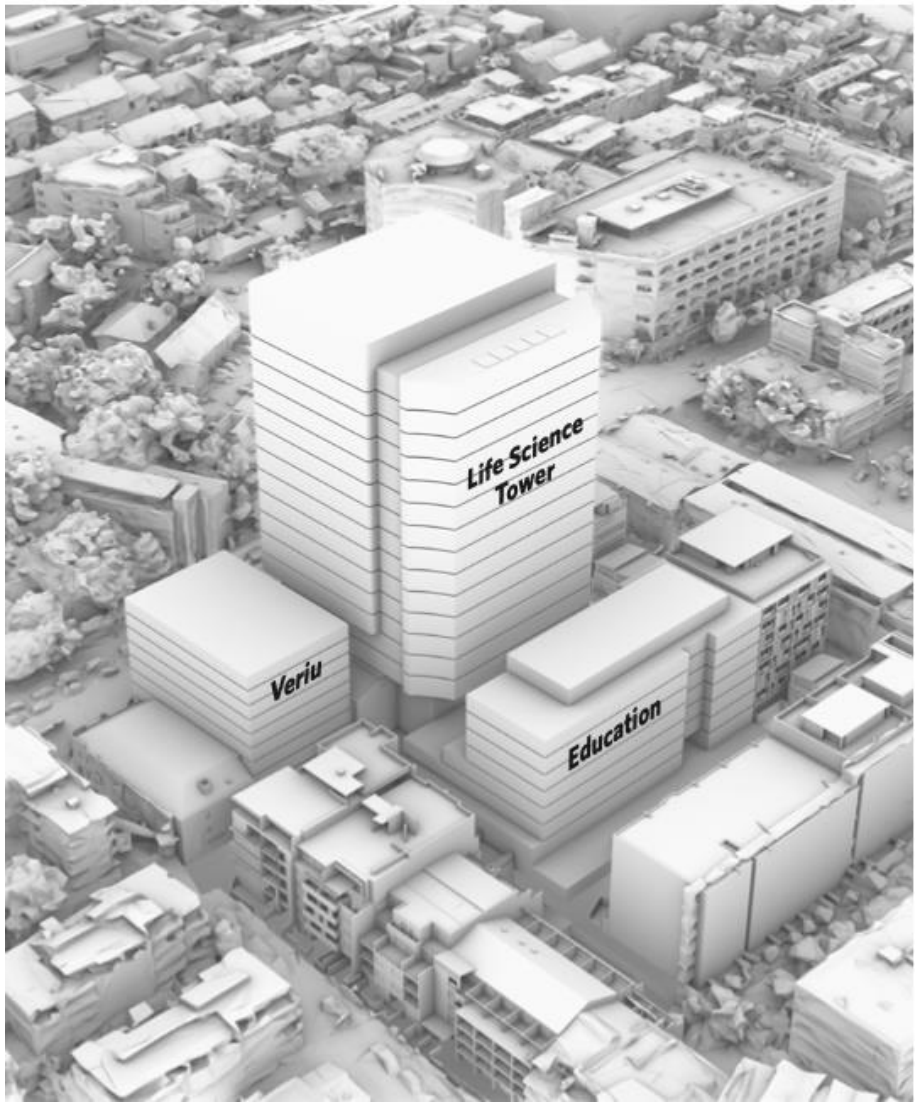
LIFE SCIENCES HUB DEVELOPMENT

Providing critical space for the translation and commercialisation of biomedical and life sciences research

Wentworth Capital envisage a world-class life sciences hub and campus for Sydney University at the 84 – 94 Parramatta Road development in Camperdown. The planning proposal comprises 37,600 square meters of floor space to house 800 researchers and 400 support staff in the life sciences. This development is part of the purpose-built infrastructure within key innovation clusters of Wentworth Capital's recently announced a $1.5b investment to support science and innovation, as they state:

Australia has an expanding biomedical sector, which has seen growth of more than double the number of life sciences organisations between 2017 and 2024. Australia is an important global market to commercialise new biomedical technologies and Sydney is home to a majority of multinational affiliate companies operating in Australia.

Opposite Sydney University and St John's Oval, the aim is that this new Life Science campus will establish Camperdown as Sydney's premier biomedical hub centred around top tier life science facilities. This new campus will complement the larger University of Sydney life science and innovation ecosystem to enhance the existing research facilities and strategic infrastructure presently being developed by the University, including the Sydney Biomedical Accelerator, as well as the Royal Prince Alfred Hospital (RPA) upgrades.









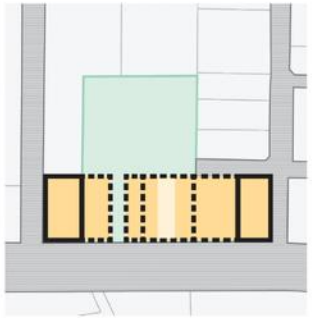
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LIFE SCIENCES HUB DESIGN PRINCIPLES



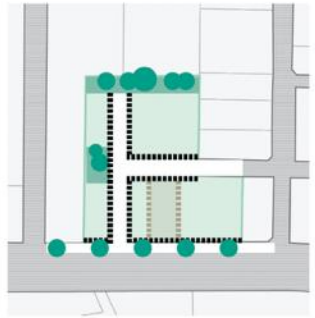




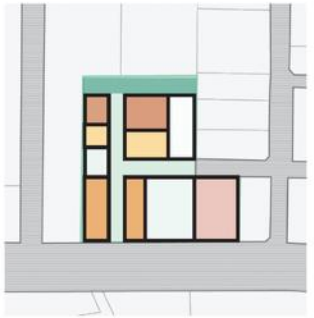
Positively Address Parramatta Road

- Respond to grain and scale of Parramatta Rd street wall.
- Acknowledge, adapt and reuse existing warehouse.
- Present science and learning to wider public.



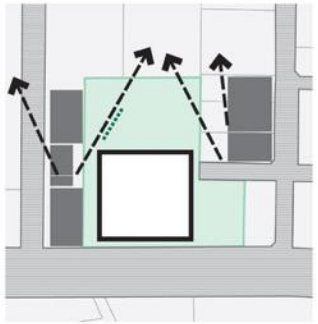
Create Open Spaces, New Arcade and Laneway Network

- Improve site porosity.
- Provide deep soil and building separation to northern boundary.
- Introduce planting and landscape.
- Support the transformation of Parramatta Rd boulevard.



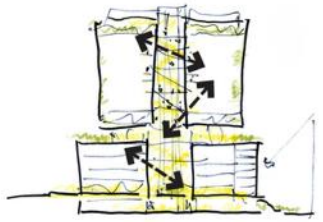
Diversity of Use

- Introduce activating uses.
- Support a mix of site users.
- Extend hours of utilisation and activation.



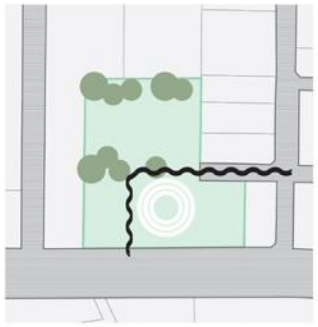
Be a Responsible Neighbour

- Minimise shadowing impacts upon neighbouring apartments.
- Provide improved building separations to the north.
- Provide deep soil along northern boundary.



Foster Innovation & Collaboration

- Create Vertical Integration
- Create Horizontal Integration
- Provide Spaces for Exchange



Strategies for Connecting with Country

- Celebrate the site as a place of knowledge and learning.
- Interpret the original walking track betwen Sydney and Parramatta.
- Improve ecological function, deep soil, tree canopy and water cycle management.

LIFE SCIENCES HUB EXHIBITION SPACE

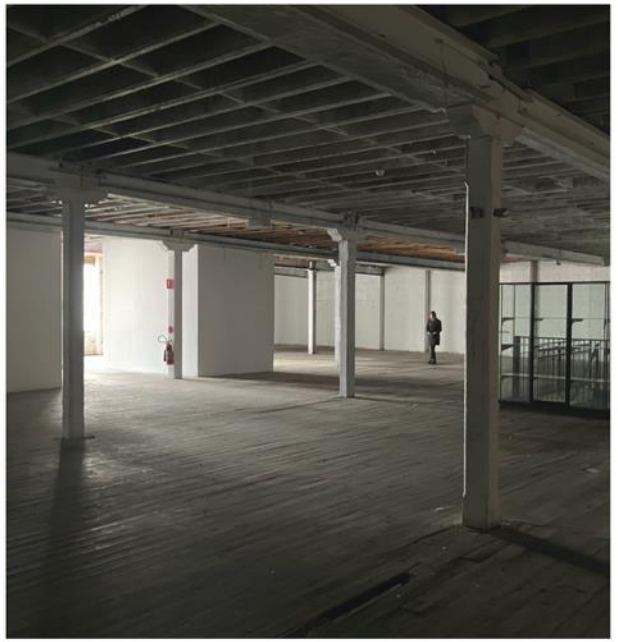
The site contains a warehouse with heritage character that is to be retained as much as possible and integrated into the design of the Life Sciences Hub development. This idea is that this warehouse will form an important link to the general public and house exhibitions, eventsand conferences associated with the research in biotechnology that will be undertaken in the facilities provided by the development.

The City's feedback on the design proposal is for the architects to preserve the building's overall volume, street facing façade and internal spatial character whilst adapting it for contemporary use within the precinct. The new tower will be set back to conserve the roof form of the warehouse and maintain legibility of the building from Parramatta Road. The windows on the northern and southern upper levels will also be retained to support the heritage architectural values and environmental performance objectives.

Importantly the ground floor level will be altered to provide a pedestrian link through the building to the internal lane that connects into Sparkes Street, and the building will provide a welcoming public interface. Public art in this location and at the entrance to this area will assist in announcing this as the public interface for the development.

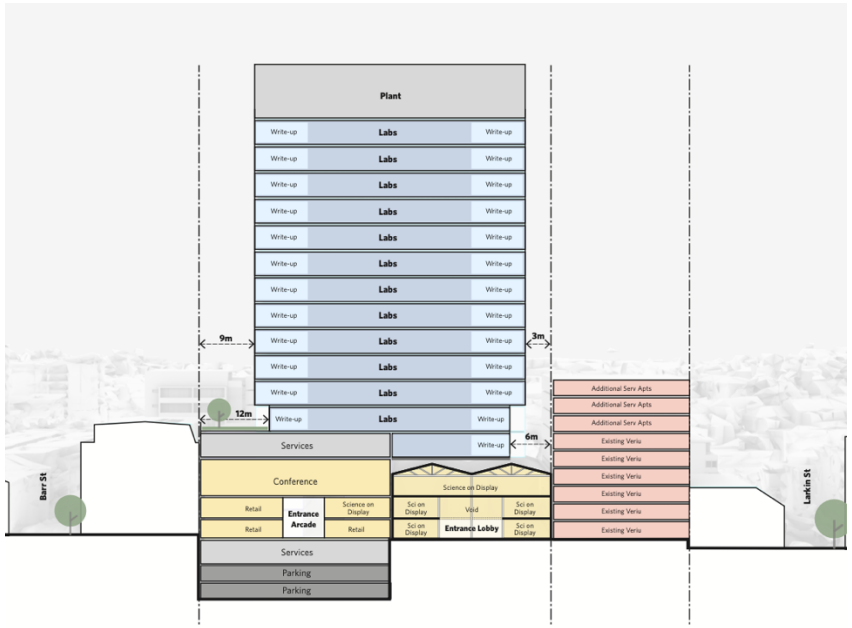


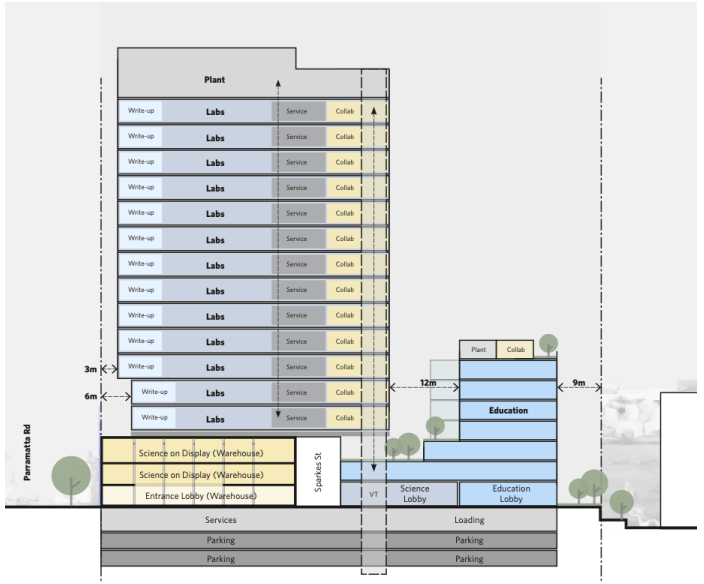




LIFE SCIENCE HUB LAYOUT PLAN & SECTIONS







PUBLIC ART VISION

The driving vision for art in the Life Sciences Hub will be innovation, sustainability and collaboration. Many contemporary creative practices achieve distinction through their engagement with cutting edge ideas around science, biodiversity and sustainability.

Exceptional artworks will be either highly integrated with the equally exceptional caliber of the architecture – or complementary and well housed within the development, to provide a meaningful and memorable experience of the iconic and the fine grain moments.

The art will resonate with the innovation and scientific research being carried out in the hub, and will engage with a predominately young and diverse audience in this thriving educational and cultural precinct.

The permanent public art offering for the Life Sciences Hub will be of exceptional quality that is commissioned in accordance with the City of Sydney's guidelines for public art in private development.

OBJECTIVES

- Activate the fine grain experience of the laneways through the development to enhance pedestrian use and connectivity and a sense of safety;
- Create distinctive and exceptional art;
- Announce this as a site for innovation and scientific research through memorable artworks addressing themes around sustainability and bio research and advances;
- Encourage exploration with a series of art elements throughout the development;
- Excite and spark the imagination;
- Respond intelligently, uniquely, imaginatively to the architecture with originality and excellence.

CURATORIAL DIRECTION

The curatorial vision for art in the Life Sciences Hub is for work that is innovative, challenging, contemporary, memorable, unique, exceptional and meaningful.

For the art to contribute fresh ideas to the field while maintaining excellence, aesthetic quality, conceptual depth and relevance to the site and zeitgeist, a highly qualified public art curator will be required to research and present the best possible artists for this opportunity.

A 0.5 - 1% development cost indicative spend on public art would see a sizeable budget for public artworks. It is recommended a range and number of artists be engaged to provide a program of public artworks across the development.

Artists should come from varied backgrounds referencing diversity in the creative community with work addressing issues related to the vision for this precinct such as sustainability. As this is a scientific research hub showcasing strengths in Australia's biotech research, it is fitting to include Australian artists, but sustainability is a global issue and international artists could also be included. With the university nearby, innovation and scientific research could be referenced and highlighted in the artworks, and connections could be made between the site, Country and sustainable First Nations practices.

Artists who have the capacity to be inventive and original, and the willingness to develop their practice in new and exciting ways are recommended, so that a unique and distinct offering can be delivered for the site and precinct.



PUBLIC ART OPPORTUNITIES

The following sites are considered the best opportunities for public art throughout the development.

Major opportunities occur on the Parramatta Road façade and entrances as well as throughout the development in the laneways that are publicly accessible and provided as genuine through-site links.

Possible artwork types:

1. Sculptural elements attached or integrated into the façade;
2. Suspended or cantilevered sculptural elements along the laneways;
3. Ground plane elements along the laneways;
4. Art elements integrated into the landscape design, ground plane of the co-living outdoor space.
5. Moving image art on a screen attached to or projected onto an internal wall of the through-site link;



OPPORTUNITIES: PARRAMATTA ROAD FACADE

The Parramatta Road façade is the primary entrance for pedestrian and passing traffic and art elements integrated into this façade could be viewed up close from the pavement or in a larger scale could be read from afar across the parklands.

Art in this location announces and celebrates the building and arrival destination and art at scale would create an iconic landmark in the surrounding urban landscape – particularly as the building will have a prominent scale with excellent surrounding vantage points from the parklands opposite.

Artworks activating the entrances at ground level could assist the City of Sydney's aim to transform Parramatta Road boulevard and activate Parramatta Road at pedestrian level. Art at the entrance to the converted warehouse exhibition space could attract attention to the use of this reused warehouse for presenting science and learning to the wider public.

Artworks could be highly integrated into the architectural fabric or fenestration of the building, or be in the form of sculptural elements attached to the façade. These artworks could cluster around the entrances to the laneway and entrance lobby or be spread across the façade, wrapping around the façade to the western and eastern sides so that is is viewable from Parramatta Road. The commissioned artist would work very closely with the architectural teams in order to ensure respectful and meaningful integration of materials and concept.

Should there be a proposed awning to the building at entrance points, artworks could be integrated within this awning or attached to the underside.

Sculptural elements attached to the façade should be at a height out of reach for ongoing maintenance, and should not exceed the site boundary.





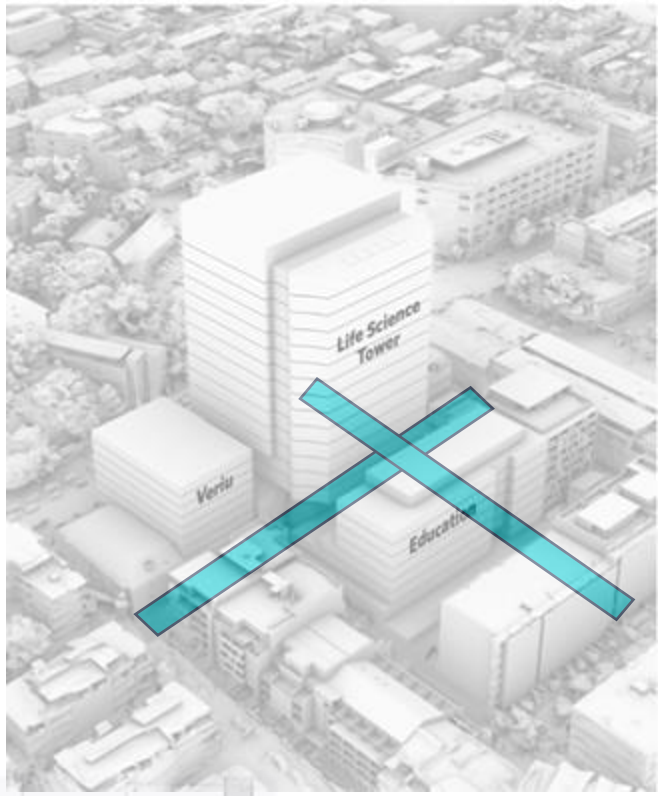
OPPORTUNITIES: LANEWAYS

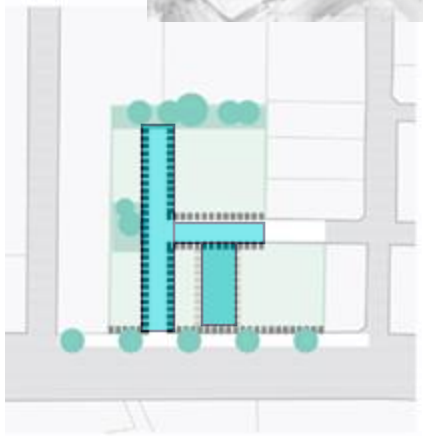
The laneways through the Life Sciences Hub are intended to provide genuine through-site pedestrian links between Parramatta Road, Parkes Street and the northern boundary of the site, to improve site porosity.

Artworks along the laneway help navigation through the development, and if incorporating lighting can create a sense of safety at night and activate the space day and night. The laneways will be gated from 10pm each night and artwork elements could be incorporated into these entry gates.

Artwork could occur along the ground plane or be a series of smaller freestanding or attached or suspended sculptural elements in order to provide a sense of discovery as one progresses along the lane.

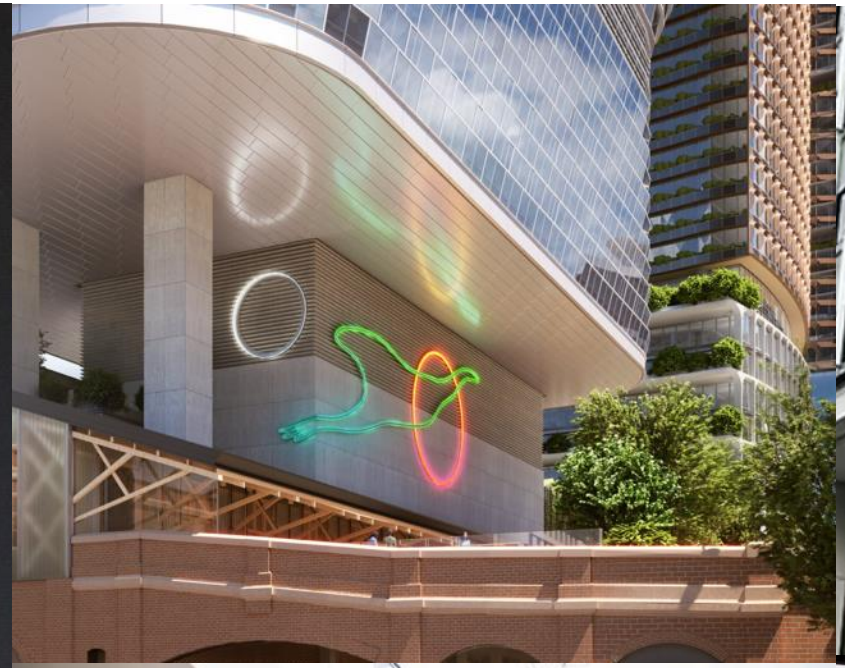
Artworks suspended or cantilevered along the lane from the buildings either side will need to be placed at a height that does not impede vehicular traffic for deliveries and artworks that are freestanding should consider pedestrian accessibility.





PUBLIC ART BENCHMARKS











Images clockwise from above: *City Light,* Callum Morton, Surry Hills; *giwang dinawan yiray,* Brook Andrew, Atlassian Central, Tech Central; *Big Nest*, Tadashi Kawamata, Central Park; Harpa Reykjavik Concert Hall façade artwork, Olafur Eliasson; *All alongside of each other*, Rose Nolan, Central Station.



885

ARTIST SELECTION & COMMISSION PROCESS

A suitably qualified public art curator will be engaged to provide full curatorial services in developing artist brief/s, overseeing the artist selection and concept development through fabrication, installation to completion. Best practice curatorial expertise will be applied to the curation of artists and a cultural respectful process.

The procurement process will entail curatorial research of artists suitably qualified for the available opportunity sites. This list will be presented by the public art curator and collaboratively shortlisted by the developer, the selected architectural team and curator. Artists will be selected by a shortlisted competition or direct invitation, to be decided upon at the brief writing stage. Should First Nations artists be considered, a curator with expertise in curating First Nations artists as evidenced in prior projects will be engaged to work with the First Nations Cultural Heritage consultant to inform the artist briefs and ensure the Cultural appropriateness of themes addressed in the briefs. Should international artists be considered a suitably qualified curator with expertise in curating international artists will be engaged to oversee the project. Ideally the one curator who has expertise in Australian, First Nations and international artist be engaged to oversee the public art.

Successful artists, or artist will be invited to submit concept designs that will be evaluated in terms of their ability to meet the Artist Brief and Selection Criteria. The evaluation will be by the curator in collaboration with the developer and design teams who will constitute the evaluation panel.

In addition to the selection criteria the evaluation panel will consider the potential for the art concept to augment the current exemplary public art in the area and throughout the city, and to have a distinct point of difference in the precinct in terms of artwork type, approach to the site and type of artist. This selection and commissioning process is advised to achieve the best possible outcome, to reflect diversity in the community and to provide collaborative opportunity for the client and architectural team who will be closely involved in the selection.

The curator will drive the artwork development and commission process, through to fabrication, installation and completion to ensure excellence and artistic integrity.

It is believed that the above approach will provide the best possible memorable and unique public art offering for the development and area.

SELECTION CRITERIA

Artists will be selected on their ability to present unique ideas that develop their creative practice into new and ambitious territory and will be evaluated according to the following criteria:

- Artistic excellence & expertise;
- Strength, innovation and contemporaneity ;
- Response to the artist brief and site;
- Feasibility.

PUBLIC ART BUDGET

The budget allocation for public art is an indicative 0.5 - 1% of the considerable development cost which would be commensurate with the development.

It is to include the following:

- Artist fees;
- Artist selection competition costs / fees;
- Project Management and Artist design team fees;
- Specialist and technical fees;
- Public art planning / authority approval fees;
- Artwork materials for sampling, testing and fabrication;
- Artwork fabrication;
- Artwork transportation, insurances, storage and installation;
- Artwork supports and footings;
- Artwork photography for announcement, artwork launch, marketing and publicity;
- Artwork maintenance manual.

PROGRAM

Preliminary Public Art Plan

June 2025

(*Aligned with Planning Proposal)*

Stage Two A: **Artist Brief**

8 weeks

(Aligned with Design Competition)

Stage Two B: Artist Selection

Stage Three: **Artwork Refined Concept**

8 - 12 weeks

Stage Three: **Artwork Detailed Design for Detailed Public Art Plan**

8 weeks

(Approval aligned with Stage 2DA or nominated CC)

Stage Four: **Public Art Fabrication & Installation**

16 - 24 weeks

(Approval aligned with OC)

COMMISSIONING CONSIDERATIONS

ARTIST AGREEMENT

The artist sill be selected and engaged with an artist agreement. An Artist Agreement needs to be a bespoke document that reflects the unique public art commissioning process. Artist agreements must reflect the conditions under which an artist is required to perform the Artist Brief. Agreements are best tailored to the project with commissioning stages and milestones reflecting the specific circumstances of the public art opportunity.

TIMEFRAME

It is important to engage artists early in the development process, but also at the appropriate time when enough information is known about opportunity sites for the Artist Brief. Artwork elements that are highly integrated into the built environment or landscape can be factored into urban, architectural and landscape designs, planning and costing. If commissioned too late in the construction program the artist does not have the opportunity to collaborate with design teams on a well integrated artwork, however if engaged too early, constantly changing site parameters require updates in the artwork design. The artists' time to do this must be adequately remunerated.

ARTIST FEES

The artist is provided with a fee that is nominated at the outset by the artist in the public artwork cost plan. Although it is important to engage artists early in the development program, construction programs and site parameters change and artists must be remunerated appropriately for additional work and variations that come with adapting to these changing parameters.

MAINTENANCE

Permanent public artworks must be made of materials that are durable, safe, resistant to weather conditions and wear and tear commensurate with their contracted lifespan. If artworks involve new technologies, it is recommended that the highest quality be used to mitigate the speed with which technologies are developed. For permanent artworks, technology should be housed in an accessible, removable manner within the artwork to ease replacement of broken parts or redundant technologies if necessary. Maintenance Plans and Manuals should be developed by the artist and their fabrication teams during artwork development stage. These should include contact details for all material suppliers involved in fabricating the artwork and for contractors that will provide on-going maintenance. In the possible event that the artist is not contactable this information is required for maintenance and repair. The Maintenance Manual should include annual and reactive maintenance schedules, an agreement as to the wear and tear deemed acceptable by the artist prior to maintenance and repair, and the artist agreement can contain a 12-month defects clause. The Artist Agreement and Maintenance Manual should identify who is responsible for ongoing maintenance beyond the first year, preventing unnecessary deterioration and expensive future restoration costs.

LIFESPAN

The lifespan of artworks must be specified in the Artist Brief and Artist Agreement so that artists can recommend and work with appropriate materials. The condition of consent lifespan is for a permanent artwork with a lifespan commensurate with that of the building. The conditions under which decommissioning may occur must be clearly outlined in the artist agreement to avoid breaching the artists' moral rights, and to provide the client / owner the right to remove artworks should they prove unsafe, no longer suitable in the site or fit for purpose.

Attachment A14

Environmentally sustainable design strategy

ARUP

Wentworth Capital | University of Sydney

Camperdown Life Sciences Hub

Environmentally Sustainable Design Strategy Report

Reference: ESD-01

Rev E | 30 July 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 304985-00

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Contents

Executive Summary 1

1. Project Overview 2
1.1 Site Description 2
2. Introduction 4
3. Ecologically Sustainable Development 4
3.1 Definition 4
3.2 Methodology 4
3.3 Principles of ESD 4
4. ESD Strategy 7
4.1 Sustainability Rating 7
4.2 Embodied Emissions 8
4.3 Net Zero Plan 9
4.4 Energy Performance and Offsets 9
4.5 Water Performance 9
5. Conclusion 10

Figure 1 Locational Context (source Google Maps, edits by Collier Urban Planning) 3
Figure 2 Green Star Buildings - credit categories (source GBCA) 7
Figure 3 Annotated Climate Positive Pathway (source GBCA) 8

Executive Summary

This report provides an Environmentally Sustainable Design (ESD) Strategy that can be used to guide future development of the site. In developing the report, the relevant statutory and advisory planning documents have been reviewed to inform ESD priorities.

Significant opportunities have been identified for the site that will contribute to excellent ESD outcomes, four examples are noted following:

1. Retention and adaptation of the existing warehouse results in reduce embodied carbon and maintains the current street character.
2. Targeting of a 5-star Green Star rating ensures the future development is Net Zero ready
3. Best practice procurement and management will be embedded via Green Star rating
4. Creation of research facility providing skilled jobs and assisting in local innovation in science.

Additional features have been identified which will also contribute to the ESD outcomes covering topics encompassing; net zero, embodied emissions, and energy and water efficiency.

The Planning Proposal has integrated the ESD requirements of the Sustainable Building SEPP and the City of Sydney DCP 2012. Significant commitments have been made by the proponent in the development of this strategy that will ensure market leading sustainability outcomes for future development on the site.

1. Project Overview

This Ecologically Sustainable Development Strategy is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.5:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.
- Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Collier Urban Planning.

1.1 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1.

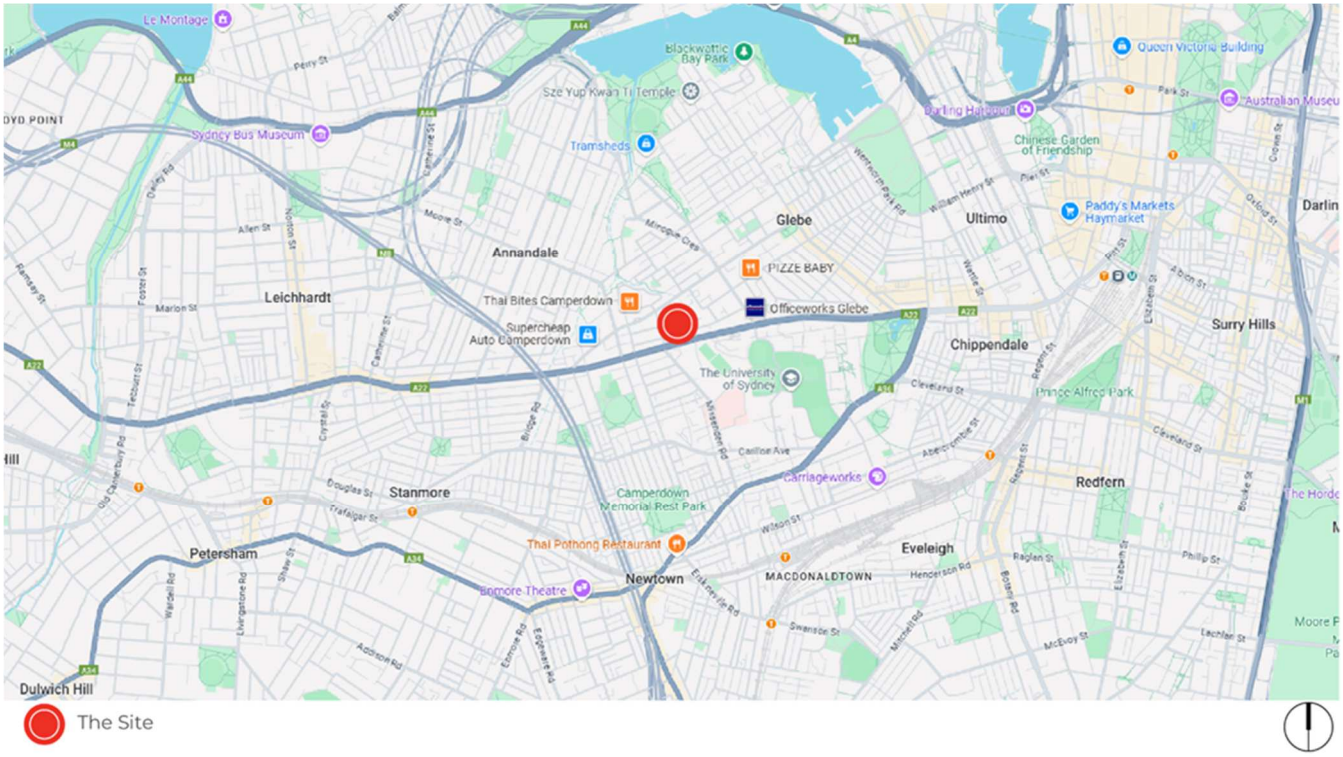


Figure 1 Locational Context (source Google Maps, edits by Collier Urban Planning)

2. Introduction

This report has been developed to provide an Environmentally Sustainable Design (ESD) Strategy for future development at 84-94 Parramatta Road. It is a framework document that will ensure the principles of sustainability are integrated into the buildings.

It also documents the aspirations and commitments proposed by the proponent. As the future developments progress in design, the framework will provide certainty in the delivery of these aspirations.

3. Ecologically Sustainable Development

In developing the Environmentally Sustainable Development Strategy, guidance has been taken from the EPA directive on Ecologically Sustainable Development (ESD). The following section provides a high level of summary of considerations that will be made in developing the planning proposal for the site.

3.1 Definition

Ecologically sustainable development (ESD) requirements to be addressed by this SSD report are derived from the definition documented in Section 193 of the Environmental Planning and Assessment Regulation 2021, under the Environmental Planning and Assessment Act 1979.

Namely, these are the principles of ecologically sustainable development:

1. The precautionary principle,
2. Inter-generational equality,
3. Conservation of biological diversity and ecological integrity, and
4. Improved valuation, pricing and incentive mechanisms.

3.2 Methodology

The principles of ecologically sustainable development have been used as an overarching guide to develop the ESD strategy for the project. The key elements of this development proposal in respect to Section 193 are resource consumption and carbon emissions. Specifically, the ESD strategy for the development addresses the following key area noted below. In preparing this strategy, guidance has been taken from the Sustainable Buildings SEPP, specifically the high level topics related to non-residential development listed below.

- Sustainability rating
- Embodied emissions
- Net zero plan
- Energy performance and offsets
- Water performance

For each of these areas, this report identifies initiatives and/or controls that are proposed to be incorporated or are under consideration. The initiatives are proposed to reduce the environmental impact of the future development.

3.3 Principles of ESD

3.3.1 The Precautionary Principle

The precautionary principle is defined as follows:

The precautionary principle is that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

(3) In applying the precautionary principle, public and private decisions should be guided by -

(a) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(b) an assessment of the risk-weighted consequences of various options.

- The proposed site will be reviewed to confirm that no ecologically sensitive features are impacted.
- Assessment will be made to ensure the future development does not create downstream impacts on any natural sites adjacent, for water flows to natural water courses of water bodies.
- Future development will also seek to improve the quality of stormwater flow from the site compared to the current state.

3.3.2 Intergenerational Equity

The principle of intergenerational equity is defined as follows:

The principle of inter-generational equity is that the present generation should ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

- Future development will be committed to providing Australian Excellence in building systems ratings through the Green Star Buildings tool.
- This includes enhanced performance targets for water, energy and carbon efficiency in the design and construction on the site.

3.3.3 Conservation of biological diversity and ecological integrity

The principle of the conservation of biological diversity is defined as follows:

The principle of the conservation of biological diversity and ecological integrity is that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

- The resultant direct, indirect, and cumulative ecological impacts of the proposal are being carefully considered. Through the development of an Environment Impact Statement, recommendations and mitigation measures will be developed in order to address the principle of biological diversity and ecological integrity.

3.3.4 Improved valuation, pricing and incentive mechanisms

The principle of improved valuation, pricing and incentive mechanisms is defined as follows:

The principle of improved valuation, pricing and incentive mechanisms is that environmental factors should be included in the valuation of assets and services, such as -

(a) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, and

(b) the users of goods and services should pay prices based on the full life cycle of the costs of providing the goods and services, including the use of natural resources and assets and the ultimate disposal of waste, and

c) established environmental goals should be pursued in the most cost effective way by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

- The upfront carbon targets detailed in this strategy will assist in creating a market for products with reduced embodied carbon emissions.

- Similarly, the proposed water and energy performance targets will help incentivise the market for more efficient building services.

4. ESD Strategy

The following sections describe the proposed minimum standards that will be integrated into future development enable by this planning proposal. The structure of the strategy reflects the NSW Government's Sustainable Buildings SEPP 2022 and provides initiatives that the proponent is committed to for the Camperdown Life Sciences Hub.

4.1 Sustainability Rating

Wentworth Capital is committed to sustainability rating of the future developments on the site subject to this planning proposal submission. In line with their ESG policies, and the development guidelines of their partner, the University of Sydney, a Green Star rating will be targeted and certified.

Green Star is a holistic sustainability rating tool, which addresses multiple aspects of building design and construction. Figure 2 below is an excerpt from the Green Star Buildings rating tool submission guidelines which highlights the broad categories of credits which are part of the Green Star rating. A 5 star rating is proposed which will require an enhanced level of achievement relative to the minimum expectations of a Green Star rating. This level of achievement is considered "Australian Excellence" and will result in high environmental performance that addresses social issues relevant to the building owner[1].



Figure 2 Green Star Buildings - credit categories (source GBCA)

4.1.1 Minimum expectations

To achieve a rating under the Green Star Buildings tool, there are a "minimum expectations" that the Green Building Council of Australia (GBCA) nominate to ensure that the building is no less than "Best Practice". This includes requirements as noted below.

1. Responsible Construction – ISO certified builder, EMS requirements, and min. 80% diversion of construction and demolition waste from landfill.
2. Verification and Handover – building is commissioned, tuned and metered to an enhanced standard.
3. Responsible Resource Management – appropriate design to enable best practice waste management in operation.
4. Clean Air – enhance ventilation requirements relative to code.
5. Light Quality – glare management, quality lighting fittings and levels, and consideration of daylighting.
6. Acoustic Comfort – design to manage noise levels both internally and external to the building.

[1] Green Star Buildings Submission Guidelines, v1, Rev C.

7. Exposure to Toxins – exclusions for products that have excessive VOCs, no lead, asbestos and PCBs.
8. Climate Change Resilience – requirements for assessing impacts of climate change early in design development.
9. The Climate Positive Pathway, as described in Section 4.1.2.
10. Inclusive Construction Practice – provides for gender appropriate facilities and PPE.
11. Impact to Nature – exclusion for sites that are ecologically sensitive.

The minimum expectations noted above are a significant enhancement compared to code mandated minimum performance and will result in a development that has increased amenity, improved operational performance and better outcomes for workers during construction.

4.1.2 Climate Positive Pathway

By virtue of targeting a 5-star rating, the future developments on the site will be required to provide a climate positive pathway in their design. To achieve this, the following criteria will be integrated into the building design.

1. Commitment to 100% renewable electricity purchase for base building requirements
2. Commitment to 100% renewable energy for all non-electric energy, base building and tenant requirements
3. 20% reduction in annual energy use relative to benchmark building performance
4. 20% reduction in upfront carbon emissions relative to benchmark building design
5. Offset of all scope 1 emissions

The stringency of the Climate Positive pathway determined by the GBCA increases over time, Figure 3 taken from the Green Star Buildings submission guidelines shows the increased requirements by year of registration. The annotated blue line showing the minimum requirements for a 5-star rating. Note that the 2030 targets are based on year of completion – not registration.

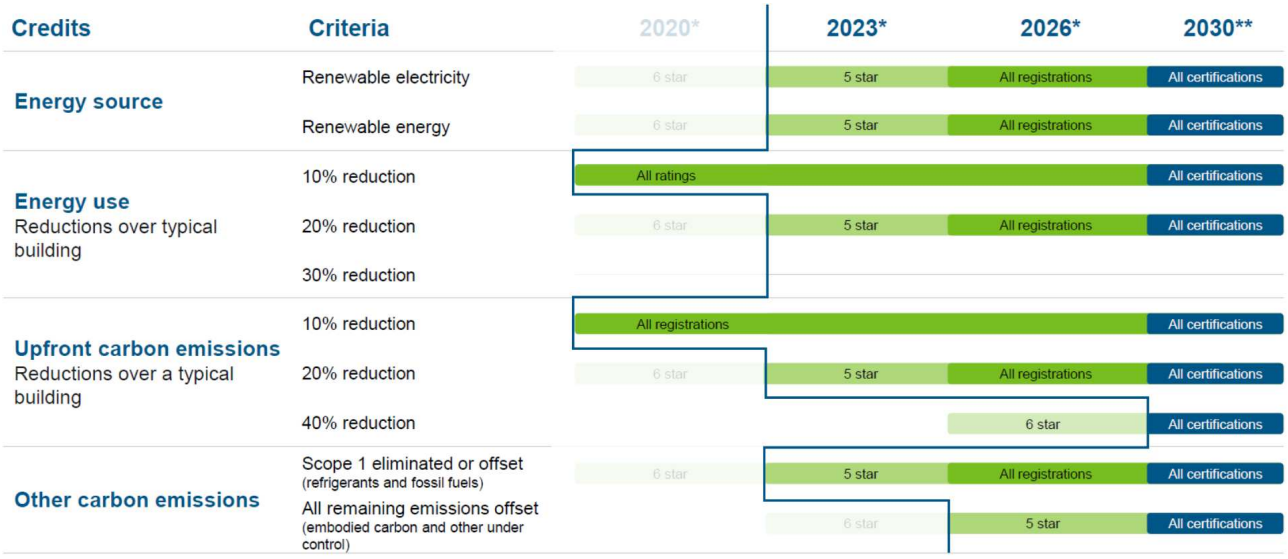


Figure 3 Annotated Climate Positive Pathway (source GBCA)

4.2 Embodied Emissions

Embodied emissions associated with future development will be addressed via two key pathways, these are detailed in the following sections.

4.2.1 Adaptive Reuse

A key design feature of the future development is the adaptive reuse of the existing warehouse development at 88-90 Parramatta Road. This will become a feature of the site, displaying the site's history and utilising the embodied carbon already invested in the site to provide new functionality.

Similarly, the extension of the existing Veriu development will take advantage of the current structure and provide additional accommodation capacity.

4.2.2 Green Star Upfront Carbon

Aligned with the NABERS Embodied Carbon protocol, the building's rating under Green Star will assess the upfront carbon of all future development. This will include a target to reduce upfront carbon emissions by a minimum of 20% compared to a reference building design defined by the GBCA. This target represents a significant improvement on embodied carbon intensity and will be achieved through a combination of dematerialisation and material selection/specification.

4.3 Net Zero Plan

Aligned with the Climate Positive Pathway in the proposed Green Star rating, the future developments will provide a Net Zero Plan. This includes details of what energy sources are used on site, what efforts have been made to provide efficiency in their use and how any residual fossil fuels may be removed from the site in the future.

As a minimum, it is proposed that all future developments will:

- Have all electric building services for HVAC and domestic hot water production,
- Will maximise onsite renewables,
- All base building energy uses will be powered by renewable energy, and
- All tenant energy use will be encouraged to utilised renewable energy.

This approach is also aligned with the "Planning for Net Zero Buildings" report co-authored by the City of Sydney, which also informs the DCP applicable to future developments on this site.

4.4 Energy Performance and Offsets

Future development on the site is primarily focused on typologies that are not envisaged in either the Sustainable Buildings SEPP or City of Sydney DCP energy performance requirements.

To demonstrate energy efficient performance for the future developments, the proposal to use Green Star will enable rating via the Energy Use credit. In line with the 5-star rating, a minimum improvement in energy efficiency 10% without any onsite renewable energy and greater than 20% improvement in total.

The Green Star Climate Positive Pathway targeted for future developments will also require purchase of renewable energy and offsets for scope 1 emissions – minimising the operational emissions associated with the development.

If a future development application created a typology that does trigger the Sustainable Building SEPP, the submissions would be capable of addressing those requirements.

4.5 Water Performance

Similar to energy performance, the building types proposed for the subject site are not envisaged in the Sustainable Buildings SEPP or City of Sydney DCP for water efficiency standards.

To demonstrate water efficiency, future developments will utilise the Water Use credit of the Green Star Buildings tool. This will require a modelled minimum reduction in potable water use of 15% compared to a reference building.

5. Conclusion

This report provides an Environmentally Sustainable Design Strategy that can be used to guide future development of the site. Significant opportunities have been identified for the site that will contribute to excellent ESD outcomes:

1. Retention and adaptation of the existing warehouse results in reduce embodied carbon and maintains the current street character.
2. Targeting of a 5-star Green Star rating ensures the future development is Net Zero ready
3. Best practice procurement and management will be embedded via Green Star rating
4. Creation of research facility providing skilled jobs and assisting in local innovation in science

The Planning Proposal has integrated the ESD requirements of the Sustainable Building SEPP and the City of Sydney DCP 2012. Significant commitments have been made by the proponent in the development of this strategy that will ensure market leading sustainability outcomes for future development on the site.

Attachment A15

Preliminary site investigation (contamination)

84-94 Parramatta Road, Camperdown, NSW

Wentworth Capital

Preliminary Site Investigation

69242 | 167,422 (Rev C)

29 September 2025

We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.



Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

Table of Contents

1. Introduction 2

1.1 Background 2

1.2 Objectives 2

1.3 Scope of Works 2

2. Site Description 4

2.1 Site Identification 4

2.2 Site Description 4

2.2.1 84 Parramatta Road, Camperdown 4

2.2.2 88-90 Parramatta Road, Camperdown 5

2.2.3 92-94 Parramatta Road, Camperdown 5

2.3 Surrounding Land Use 5

2.4 Topography 5

2.5 Geology and Soil 5

2.6 Hydrology 6

2.7 Hydrogeology 6

2.8 Acid Sulfate Soils 7

2.9 Naturally Occurring Asbestos 7

2.10 Salinity 7

2.11 Meteorology 7

3. Site History 9

3.1 Aerial Photograph Review 9

3.2 EPA Searches 10

3.3 Heritage Registers 11

3.4 Hazardous Chemicals Search 12

3.5 Section 10.7 Planning Certificate Search 12

3.6 Council Development Application Records 13

3.7 Historical Land Title Records 14

3.8 Review of Historical Business Directories 18

3.9 Integrity Assessment and Summary of Site History 20

4. Preliminary Conceptual Site Model 21

4.1 Potential Areas of Environmental Concern 21

4.2 Potentially Contaminated Media 21

4.3 Potential for Migration from Site 21

4.4 Potential Human and Ecological Receptors and Exposure Pathways 22

4.5 Preferential Pathways 23
5. Conclusions 24
6. Limitations 25

List of Tables

Table 2.1: Summary of Site Details 4
Table 2.2: Registered Groundwater Bore Search Summary 6
Table 3.1: Historical Aerial Photograph Review 9
Table 3.2: Summary of Historical Title Records 14
Table 3.3: Historical Business Directory Records on site between 1950 and 1991 18
Table 3.4: Drycleaners, motor garages and service stations from 1948 and 1993 19
Table 4.1: Areas of Environmental Concern and Contaminants of Potential Concern 21
Table 4.2: Summary of Potential On-site Human Exposures 22

List of Figures

Figure 1: Site Location
Figure 2: Site Layout

Appendices

Appendix A **Site Specific LotSearch Report**
Appendix B **SafeWork Hazardous Chemicals Search**
Appendix C **Section 10.7 Planning Certificates**
Appendix D **Historical Land Title Records**
Appendix E **Council Development Application Records**
Appendix F **Detailed Site Investigation (SMEC 2013)**

Abbreviations

Term	Definition
ACM	Asbestos containing material
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
ASS	Acid Sulfate Soils
AST	Above ground storage tank
Bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DP	Deposited Plan
EPA	Environment Protection Authority
JBS&G	JBS&G Australia Pty Ltd
LEP	Local Environment Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
OCPs	Organochlorine Pesticides
PAHs	Polycyclic aromantic hydrocarbons
PCBs	Polychlorinated biphenyls
PFAS	Per- and polyfluoroalkyl substances
PSI	Preliminary Site Investigation
SEPP	State Environmental Planning Policy
SWL	Standing Water Level
TRH	Total Recoverable Hydrocarbons
UST	Underground storage tank
WQO	Water quality objectives

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) has prepared this Preliminary Site Investigation (PSI) to be submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital (the client) in support of a Planning Proposal for an amendment to the Sydney Local Environmental Plan 2012 for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown (the site). The site location is shown on **Figure 1**.

This PSI report was prepared in accordance with Clause 4.6.2 of State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021, to confirm if the site is or can be made suitable for the proposed use. Based on the findings of this investigation and subject to the limitations in **Section 7**, the following conclusions are made:

- Based on the desktop findings, the site appears to have been historically used for various commercial / industrial enterprises from as early as the 1920s, with businesses primarily consisting of car dealerships, motor body repair shops, and wholesale manufacturers of various goods and equipment such as fluorescent lighting, scientific instruments, and machinery. A portion of the site acquired by the University of Sydney in 2001 and 2006, currently operates as a medical research centre, with a small portion of the site also currently operating as a hotel and gym.
- Based on an assessment of the history, environmental setting and site inspection, potentially contaminating activities were identified to include fill used for site levelling prior to and during construction of the current commercial buildings at the site, former industrial land-uses (motor garages etc), potential above ground storage tanks (ASTs) and the former service station and dry cleaner located upgradient and in close proximity to the site;
- The assessment did not identify the potential for gross or widespread contamination;
- With reference to Clause 4.6.1 of SEPP Resilience and Hazards, the findings of this report are that there is the potential for some contamination to be present at the site. However, the potential contamination is unlikely to be such that it cannot be cleaned-up or managed by the application of commonly used methods. Consequently, the potential contamination identified at the site is considered not to represent a significant barrier to the future development of the site;
- Based on the findings of this report, further intrusive investigations as part of a Detailed Site Investigation (DSI) are anticipated to be required as supporting documentation for any future Development Applications (DAs), to quantify any contamination associated with the areas of environmental concern identified herein; and
- In the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses through standard industry approaches as guided through the preparation of a Remediation Action Plan (RAP).

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) has prepared this Preliminary Site Investigation (PSI) to be submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital (the client) in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown (the site). The site location is shown on **Figure 1**.

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Ethos Urban. This PSI report was prepared to address State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021, to confirm if the site is or can be made suitable for the proposed use.

1.2 Objectives

The objectives of the investigation are to assess the potential for historical contaminating activities at the site and provide a preliminary assessment of the suitability of the site for the proposed use, or to make recommendations to enable such assessments to be made in the future.

1.3 Scope of Works

This PSI was undertaken in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) including National Environment Protection Council (NEPC 2013[1]) *National Environment*

[1] *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013), National Environment Protection Council, 2013 (NEPC 2013).

Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (NEPC 2013 ASC NEPM), and other relevant Australian guidelines and standards.

The desktop assessment comprised a review of:

- The environmental setting of the site and surrounding area, including geology, hydrogeology, topography and hydrology;
- Records of environmental incidents or former environmental licenses and contaminated land notices as held by the EPA;
- State and national heritage records;
- Review of Council Section 10.7 (2&5) certificate;
- Historical aerial photographs obtained from the Department of Lands;
- Current and historical land title records;
- Dangerous Goods Records held by WorkSafe;
- Review of the Loose Fill Asbestos Insulation Register;
- Potential acid sulfate soil (PASS) information;
- NSW Government PFAS Investigation Program information;
- Licensed groundwater bores present within a 1.5 km radius of the site available on the online NSW Natural Resources Atlas;
- Detailed inspection of site and surrounding areas focussing on the identification of indicators of potential contamination;
- Development and documentation of a preliminary conceptual site model (CSM) based on the reviewed information; and
- Preparation of this PSI report in general accordance with relevant EPA made or endorsed guidelines.

2. Site Description

2.1 Site Identification

The location and current layout of the site is shown in **Figures 1** and **2** respectively. The site details are summarised in **Table 2.1**.

Table 2.1: Summary of Site Details

Lot/Deposited Plan (DP)	Lot A DP 402925, Lot 1 DP 965792, Lot 1 DP 178634, and Lot 1 DP 1216911
Site Address	84-94 Parramatta Road, Camperdown, NSW 2050
Site Area	6195 m^2
Local Government Authority (LGA)	Council of the City of Sydney
Approximate Coordinates (GDA 94 Map Grid of Australia (MGA) 55)	Eastings: 331690.78 Northings: 6249059.84
Site Zoning	MU1, mixed use commercial and residential.
Current Land Uses	84 Parramatta Road – hotel and fitness centre 88-90 Parramatta Road – vacant 92-94 Parramatta Road – a medical research centre including commercial office space and laboratories
Proposed Land Uses	Educational facility, including laboratories, educational spaces and amenities.

2.2 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown in **Figure 1**.

A limited site inspection of publicly accessible land surrounding the site, was completed on 16 June 2025 by a suitably qualified and experienced JBS&G Environmental Consultant to assess the site condition and identify indicators of potential contamination and/or contaminating activities. The observed conditions surrounding each parcel of land within the site is summarised in the Sections below.

2.2.1 84 Parramatta Road, Camperdown

This portion of the site is currently used as a hotel and fitness centre. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

The property was observed to be a recent build, with a brick façade. The property comprised one main building of around 5 levels with a central courtyard area, comprising some small garden beds. Access to undercover parking was observed off Sparkes Street, but it was unclear if the carpark comprised any basement levels.

2.2.2 88-90 Parramatta Road, Camperdown

This portion of the site was observed to be vacant. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

The property was observed to comprise a multi-level building with a brick façade. The building appeared to have been unoccupied for some time, with boarded up windows and appearing in somewhat derelict condition.

2.2.3 92-94 Parramatta Road, Camperdown

The portion of the site was observed to be currently used as a medical research facility. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

Entrance to the site was through a covered gated archway off Parramatta Road, which appeared to lead to a paved open courtyard area. The property was observed to comprise of painted brick and comprised multiple levels plus a basement carpark. The building is known to comprise of a medical research centre, containing laboratories, offices and meeting rooms.

Driveway access to basement parking was observed off Sparkes Street. A potential diesel refuelling point was observed on the wall next to the driveway, which is expected to connect with a potential AST / UST within the site, potentially servicing a backup generator.

2.3 Surrounding Land Use

The current land uses of adjacent properties or properties across adjacent roadways are summarised below:

- North – Various commercial and medium-density residential apartment buildings are located to the north of site;
- East – Larkin Street, followed by commercial and residential land use is present to the east of site;
- South – Parramatta Road, followed by BP petrol station, childcare centre, catholic church, college and St Johns Oval and other Sydney University facilities further southeast; and
- West – High-density residential properties, motorcycle dealer, and café, followed by Lyons Street and various commercial and residential properties, including a gym, hotel, mechanic and Lyons Road Park further west.

2.4 Topography

A review of regional topographic data provided on Spatial Information Exchange (SIX Maps[2]) indicates that the site elevation ranges from 19-26 m Australian Height Datum (AHD) and slopes to the north-east.

2.5 Geology and Soil

A review of the site geology provided on the NSW Department of Primary Industries and Regional Development (NSW DPIRD 2025[3]) as included in **Appendix A**, indicated that the site is underlain Ashfield Shale of the Wianamatta group. This material is characterised by laminate, dark grey siltstone and Bringelly Shale which consists of shale, with occasional calcareous claystone, laminite and coal.

[2] Six Maps, https://maps.six.nsw.gov.au/ accessed 7 May 2025
[3] NSW Department of Primary Industries and Regional Development, *NSW Seamless Geology project*, https://www.resources.nsw.gov.au/geological-survey/projects/nsw-seamless-geology-project, accessed 17 May 2025

Review of the Soil Landscapes of Central and Eastern NSW provided by the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW 2024[4]) as included in **Appendix A**, indicated that the site is present within the Blacktown soil landscape. Blacktown Soil Landscape is characterized by shallow to moderately deep (less than 100 cm) Red and Brown Podzolic Soils on crest, upper slopes and well-drained areas. Yellow Podzolic Soils is presented on lower slopes and in areas of poor drainage on the depth of 150-300 cm. These soils are noted to have moderately reactive highly plastic subsoil, with low soil fertility and poor soil drainage.

Review of the Atlas of Australian Soil compiled by the Commonwealth Scientific and Industrial Research Organisation (CSIRO[5]) as included in **Appendix A**, indicate the site is underlain by the soil order of Kurosol, in which chief soils are hard acidic red soils with hard neutral and acidic yellow mottled soils on lower slopes and in valleys as similarly described in the Blacktown soil landscape. Associated are small areas of various soils including on some ridges and on some slopes, in saddles and some mid-slope positions and some low-lying swampy areas of soils and soil with peaty surfaces.

2.6 Hydrology

The nearest surface water receptor is Orphan School Creek approximately 300 m to the northwest of the site which flows into the Johnstone Creek, located approximately 600 m to the west and northwest of the site. The Johnstone Creek flows into Rozelle Bay, located approximately 1.6 km to the north of the site.

The site is covered by buildings and concrete hardstand with the exception of Lot A in DP 402925 and Lot 1 in DP 1216911 which both have small internal courtyards with garden spaces. Infiltration of precipitation at the site is expected to be low, given the site is primarily sealed and has existing buildings. Most of surface water generated during periods of rainfall will be captured by the site's stormwater infrastructure and discharged to the municipality stormwater network.

2.7 Hydrogeology

Based on the natural topography of the site, as summarised in **Section 2.4**, groundwater is inferred to flow in a north-east direction.

A search for registered groundwater bore information was undertaken of the National Groundwater Information System from the Bureau of Meteorology, Water NSW (NGIS, BOM 2024[7]) and is included in **Appendix A**. There were no registered groundwater bores onsite.

There are six groundwater bores identified within a 0.5 km radius of the site, and a further 23 groundwater bores within a 1.5 km radius of the site. There are no known beneficial uses of groundwater within or in proximity of the site. The relevant information is summarised in **Table 2.2** below.

Table 2.2: Registered Groundwater Bore Search Summary

Bore ID	Use	Standing Water Level (m bgs)	Depth (m)	Distance from site (m) / Direction	Lithology
GW109231 (2008)	Monitoring	N/A	3.20	38 m / East	N/A
GW109230 (2008)	Monitoring	N/A	1.80	50 m / East	N/A
GW111408	Monitoring	2.07	4.40	328 m / East	0.00m-0.22m: Concrete slab

[4] Department of Climate Change, Energy, the Environment and Water, 2024, *Soil Landscapes of Central and Eastern NSW - v3.0.1*, Department of Climate Change, Energy, the Environment and Water, Sydney.
[5] CSIRO; & National Resource Information Centre, BRS (1991): Atlas of Australian Soils (digital). v3. CSIRO. Data Collection. https://doi.org/10.25919/5f1632a855c17
[7] *National Groundwater Information System*, Bureau of Meteorology (BOM 2024) Water NSW

(2011)					0.22m-0.50m: Gravel roadbase 0.5m-1.1m: Fill, Silty clay 1.1m-4.4m: Silty clay
GW116424	Monitoring	N/A	5.00	426 m / East	N/A
GW116421	Monitoring	N/A	5.80	428 m / East	N/A
GW116422	Monitoring	N/A	5.30	429 m / East	N/A

2.8 Acid Sulfate Soils

A review of the Atlas of Australian Acid Sulfate Soils (CSIRO 2011[8]) as included in **Appendix A**, identified the site to have an extremely low probability of occurrence of Acis Sulphate Soil (ASS). The Environmental Planning Instrument - Acid Sulphate Soils from the NSW Department of Planning, Housing and Infrastructure (NSW DPHI 2025[9]) indicates the site is classified Class 5. ASS are not typically found in Class 5 areas, but the site is located 129 m from adjacent Class 3 land, where works more than 1 metre below natural ground surface present an environmental risk and works by which the watertable is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk.

Review of geology maps, soil maps, and topography indicate that it is unlikely that acid sulfate soils would be present on the site. Based on the elevation of the site and the reported geology, no further consideration of requirements for the assessment or management of ASS is warranted.

2.9 Naturally Occurring Asbestos

A review of NSW DPIRD map Naturally Occurring Asbestos (DPIRD 2015[10]) as included in **Appendix A**, indicated that the site and the immediate surrounds are not situated in an area of naturally occurring asbestos.

2.10 Salinity

A review of the Australian Dryland Salinity Assessment by the Australian Bureau of Agricultural and Resource Economics and Science (ABARES[11]) as included in **Appendix A**, identified there were no record of dryland salinity potential at the site.

2.11 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Sydney (Observatory Hill)), located approximately 3.7 km to the northeast of the site, indicates the site is located within the following meteorological setting:

- Mean minimum temperatures vary from 8.1°C in July to 18.9°C in February;
- Mean maximum temperatures vary from 16.4°C in July to 26.0°C in January;
- The mean annual rainfall is approximately 1211.1 mm, with rainfall greater than 1 mm occurring on an average of 99.5 days per year; and

[8] Fitzpatrick, Rob; Powell, Bernie; & Marvanek, Steve (2011): Atlas of Australian Acid Sulfate Soils. v3. CSIRO. Data Collection. https://doi.org/10.4225/08/512E79A0BC589

[9] State Government of NSW and NSW Department of Planning, Housing and Infrastructure 2025, *Environmental Planning Instrument - Acid Sulfate Soils*, accessed 16 April 2025

[10] State Government of NSW and Department of Primary Industries and Regional Development (DPIRD) 2015, Naturally Occurring Asbestos, supplied 26 April 2024

[11] Australian Bureau of Agricultural and Resource Economics and Science (2013) Australian Dryland Salinity Assessment Spatial Data (1:2,500,000) – NLWRA 2001, supplied 3 June 2024

- Monthly average rainfall varies from 68.1 mm in September to 133.1 mm in June with the wettest periods occurring on average in January to June.

3. Site History

3.1 Aerial Photograph Review

Historical aerial photographs provided sourced from Google, NSW Spatial Services, and Geoscience Australia were reviewed for this assessment Relevant information from the aerial imagery review is summarised in **Table 3.1**.

Table 3.1: Historical Aerial Photograph Review

1930	The low quality of the aerial photograph precluded a detailed review of the site features and surrounds. However, the site surrounding areas appear to be developed, with serval warehouse like structures on the site and to the east and west of the site, with some residential properties further afield. North of the site appeared vacant, and south of the site, on the other side of Parramatta Road, there was a park with a few buildings on it.
1943	The site had multiple buildings which appeared consistent with commercial or industrial buildings. The surrounding areas in the west, east and south appeared to be similar to the 1930 aerial photograph. A large new warehouse was constructed north of the site. Part of the land in the north of the site remained vacant.
1951	The site remained relatively unchanged from the previous 1943 aerial photograph. A large warehouse was reconstructed in the north of the site on Barr Street. The rest of surrounding areas appeared to be similar to the 1943 aerial photograph.
1955/56	The site remained relatively unchanged from the previous 1951 aerial photograph. Some residential buildings were demolished, and new industrial/commercial buildings were constructed in their places to the northeast of the site on Larkin Street. Some trees were removed from the park southeast of the site. The rest of surrounding areas appeared to be similar to the 1951 aerial photograph.
1961	The site remained relatively unchanged from the previous 1955/56 aerial photograph. Continued development was observed in the surrounding areas northwest of the site on Barr Street as a large new warehouse building was constructed, the area was previously occupied by commercial/industrial structures. Further afield northwest of the site on Lyons Road, a multi-level residential apartment building was constructed. On the other side of Larkin Street, east of the site, shed structures with parking lots were constructed.
1965	The site remained relatively unchanged from the previous 1961 aerial photograph with possible minor changes which cannot be seen due to the photograph's quality. Continued development was observed in the surrounding areas. On the other side of Lyons Road, west of the site, a few buildings were demolished, and the area was vacant when the photograph was taken. On the other side of Larkin Street, east of the site, some structures were also demolished. South of the site, on Missenden Road, a large warehouse has been constructed, and new building was constructed on the corner of Missenden and Parramatta Road.
1970	The site remained relatively unchanged from the previous 1965 aerial photograph. A new building was constructed on the corner of Parramatta and Lyons Roads, west of the site. Several structures were redeveloped east of the site along Parramatta Road. The vacant piece of land, north of the site, appeared to be used as a carpark for trucks.
1978	The site remained relatively unchanged from the previous 1970 aerial photograph Surrounding the site, structures to the west of the site were demolished and the warehouse to the northwest of the site was extended to the south bordering the site. A new building was constructed further afield, southwest of the site on Missenden Road, and several smaller buildings are warehouses along Larkin Street were demolished.
1982	The site remained relatively unchanged from the previous 1978 aerial photograph.

	A small, shed like structure was constructed in the west of the carpark lot north of the site. On the other side of Larkin Street, northeast of the site, shed structures and small commercial/industrial buildings were demolished and a new warehouse was constructed. In the north of this warehouse the land seemed to be covered by asphalt and used as a carpark.
1986	The site remained relatively unchanged from the previous 1982 aerial photograph. A new building was constructed west of the site. All other surrounding areas remained relatively unchanged from the previous aerial photograph.
1991	Former structures on the northern portion of the site were demolished and a new multi-level building with an open-space area in the middle was constructed. Two buildings on the southwest portion of the site on Parramatta Road were also demolished and replaced by a new building. The surrounding area appeared to be similar to the 1986 aerial photograph.
1994	An additional small shed was constructed north of the site in the carpark area. The site and remaining surrounding area remained relatively unchanged from the previous 1991 aerial photograph.
2005	Two buildings on the eastern portion of the site were demolished and new buildings and a carpark were constructed. The rest of the site appeared to be similar to the 1994 aerial photograph. Warehouses and buildings on Larkin Street and Pyrmont Bridge Road north and northeast of the site were being demolished, and a multi-level apartment building was constructed northeast of the site. Several buildings were demolished and redeveloped along Parramatta Road to the east and west of the site of the site and on the corner of Missenden Road.
2014	The site remained relatively unchanged from the previous 2005 aerial photograph. Several more buildings and warehouses were demolished along Larkins Street, in the north and northeast of the site, and new buildings were constructed, which generally consisted high-density residential apartment buildings.
2025	A new building with an open-space courtyard area in the middle was constructed in the south-east portion of the site, which was previously a mechanic/carpark. Warehouses, commercial/industrial buildings and carparks along Barr Street and Larkin Street, in the west and north of the site, as well as some older buildings along Paramatta Road to the east of the site, were all demolished and replaced by medium to high-density residential properties.

3.2 EPA Searches

Search of the NSW EPA database records for the site and immediate surroundings are provided in **Appendix A**. The search consisted of the following public registers:

- NSW EPA Protection of the Environment Act public register of licence, applications and notices (maintained under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act)). The results are detailed following:
    - No prevention, clean-up or prohibitions notices and no transfer, variation, suspension, surrender or revocation of an environment protection licence (EPL) has been issued under the POEO Act for the site. The following was identified with regards to the area surrounding of the site:
        - A PEOE licence was issued to Acciona Infrastructure Projects Australia Pty Ltd for the WestConnex motorway between M4 east at Haberfield and the new M5 at St Peters in Marrickville (approx. 327 m west of the site) for road construction in 2018. The PEOE licence has undergone several variations in 2019 and 2022 and is still in force.
        - A POEO licence was issued to The University of Sydney at their Camperdown and Darlinghurst campuses (approximately 26 m south of the site) for hazardous, industrial or Group A waste generation or storage in 2004 which is no longer in force but still regulated by the EPA.
        - POEO licences were issued to Sydney South West Area Health Service for both the Royal Prince Alfred Hospital on Missenden Road, Camperdown (approximately 243 m to the

south of the site) and the Department of Forensic Medicine at 50 Parramatta Road, Glebe (approximately 244 m east of the site) for hazardous, industrial or Group A waste generation or storage in 2000 which are no longer in force but still regulated by the EPA.

  - A POEO licence was issued to The Preterm Foundation located at 300 Bridge Road, Camperdown, (approx. 118 m to the north of the site) for Hazardous, Industrial or Group A Waste Generation or Storage in 2000 and was surrendered.
  - A POEO licence was issued to Luhrmann Environment Management Pty Ltd, Robert Orchard and Sydney Weed & Pest Management Pty Ltd for application of herbicides throughout various waterways throughout NSW (including Johnstone Creek and Orphan School Creek, approximately 172 m west of the site) throughout 2000, and have all since been surrendered.
  - A POEO licence was issued to Summit Motors Pty Limited located at 36 Parramatta Road, Glebe, (approx. 289 m to the east of the site) for Hazardous, Industrial or Group A Waste Generation or Storage in 2000 and was surrendered.
  - It is considered unlikely that the properties listed above present a contamination risk to the site given their distance from the site.

- NSW EPA contaminated land public register of record of notices (under Section 58 of the Contaminated Land Management Act 1997 (CLM Act)).
  - No notices have been issued under the CLM Act for the site or the immediate surrounds.
- NSW contaminated sites notified to the EPA (under Section 60 of the CLM Act).
  - The site was not on the list of NSW contaminated sites notified to the EPA. In the vicinity of the site the following have been notified:
    - The Spruce located at 12-14 Marsden Street, Camperdown, (approx. 170 m to the southwest of the site) is classified as other industry and regulation under CLM Act not considered to be required.
    - Former Gee Graphics located at 27 Church Street, Camperdown, (approx. 264 m to the southwest of the site) is classified as other industry and regulation under CLM Act not considered to be required.
    - 7-Eleven (former Mobil) Annandale Service Station located at 198 Parramatta Road (approx. 526 m west of the site) is classified as a service station and regulation under CLM Act not considered to be required.
  - It is considered unlikely that the properties listed above present a contamination risk to the site given their distance from the site.
- Per- and polyfluoroalkyl substances (PFAS) Investigation Program.
  - The site is not listed by EPA on the NSW Government PFAS Investigation program. The closest PFAS investigation area identified by the EPA is Alexandria Fire and Rescue (245 Devonshire Road, Kemps Creek NSW) located approximately 2.8 km southeast of site. Given its distance from the site, it is unlikely that PFAS related impacts pose a risk to the site.

3.3 Heritage Registers

A search of the Commonwealth and National Heritage databases (**Appendix A**) did not identify any items of Commonwealth or National heritage listed items at the site or in the immediate surroundings.

The Lotsearch report identified several state heritage items within 500 m of the site, as summarised below:

- Several locations within the University of Sydney including the University Colleges and Victoria Park. University of Sydney is located 26 m south east of the site;
- Several locations within the Royal Prince Albert Hospital including the Victoria and Albert Pavilions, and Administration Block (approximately 380 m and 475 m south east of site); and
- Sewage Pumping Station 3 located at Booth Street in Annandale (approximately 396 m northwest of the site).

A search of Local Heritage from NSW DPHI (**Appendix A**) also identified several items of local heritage as listed under the local Sydney Local Environmental Plan 2012, which included sites such as Sydney University, St Johns College, various historical terrace houses, and Hereford and Forest Lodge, all within 100 m of the site.

3.4 Hazardous Chemicals Search

A Hazardous Chemicals search of the stored chemical information database of SafeWork NSW for the site (excluding 84 Parramatta Road) was requested on 21 September 2021. The SafeWork NSW response is provided as **Appendix B**. SafeWork did not locate any records of dangerous goods or hazardous chemicals pertaining to the site.

3.5 Section 10.7 Planning Certificate Search

A copy of the Section 10.7 Planning Certificates (2) and (5) for a property representative of the site, 92-94 Parramatta Road (Lot A DP 402925 and Lot 1 DP 965792), was previously obtained from the Council of City of Sydney and is included in **Appendix C** and is summarised below:

- The site was previously zoned Zone B4 Mixed Use which was changed to MU1 Mixed Use in the State Environmental Planning Policy Amendment (Land Use Zones) 2023, and the site is now currently zoned as MU1 Mixed Use (Sydney Local Environmental Plan 2012).
- The land has not been identified as significantly contaminated land within the meaning of the Contaminated Land Management Act 1997 (CLM Act 1997).
- The land has not been identified as a property that comprises, or on which there is, an item that is listed on the State Heritage Register under Heritage Act 1997 or that is subject to an interim heritage order under the Heritage Act 1977.
- The land has not been identified as being within a wilderness area (identified under the Wilderness Act 1987).
- The land has not been identified as land that is within an environmentally sensitive area or by an environmental planning instrument as being within a buffer area, a river front area, an ecologically sensitive area, environmentally sensitive land or a protected area.
- The land has not been identified as being within a heritage conservation area or a draft heritage conservation area.
- The land has not been identified as being land that is reserved for a public purpose in an environmental planning instrument.
- The land has not been identified as being on an Acid Sulfate Soils Map as being Class 1 or Class 2.
- The land has not been identified as land that is subject to a biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.
- The land has not been identified by an environmental planning instrument, a development control plan or a policy adopted by the Council as being or affected by a coastline hazard, a coastal hazard or a coastal erosion hazard.

- The land has not been identified as being land in a foreshore area.
- The land has not been identified as unsewered land within a drinking water catchment.
- The land has not been identified as land that is declared to be a special area under the Sydney Water Catchment Management Act 1998.
- The land is not proclaimed to be a Mine Subsidence District.
- The land is not affected by any road widening/realignment under the Roads Act 1993.
- The land is not affected by a policy adopted by the Council or other public authority that that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk.
- The property is within the flood planning area and is situated between the flood planning area and probable maximum flood.
- No environmental planning instrument, or proposed environmental planning instrument applying to the land, provides for the acquisition of the land by a public authority.
- The land has not been certified as biodiversity certified land.
- The land has not been identified as Bush fire prone land.
- The land is not subject to any orders under Trees Act 2006.
- The land is not subject to any matters under the CLM Act 1997.

3.6 Council Development Application Records

A search of available Development Applications (DA) submitted to City of Sydney Council for the site and adjoining properties was completed (**Appendix E**). Based on a review of the available DA submissions, it appears most submissions were generally related to internal building fit-outs and refurbishments (commonly for restaurant and cafes). The DAs of relevance to the site that provide further information on potential site contamination are discussed below.

A DA (D/2014/69) was approved in 2014 for the construction of a new building at 84-86 Parramatta Road, Camperdown, east of the site, with which a Detailed Site Investigation Report (DSI) was included as a part of the application. The DSI was conducted by SMEC Testing Services (STS 2013[12]), a copy of the report was publicly available and was able to be reviewed herein.

The DSI investigation included a review of historical land title information, historical aerial photographs, local council records, review of local geology and hydrogeology, as well as a site inspection and a limited soil sampling program comprising six borehole sample locations (**Appendix F**).

The site history review found that the site appears to have been used for commercial / industrial purposed since at least the 1930s, including that of a motor vehicle workshop which operated at the site from 1992 to 2010. The review was unable to identify the specific historical uses at the site beyond that of commercial / industrial uses. A Dangerous goods search was conducted and found no records of the storage of dangerous goods at the site. A search of EPA contaminated land public register did not find any notices pertaining to the site. The site was also found to not be listed on EPAs list of notified sites. Potential contamination sources were noted to include any contaminants associated with historical industrial land use, and any contaminants associated with fill material of unknown origin.

[12] *Detailed Site Investigation, 84-86 Parramatta Road, Camperdown NSW*, prepared by SMEC Testing Services Pty. Ltd December 2013

The site was noted to be located on the boundary of two geological units, these being the Middle Triassic Age 'Ashfield Shale' and 'Hawkesbury Sandstone'. The Ashfield Shale comprises black to dark-grey shale and laminate, whilst the Hawkesbury Sandstone comprises medium to coarse-grained quartz sandstone with minor shake and laminite lenses. The natural soils encountered during the investigation were observed to comprise grey and brown silty clays. Sandstone and shale bedrock was observed at depths of at least 2.3 m below the ground surface.

Observations from the limited intrusive soil investigation noted fill depths ranged from 0.4 m bgs to 1.5 m bgs, with fill material generally comprising silty clay fill with some trace inclusions of gravels, brick and glass. Ten samples, as well as one intra-laboratory and one inter-laboratory field duplicate sample for quality control assessment, were analysed for a limited range of COPC including heavy metals, monocyclic aromatic compounds (MAH), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphorus pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos. All reported concentrations were below the adopted site criteria. Hence it was concluded that based on the results of the DSI investigation, the site was considered to be suitable for high-density residential and commercial land use.

A DA (D/2005/300) was also approved in 2005 regarding the installation of a diesel generator in the basement of the Medical Foundation Building for the University of Sydney, located at 92-94 Parramatta Road Camperdown, indicating that there is likely a diesel AST within the basement of the property.

3.7 Historical Land Title Records

Relevant details from a historical review of the land titles for the site are listed in **Table 3.2**. A copy of title search results is provided in **Appendix D**.

Table 3.2: Summary of Historical Title Records

Lot A DP402925		
Date of Acquisition and term held	**Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
07.05.1923 (1923 to 1927)	Arthur Reginald Inglis (Blood Stock Salesman) Robert Clive Inglis (Blood Stock Salesman)	Volume 3448 Folio 250 & Volume 3449 Folio 1
08.03.1927 (1927 to 1950)	Andrew Sneddon Pty Limited (Formerly styled Andrew Sneddon Limited)	Volume 3448 Folio 250 & Volume 3449 Folio 1 Now Volume 3979 Folio 236
12.01.1950 (1950 to 1958)	White Trucks Proprietary Limited	Volume 3979 Folio 236
20.03.1958 (1958 to 1963)	Bruce Bruno Panucci (Interstate Carrier)	Volume 3979 Folio 236 Now Volume 7464 Folio 182
13.12.1963 (1963 to 1982)	John A. Gilbert holdings Limited	Volume 7464 Folio 182
03.09.1982 (1982 to 1988)	Padumu Pty Limited	Volume 7464 Folio 182
29.10.1988 (1988 to 1991)	Calsound Pty. Limited	Volume 7464 Folio 182
16.09.1991 (1991 to 2001)	Texi Pty Limited	Volume 7464 Folio 182 Now

		A/402925
23.10.2001 (2001 to Date)	# The University of Sydney	A/402925

Lot 1 DP 965792		
Date of Acquisition and term held	**Date of Acquisition and term held**	**Reference to Title at Acquisition and sale**
12.02.1920 (1920 to 1982)	Tooth & Co Limited	Volume 3018 Folio 222 Now Volume 14135 Folio 225
17.02.1982 (1982 to 1988)	Padumu Pty. Limited	Volume 14135 Folio 225
29.10.1988 (1988 to 1991)	Calsound Pty. Limited	Volume 14135 Folio 225
16.09.1991 (1991 to 2001)	Texi Pty Limited	Volume 14135 Folio 225 Now 1/965792
23.10.2001 (2001 to Date)	# The University of Sydney	1/965792

Lot 1 DP 178634		
Date of Acquisition and term held	**Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
07.05.1923 (1923 to 1925)	Arthur Reginald Inglis (Blood Stock Salesman) Robert Clive Inglis (Blood Stock Salesman)	Volume 3448 Folio 250 & Volume 3449 Folio 1
11.12.1925 (1925 to 1940)	Arthur Ernest Newland (Motor Merchant)	Volume 3448 Folio 250 & Volume 3449 Folio 1 Now Volume 3810 Folio 249
18.06 1940 (1940 to 1957)	Herbert Richard Nichols (Contractor)	Volume 3810 Folio 249
31.05.1957 (1957 to 1958)	Geoffrey William Thornton (Solicitor) William Bruce Andrews (Managing Clerk) (Section 94 Application not investigated)	Volume 3810 Folio 249
02.12.1958 (1958 to 1960)	Gladys Sophia Brunsden (Married Woman) Emily Agnes Mitchell (Married Woman) Annie Julia Freeman (Married Woman) Frederick Robert Nichols (Railway Employee) William Herbert Nichols (Manager) Herbert Richard Nicols (Contractor)	Volume 3810 Folio 249 Now Volume 7617 Folios 219 to 224
08.02.1960 (1960 to 1983)	Eterna Pty. Limited	Volume 7617 Folios 219 to 224 Now

		Volume 7964 Folio 83
18.01.1983 (1983 to 1995)	Nephard Pty Limited	Volume 7964 Folio 83 Now 1/178634
18.05.1995 (1995 to 2006)	Golden Silver Trading Pty Limited	1/178634
24.03.2006 (2006 to Date)	# The University of Sydney	1/178634

Lot 1 DP 1216911 – Part 1		
Date of Acquisition and term held	**Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
04.11.1909 (1909 to 1919)	Eliza Davison (Widow)	Volume 2012 Folio 207
26.03.1919 (1919 to 1925)	Laura Henrietta Davison (Spinster) Eliza Jane Schols (Married Woman) (Transmission Application not investigated)	Volume 2012 Folio 207
16.12.1925 (1925 to 1939)	Charles Frederick Kelaher (Electrician)	Volume 2012 Folio 207
30.08.1939 (1939 to 1945)	Gladys Irene Buckley (Spinster)	Volume 2012 Folio 207
30.01.1945 (1945 to 1972)	Frang Kujawski (Instrument Maker)	Volume 2012 Folio 207
18.02.1972 (1972 to 1983)	Stenning Holdings Pty. Limited Thomas John Sinclair (Company Director) Barbara Elizabeth Sinclair (Married Woman)	Volume 2012 Folio 207 Now Volume 12209 Folio 99
16.11.1983 (1983 to 1983)	Martin Keith Feil William James Bosley Edmund Keith Smith	Volume 12209 Folio 99
16.11.1983 (1983 to 1984)	M.K. Feil and Associates Pty. Ltd	Volume 12209 Folio 99
03.09.1984 (1984 to 1986)	Rural Commerce Pty. Limited	Volume 12209 Folio 99
03.11.1986 (1986 to 2000)	Emona Enterprises Pty Limited	Volume 12209 Folio 99 Now 1/66031
28.06.2000 (2000 to 2011)	Alfred Breznik Jelenia Breznik	1/66031
17.03.2011 (2011 to 2014)	Joshtyra Investments Pty Limited	1/66031

Lot 1 DP 1216911 – Part 2

Date of Acquisition and term held	Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
16.03.1927 (1927 to 1938)	William Joseph Coogan (President of the Particular Council of St. Vincent de Paul Society) Father Patrick Joseph Baugh John Joseph Carroll (Solicitor) (Re the Estate of Michael Cullen)	Book 1465 No.71 (Book 1501 No. 656)
05.04.1938 (1938 to 1939)	Patrick James Shesgreen (Company Manager) Eileen Manion (Married Woman)	Volume 4922 Folios 112 & 113
03.07.1939 (1939 to 1939)	Patrick James Shesgreen (Company Manager)	Volume 4922 Folios 112 & 113
03.07.1939 (1939 to 1967)	John Thomas Barry (Motor Body Repairer)	Volume 4922 Folios 112 & 113 Now Volume 5060 Folio 67
17.07.1967 (1967 to 1967)	Mary Madeline Barry (Widow) Brian William Barry (Company Director) Mary Rose McHugh (Married Woman) (Section 94 Application not investigated)	Volume 5060 Folio 67
17.07.1967 (1967 to 1973)	Mary Madeline Barry (Widow)	Volume 5060 Folio 67
20.06.1973 (1973 to 1992)	Runyan Pty Limited	Volume 5060 Folio 67 Now 1/83227
23.10.1992 (1992 to 2010)	Central Autohaus Pty Limited	1/83227
16.11.2010 (2010 to 2014)	Joshtyra Investments Pty Limited	1/83227

Whole of Lot 1 DP 1216911		
Date of Acquisition and term held	**Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
04.02.2014 (2014 to Date)	# J & A Sassine (Nominees) Pty Limited # G & R Sassine (Nominees) Pty Limited	1/66031 & 1/83227 Now 1/1216911

# denotes current registered proprietor

A review of historical title information (summarised in **Table 3.2**), and reference to historical business directories (Section 3.8) indicated the following:

- Lot A DP402925 was previously owned by private citizens from 1923 until 1927 when it was subsequently owned by various commercial/industrial enterprises, including motor body builders/repairers and carriers and cartage contractors, until the site was acquired by The University of Sydney in 2001;

- Lot 1 DP 965792 was owned by various commercial/industrial enterprises from 1920 until it was acquired by The University of Sydney in 2001;
- Lot 1 DP 178634 was owned by private citizens from 1923 until around 1925 when it was subsequently owned by various commercial/industrial enterprises, including motor dealerships, motor body builders/repairers, manufacturers of various goods such as sewing machines, radio parts, electrical appliances, kitchen equipment, medical equipment, clothing, and footwear, as well various wholesalers of textiles and machinery. The property was acquired by The University of Sydney in 2006;
- Part 1 of Lot 1 DP 1216911 (previously Lot 1 DP66031) was owned by private citizens from 1909 until 1945 when it was subsequently owned by various commercial/industrial enterprises, including various manufacturers of goods such as scientific and medical equipment, fluorescent lighting and signs, until it was acquired by J & A Sassine (Nominees) Pty Ltd and G & R Sassine (Nominees) Pty Ltd in 2014; and
- Part 2 of Lot 1 DP 1216911 (previously Lot 1 DP83227) was owned by private citizens from 19 until 1972 when it was subsequently owned by various commercial/industrial enterprises over the years, including car dealerships, and motor body repairers, until it was acquired by J & A Sassine (Nominees) Pty Ltd and G & R Sassine (Nominees) Pty Ltd in 2014.

3.8 Review of Historical Business Directories

The Lotsearch Report (**Appendix A**) provided a summary of potentially contaminating businesses in operation at the site or in the surrounding areas, which has been extracted from universal business directories from several years including 1950, 1961, 1965, 1970, 1975, 1978, 1982, 1986 and 1991.

The following potentially contaminating industries which have historically operated at the site are summarised in **Table 3.3**.

Table 3.3: Historical Business Directory Records on site between 1950 and 1991

Company	Business Activity	Address	Years in Record
Barry's Motors	Motor body painter, repairer, spare part retailer, and used car/truck dealer	84 Parramatta Road, Camperdown	1950, 1961, 1965, 1970, 1975, 1978, 1982
Universal Boat Trailers Pty. Ltd	Sale/hire/service of boats and boat trailers	84 Parramatta Road, Camperdown	1978
Balyliner Marine Corporation of Australia Pty. Ltd			
H.K Motors	Motor garage / engineers	84 Parramatta Road, Camperdown	1982
Central Autohaus Pty. Ltd.	Motor body builders	84 Parramatta Road, Camperdown	1986 and 1991
Williams & Spaulding Pty. Ltd.			
Kelaher, C. F.	Electrical instrument manufacturer	86 (formerly 32) Parramatta Road, Camperdown	1950
Kujawski, F.	Manufacturer of scientific instruments, X-rays and electromedical apparatus		
Neon Fluorescent Company	Specialist manufacturers of fluorescent lighting, electrical signs, and glass laboratory apparatus.	86 (formerly 32) Parramatta Road, Camperdown	1950, 1961, 1965 and 1970
Stenning Sinclair Pty. Ltd	Manufacturers and distributors of equipment for surgical and scientific uses	86 Parramatta Road, Camperdown	1975 to 1978

Atanak Co.	Sporting goods wholesalers (golf bags)	86 Parramatta Road, Camperdown	1982
York Motors Pty. Ltd. (Howard Tractors)	Agricultural machinery manufacturers and dealers	88 (formerly 38) Parramatta Road, Camperdown	1950
Nichols, H. J	Used motor car and truck dealership	88 (formerly 36-40) Parramatta Road, Camperdown	1950
Amplion (Australia) Pty. Ltd.	Manufacturers of radios, speakers, internal combustion engines, electrical supplies and appliances, electric clocks, electric lighting, battery charging and testing equipment, rectifiers and lawn mowers.	88 (formerly 36) Parramatta Road, Camperdown	1950 and 1961
Singer Sewing Machine Co.	Manufacture/repair/distribution of sewing machines and laundry machinery	88 Parramatta Road, Camperdown	1961, 1965, 1970 and 1975
Eterna Pty. Ltd.	Manufacture/wholesale/import of clothing (underwear)	88-90 Parramatta Road, Camperdown	1961
Eastern Industries Pty. Ltd	Manufacture/wholesale of clothing (underwear, sportswear, knitwear)	88 Parramatta Road, Camperdown	1961 and 1965
Catering Aids Pty. Ltd.	Manufacture/wholesale of supplies/equipment for hotels, hospitals, kitchens and cafes	88 Parramatta Road, Camperdown	1978, 1982 and 1986
Lyn Maid Corporation Pty. Ltd.	Manufacture/wholesale of clothing	88 Parramatta Road, Camperdown	1982 and 1991
Showman Pty. Ltd.	Television program producer	88 Parramatta Road, Camperdown	1986
White Trucks Pty. Ltd. (Motor Body Assemblers Pty. Ltd.)	Motor body builders and assemblers	92-94 (formerly 42) Parramatta Road, Camperdown	1950, 1961
Olding, G. H. & Sons Pty. Ltd.	Carriers and cartage contractors	92-94 (formerly 42) Parramatta Road, Camperdown	1961

Lotsearch report also provided a summary of potentially contaminating industries that have historically operated at the site and within areas surrounding the site in the years 1948 to 1993. Contaminating industries listed included service stations, motor garages and dry cleaners.

Contaminating industries have historically operated within 100 m of the site are summarised in **Table 3.4** below.

Table 3.4: Drycleaners, motor garages and service stations from 1948 and 1993

Company	Business Activity	Address	Years in Record	Distance From Site
Waynes 1 Stop Mufflers/Workshop	Motor garage/service station	23 Larkin St, Camperdown	1988 to 1990	0 m – North East

T.K. Foster Motors Pty. Ltd	Motor garage/service station	23 Larkin St, Camperdown	1983 to 1986	0 m – North East
Wawns Service Station	Service Station	13 Pyrmont Bridge Rd Camperdown	1959 to 1976	0 m – North West
International Harvester Co. Of Aust. Pty. Ltd.,	Motor garage/engineer	5-11 Pyrmont Bridge Rd Camperdown	1958	0 m – North West
Turner J. R. & Co. Pty. Ltd.	Motor garage/engineer	16-18 Parramatta Rd Camperdown	1948 to 1962	25 m – East
Red, White and Blue Service Station	Service Station	15 Parramatta Rd, Camperdown	1948 to 1950	26 m – South West
Singleton G. C. & Co. Pty. Ltd.	Dry Cleaner	16 Larkin Street, Camperdown	1966 to 1972	29 m – North East
Camperdown Auto Port,	Motor garage/engineer	66 Parramatta Road, Camperdown	1985 to 1993	
Ezzy K.	Motor garage/engineer	47 and 66 Parramatta Road, Camperdown	1948 to 1959	80 m – East 100 m – South West
Olding, G. H.	Motor garage/engineer	47 Parramatta Road, Camperdown	1948 to 1952	94 m – South West
Action Auto Electrical Co. Pty. Ltd.	Motor garage/engineer	18 Purkis Street Camperdown	1972 to 1986	100 m - West

In summary, there is a history of potentially contaminating industries operating on the site and in the surrounding areas. Due to the inferred northeastern direction of groundwater flow, industries historically operating to the south west of the site are of the greatest concern, notably the historical service station location at 15 Parramatta Road (where a BP service station is still apparent) which lies upgradient of site 26 m away and presents a potential offsite source of contamination.

3.9 Integrity Assessment and Summary of Site History

The information obtained from the historical sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

The site appears to have been historically used for various commercial / industrial enterprises from as early as the 1920s, with businesses primarily consisting of car dealerships, motor body repair shops, and wholesale manufacturers of various goods and equipment such as fluorescent lighting, scientific instruments, and machinery. A portion of the site acquired by the University of Sydney in 2001 and 2006, which currently operates as primarily a medical research centre, and part of the site is currently operating as a hotel and gym.

4. Preliminary Conceptual Site Model

A Conceptual Site Model (CSM) is a representation of the site and how contaminants move from the source through the environment to potential human or environmental receptors. A preliminary CSM has been developed based on the desktop assessment and site inspection. It presents a preliminary understanding of potential contamination sources, pathways, and receptors, consistent with NEPC (2013) ASC NEPM.

4.1 Potential Areas of Environmental Concern

Based on the historical review and observations made during the JBS&G inspection of the site, potential contamination sources or areas of environmental concern (AECs) and associated key contaminants of potential concern (COPC) are presented in Error! Reference source not found. below.

Table 4.1: Areas of Environmental Concern and Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill materials used to create current site levels	Heavy metals, total recoverable hydrocarbons (TRH), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) and asbestos
Historical demolition of previous structures	Lead, asbestos
Historical use of the site for industrial purposes that has potentially included manufacturing of scientific instruments, fluorescent lighting, textiles, and shoes, as well as motor vehicle maintenance and repairs	Heavy metals, TRH, BTEX, PAHs, VOCs
Above ground storage tanks (ASTs) within the site.	Heavy metals, TRH, BTEX, PAHs, VOCs
Offsite sources (e.g. current and former industry surrounding the site including an active service station 26m south of the site and former dry cleaners 29m north east of the site)	Heavy metals, TRH, BTEX, PAH, per- and polyfluoroalkyl substances (PFAS) and VOCs

4.2 Potentially Contaminated Media

Each of the AECs and corresponding COPCs identified in **Section 4.1** have the potential to impact soil, groundwater and/or soil gas (where volatile constituents are identified) underlying the site.

Where fill materials are present to depth, or in areas surrounding potential USTs, there is a likelihood that environmental impact may be present at depth. Anthropogenic materials are commonly present in impacted fill materials and can be used as an indication of the depth of disturbance. Where soils impacted with chemical-based contaminants are identified, there is a likelihood the impact may have migrated laterally and vertically to underlying natural soils.

With the exception of asbestos, each of the COPCs identified for the site, in **Table 4.1,** have the potential to migrate from shallow soils into groundwater.

4.3 Potential for Migration from Site

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);

- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The COPCs identified as part of the site history review and site inspection are generally in solid (e.g. asbestos, PAHs and metals), liquid (e.g. TRH, BTEX, VOCs, PFAS, OCPs and PCBs) or gaseous (e.g. VOCs, BTEX, Volatile TRH and semi-volatile PAHs) form. It is noted that the COPCs identified to primarily occur in liquid form can also presumably exist in solid form as adsorbed to the soil matrix.

The ground surfaces overlying the site are primarily comprised of sealed pavements and building footprints with limited unsealed or vegetated ground thereby limiting the total extent of surface water infiltration into the subsurface. The migration of in-situ impacted soil via windblown dust is considered to be unlikely provided the hardstands are maintained across the majority of the site.

The potential solubility of chemical contaminants in soil, in addition to rate of surface water intrusion, perched water seepage and groundwater movement across the site, will influence the potential for migration of soil and groundwater contamination within and from the site. Should groundwater be identified to be impacted with on-site sources of contamination in proximity to the inferred downgradient boundary of the site, then potential off-site migration of contaminants in groundwater will require consideration.

The potential for off-site migration of vapours will only be relevant where these constituents are identified at concentrations greater than relevant health-based screening and investigation levels. These constituents can migrate laterally from the site through volatilisation and diffusive/advective processes as well as through preferential pathways (refer to **Section 4.5**). Should elevated levels of vapours be identified, then the potential off-site migration of these constituents will require further consideration.

The potential migration of contaminants from off-site sources to the site is possible via groundwater and/or soil vapour.

4.4 Potential Human and Ecological Receptors and Exposure Pathways

Table 4.2 summarises potential on-site human receptors and associated exposure pathways for the site, based on the range of exposure scenarios that may occur under the different potential land-uses of the site.

Table 4.2: Summary of Potential On-site Human Exposures

Receptor	Location	Media	Potential Exposure Pathways
General Site User	Indoor and outdoor areas	Soils	Inhalation (vapours)
	Indoor and outdoor areas	Groundwater	Inhalation (vapours) Oral (infiltrating seepage water within basement if present) Dermal (infiltrating seepage water within basement if present)
Construction worker or intrusive maintenance worker (short duration)	Construction areas/ Excavations	Soil	Inhalation (vapours and particulates) Oral Dermal
		Groundwater	Inhalation (vapours) Oral (infiltrating seepage water within basement if present)

			Dermal (infiltrating seepage water within basement if present)

Currently the site is primarily covered by hardstand pavements and building footprints. On this basis, there are limited on-site ecological receptors that could be exposed to environmental impacts underlying the site which is proposed to be maintained as part of the site redevelopment. Possible off-site ecological receptors are limited to potential impacts associated with groundwater and surface runoff water (if present) migrating through the local stormwater network towards Johnstons Creek and Orphan School Creek and eventually discharge into Rozelle Bay. Off-site ecological receptors are therefore limited to the organisms living within the estuarine system of Rozelle Bay and can be identified from the water quality objectives (WQO) from the Sydney Harbour catchment and include 'aquatic ecosystems'. In addition, recreational users of Rozelle Bay comprise an off-site human receptor.

4.5 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids or gases.

Man-made preferential pathways are present throughout the site, generally associated with service easements and areas of previously disturbed fill material which may have a higher permeability than underlying natural soils. Natural preferential pathways include fractures within bedrock. Where environmental impact (particularly in liquid or gaseous form) is observed within proximity to these identified preferential pathways, further consideration to the potential migration of these impacts will be required.

5. Conclusions

Based on the findings of this investigation and subject to the limitations in **Section 7**, the following conclusions are made:

- Based on the desktop findings, the site appears to have been historically used for various commercial / industrial enterprises from as early as the 1920s, with businesses primarily consisting of car dealerships, motor body repair shops, and wholesale manufacturers of various goods and equipment such as fluorescent lighting, scientific instruments, and machinery. A portion of the site acquired by the University of Sydney in 2001 and 2006, currently operates as a medical research centre, with a small portion of the site also currently operating as a hotel and gym.
- Based on an assessment of the history, environmental setting and site inspection, potentially contaminating activities were identified to include fill used for site levelling prior to and during construction of the current commercial buildings at the site, former industrial land-uses (motor garages etc), potential above ground storage tanks (ASTs) and the former service station and dry cleaner located upgradient and in close proximity to the site;
- The assessment did not identify the potential for gross or widespread contamination;
- With reference to Clause 4.6.1 of SEPP Resilience and Hazards, the findings of this report are that there is the potential for some contamination to be present at the site. However, the potential contamination is unlikely to be such that it cannot be cleaned-up or managed by the application of commonly used methods. Consequently, the potential contamination identified at the site is considered not to represent a significant barrier to the future development of the site;
- Based on the findings of this report, further intrusive investigations as part of a Detailed Site Investigation (DSI) are anticipated to be required as supporting documentation for any future Development Applications (DAs), to quantify any contamination associated with the areas of environmental concern identified herein; and
- In the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses through standard industry approaches as guided through the preparation of a Remediation Action Plan (RAP).

6. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

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Attachment A16

Site remedial concept plan

84-94 Parramatta Road, Camperdown, NSW

Wentworth Capital

Site Remedial Concept Plan

69242 | 167,581 (Rev B)

29 September 2025

We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.

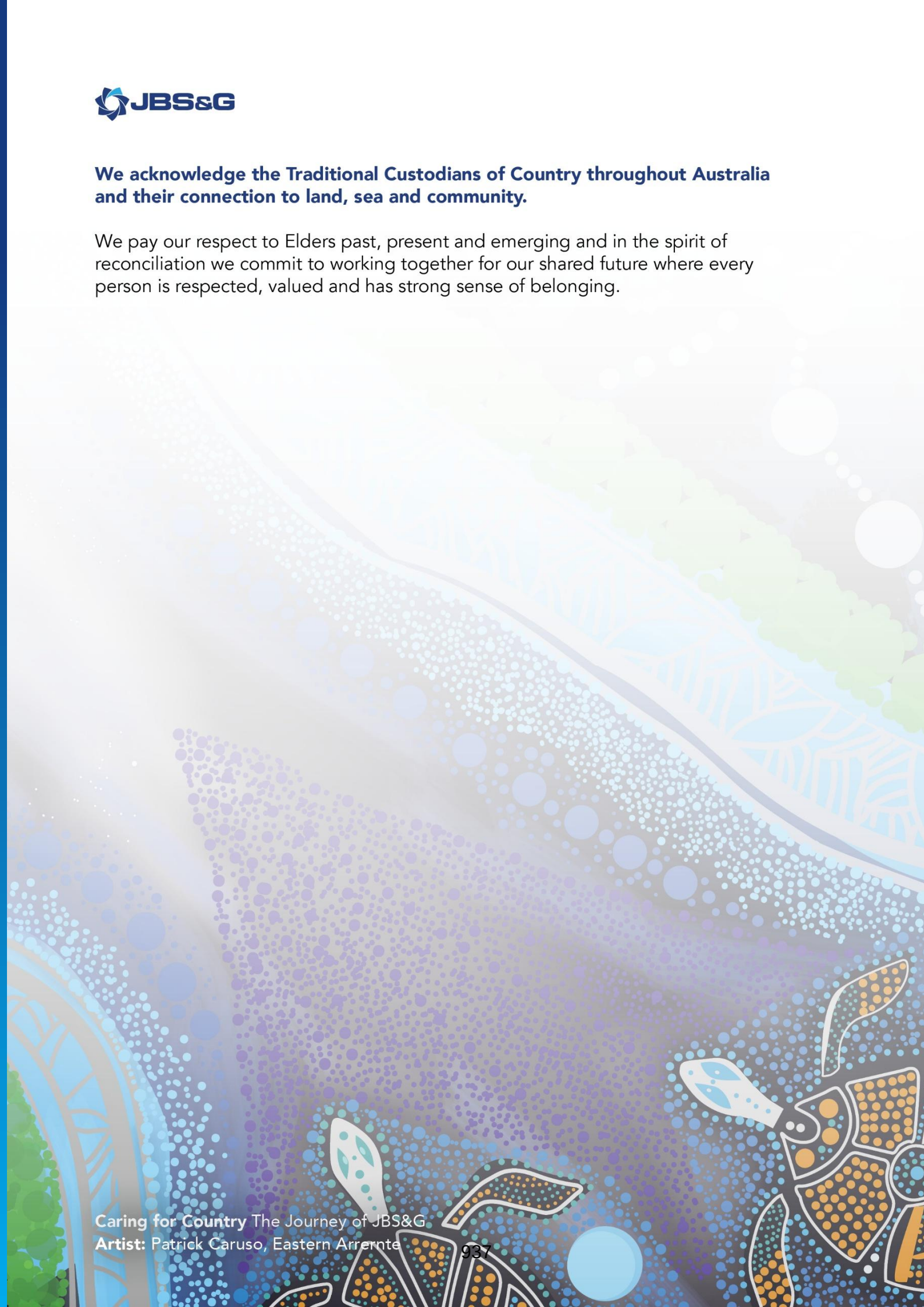


Table of Contents

Introduction **1**

1. **1**

1.1 Background 1

1.2 Objective 1

2. **Site Condition & Environmental Setting** **2**

2.1 Site Identification 2

2.2 Site Description 2

84 Parramatta Road, Camperdown 2

88-90 Parramatta Road, Camperdown 3

92-94 Parramatta Road, Camperdown 3

2.3 Surrounding Land Use 3

2.4 Topography 3

2.5 Geology and Soil 3

2.6 Hydrology 4

2.7 Hydrogeology 4

2.8 Acid Sulfate Soils 5

2.9 Naturally Occurring Asbestos 5

2.10 Salinity 5

2.11 Meteorology 5

3. **Site History and Previous Assessments** **7**

3.1 Preliminary Site Investigation – 84-94 Parramatta Road (JBS&G 2025) 7

3.2 Detailed Site Investigation, 84-86 Parramatta Road (STC 2013) 8

4. **Preliminary Conceptual Site Model** **9**

4.1 Potential Areas of Environmental Concern 9

4.2 Potentially Contaminated Media 9

4.3 Potential for Migration from Site 9

4.4 Potential Human and Ecological Receptors and Exposure Pathways 10

4.5 Preferential Pathways 11

5. **Conceptual Remedial Strategy** **12**

5.1 Guidance Framework 12

5.2 Regulatory and Planning Requirements 13

5.2.1 Requirements in Relation to Future Project Applications/Approvals 13

5.2.2 Other Requirements 14

5.3 Extent of Remediation and/or Management Required 15

5.3.1 Soil Impact 15
5.4 Hierarchy of Remedial Options 15
5.5 Options Assessment 16
5.5.1 On-site Treatment 16
5.5.2 Off-site Treatment 17
5.5.3 Consolidation and Isolation by Containment 17
5.5.4 Off Site Removal 18
5.5.5 Implementation of an Appropriate Management Strategy 18
5.6 Strategy for Selection of Proposed Options 18
5.7 Anticipated Scope of Remediation Works 19
5.7.1 Areas Subject to Further Investigation 19
5.7.2 Contaminant Source Removal 21
5.7.3 Management of Asbestos Impacts 21
5.7.4 On-Site Containment Requirements 21
5.7.5 Site Boundaries 22
5.8 Material Movement Management 23
5.8.1 Material Movement Principles 23
5.8.2 Off-Site Disposal of Material 24
5.8.3 Beneficial Reuse of Material within the Site 24
5.8.4 Importation of Material 26
5.9 Proposed Validation Strategy 27
5.9.1 Validation Sampling Analysis and Quality Plan 27
5.9.2 Validation Assessment Criteria 27
5.9.3 Contaminant Source and Impacted Material Removal Validation 27
5.9.4 Accessible Soils Validation 28
5.9.5 Installation of Containment Measures Validation 29
5.9.6 Validation and Ongoing Management Requirement Reporting 29
5.10 Contingency Plans 31
5.10.1 Unexpected Material Finds 31
5.10.2 Emission Complaints 32
6. Conclusions and Recommendations 33
6.1 Conclusions 33
6.2 Recommendations 33
7. Limitations 34

List of Tables

Table 2.1: Summary of Site Details....2
Table 2.2: Registered Groundwater Bore Search Summary....4
Table 4.1: Areas of Environmental Concern and Contaminants of Potential Concern 9
Table 4.2: Summary of Potential On-site Human Exposures 10
Table 5.1: Review of Potential Environmental Issues ....**Error! Bookmark not defined.**

List of Figures

Figure 1 – Site Location
Figure 2 – Site Layout

Abbreviations

Term	Definition
ACM	Asbestos Containing Materials
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
ASS	Acid Sulfate Soils
AST	Aboveground Storage Tank
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CLM Act	Contaminated Land Management Act
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DA	Development Application
DP	Deposited Plan
DSI	Detailed Site Investigation
EPA	NSW Environmental Protection Authority
Ha	Hectare
JBS&G	JBS&G Australia Pty Ltd
MNA	Monitored Natural Attenuation
OCP	Organochlorine Pesticides
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PID	Photoionisation Detector
POEO Act	Protection of Environment Operations Act
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
SAQP	Sampling Analytical and Quality Plan
STC	SMEC Testing Services
SWMS	Safe Work Method Statement
TRH	Total Recoverable Hydrocarbons
UST	Underground storage tank
VOC	Volatile Organic Compounds
WHSP	Work Health and Safety Management Plan

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) has prepared this site remedial concept plan (SRCP) to be submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital (the client) in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown (the site). The site location is shown on **Figure 1**.

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Ethos Urban.

This SRCP report was prepared to address State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021, in order to establish a suitable framework for management of potentially contaminated media at the site and facilitate the future redevelopment of the site. This assessment has been developed in general accordance with the requirements of the NSW Environment Protection Authority (EPA) published and endorsed guidelines.

1.2 Objective

The objectives of this SRCP are to provide a summary of suspected potential site contamination conditions and potential exposure pathways via documentation of a Conceptual Site Model (CSM), and to identify available remedial strategies as may be adopted for the site by an assessment of remedial options, including evaluation of options in accordance with the principles of ecologically sustainable development (ESD) and the overall anticipated development objectives for the site.

2. Site Condition & Environmental Setting

2.1 Site Identification

The location and current layout of the site is shown in **Figures 1** and **2** respectively. The site details are summarised in **Table 2.1**.

Table 2.1: Summary of Site Details

Lot/Deposited Plan (DP)	Lot A deposited plan (DP) 402925, Lot 1 DP 965792, Lot 1 DP 178634, and Lot 1 DP 1216911
Site Address	84-94 Parramatta Road, Camperdown, NSW 2050
Site Area	6195 m^2
Local Government Authority (LGA)	Council of the City of Sydney
Approximate Coordinates (GDA 94 Map Grid of Australia (MGA) 55)	Eastings: 331690.78 Northings: 6249059.84
Site Zoning	MU1, mixed use commercial and residential.
Current Land Uses	84 Parramatta Road – hotel and fitness centre 88-90 Parramatta Road – vacant 92-94 Parramatta Road – a medical research centre including commercial office space and laboratories
Proposed Land Uses	Educational facility, including laboratories, educational spaces and amenities.

2.2 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown in **Figure 1**.

A limited site inspection of publicly accessible land surrounding the site, was completed on 16 June 2025 by a suitably qualified and experienced JBS&G Environmental Consultant to assess the site condition and identify indicators of potential contamination and/or contaminating activities. The observed conditions surrounding each parcel of land within the site is summarised in the Sections below.

84 Parramatta Road, Camperdown

This portion of the site is currently used as a hotel and fitness centre. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

The property was observed to be a recent build, with a brick façade. The property comprised one main building of around 5 levels with a central courtyard area, comprising some small garden beds. Access to undercover parking was observed off Sparkes Street, but it was unclear if the carpark comprised any basement levels.

88-90 Parramatta Road, Camperdown

This portion of the site was observed to be vacant. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

The property was observed to comprise a multi-level building with a brick façade with signage for 'Glebe Antique Centre'. The building appeared to have been unoccupied for some time, with boarded up windows and appearing in somewhat derelict condition.

92-94 Parramatta Road, Camperdown

The portion of the site was observed to be currently used as a medical research facility. The property was not accessible to JBS&G at the time of inspection, hence only a limited inspection from the perimeter of the property was conducted.

Entrance to the site was through a covered gated archway off Parramatta Road, which appeared to lead to a paved open courtyard area. The property was observed to comprise of painted brick and comprised multiple levels plus a basement carpark. The building is known to comprise of a medical research centre, containing laboratories, offices and meeting rooms.

Driveway access to basement parking was observed off Sparkes Street. A potential diesel refuelling point was observed on the wall next to the driveway, which is expected to connect with a potential AST / UST within the site, potentially servicing a backup generator.

2.3 Surrounding Land Use

The current land uses of adjacent properties or properties across adjacent roadways are summarised below:

- North – Various commercial and medium-density residential apartment buildings are located north of the site;
- East – Larkin Street, followed by commercial and residential land use is present to the east of the site;
- South – Parramatta Road, followed by BP petrol station, childcare centre, catholic church, college and St Johns Oval and other Sydney University facilities further southeast; and
- West – High-density residential properties, motorcycle dealer, and café, followed by Lyons Street and various commercial and residential properties, including a gym, hotel, mechanic and Lyons Road Park further west.

2.4 Topography

A review of regional topographic data provided on Spatial Information Exchange (SIX Maps[1]) indicates that the site elevation ranges from 19-26 m Australian Height Datum (AHD) and slopes to the north-east.

2.5 Geology and Soil

A review of the site geology provided on the NSW Department of Primary Industries and Regional Development (NSW DPIRD 2025[3]) as included in JBS&G 2025, indicated that the site is underlain Ashfield Shale of the Wianamatta group. This material is characterised by laminate, dark grey siltstone and Bringelly Shale which consists of shale, with occasional calcareous claystone, laminite and coal.

[1] Six Maps, https://maps.six.nsw.gov.au/ accessed 7 May 2025
[3] NSW Department of Primary Industries and Regional Development, *NSW Seamless Geology project*, https://www.resources.nsw.gov.au/geological-survey/projects/nsw-seamless-geology-project, accessed 17 May 2025

Review of the Soil Landscapes of Central and Eastern NSW provided by the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW 2024[4]) as included in JBS&G 2025[5], indicated that the site is present within the Blacktown soil landscape. Blacktown Soil Landscape is characterized by shallow to moderately deep (less than 100 cm) Red and Brown Podzolic Soils on crest, upper slopes and well-drained areas. Yellow Podzolic Soils is presented on lower slopes and in areas of poor drainage on the depth of 150-300 cm. These soils are noted to have moderately reactive highly plastic subsoil, with low soil fertility and poor soil drainage.

Review of the Atlas of Australian Soil compiled by the Commonwealth Scientific and Industrial Research Organisation (CSIRO[6]) as included in JBS&G 2025, indicate the site is underlain by the soil order of Kurosol, in which chief soils are hard acidic red soils with hard neutral and acidic yellow mottled soils on lower slopes and in valleys as similarly described in the Blacktown soil landscape. Associated are small areas of various soils including on some ridges and on some slopes, in saddles and some mid-slope positions and some low-lying swampy areas of soils and soil with peaty surfaces

2.6 Hydrology

The nearest surface water receptor is Orphan School Creek approximately 300 m to the northwest of the site which flows into the Johnstone Creek, located approximately 600 m to the west and northwest of the site. The Johnstone Creek flows into Rozelle Bay, located approximately 1.6 km to the north of the site.

The site is covered by buildings and concrete hardstand with the exception of Lot A in DP 402925 and Lot 1 in DP 1216911 which both have small internal courtyards with garden spaces. Infiltration of precipitation at the site is expected to be low, given the site is primarily sealed and has existing buildings. Most of surface water generated during periods of rainfall will be captured by the site's stormwater infrastructure and discharged to the municipality stormwater network.

2.7 Hydrogeology

Based on the natural topography of the site, as summarised in **Section 2.4**, groundwater is inferred to flow in a north-east direction.

A search for registered groundwater bore information was undertaken of the National Groundwater Information System from the Bureau of Meteorology, Water NSW (NGIS, BOM 2024[7]) and is included in JBS&G 2025. There were no registered groundwater bores onsite.

There are six groundwater bores identified within a 0.5 km radius of the site, and a further 23 groundwater bores within a 1.5 km radius of the site. There are no known beneficial uses of groundwater within or in proximity of the site. The relevant information is summarised in **Table 2.2** below.

Table 2.2: Registered Groundwater Bore Search Summary

Bore ID	Use	Standing Water Level (m bgs)	Depth (m)	Distance from site (m) / Direction	Lithology
GW109231 (2008)	Monitoring	N/A	3.20	38 m / East	N/A
GW109230 (2008)	Monitoring	N/A	1.80	50 m / East	N/A

[4] Department of Climate Change, Energy, the Environment and Water, 2024, *Soil Landscapes of Central and Eastern NSW - v3.0.1*, Department of Climate Change, Energy, the Environment and Water, Sydney.
[5] *Preliminary Site Investigation, 84-94 Parramatta Road, Camperdown NSW*, prepared by JBS&G Pty. Ltd, May 2025
[6] CSIRO; & National Resource Information Centre, BRS (1991): Atlas of Australian Soils (digital). v3. CSIRO. Data Collection. https://doi.org/10.25919/5f1632a855c17
[7] *National Groundwater Information System*, Bureau of Meteorology (BOM 2024) Water NSW

GW111408 (2011)	Monitoring	2.07	4.40	328 m / East	0.00m-0.22m: Concrete slab 0.22m-0.50m: Gravel roadbase 0.5m-1.1m: Fill, Silty clay 1.1m-4.4m: Silty clay
GW116424	Monitoring	N/A	5.00	426 m / East	N/A
GW116421	Monitoring	N/A	5.80	428 m / East	N/A
GW116422	Monitoring	N/A	5.30	429 m / East	N/A

2.8 Acid Sulfate Soils

A review of the Atlas of Australian Acid Sulfate Soils (CSIRO 2011[8]) as included in JBS&G 2025, identified the site to have an extremely low probability of occurrence of Acis Sulphate Soil (ASS). The Environmental Planning Instrument - Acid Sulphate Soils from the NSW Department of Planning, Housing and Infrastructure (NSW DPHI 2025[9]) indicates the site is classified Class 5. ASS are not typically found in Class 5 areas, but the site is located 129 m from adjacent Class 3 land, where works more than 1 metre below natural ground surface present an environmental risk and works by which the watertable is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk.

Review of geology maps, soil maps, and topography indicate that it is unlikely that acid sulfate soils would be present on the site. Based on the elevation of the site and the reported geology, no further consideration of requirements for the assessment or management of ASS is warranted.

2.9 Naturally Occurring Asbestos

A review of NSW DPIRD map Naturally Occurring Asbestos (DPIRD 2015[10]) as included in JBS&G 2025, indicated that the site and the immediate surrounds are not situated in an area of naturally occurring asbestos.

2.10 Salinity

A review of the Australian Dryland Salinity Assessment by the Australian Bureau of Agricultural and Resource Economics and Science (ABARES[11]) as included in JBS&G 2025, identified there were no record of dryland salinity potential at the site.

2.11 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Sydney (Observatory Hill)), located approximately 3.7 km to the northeast of the site, indicates the site is located within the following meteorological setting:

- Mean minimum temperatures vary from 8.1°C in July to 18.9°C in February;
- Mean maximum temperatures vary from 16.4°C in July to 26.0°C in January;

[8] Fitzpatrick, Rob; Powell, Bernie; & Marvanek, Steve (2011): Atlas of Australian Acid Sulfate Soils. v3. CSIRO. Data Collection. https://doi.org/10.4225/08/512E79A0BC589

[9] State Government of NSW and NSW Department of Planning, Housing and Infrastructure 2025, *Environmental Planning Instrument - Acid Sulfate Soils*, accessed 16 April 2025

[10] State Government of NSW and Department of Primary Industries and Regional Development (DPIRD) 2015, Naturally Occurring Asbestos, supplied 26 April 2024

[11] Australian Bureau of Agricultural and Resource Economics and Science (2013) Australian Dryland Salinity Assessment Spatial Data (1:2,500,000) – NLWRA 2001, supplied 3 June 2024

- The mean annual rainfall is approximately 1211.1 mm, with rainfall greater than 1 mm occurring on an average of 99.5 days per year; and
- Monthly average rainfall varies from 68.1 mm in September to 133.1 mm in June with the wettest periods occurring on average in January to June.

3. Site History and Previous Assessments

The preliminary site investigation (PSI) completed by JBS&G (JBS&G 2025[12]) provides a detailed history of the properties within the site as based on a review of various historical records including historical land title records, business directories, council development application (DA) records, and historical aerial imagery. As part of the desktop assessment and review, a previous detailed site investigation (DSI) report was found to have been completed as part of a DA for 84-86 Parramatta Road, Camperdown by SMEC Testing Services (STS, 2013[13]).

A summary of both reports, including key aspects of the site history are provided below.

3.1 Preliminary Site Investigation – 84-94 Parramatta Road (JBS&G 2025)

JBS&G completed an PSI for the properties located at 84, 88-90 and 92-94 Parramatta Road, Camperdown NSW in 2025. The stated objective of the PSI was to draw preliminary conclusions regarding potential contamination status of the site. The following summarises the key findings of the assessment:

- Based on the desktop findings, the site appears to have been historically used for various commercial / industrial enterprises from as early as the 1920s, with businesses primarily consisting of car dealerships, motor body repair shops, and wholesale manufacturers of various goods and equipment such as fluorescent lighting, scientific instruments, and machinery. A portion of the site acquired by the University of Sydney in 2001 and 2006, currently operates as a medical research centre, with a small portion of the site also currently operating as a hotel and gym.
- Based on an assessment of the history, environmental setting and site inspection, potentially contaminating activities include fill used for site levelling prior to and during construction of the current commercial buildings at the site, former industrial land-uses (motor garages etc), potential above ground storage tanks (ASTs) and the former service station and dry cleaner located upgradient and in close proximity to the site;
- The assessment did not identify the potential for gross or widespread contamination;
- It is considered unlikely that activities at the site will have contaminated the land to a degree that would prevent the redevelopment of the site for the proposed land-use; and
- In the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land-use.
- Based on these conclusions, it was recommended that a limited and targeted intrusive investigation of the site in accordance with a Sampling, Analysis and Quality Plan (SAQP) to provide a quantitative assessment of contaminant levels as associated with the areas of environmental concern identified above.
- It was further concluded, that in the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses through standard industry approaches as guided through the preparation of a Remediation Action Plan (RAP).

[12] *Preliminary Site Investigation, 84-94 Parramatta Road, Camperdown NSW*, prepared by JBS&G Pty. Ltd, May 2025
[13] *Detailed Site Investigation, 84-86 Parramatta Road, Camperdown NSW*, prepared by SMEC Testing Services Pty. Ltd December 2013

3.2 Detailed Site Investigation, 84-86 Parramatta Road (STC 2013)

STC completed an DSI for the property 84-86 Parramatta Road, Camperdown NSW in 2013. The DSI was prepared to support the DA and redevelopment of the site for a mixed commercial and residential use.

The DSI investigation included a review of historical land title information, historical aerial photographs, local council records, review of local geology and hydrogeology, as well as a site inspection and a limited soil sampling program comprising six borehole sample locations.

The site history review found that the site appears to have been used for commercial / industrial purposed since at least the 1930s, including that of a motor vehicle workshop which operated at the site from 1992 to 2010. The review was unable to identify the specific historical uses at the site beyond that of commercial / industrial uses. A Dangerous goods search was conducted and found no records of the storage of dangerous goods at the site. A search of EPA contaminated land public register did not find any notices pertaining to the site. The site was also found to not be listed on EPAs list of notified sites. Potential contamination sources were noted to include any contaminants associated with historical industrial land use, and any contaminants associated with fill material of unknown origin.

The site was noted to be located on the boundary of two geological units, these being the Middle Triassic Age 'Ashfield Shale' and 'Hawkesbury Sandstone'. The Ashfield Shale comprises black to dark-grey shale and laminate, whilst the Hawkesbury Sandstone comprises medium to coarse-grained quartz sandstone with minor shake and laminite lenses. The natural soils encountered during the investigation were observed to comprise grey and brown silty clays. Sandstone and shale bedrock was observed at depths of at least 2.3 m below the ground surface.

Observations from the limited intrusive soil investigation noted fill depths ranged from 0.4 m bgs to 1.5 m bgs, with fill material generally comprising silty clay fill with some trace inclusions of gravels, brick and glass. Ten samples, as well as one intra-laboratory and one inter-laboratory field duplicate sample for quality control assessment, were analysed for a limited range of COPC including heavy metals, monocyclic aromatic compounds (MAH), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphorus pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos. All reported concentrations were below the adopted site criteria. Hence it was concluded that based on the results of the DSI investigation, the site was considered to be suitable for high-density residential and commercial land use.

4. Preliminary Conceptual Site Model

A Conceptual Site Model (CSM) is a representation of the site and how contaminants move from the source through the environment to potential human or environmental receptors. A preliminary CSM has been developed based on the desktop assessment and site inspection. It presents a preliminary understanding of potential contamination sources, pathways, and receptors, consistent with NEPC (2013) ASC NEPM.

4.1 Potential Areas of Environmental Concern

Based on the historical review and observations made during the JBS&G inspection of the site, potential contamination sources or areas of environmental concern (AECs) and associated key contaminants of potential concern (COPC) are presented in **Error! Reference source not found.** below.

Table 4.1: Areas of Environmental Concern and Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill materials used to create current site levels	Heavy metals, total recoverable hydrocarbons (TRH), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) and asbestos
Historical demolition of previous structures	Lead, asbestos
Historical use of the site for industrial purposes that has potentially included manufacturing of scientific instruments, fluorescent lighting, textiles, and shoes, as well as motor vehicle maintenance and repairs	Heavy metals, TRH, BTEX, PAHs, VOCs
Above ground storage tanks (ASTs) within the site.	Heavy metals, TRH, BTEX, PAHs, VOCs
Offsite sources (e.g. current and former industry surrounding the site including an active service station 26m south of the site and former dry cleaners 29m north east of the site)	Heavy metals, TRH, BTEX, PAH, per- and polyfluoroalkyl substances (PFAS) and VOCs

4.2 Potentially Contaminated Media

Each of the AECs and corresponding COPCs identified in **Section 4.1** have the potential to impact soil, groundwater and/or soil gas (where volatile constituents are identified) underlying the site.

Where fill materials are present to depth, or in areas surrounding potential USTs, there is a likelihood that environmental impact may be present at depth. Anthropogenic materials are commonly present in impacted fill materials and can be used as an indication of the depth of disturbance. Where soils impacted with chemical-based contaminants are identified, there is a likelihood the impact may have migrated laterally and vertically to underlying natural soils.

With the exception of asbestos, each of the COPCs identified for the site, in **Table 4.1,** have the potential to migrate from shallow soils into groundwater.

4.3 Potential for Migration from Site

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);

- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The COPCs identified as part of the site history review and site inspection are generally in solid (e.g. asbestos, PAHs and metals), liquid (e.g. TRH, BTEX, VOCs, PFAS, OCPs and PCBs) or gaseous (e.g. VOCs, BTEX, Volatile TRH and semi-volatile PAHs) form. It is noted that the COPCs identified to primarily occur in liquid form can also presumably exist in solid form as adsorbed to the soil matrix.

The ground surfaces overlying the site are primarily comprised of sealed pavements and building footprints with limited unsealed or vegetated ground thereby limiting the total extent of surface water infiltration into the subsurface. The migration of in-situ impacted soil via windblown dust is considered to be unlikely provided the hardstands are maintained across the majority of the site.

The potential solubility of chemical contaminants in soil, in addition to rate of surface water intrusion, perched water seepage and groundwater movement across the site, will influence the potential for migration of soil and groundwater contamination within and from the site. Should groundwater be identified to be impacted with on-site sources of contamination in proximity to the inferred downgradient boundary of the site, then potential off-site migration of contaminants in groundwater will require consideration.

The potential for off-site migration of vapours will only be relevant where these constituents are identified at concentrations greater than relevant health-based screening and investigation levels. These constituents can migrate laterally from the site through volatilisation and diffusive/advective processes as well as through preferential pathways (refer to **Section 4.5**). Should elevated levels of vapours be identified, then the potential off-site migration of these constituents will require further consideration.

The potential migration of contaminants from off-site sources to the site is possible via groundwater and/or soil vapour.

4.4 Potential Human and Ecological Receptors and Exposure Pathways

Table 4.2 summarises potential on-site human receptors and associated exposure pathways for the site, based on the range of exposure scenarios that may occur under the different potential land-uses of the site.

Table 4.2: Summary of Potential On-site Human Exposures

Receptor	Location	Media	Potential Exposure Pathways
General Site User	Indoor and outdoor areas	Soils	Inhalation (vapours)
	Indoor and outdoor areas	Groundwater	Inhalation (vapours) Oral (infiltrating seepage water within basement if present) Dermal (infiltrating seepage water within basement if present)
Construction worker or intrusive maintenance worker (short duration)	Construction areas/ Excavations	Soil	Inhalation (vapours and particulates) Oral Dermal
		Groundwater	Inhalation (vapours) Oral (infiltrating seepage water within basement if present) Dermal (infiltrating seepage water within basement if present)

Currently the site is primarily covered by hardstand pavements and building footprints. On this basis, there are limited on-site ecological receptors that could be exposed to environmental impacts underlying the site which is proposed to be maintained as part of the site redevelopment. Possible off-site ecological receptors are limited to potential impacts associated with groundwater and surface runoff water (if present) migrating through the local stormwater network towards Johnstons Creek and Orphan School Creek and eventually discharge into Rozelle Bay. Off-site ecological receptors are therefore limited to the organisms living within the estuarine system of Rozelle Bay and can be identified from the water quality objectives (WQO) from the Sydney Harbour catchment and include 'aquatic ecosystems'. In addition, recreational users of Rozelle Bay comprise an off-site human receptor.

4.5 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COPC as either liquids or gases.

Man-made preferential pathways are present throughout the site, generally associated with service easements and areas of previously disturbed fill material which may have a higher permeability than underlying natural soils. Natural preferential pathways include fractures within bedrock. Where environmental impact (particularly in liquid or gaseous form) is observed within proximity to these identified preferential pathways, further consideration to the potential migration of these impacts will be required.

5. Conceptual Remedial Strategy

The overall goal for any potential remediation and/or ongoing management of environmental impact at the site will be to:

- Prevent exposure of human populations including future site occupants, workers and users to contaminated media;
- Prevent potential phyto-toxicity effects to land, water and sediment-based flora and/or fauna that may come into contact with contaminated media;
- Remove potential ongoing sources of environmental contamination from the site; and
- Prevent human exposure to impacted groundwater and vapour where present.

In achieving the above goals, it is noted that consideration would also need to be given to the requirements of other urban redevelopment concerns including ecologically sustainable development (ESD) principles, ecological concerns etc. It would be required that there is flexibility to adopt alternative measures, including the in-situ management of contamination, to address these other urban redevelopment concerns.

5.1 Guidance Framework

The *Contaminated Land Management (CLM) Act 1997* is the primary legislation associated with management of contaminated land in NSW. Section 105 of the Act allows the EPA to make or endorse guidelines connected with the objectives of the Act. These guidelines form the basis for making decisions in relation to the investigation, remediation, validation and documentation of contaminated land management within NSW.

As such, this remedial strategy document and future activities associated with assessment, remediation and validation will address the requirements of those guidelines. The current list of relevant NSW EPA endorsed guidelines comprises:

- National Environment Protection (Assessment of Site Contamination Measure) Measure 1999 (as amended 2013), National Environment Protection Council (NEPC 2013);
- Remediation of Land requirements under State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP 2021) and associated Planning Guidelines;
- Sampling design part 1 – application and Sampling design part 2 - interpretation, NSW EPA 2022 (EPA 2022);
- Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Land. NSW EPA 2020 (EPA 2020);
- Contaminated Land Management: Guidelines for NSW Site Auditor Scheme (3rd Edition), NSW Environment Protection Authority 2017 (EPA 2017);
- Environmental Health Risk Assessment: Guidelines for Assessing Human Health Risks from Environmental Hazards, Dept. of Health and Ageing and EnHealth Council (CoA 2012);
- Guidelines for the Assessment and Management of Groundwater Contamination, Department of Environment and Conservation (DECC 2007); and
- Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act, 1997, NSW (EPA 2015).

In addition, consideration is also required to guidelines made or endorsed by the EPA under the Protection of the Environment Operations (POEO) Act 1997 and associated regulations, including:

- Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019. (UPSS 2019);
- Waste Classification Guidelines, Part 1 - Classifying Waste (NSW EPA 2014);
- Waste Classification Guidelines, Part 2 – Immobilising Waste (NSW EPA 2014);
- Waste Classification Guidelines, Part 3 - Waste Containing Radioactive Material (NSW EPA 2014); and
- Waste Classification Guidelines, Part 4 – Acid Sulfate Soils (NSW EPA 2014).

Other guidance that should also be considered in relation to site conditions includes:

- Acid Sulfate Soil Manual, Acid Sulfate Soil Management Advisory Committee (ASSMAC 1998);
- National Acid Sulfate Soil Guidance. Australian Government Department of Agriculture and Water Resources (DAWR) (AGDAW, 2018);
- Work Health and Safety Act 2011 and Work Health and Safety Regulation 2017;
- SEPP (Resilience and Hazards) 2021; and
- Code of Practice for the Safe Removal of Asbestos, SafeWork NSW, September 2019 (SafeWork 2019).

5.2 Regulatory and Planning Requirements

Where a proponent seeks approval for a change of permitted use of the land in the form of a rezoning, it is required that the proponent satisfies the consent authority, and relevant regulator (including the NSW EPA), that contamination conditions as may be present at the site will be appropriately managed such that the site may be considered suitable for the proposed use.

In some instances, the proposed development and/or remedial works may also trigger requirements under the POEO Act for issue of a specific Environmental Protection License (EPL). Relevant categories and associated triggers are outlined in Schedule 1 of the POEO Act and relate to categories including the treatment of contaminated soil and/or groundwater, quarrying activities, etc (not suspected on this site given the current understanding of the proposed development).

5.2.1 Requirements in Relation to Future Project Applications/Approvals

It is understood that the client is seeking approval of a rezoning of the site that will facilitate a new development of a new Life Sciences Building as part of the University of Sydney. Subsequent to the approval, it is anticipated that the site will each be subject of one or more specific Development Applications to the appropriate consent authority. Such applications would define specific land uses and built form layouts. Under SEPP (Resilience and Hazards) 2021 it is noted that the consent authority must not consent to the carrying out of development on the subject land unless:

a) It has been considered whether the land is contaminated; and

b) If the land is contaminated that the planning authority is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for all purposes for which the development is proposed to be carried out; and

c) If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, the planning authority is satisfied that the land will be remediated prior to use for that purpose.

Further, it is required that the planning authority obtains from the proponent a report specifying the findings of a preliminary investigation of the land prepared in accordance with the contaminated land planning guidelines. The consent authority may also require the applicant to provide a report on the detailed

investigation of the site if it is considered that the findings of the preliminary investigation warrant such additional assessment.

For future development within the site, it is anticipated that a Detailed Site Investigation (DSI) will be implemented in accordance with the recommendation of the PSI (JBS&G 2025) to quantify any potential impacts associated with the identified AECs. Should the DSI identify contamination that requires to be addressed in order to make the site suitable for the proposed used, then a detailed site-specific Remedial Action Plan (RAP) with specific consideration to the proposed development details (site levels, land use scenarios, etc) will be required. The DSI and subsequent RAP (if required) would be submitted to the consent authority prior to, or during the Project Application/Approvals process to satisfy the consent authority's obligations in relation to SEPP (Resilience and Hazards) 2021.

It is further anticipated that as part of the resulting project approval/development consent, the planning authority may issue consent conditions in relation to:

- Compliance with the requirements of the SRCP and RAP in completing site remediation works; and
- Documentation of remediation works as a validation assessment report and where appropriate, an environmental management plan (EMP), to be submitted to the consent authority stating that the site contamination concerns have been appropriately addressed, and the site is considered suitable for the approved use.

Detailed and/or data gap investigation(s) and further evaluation of data in relation to specific site development proposals may identify that the site, or a portion of the site, is considered suitable for the specific proposed use without requirement for ongoing management and/or remediation. In this event, the detailed assessment report would then be submitted at the project approval/application stage in lieu of a RAP. In this instance, the Development Consent conditions would not be required to address compliance with this SRCP, unless contamination/inground conditions are identified during site development works that are inconsistent with the conclusions of the site assessment.

5.2.2 Other Requirements

In addition to the requirements of SEPP (Resilience and Hazards) 2021, consideration of the regulatory requirements under NSW legislation is also necessary as part of development of the RAP, as briefly outlined following:

- Protection of the Environment Operations (POEO) Act 1997 - Evaluation of the proposed remediation/validation activities in relation to the categories and/or thresholds presented in Schedule 1 of this Act. Where works trigger one or more categories presented in Schedule 1, the works will require to be licensed by the EPA in addition to the requirements of the consent authority.
- Water Management Act 2000 – Where remediation works require the extraction (and treatment, reinjection or otherwise) of groundwater, consent for these works may be required under a temporary dewatering licence even if the triggers for an EPL are not met. Such requirements may potentially be stipulated as a condition of the development consent via the integrated development approvals process.
- POEO (Waste) Regulation 2014 – In addition to triggers for an EPL, consideration will be needed with respect to the POEO Waste Regulation in relation to non-licensed waste activities and waste transporting. This includes requirements for management of asbestos waste during transport/disposal and the approval of methods associated with the immobilisation of specific waste streams etc. as may be required under an area specific RAP.
- Work Health and Safety Act 2011 and associated Regulations including those related to Asbestos – Where asbestos contamination in soil is identified during site investigation works or during/following the demolition of existing structures, the site must be considered as having asbestos-contaminated soil. Appropriate protective measures must be implemented to prevent exposure to site workers and nearby

sensitive receptors. In such cases, management requirements are outlined in the *How to Manage and Control Asbestos in the Workplace* Code of Practice, WorkSafe NSW, 2019.

5.3 Extent of Remediation and/or Management Required

To date, intrusive investigations have not been completed at the site (with the exception of some limited sampling as part of STC 2013 (**Section 3.2**), and as such, no specific impacts that require remediation have been identified. Notwithstanding, should environmental impact be identified at the site, it is considered that the primary source of impact will likely be limited to soils as a consequence of the surface / near surface application of contamination associated with the historical land-uses. Therefore, the sections below (within this preliminary RCP) focus on the potential remedial requirements as related to soil. Notwithstanding, appropriate contingencies are provided in the event that groundwater and / or soil vapour impacts are identified that require remediation.

5.3.1 Soil Impact

Potential historical filling activities undertaken within the site and current/former industrial land uses may have resulted in site soils to be potentially impacted with a variety of inorganic and organic constituents that, dependent upon final land use scenarios may be present at unacceptable levels. **Table 4.1** presents the areas of environmental concern and associated contaminants of concern as listed following:

- Heavy metals;
- TRH/BTEX
- OCPs/PCBs;
- PFAS; and
- Asbestos

An intrusive assessment of site soils will be required for each of these contaminants to identify the extent of potentially impacted soils that may require remediation.

5.4 Hierarchy of Remedial Options

The preferred hierarchy of options for remediation (clean up) and/or management adopted by NSW EPA has been established within the NEPC (2013) Assessment of Site Contamination Policy Framework as follows:

- On-site treatment of the soil so that the contaminant is either destroyed or the associated risk is reduced to an acceptable level; and
- Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site; or

If the above options are not practicable:

- Consolidation and isolation of the soil on site by containment with a properly designed barrier; and
- Removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material; or
- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

In addition, when deciding which option to choose, consideration is also required to be given to the sustainability (environmental, economic and social) aspects of each option to ensure an appropriate balance between the benefits and effects of undertaking remedial/management options.

In cases where no readily available or economically feasible method is available for remediation, it may be possibly to adopt appropriate regulatory controls or develop other forms of remediation.

5.5 Options Assessment

In accordance with the above hierarchy, the opportunities and constraints of each remedial option required for any potential site impacts are further discussed below.

5.5.1 On-site Treatment

On-site treatment of contaminants/contaminated material requires that the contaminants are either destroyed or otherwise the risk associated with the material is appropriately reduced to an acceptable level whereby no on-going management of the hazard is necessary. These opportunities are discussed following for the main contaminants of potential concern at the site.

- Heavy metals cannot be destroyed by treatment methods. However, there are a number of commercially available microencapsulation measures available, including cement stabilisation that effectively reduce hazards associated with soil heavy metal contaminant migration in leachable material. Whilst there are costs associated with site specific approvals, space and time requirements, etc, should treatment be successful, the stabilised material could potentially be reused on site saving the cost of off-site (landfill) disposal. As such, where soils are identified as impacted with leachable metals such that they require treatment to address contaminant migration risks, application of on-site treatment via micro-encapsulation and subsequent reuse of stabilised material may be a viable option, provided the material can be temporarily excavated and there is sufficient capacity for retention of an increased volume of material on-site.
- Organic contaminants can be remediated through thermal processes such as indirect or direct thermal desorption (I/DTD). However, as with heavy metal contamination, the material must be excavated for ex-situ treatment. The practicability of this method will be dependent on the extent and nature of organic contaminant impacts identified at the site, as well as the costs associated with plant establishment, site sensitivity, on-site approvals, operational (energy) costs, and space and time constraints. Additionally, if the material is co-contaminated with contaminants such as heavy metals and asbestos, they will remain following thermal treatment. For soils impacted by organic compounds, several commercially available microencapsulation technologies may be used to reduce the mobility of organic contaminants. However, where unacceptable contaminant migration risks and/or vapour risks are not identified, microencapsulation of the impacted soil is not considered necessary.
- For asbestos impacts in soil, where the material consists of intact infrastructure or bonded asbestos-containing material (ACM) in shallow soils (less than 10 cm), typically resulting from incomplete or poor demolition of asbestos structures (i.e. not necessarily from asbestos historically present within imported fill materials), on-site treatment options may include the physical separation of ACM from surrounding soil using screening and/or manual picking methods. The presence of broken ACM or co-occurrence with demolition rubble within fill material may reduce the viability of manual picking or removal programs, which require sufficient space and time for effective implementation. These programs also require the off-site disposal of ACM fragments; however, they allow for the on-site retention of treated soil without the need for further management.
- If chemical or petroleum storage infrastructure is identified, it may need to be removed. Where impacted soil is identified in association with such infrastructure, or as a separate occurrence, there is potential for on-site remediation using bio-remediation methodologies, provided that adequate time and space are available to support the process. Bio-remediation involves the breakdown of petroleum hydrocarbons and, in certain cases, chlorinated compounds through the metabolic activity of soil micro-organisms, either naturally present or introduced to the impacted soil. However, the application of bio-remediation methodologies must ensure that the process is not simply the result of volatilisation of

contaminants into the atmosphere, which the NSW EPA classifies as air pollution. To prevent this, bio-remediation should involve the use of covered bio-pile systems, allowing vapour emissions to be captured and treated through carbon filters before environmental discharge. Additionally, the presence of free product may limit the suitability of this remediation method. Given these factors, the effectiveness of bio-remediation may be constrained where significant volumes of impacted soil are present in areas with limited space for treatment. The viability of this option should be further evaluated in the site RAP, should areas of petroleum hydrocarbon or chlorinated hydrocarbon impact requiring remediation be observed.

5.5.2 Off-site Treatment

Off-site treatment of contaminants or contaminated material requires that the impacted material be excavated and transported to an alternative, lawful location for treatment. The contaminants must then be either destroyed or otherwise rendered such that the associated hazards are appropriately reduced to an acceptable level, eliminating the need for ongoing hazard management. Following the completion of these treatment activities, the material may either be returned to the site or lawfully disposed of at the treatment location. The available treatment options for contaminants are consistent with those identified for on-site soil treatment, as discussed above.

The advantage of off-site treatment options, when compared to on-site treatment for suitable heavy metal-, PAH, and/or hydrocarbon impacted soils, include the absence of potential regulatory requirements for on-site treatment, no costs of establishing on-site treatment plants, and no requirements manage emissions associated with potential treatment methodologies. However, the material would still require excavation and potentially need to be returned to the site. As such, factors such as the cost and impact of soil movement, the time required to complete treatment for the necessary volumes (particularly in the case of hydrocarbon-impacted material), and social constraints (e.g., increased truck movements) must be considered in a feasibility assessment.

Regarding the off-site treatment of asbestos-contaminated material instead of on-site treatment, additional regulations concerning the transport, treatment, and management of asbestos-containing materials would need to be considered. On this basis, off-site treatment of asbestos-impacted soil is unlikely to be feasible.

5.5.3 Consolidation and Isolation by Containment

Consolidation and isolation by containment involves retaining the contaminated material on-site beneath a physical barrier, ensuring that no complete exposure pathways exist between the contaminated material and sensitive human or ecological receptors. The material would be covered with a demarcation indicator (such as a visual marker layer), followed by a permanent physical barrier—such as pavements and/or a layer of clean, non-impacted soil. An Environmental Management Plan (EMP) would then be prepared to provide a framework for the ongoing management of potential risks associated with the retained material.

- For heavy metals and organic compounds with low volatility, this option is considered appropriate, subject to confirmation the contaminated material does not result in adverse impacts to groundwater quality and there are no vapour generation risks associated with such contaminants. Where material is identified as leachable and as such may impact groundwater quality, physical containment is unlikely to be an economically viable option. In such instances, impacted material should be the subject of one or more of the above options.
- For asbestos-impacted material, this option is considered to pose the least risk to remediation and construction personnel during site works. The implementation of a physical barrier to prevent the liberation and airborne dispersion of asbestos fibres is generally appropriate. However, potential risks associated with site development activities, particularly where building foundations may need to be installed within or through the encapsulated material, must be considered. In such cases, asbestos management controls may still be required during these construction activities

- For volatile hydrocarbon impacted material, which may potentially generate unacceptable soil vapour concentrations or migrate via groundwater, containment measures would need to address these potentially unacceptable risks to establish the appropriateness of this option.

5.5.4 Off Site Removal

Excavation and off-site disposal of contaminated material to a lawfully facility effectively removes the contaminants from the site such that no on-going management is required. Impacted materials are transported to a facility lawfully able to accept the type of waste, where associated fees including government waste levies apply. There are facilities within the Sydney region able to accept material classified as General Solid Waste (GSW), Special (asbestos) Waste and Restricted Solid Waste (RSW).

Social impacts, including high volume truck movements and potential environmental emissions associated with on-site activities and vehicle movements would require consideration on evaluation of this strategy.

Subsequent to off-site disposal of the contaminated material, in some instances replacement material may be required to be sourced to establish proposed development levels. Opportunities may exist for the beneficial reuse of excess suitable material from other areas of the site during development. Alternatively, suitable material could be sourced from off-site locations. Consideration of the viability of this option would be required for large quantities of material and where material is required to be sourced from off-site to reinstate site levels.

Further, where material is identified to be impacted such that contaminant concentrations exceed the thresholds for characterisation as GSW, GSW mixed with Special waste or RSW, material may require to be treated prior to off-site disposal to a lawful facility as discussed above. In such instances, on-site or off-site treatment of the contaminated soil as per the methodologies outlined above would require application prior to either beneficial reuse, or disposal as a lower category waste to landfill.

5.5.5 Implementation of an Appropriate Management Strategy

Where assessment of site conditions and potential remediation opportunities has identified the absence of a strategy that would deliver net environmental gains and/or would result in greater environmental impact, then none of the above opportunities should be preferred. Instead, alternative approaches, including for example, monitored natural attenuation (MNA), or management of contamination at depth by maintenance of existing site uses/features may be considered. Evaluation of such opportunities would require appropriate lines of evidence to be documented, as well as the potential adoption of an EMP to guide the ongoing management of the site.

As technologies, exposure scenarios, and contamination conditions may evolve over time, these changes could influence the initial outcomes of the remediation and management options assessment. Therefore, such a strategy should be viewed as an interim rather than permanent solution, and its potential limitations must be carefully considered by stakeholders prior to adoption.

Should potential hazardous ground gas impacts be identified at the site, the management strategy will be required to address the impacts to future buildings and site users. This strategy would involve the incorporation of additional building elements designed to prevent the accumulation of gases within buildings. These elements may include venting systems and/or impermeable liners installed beneath the building structures.

5.6 Strategy for Selection of Proposed Options

Based upon the assessment of potential remedial options as presented above, it is likely that a range of potential strategies may be adopted during future development of the site, dependent upon specific factors including the contaminant(s) of concern in various areas and the final site development details (ie. basement excavations, site surface treatments, exposure scenarios).

In general, subject to the specific considerations above, it is anticipated that the preferred option for remediation of non-volatile impacted fill material is, where appropriate, the on-site containment of the contaminated material. Where retention of impacted material on-site is not feasible due to development requirements (material excess to development requirements), it is anticipated that such materials will be the subject of off-site disposal to a lawful facility.

In the preparation of the site RAP, proposals to adopt on-site containment will be required to demonstrate:

- Exclusion of potential direct human contact to materials by consideration of potential exposure times and pathways that will pose an unacceptable level of risk / hazard;
- Exclusion of new site flora contact to materials that may pose a potential phyto-toxicity risk; and
- Confirmation that the material present is consistent with the extent of fill materials historically observed and reported on the site, and that these materials are not expected to generate vapours or gases (posing a potential inhalation risk), as assessed through site soil, groundwater, and/or direct vapour data. Additionally, confirmation that the materials do not contain significant levels of potentially leachable constituents that could impact groundwater quality, as assessed by comparing soil leachate and groundwater data against site-specific contaminant threshold values, taking into consideration the Sydney Harbour water quality objectives.

The preferred option for remediating any potential hydrocarbon-impacted materials is source removal, followed by on-site bioremediation using a method that reduces hydrocarbon concentrations in the affected soil and/or groundwater, while preventing uncontrolled atmospheric release of hydrocarbon constituents. Where bioremediation cannot be implemented due to spatial, temporal, or environmental constraints, the contingency option is off-site disposal of the impacted materials. It is noted that should heavily impacted materials be encountered, limited bioremediation may be conducted to reduce gross contamination levels, thereby facilitating more manageable off-site disposal to a licensed facility.

Where source material presenting a vapour or leaching risk is identified, removal will be undertaken as necessary. In such cases, the most suitable remediation option will be selected on a case-by-case basis from the following preferred approaches:

- On-site treatment, including chemical encapsulation, bioremediation, or other appropriate methods tailored to the specific contaminant characteristics; or

5.7 Anticipated Scope of Remediation Works

5.7.1 Areas Subject to Further Investigation

While there is an established history of potentially contaminating industries operating at the site, there is very limited analytical data available, hence contaminant conditions have not yet been confirmed at the site. As identified in previous sections, additional site characterisation activities would be required to identify the extent of remediation/ management required for a future land use proposal.

It is anticipated that a DSI will need to be conducted to provide information of the contaminant conditions at the site and inform potential remediation requirements. The proposed scope of the DSI investigation should be documented as a SAQP prior to the commencement of works such that the proposed approach can be endorsed by the appointed site auditor (if required) prior to the investigation. If following the DSI, there are no identified data gaps or evidence of gross or widespread contamination, then there may not be a requirement to have a RAP for the site.

Investigations that have not yet been completed at the site which will require further assessment include the following:

- Site wide soil characterisation assessment, especially in relation to the assessment of the potential for asbestos in soil contamination and other COPC as identified in S**ection 4.1**;

- The assessment of the potential leaching of contaminants to groundwater/sensitive nearby receptors;
- Assessment of site soil vapour conditions, and collection of a defensible of soil vapour data set using endorsed methodologies;
- Assessment of groundwater contaminant conditions on the site, especially focused on the evaluation of potential contaminant sources and down-gradient site conditions;
- Evaluation of site and laboratory soil, soil vapour, and groundwater data against appropriate initial Tier 1 screening levels presented in NEPC (2013); and
- If required, implementation of a site-specific health risk assessment with appropriate consideration to exposure pathways specific to the proposed development details.

5.7.2 Contaminant Source Removal

Where assessment of soil, groundwater and/or soil vapour contaminant conditions identifies the occurrence of unacceptable contaminant sources on the site, these sources will be required to be removed and/or treated such that they no longer represent an unacceptable risk. It is anticipated that sources may include, but are not necessarily limited to:

- Existing petroleum hydrocarbon infrastructure and associated impacted soils/groundwater;
- Fill/waste material with leachable contaminant concentrations representative of an unacceptable migration risk; and
- Fill/waste material with concentrations of volatile and/or semi-volatile contaminants presenting an unacceptable vapour generation risk in relation to the proposed land use scenario.

Validation of the works will be required during, and potentially following completion of the source removal works to demonstrate that the unacceptable risks have been appropriately addressed prior to issue either of the final validation report or alternatively, implementation of cap and containment strategies to address residual impacts as may be identified within specific areas.

5.7.3 Management of Asbestos Impacts

Where asbestos impacts other than those in existing buildings and infrastructure (pits, pipework, etc) are identified within soil during either site investigation works, or during/following demolition of existing improvements, the site will be required to be considered as having asbestos contaminated soils.

Such soils are defined in *How to Manage and Control Asbestos in the Workplace Code of Practice*, December 2022, SafeWork NSW (SafeWork NSW 2022) as:

- Soil that contains visible asbestos as determined by a competent person; or
- Soil that contains asbestos fibres at quantities exceeding trace levels (considered to be the analytical detection limit in lieu of alternate guidance) as reported by analysis undertaken in accordance with AS4964:2004 *Method for the qualitative identification of asbestos in bulk samples*.

Environmental, work health and safety management requirements for the handling of these materials will be based on the requirements provided for asbestos-related works in WorkSafe NSW 2022. This will include preparation of an asbestos register and associated asbestos removal control/management plan.

Assessment of site soils/fill material may be completed via inspection and sampling by a competent person and subsequent laboratory analysis of appropriate characterisation samples. Consideration may also be given to a quantitative assessment of the asbestos in soil impact to evaluate the potential extent of remediation required using asbestos quantitation methods as outlined in NEPC (2013).

Where the assessment results indicate that such material does not fall within the 'asbestos contaminated soil' definition, the requirements for management of 'asbestos contaminated soils' will not be required to be implemented.

For the purposes of the proposed remediation works, a competent person shall be considered to be a person who holds a tertiary degree in an environmental or occupational hygiene discipline, has experience in contaminated site assessment and has completed a Safe Work NSW approved Asbestos Removal Supervisor course and/or a NSW WorkSafe accredited Licensed Asbestos Assessor (LAA).

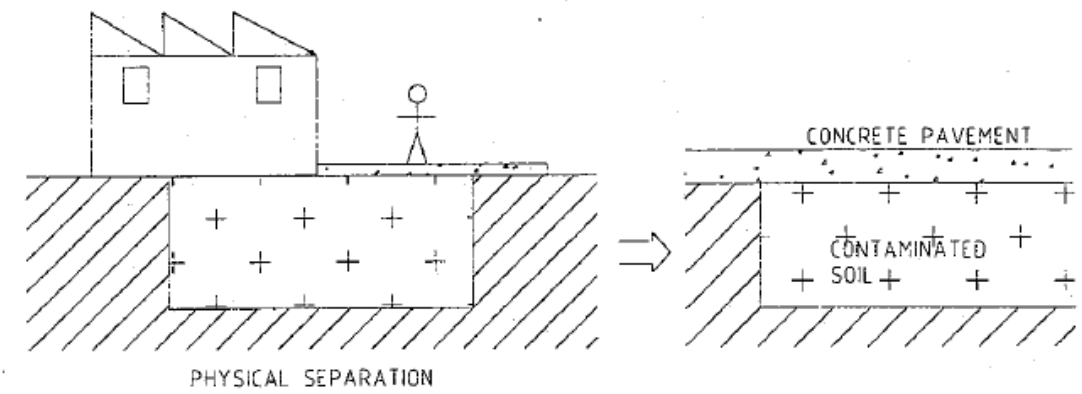
5.7.4 On-Site Containment Requirements

Requirements for installation of the physical barrier over impacted fill material are based upon the *Guidelines for the Assessment of On-Site Containment of Contaminated Soil*, September 1999, ANZECC (ANZECC 1999).

The minimum typical requirements for physical separation to ensure that there are no complete exposure pathways include:

- Permanent pavement measures such as a concrete ground slab, asphalt surfaced pavement, mortared stone/concrete pavers or similar. The pavement base course shall be underlain by an easily discernible visual marker layer; or
- A thickness of soil that is unlikely to be penetrated by future users during everyday activities at the site (or relevant parts thereof). A minimum soil cover thickness of 0.5m is nominated in general site areas where exposed soil is proposed, which is to be underlain by a visual marker layer. However, it is noted that to achieve ecological objectives, increased depths of suitable non-contaminated soil may be required.

An example of such measure is shown schematically below:



Source: ANZECC (1999)

Further consideration would be given in the site RAP to relevant scenarios, including requirements to address the installation of underground services, areas of deep planting, etc.

The purpose of the marker layer is to serve as a visual signal to those disturbing the capping system of the presence of potentially contaminated fill material at depth. The marker layer shall consist of a bright-coloured knitted HDPE constructed equivalent to at least Bidum A19 in strength and durability. The marker layer should be of a distinctive bright colour such that future workers and/or site users will be alerted to conditions as documented in a site environmental management plan (EMP) prior to breaching the marker layer.

Where soil/rock based material is proposed to be used as part of the capping media and placed above the marker layer, the material will be required to be validated as meeting the adopted health / ecological criteria for the site such that there are no unacceptable risks to future site users/ occupants and/or workers during day to day site activities.

5.7.5 Site Boundaries

It is anticipated that, in some instances, potential remediation activities at the site may require consideration of boundary conditions to protect adjoining structures and/or road infrastructure. In such cases, it may not be feasible to complete remedial excavation works right up to the site boundary. Excavations may either be battered back from the boundary or, alternatively, shoring may be installed within the property boundary. As a result, some impacted material may remain on site at the time of validation.

Where shoring is installed inside the boundary, it is anticipated that (provided the shoring is permanent and will form part of a future structure) the capping beam will effectively cap the remaining impacted material, which satisfies the requirement of the RAP for material containment.

However, where battering is used at the excavation edge, the resulting slope may cause environmentally impacted material to remain at depths shallower than the minimum site capping requirement (i.e. a minimum of 0.5 m of clean material in non-paved areas). Where such conditions occur, the extent of the impacted material must be surveyed, and the non-compliance addressed in the final Validation Report and

Environmental Management Plan (EMP). This ensures that future site workers or occupants undertaking activities in this area are appropriately informed.

Alternatively, license agreements may be arranged to allow the proponent to construct boundary stability works within an adjoining lot, thereby enabling full remediation of the subject site. In such cases, appropriate contamination management protocols must be followed to ensure that contamination conditions on the adjoining site are managed in accordance with the RAP.

5.8 Material Movement Management

5.8.1 Material Movement Principles

As part of the potential site remediation/redevelopment works it is anticipated that material excavated during works will fall into one of a number of categories, comprising:

- Material required to be removed from the site to achieve site remediation objectives and will require disposal to a lawful waste facility; and
- Material excavated for services installation, to establish site development levels, regrading for installation of landscaping, etc. with contaminant concentrations suitable to be reused and retained on the site with or without ongoing management.

Appropriate sampling protocols including the required density of sampling for differing material types, sampling methodology and documentation requirements would be outlined in the RAP to ensure compliance with NSW EPA Regulations and Guidance.

Based on assessment outcomes, material falling within the first category will automatically require classification and off-site disposal to a lawful facility. Tracking of this material will be required with resulting documentation to be included in the relevant validation report.

For the second category, it is proposed where possible reuse of material across the site be facilitated where possible such that disposal to waste facilities may be minimised. This will assist with management of social impacts including truck movements, waste generation rates, the potential need to source material for importation, in addition to reducing the overall cost of remedial/development works.

Application of this approach will result in management of such material under the Contaminated Land Management Act (CLM) framework, rather than the Waste (POEO Act) framework. The RAP would have to evaluate the potential suitability of material within the site to be the subject of reuse elsewhere on site, where excavation is required as part of development works.

In addition, where off-site disposal of surplus materials is required, preference should be given to materials with a lower waste classification or those with potential for off-site beneficial re-use. These should be selected for removal prior to the off-site disposal of impacted material at a lawful facility, in order to minimize the quantity of waste generated by the works. This may include the excavation of non-contaminated or less impacted material for off-site disposal, with the resulting area being reinstated using environmentally impacted material and which may be capped/contained if required as described in **Section 5.7**. These activities would be subject to development approval for excavation and stockpiling activities. Soils moved between stages or development lots must be transferred in accordance with a Materials Tracking System (MTS), as described below.

Within the RAP, the management of excavated material would need to be addressed through the application of an appropriate MTS. The scope and level of detail included in the MTS will depend on the volume of excavated material anticipated within the area-specific RAP footprint. However, it is expected that each MTS will include the following elements:

Definition of Roles and Responsibilities;

- Material quality information;

- Material movement tracking;
- Material emplacement;
- Documentation required;
- Dealing with non-conformance; and
- Dealing with expected and unexpected finds.

It is noted that the MTS system should also cover material imported to site for use in development works until such time as a final validation report and/or SAS (if required) stating that the site is considered suitable for the proposed land use.

5.8.2 Off-Site Disposal of Material

Where material is identified as either unsuitable under the RAP, or engineering specification, or the material is surplus to development objectives for the site, the material will be required to be assessed for off-site removal.

Should sufficient information be available when constructing a potential RAP for the site, a waste classification in accordance with EPA (2014) may be documented in the RAP. Alternatively, the requirements for assessment and documentation of a waste classification assessment will be documented in the RAP. If following additional assessment at the site a RAP is not required for development, a waste classification assessment can still be prepared for the site separately.

It is further noted that a number of exemptions may potentially apply to material considered to be surplus to the requirements of the site (but not to material considered unsuitable under a RAP). A waste (resource recovery) exemption may be applicable for material covered by either a General or Specific Resource Recovery Exemption (RRE) as issued by the EPA under the *POEO (Waste) Regulation 2014* (or as updated), including Excavated Natural Material (ENM[14]), Recovered Aggregate (EPA 2010[15]) or similar. Dependent upon the characteristics and quantities of identified material(s) there may also be opportunities available with regard to the application of a Specific RRE in some instances. Virgin excavated natural material (VENM) as defined in the POEO Act is also exempt from the waste definition for the purposes of resource recovery.

Details of completed additional assessment activities including waste classification reports are included in the final validation report, which is prepared in accordance with the requirements of a RAP. Records associated with material tracking, including trucking receipts, landfill disposal records, etc will also be reviewed to ensure material removed from the site can be accounted for and has been disposed of lawfully.

5.8.3 Beneficial Reuse of Material within the Site

Material within the site boundary will initially be evaluated regarding the suitability of the material to remain within the site. Should the material be deemed excess to its requirements, the material may be disposed of to a lawful facility off-site. Alternatively, the material may be the subject of further review to facilitate decisions within respect to the suitability of the material for beneficial reuse and/or containment elsewhere within the site.

The remediation/validation consultant for the site would be responsible for reviewing the available material characterisation data relevant to the excess material. Where necessary, the consultant would develop and implement an additional program of testing to close out any data gaps and confirm the suitability (or otherwise) of the material for beneficial reuse within the site.

[14] *The Excavated Natural Material Exemption 2014*. NSW EPA 24 November 2014 (EPA 2014a)
[15] *The Recovered Aggregate Exemption 2014*. NSW EPA 24 November 2014 (EPA 2014b)

It is noted that such characterisation assessments are included in the final validation report prepared for site. As such, the assessment of the material will require to be sufficiently robust to confirm the material as suitable under the site RAP.

The remediation consultant would be responsible for ensuring Data Quality Objectives and Data Quality Indicator evaluations are completed for the site material characterisation assessment in accordance with the details in site RAP with respect to characterisation and validation of stockpile activities.

In addition to the complete material characterisation report prepared by the remediation consultant, a Material Characterisation Form (MCF) will be developed to provide the site's Principal Contractor and/or remediation consultant with a brief overview of management and/or placement requirements. This document will be required to present the following:

- A unique MCF document name/number;
- Details of the location of the source material, including the source site identification (Lot/DP number and/or Development Lot identifier), and either site-coordinates, GPS co-ordinates, or similar identifying system;
- Summary of the completed characterisation works or identification reference for the applicable characterisation report that complies with the placement site specific RAP requirements;
- Material physical description and volume estimate; and
- Outcome of characterisation assessment stating the potential opportunities for beneficial reuse of material.

Once material has been identified as suitable for reuse within the sites (with or without ongoing management), a unique identifier will be provided for the material. This identifier will assist with the identification and ongoing management of the material from the source project site excavation location to the final project site placement location.

The site's Principal Contractor with the assistance of the site Remediation Consultant will be responsible for reviewing the assessment report and covering MCF and providing written confirmation that the material has been appropriately assessed under the site-specific RAP and whether the material has therefore been accepted for placement.

If the source material (either in-situ or as a stockpile) is subsequently divided for placement at more than one location, a new unique identifier will be generated. The MCF will identify the current location and quantity of material in addition to the previous material identifier such that the initial assessment data may be linked to this new identifier.

It is envisaged that during movement of material within the site, appropriate management of material will be required at the source until the point at which the material is relocated. At this point it is envisaged that the placement site Principal Contractor and remediation consultant will provide the following:

- Placement survey report showing final location and levels of placed material; and
- Written confirmation from the site Remediation Consultant that the material has been placed in accordance with the requirements of the RAP.

Where material movement is to occur within the site, materials should be transported from source to interim stockpile or placement location in a suitable vehicle as outlined in an applicable R/CEMP.

5.8.4 Importation of Material

Project remediation and/or redevelopment works may require the importation of material from another site, including:

- Temporary uses – such as trafficability/access measures, piling platforms, etc.; or
- Permanent uses – such as utility/infrastructure trench backfill, reinstatement of excavations, landscaped areas, drainage media, growing media, or pavement subgrade.

Prior to the importation of any material, appropriate assessment must be completed to demonstrate that the material is both fit for purpose and suitable from a contamination perspective. In accordance with EPA requirements, the extent of assessment will depend on the type of material proposed for import.

While it is anticipated that a site-specific RAP will include a tailored assessment strategy, covering sampling methodology, density, and analysis details, the following general principles must be considered:

- Virgin Excavated Natural Material (VENM): Where the material proposed for import is VENM, an assessment must demonstrate compliance with the definition of VENM under the *Protection of the Environment Operations Act 1997* (POEO Act), adopting the minimum characterisation requirements as outlined in EPA (1995), unless the material is sourced from a commercial quarry operating under an Environment Protection Licence (EPL).
- Materials under the Resource Recovery Framework (Order/Exemption): Where material has been classified under a Resource Recovery Order and Exemption, the supplier must demonstrate that it is suitable for use by providing a Statement of Compliance in accordance with the applicable Order. With reference to the current list of approved Orders and Exemptions available on the NSW EPA website, eligible materials may include, but are not limited to, excavated natural material (ENM), recycled aggregate, basalt fines, compost, mixed organic waste, pasteurised garden organics, and recovered fines.

In addition to supplier-provided testing, further compliance assessment is required for any proposed imported material due to the typically low frequency of mandatory testing required under these Exemptions. This additional assessment ensures the material does not pose an unacceptable risk to human health or the environment at the site. It is anticipated that such assessment activities will include visual inspections, representative sampling, and laboratory analysis to confirm that the material meets the site-specific RAP requirements for on-site use. As with VENM assessments, it is considered appropriate for these requirements to be defined on a site-specific basis, given the potential variability in project conditions.

Material tracking records, along with the import assessment report, must be included in the final validation report for the site.

5.9 Proposed Validation Strategy

Data would be required to be collected during potential remediation works to assess the effectiveness of any implemented remedial actions and document the final condition of the site at the completion of works such that conclusions may be drawn on the end suitability of the site for the proposed development use.

The following sections present an overview of general principles that would be required to be considered in greater detail within the RAP, if required for the site.

5.9.1 Validation Sampling Analysis and Quality Plan

A validation sampling analytical quality plan (SAQP) would be prepared within the RAP prior to the commencement of any on-site remedial works. Validation is required to address the following aspects of any potential remedial works:

- Removal of contamination sources including chemical storage infrastructure;
- Completion of remedial excavation works;
- Installation of capping materials;
- Verification that uncapped / accessible soils (including imported filling and growing media) are suitable for the proposed use;
- Characterisation of identified data gaps including site areas not subject to previous sampling and analysis as a result of access limitations at the time of preparation of the applicable area specific RAP;
- Characterisation and off-site disposal and/or beneficial use of materials excess to development requirements; and
- Assessment and close out of Unexpected Finds assessments.

5.9.2 Validation Assessment Criteria

Validation assessment criteria are required to be developed for each potentially contaminated medium (soil, groundwater, vapour, etc.) as part of the RAP, in accordance with the framework established in NEPC (2013). In some instances, it may be appropriate to adopt the NEPC (2013) Tier 1 investigation levels as default validation criteria. However, site-specific validation criteria developed through a process of human health and/or ecological risk assessment may be more appropriate for certain media and/or specific site areas, depending on the identified contaminants of concern and the development details.

Specific consideration would be required for potential exposure scenarios associated with the proposed development at the site. It is also acknowledged that a range of potential validation criteria may be appropriate for one or more media within the RAP, depending on the proposed land use and the final depth of material considered.

5.9.3 Contaminant Source and Impacted Material Removal Validation

Validation of excavations resulting from the removal of source material would be undertaken through a combination of physical inspection (visual and olfactory assessments, as appropriate) and sampling analysis of representative samples from the lateral and vertical extents. Validation samples would be analysed for identified COPC associated with the source material removal activities, and the results would be compared to the applicable validation assessment criteria. The density of sampling will be developed in accordance with NSW EPA-endorsed guidance and documented in the RAP.

Appropriate validation assessment activities may also include additional validation of groundwater and/or soil vapor conditions following the removal of source material to verify the success of the remedial works in removing the contaminant source. Depending on the contaminant characteristics and the scale of the impact, an ongoing monitoring program may be required to demonstrate improvements in groundwater, soil, and/or

sediment quality and/or a decline in soil vapor concentrations over time (e.g. via monitored natural attenuation).

5.9.4 Accessible Soils Validation

Where material sourced the site area is proposed to be reused in areas of accessible soils either without ongoing management, or above the marker layer in areas subject to management, this material would be required to be validated as suitable with respect to both human health and ecological assessment considerations. In addition, material imported for use in site reinstatement, civil/infrastructure works (aggregates, subgrade material, drainage layers, growing media, etc) would also be required to be demonstrated as fit for purpose from a contamination point of view, including evaluation with respect to human exposure and where appropriate, ecological assessment.

In areas of proposed landscaping, sampling and analysis of existing on-site fill/natural soil materials would be required to demonstrate the suitability of the material for both:

- Human contact under the relevant land use scenario; and
- Growing media, in accordance with thresholds for ecological assessment in urban public open space scenarios.

Alternatively, the existing fill materials may be subject to capping as relevant for the proposed land use and/or landscaping objectives as detailed in the RAP.

In assessing the potential for future human exposure it shall be assumed that direct exposure by site users may occur to soils to a depth of 2 m below the finished ground surface. This depth is considered suitable also for assessment of fill material in deep planting areas. Consideration of potential disturbances that may extend to depths greater than 2 m, such as infrastructure installation (underground services, etc) and ongoing maintenance activities, would also be required. In these localised areas, consideration may be required for assessment (and where required remediation/management) to greater depths. As such, it is anticipated that should remediation be required in such areas, that the site RAP would define specific depth of validation and/or containment requirements relevant to proposed development details for the site.

In general, where site soil and soil vapour conditions are able to be successfully validated with respect to the final validation criteria to a depth of 2 metres below the finish ground surface in unpaved areas of the site, no physical 'marker layer' is required to be installed, and these areas would not be subject to on-going management under a long-term Environmental Management Plan (LTEMP). However, consideration may also be required for the potential for future soil disturbance, including installation of deeper infrastructure (underground services, etc), and/or the presence of other subsurface features.

5.9.5 Installation of Containment Measures Validation

Where impacted material is considered suitable to be retained on-site subject to implementation of a physical separation layer and ongoing management, a program of inspections will be required to confirm the requirements in relation to the physical barrier are met during construction. Inspection points would include the installation of the marker layer, pavement subgrade and pavements, or alternatively application of suitable soil capping media. Photographic records would need to be retained from the inspection activities for inclusion in the validation documentation.

In addition, the remediation contractor would be required to provide survey drawings documenting the upper extent of the impacted material/marker layer and the lateral extent of the placed layer material in addition to a final 'as built' survey of the completed works ground level within the remediation area, to demonstrate that the requirements of the physical barrier (cap and containment) have been achieved. These documents would also be required to be included in the final validation report.

Where the capping material includes final ground surface treatments such as pavers, tiles, boardwalks, landscaped areas surrounding buildings, there may be consideration of a staged application of capping arrangements, where an interim cap is placed to achieve remediation sign-off requirements to allow for construction of adjoining buildings/infrastructure, following which the final capping measures will be installed. Such measures would be required to be documented in the RAP.

5.9.6 Validation and Ongoing Management Requirement Reporting

Should remediation be required at the site, a validation report shall be prepared at the completion of the remediation works. It is anticipated that the validation report would include:

- An update of the site description and CSM as presented in the RAP relevant to the validation assessment footprint;
- All sampling field notes and laboratory data including calibration certificates for field monitoring equipment, environmental monitoring etc.;
- An assessment of quality assurance and quality control (QA/QC) of analytical data generated by the works to identify if the data is reliable for use in characterising the site;
- An assessment of whether sufficient data has been obtained to meet required limits on decision error;
- An assessment to the decision rules and identify any environmental data which causes decision rules to be failed;
- A summary of waste classification and/or beneficial reuse assessment and material tracking documentation including, but not limited to details of all material removed from site either as waste or under a resource recovery exemption, material volumes, receipts from receiving facilities, RRE order condition compliance statements;
- The requirements for the EMP (where appropriate) including presentation of a survey clearly identifying the extent of the retained impacted material and associated capping; and
- A comment on the suitability of the site for the proposed use and requirements for any ongoing monitoring/management (where applicable).

Where the remedial works for the site result in requirements for ongoing management, an Environmental Management Plan (EMP) would be prepared to detail site conditions and any ongoing management/monitoring requirements for the site. The precise nature and extent of the management requirements would not be known until remediation/ management works are conducted and the validation data obtained.

If an EMP is required, it will include documentation the following elements:

- A statement of the objectives of the EMP;
- Identification of residual environmental contamination issues at the site that require ongoing management/monitoring to meet the EMP objectives, including the type of contamination and location within the site (including a survey plan prepared by a registered surveyor);
- Documentation of environmental management measures which have been implemented to address the identified environmental issues at the site;
- Description of management controls to limit the exposure of site users to known areas of contamination to acceptable levels;
- Description of responsibilities for implementing various elements of the provisions contained in the EMP;
- Environmental monitoring and reporting requirements (if required) for the future management of environmental impact underlying the site including:
    - Appropriate monitoring locations and depth within and down-gradient of any residual contamination;
    - Relevant assessment criteria to be used in evaluating monitoring results;
    - Frequency of monitoring and reporting;
    - Process for reviewing monitoring data and how decisions will be made regarding the ongoing management strategy;
    - The length of time for which monitoring is expected to continue;
    - The regulatory authorities involved (if any) and the management inputs required from each;
    - The integration of environmental management and monitoring measures for soil and groundwater;
    - Health and safety requirements for particular activities;
    - A program of review and audits;
    - Feasibility of the provisions in the EMP and able to be legally enforceable; and
    - The relevant consent authority is satisfied that the inclusion of a development consent condition relating to the implementation of the EMP is acceptable.
- Timeframes for implementing the various control/monitoring elements outlined in the EMP; and
- Corrective action procedures to be implemented where EMP assessment criteria are breached.

5.10 Contingency Plans

The RAP, if required, will need to address contingency plans specific to conditions and proposed works that could feasibly occur during remediation works within the area specific footprint. Issues that may require to be addressed in the RAPs could include:

- Encountering additional and/or unknown contaminated media and/or contamination sources;
- Increased volume of contaminated material at one or more locations;
- Failure of source removal works and/or on-site treatment of materials; and
- Identification of material requiring removal that cannot be classified for off-site disposal under EPA (2014) or subsequent endorsed guidance.

Broad discussion of contingency procedures that may be employed to address the above issues are outlined in the following sections.

5.10.1 Unexpected Material Finds

Even following any additional investigations that may be conducted at the site, there remains the possibility that additional unexpected hazards may be identified during demolition works and/or remediation works. The nature of hazards which may be present and which may be discovered at the site are largely anticipated to be detectable through visual or olfactory means, for example:

- Large scale occurrences of buried friable asbestos waste (e.g. lagging);
- Construction / Demolition Waste potentially including ACM (visible);
- Hydrocarbon/solvent or similar impacted materials (visible / odorous);
- Drums or underground storage tanks (USTs) (visible);
- Tar impacted material and/or buried tar pits (visible/odorous);
- Buried putrescible waste (visible/odorous);
- Excessive Ash, slag and / or oily contaminated soils / fill materials not considered to be consistent with the appearance of the majority of fill materials (visible).

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances (or any other unexpected potentially hazardous substance) be identified during demolition/remediation/earthworks, the unexpected finds protocol (UFP) as provided in the RAP shall be required to be followed.

The sampling strategy for each ‘unexpected find’ would be designed by a suitably qualified environmental consultant. The strategy would be aimed at determining the nature of the substance, and if it is at concentrations which pose an unacceptable risk to human health or the environment. Sampling and analysis would also be consistent with the overall requirements for validation sampling and analysis as outlined in the RAP.

5.10.2 Emission Complaints

It is not expected, based on the current understanding of the site contamination conditions, that significant widespread odorous/malodorous soils will be encountered. However, other emissions issues that may require consideration during works may include:

- Noise and vibration arising from demolition, excavation, piling/shoring and other works;
- Dust emissions arising from excavation, material handling and placement;
- Visibly impacted water quality in surface water discharged from the site; and
- Small scale odour emissions arising from handling of malodorous soil excavated from backfill areas and/or associated with fuel infrastructure.

Monitoring of all environmental emissions shall be undertaken during the works as detailed in a Site Management Plan, included in the RAP, and appropriate actions would be taken to further control emissions following receipt of a complaint. The management plan shall contain provision for contingency actions where excessive emissions occur.

6. Conclusions and Recommendations

6.1 Conclusions

Subject to the limitations stated in **Section 7**, it is considered that the proposed actions outlined in this plan conform to the requirements of the Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3rd Edition) (EPA 2017) because they are technically feasible, environmentally justifiable, and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

Should further assessment of contamination conditions at the site identify the need for a RAP, the successful implementation of the measures described in this plan, along with the recommendations below, will ensure that the site can be made suitable for the proposed range of intended uses, and that the risks posed by contamination can be managed in a way that is adequately protective of human health and the environment.

6.2 Recommendations

It is recommended that if the need for a RAP is identified for the site following future intrusive assessment of contamination conditions at the site (for example as part of a DSI), that the processes outlined in this plan be implemented as required. It is also recommended that a site management plan be included in the RAP, as well development of a WHSP, to be implemented and ensure the risks and impacts during any potential remediation works are controlled in an appropriate manner.

The site management plan and WHSP would need to address the potential for a range of chemical contaminant conditions in soil, groundwater and vapour in affected areas of the site, in addition to the potential occurrence and storage / handling of asbestos contaminated soils on the site.

If remediation works are undertaken at the site, a validation report and on-going EMP (if required) for residual impacted materials as may be retained on site will be required to be submitted to the consent authority upon completion of the remediation works, documenting that the site is considered suitable for the proposed use, subject to implementation of the relevant ongoing EMP (if required).

7. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

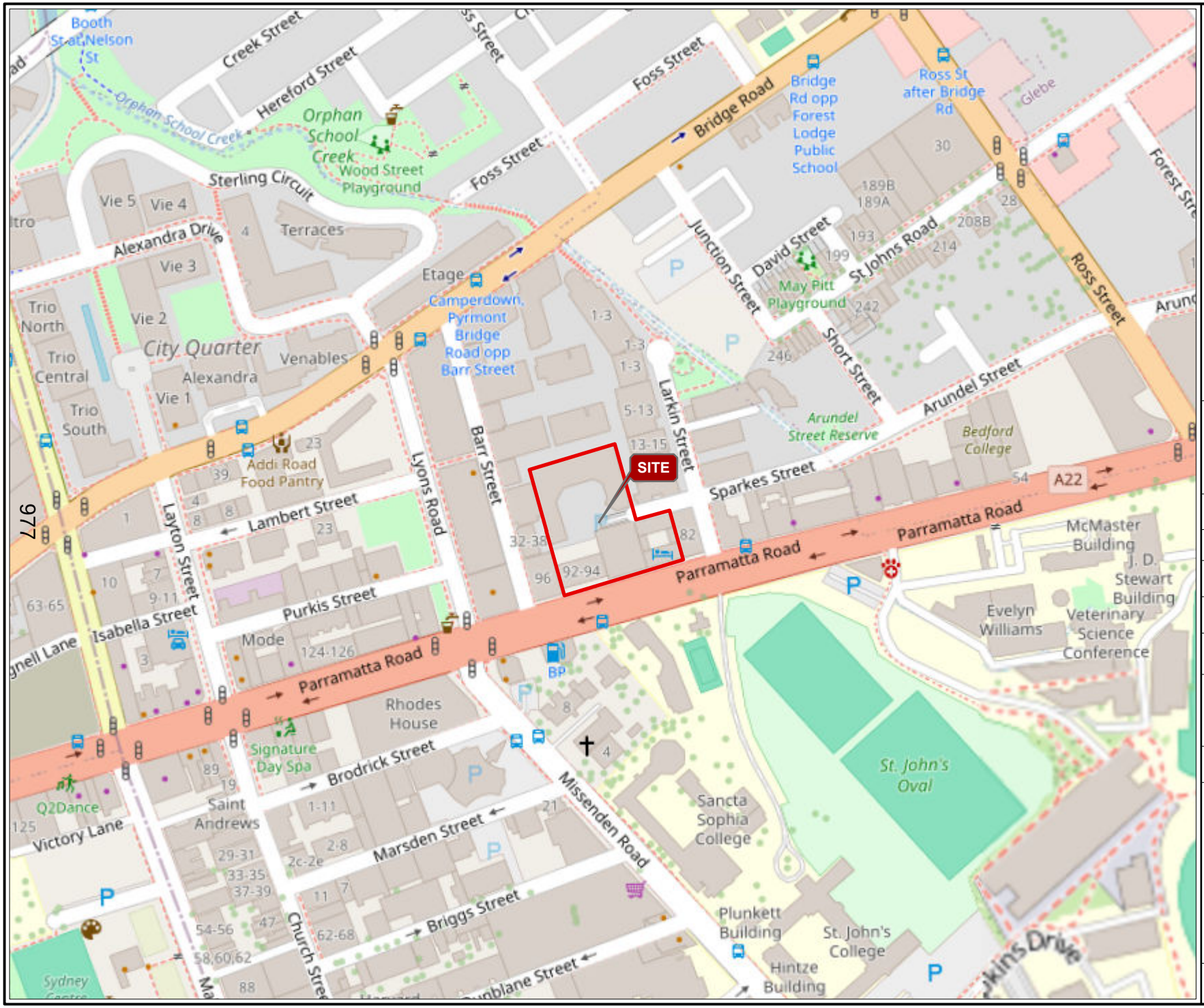
Limited sampling and laboratory analyses

. were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Legend

Approximate Site Boundary

JBS&G

Job No: 69242

Client: Wentworth Capital

Version: R01 Rev A	Date 13/05/2025
Drawn By: IA	Checked By: AH

Scale 1:3,500

0 30 60

metres

Coord. Sys. GDA 1994 MGA Zone 56

84-94 Parramatta Road
Camperdown, NSW

SITE LOCATION

FIGURE 1

File Name: 69242_ParramattaRoadCamperdown_R01_RevA

Reference: © OpenStreetMap (and) contributors, CC-BY-SA



Legend

Approximate Site Boundary

84 Parramatta Road

88-90 Parramatta Road

92-94 Parramatta Road

NSW Cadastre

JBS&G

Job No: 69242

Client: Wentworth Capital

Version: R01 Rev A	Date 13/05/2025
Drawn By: IA	Checked By: AH

Scale 1:750

0 7 14

metres

Coord. Sys. GDA2020 MGA Zone 56

84-94 Parramatta Road
Camperdown, NSW

SITE LAYOUT

FIGURE 2

File Name: 69242_ParramattaRoadCamperdown_R01_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 2025/04/03)

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Parry Street Newcastle West, NSW 2302
T: 02 8245 0300

Perth
Whadjuk Country | Allendale Square,
Level 9, 77 St Georges Terrace, WA 6000
T: 08 9380 3100

Sydney
Gadigal Country | Level 8,
179 Elizabeth Street, Sydney, NSW 2000
T: 02 8245 0300

Wollongong
Dharawal Country | Level 1,
1 Burelli Street, Wollongong, NSW 2500
T: 02 4225 2647

Attachment A17

Utility services review

ARUP

Wentworth Capital

Life Sciences Hub, 84-94 Parramatta Road, Camperdown

Utility Services Review - Technical Memo

Reference: 304985-00

Rev F | 15 September 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 304985-00

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ARUP

Document Verification

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Job number	304985-00
Document ref	304985-00
File reference	

Revision	Date				
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			Prepared by	**Checked by**	**Approved by**
		Name	Bandula S. Kamolwatchara W.	Bandula S	Julian S
		Signature			
Rev C	03/10/25	**Filename**	Utility Services Review - Technical Memo – Rev C		
			Prepared by	**Checked by**	**Approved by**
		Name	Bandula S. Kamolwatchara W.	Bandula S	Julian S
		Signature			
Rev D	05/03/26	**Filename**	Utility Services Review - Technical Memo – Rev D		
			Prepared by		
		Name	Bandula S. Kamolwatchara W.		
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			Prepared by	**Checked by**	**Approved by**
		Name	Bandula S. Kamolwatchara W.	Bandula S	Julian S
		Signature			
Rev F	30/07/26	**Filename**	Utility Services Review - Technical Memo – Rev F		
			Prepared by	**Checked by**	
		Name	Bandula S. Kamolwatchara W.	Julian S	
		Signature			

Issue Document Verification with Document ☑

Contents

1.	Introduction	5
1.1	Site Description	5
1.2	Purpose of Memo	7
1.3	National Construction Code Version	7
1.4	Objectives	7
1.5	Site Topography and Flood Levels	7
2.	Review of Existing and proposed Utility Services	9
2.1	Electrical Services	9
2.2	ICT services	12
2.3	Existing Water Services	13
2.4	Existing Sewer Mains Services	13
2.5	Existing Natural Gas Services (Jemena)	14
2.6	Laboratory Gases	15

Tables

No table of figures entries found.

Figures

Figure 1 Locational Context 6
Figure 2: Site Location 6
Figure 3: Peak Flood Depths 1% AEP Event 8
Figure 4: Peak Flood Depths PMF Event 8
Figure 5: Existing Hv infrastructure in the vicinity 9
Figure 6: Existing Ground Sub Transmission Panel to be relocated. 9
Figure 7: Substation Option 1 – In Ground Floor level 10
Figure 8: Substation Option 2 – Basement Substation with Access Hatch (Extracts from Basement) 10
Figure 9 : Substation Option 2 – Basement Substation with Access Hatch and Crane Access (Extracts from Ground Floor) 11
Figure 10: Substation Option 3 – Basement substation with Access hatch from Ground Level (Extracts from Basement) 11
Figure 11: Substation Option 3 – Basement substation with Access hatch from Ground Level and Crane Access (Extracts from Ground Floor) 12
Figure 12: Existing NBN services and existing connections to existing building 12
Figure 13: Existing Water Services 13
Figure 14: Existing Sewer Mains 13
Figure 15: Existing Natural Gas Supply 14
Figure 16 : Liquid CO2 and Liquid N2 compound 15
Figure 17: Proposed Location for Gas Cylinder Store in Basement Level 16

Drawings

Pictures

Photographs

Attachments

Appendices

Appendix A : Site Services Markup – Substation Options
Appendix B : Site Services Markup – Laboratory Gas Services

Appendix C : Correspondence with BOC- Laboratory Gases

1. Introduction

This Utility Services Review Technical Memo is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.5:1 floor space ratio (retaining the existing MU1 Mixed Use zone).
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

1.1 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1:

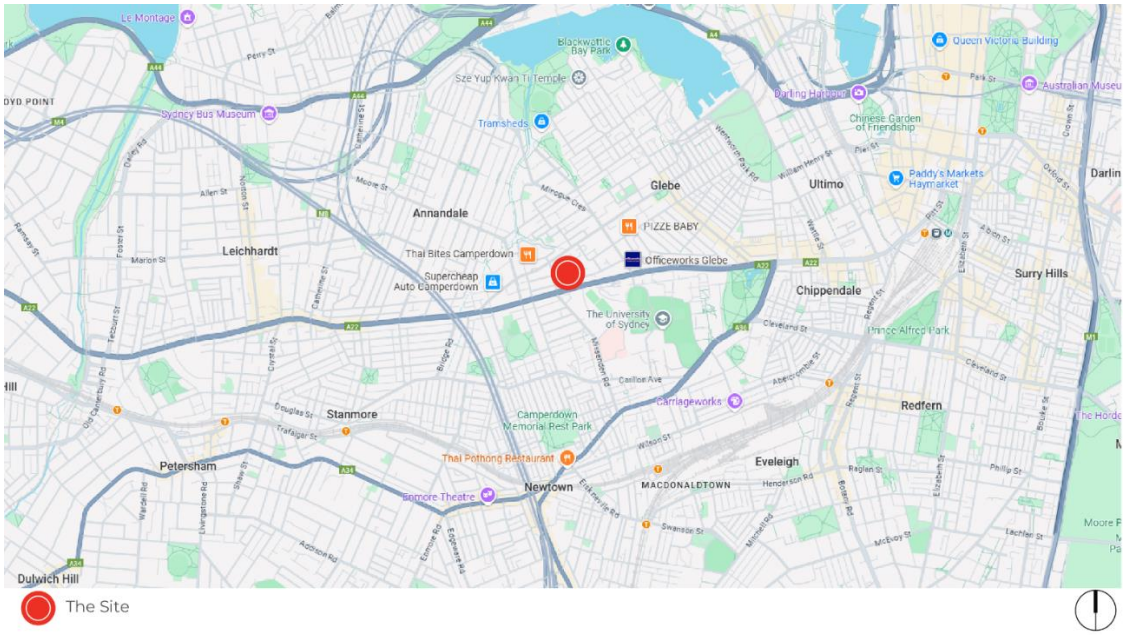


Figure 1 Locational Context

Source: Google Maps

An additional map showing the site location is provided in Figure 2

The proposed development comprises of:

- Life Science Tower Block, 27,685m2 GFA, 15 storeys plus two plant levels and 3 levels of basements. (80 m height)
- Life Science Education Block, 6,647m^2 GFA, 8 storeys. (29.7 m height)
- Veriu Block, 3.545m^2 GFA, 9 storeys- 6 existing plus 3 additional. (29.3 m height)

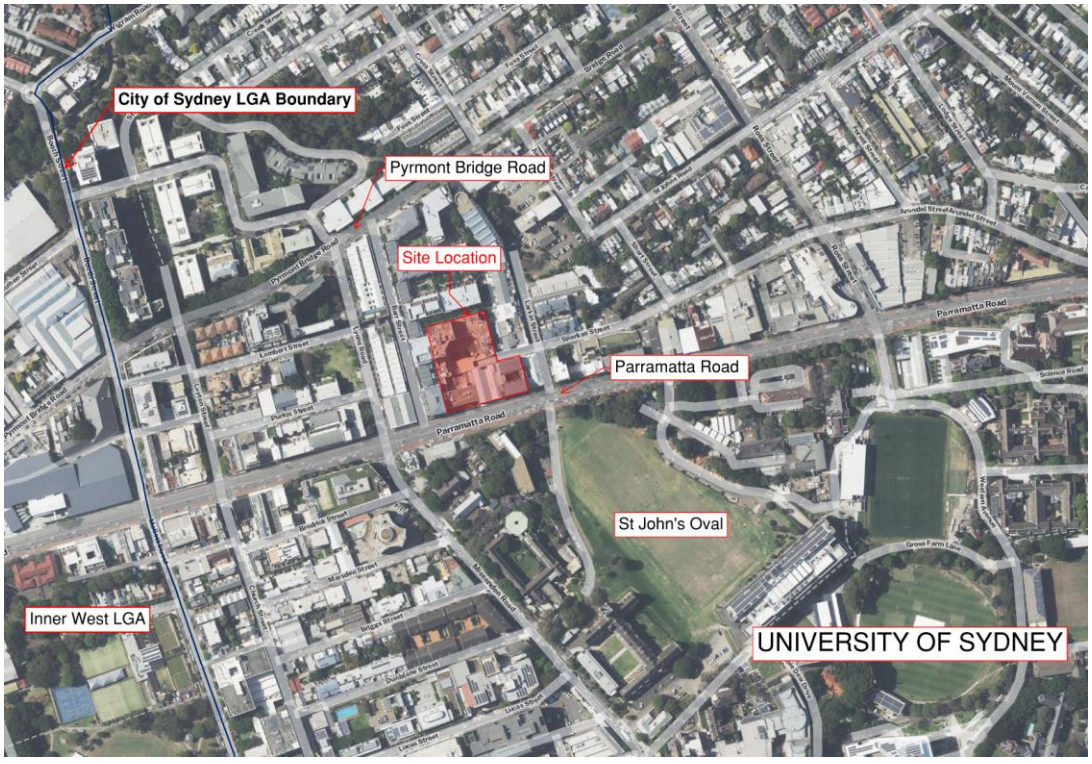


Figure 2: Site Location

1.2 Purpose of Memo

The purpose of this memo is to:

- Provide a high level review of surrounding utilities in order to identify any supply constraints and/or utility interventions required (diversions etc), plus provision of new supplies
- Provide input to the architectural design and traffic report in relation to vehicle access for substations and laboratory gas stores
- Check feasibility of utility provision (substations etc) in relation to flooding

The utility services advice is based on a desktop review of:

- Latest architectural layouts provided by Wentworth Capitol and HDR.
- Before You Dig Australia (BYDA) documents associated with existing utility services.

1.3 National Construction Code Version

At the time of this report, the 2025 version of the National Construction Code (NCC) has not been published. Therefore, we have reference NCC 2022 Amendment 1.

1.4 Objectives

This preliminary utility services assessment considers both existing and proposed conditions at the site. This assessment includes a review of the following:

- Proposed architectural plans and schedule of areas
- Preliminary maximum demand based on AS3000 and bench marking similar facilities
- Existing utility services within proximity to the proposed development.
- Relevant legislation in relation to utility services and local authority requirements;
- ESD, Flood and traffic assessments.

1.5 Site Topography and Flood Levels

The site is situated within Johnstons Creek Catchment, which spans both the CoS and Inner West LGA's. The proposed development site lies completely within the CoS LGA.

We have reviewed the associated flood levels in order to locate the critical utility services infrastructure above the 1% AEP event peak flood depths as required by utility services standards. The relevant flood maps for the 1% AEP and the Probable Maximum Flood (PMF) events from the flood study are listed below:

- Peak Flood Depths – 1% AEP Event (Figure 3)
- Peak Flood Depths – PMF (Figure 4)

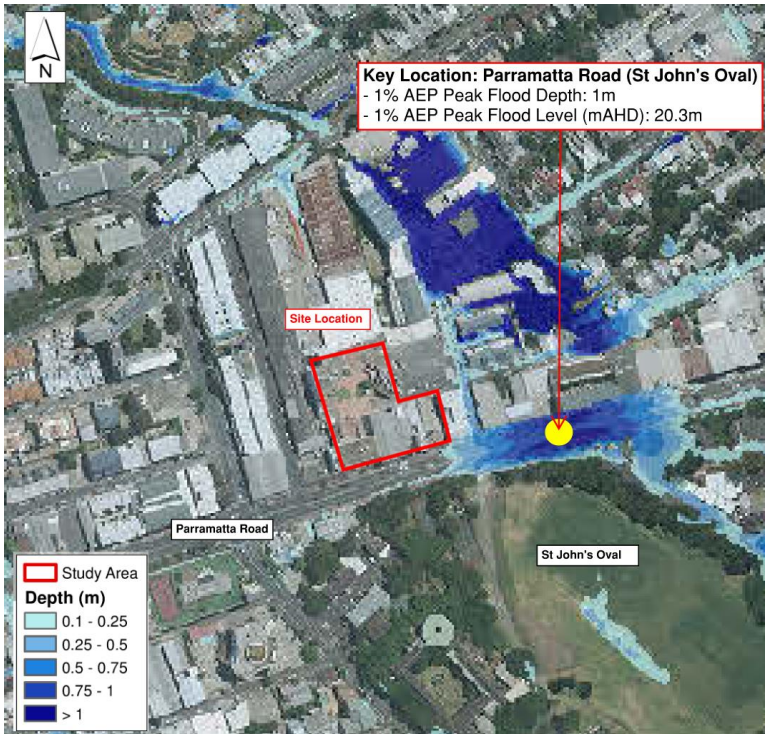


Figure 3: Peak Flood Depths 1% AEP Event

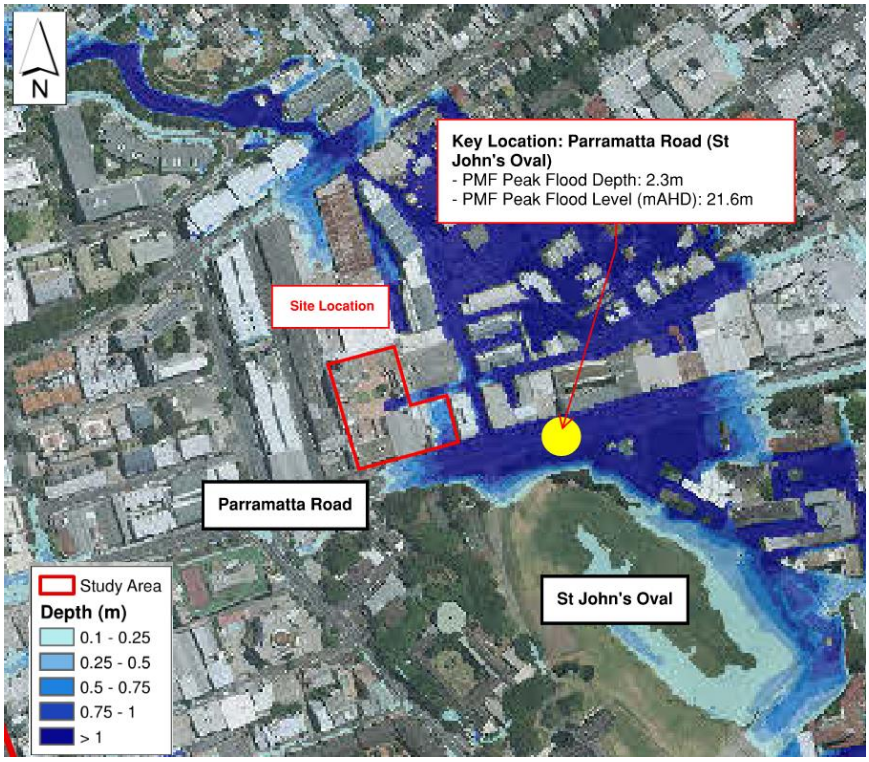


Figure 4: Peak Flood Depths PMF Event

2. Review of Existing and proposed Utility Services

2.1 Electrical Services

Proposed site has access to Ausgrid HV underground network via Parramatta road and through Larkin Street.

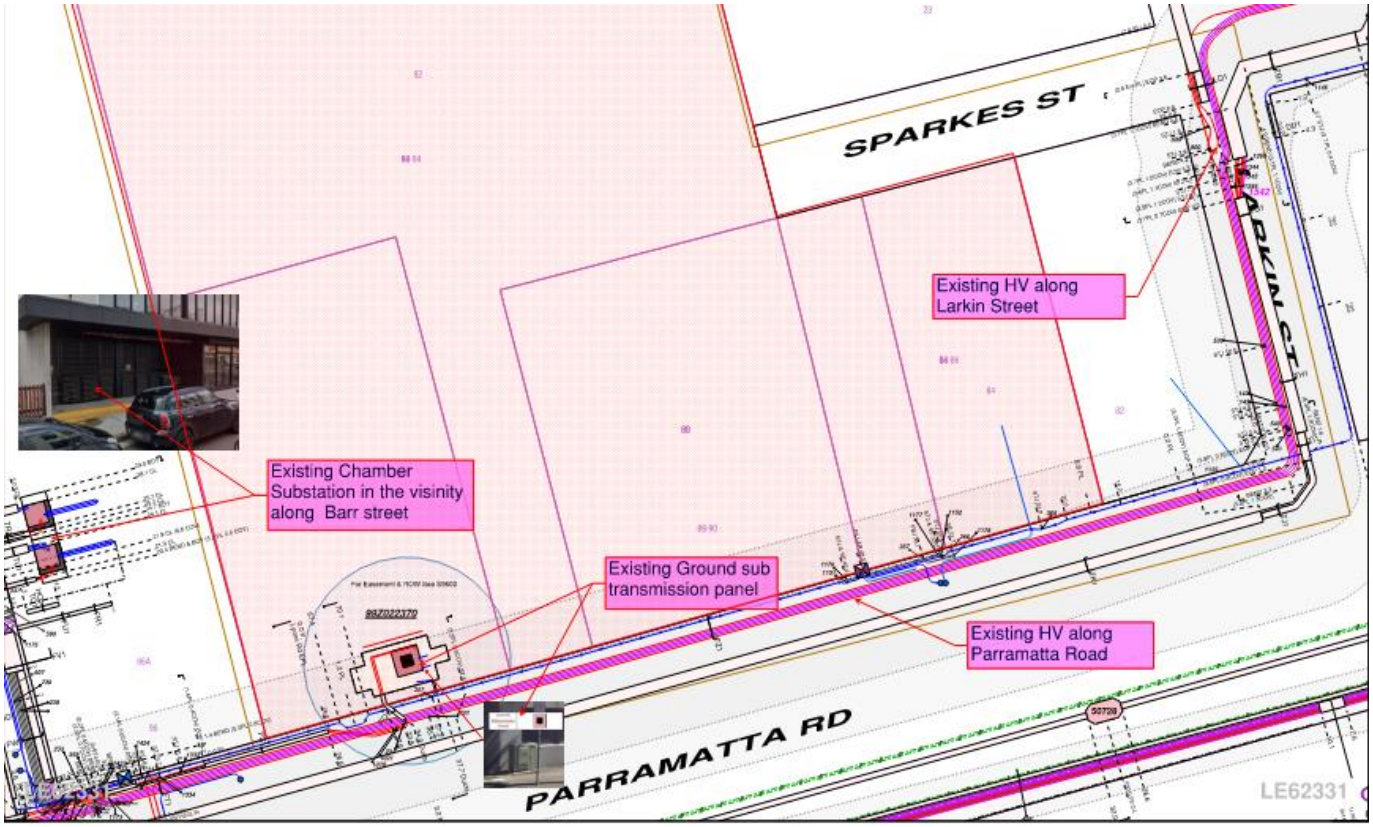


Figure 5: Existing Hv infrastructure in the vicinity

There is an existing Ground Sub transmission panel (May be supplying power to public domain/street services along Parramatta road) on the road reserve next to proposed Residential entrance. Relocation of this panel required in consultation with local power supply authority Ausgrid.

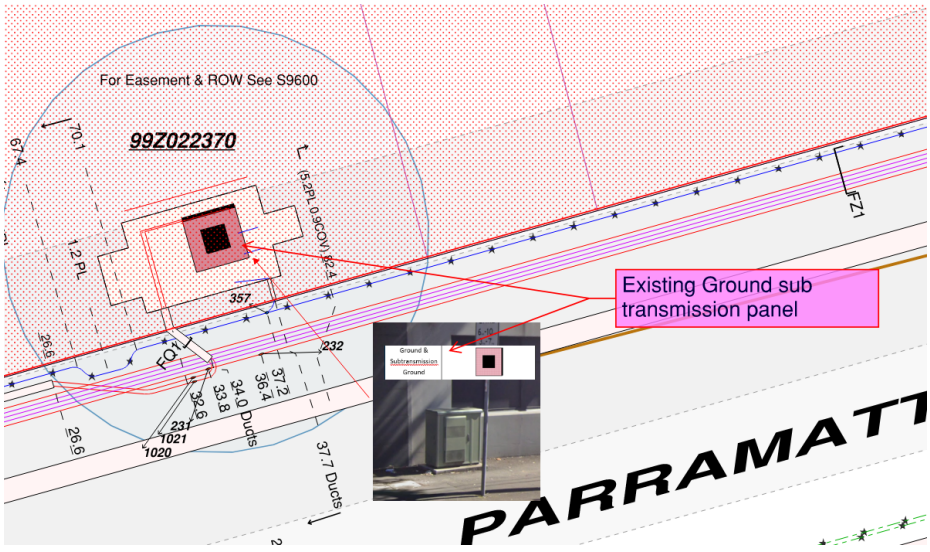


Figure 6: Existing Ground Sub Transmission Panel to be relocated.

Our preliminary design maximum demand calculations based on AS3000 and bench marking similar facilities, we anticipate that the site power demand is approximately 4.45MVA with 80% overall site diversity.

Therefore, we anticipate that 3x1500kVA triplex transformer chamber substation to be installed to supply the proposed development in consultation with local power supply authority Ausgrid.

Propose Substation location options detailed in figures below.

Option 1 – On grade chamber Substation at ground level with direct access from Parramatta Road.

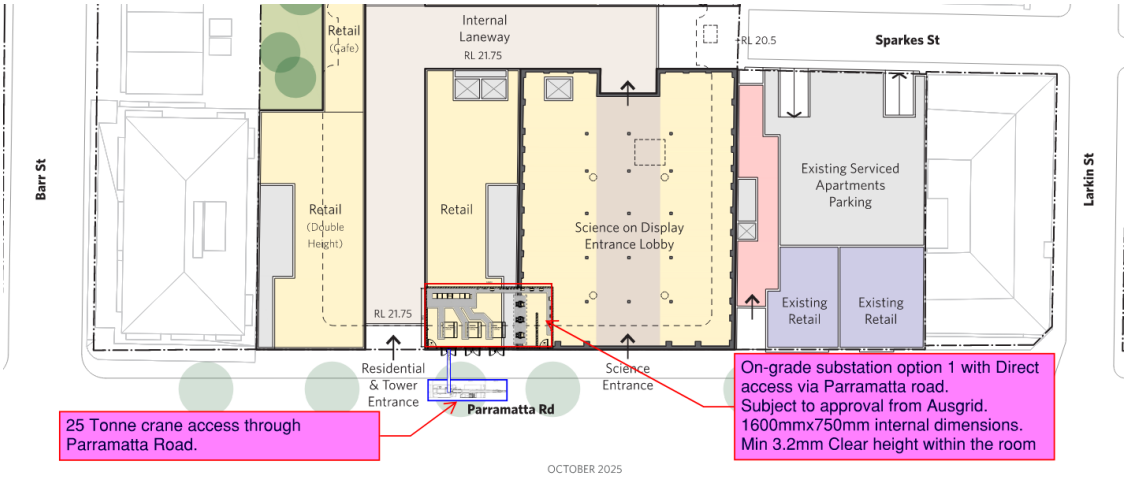


Figure 7: Substation Option 1 – In Ground Floor level

Option 2 – Basement chamber Substation with equipment access from Ground Level via an equipment access hatch.

Basement ramp area should have min 5.5m height clearance for equipment access via a 25tonne crane. Dedicated personal egress door with 24/7 access required to basement level for authorised persons from Ausgrid.

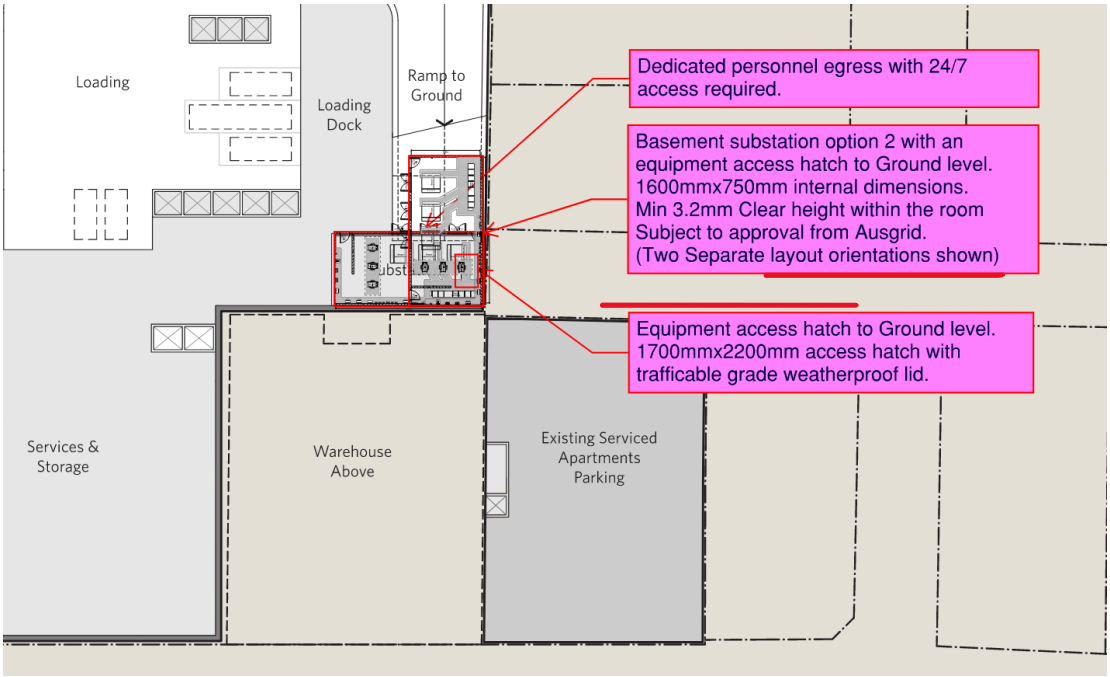


Figure 8: Substation Option 2 – Basement Substation with Access Hatch (Extracts from Basement)

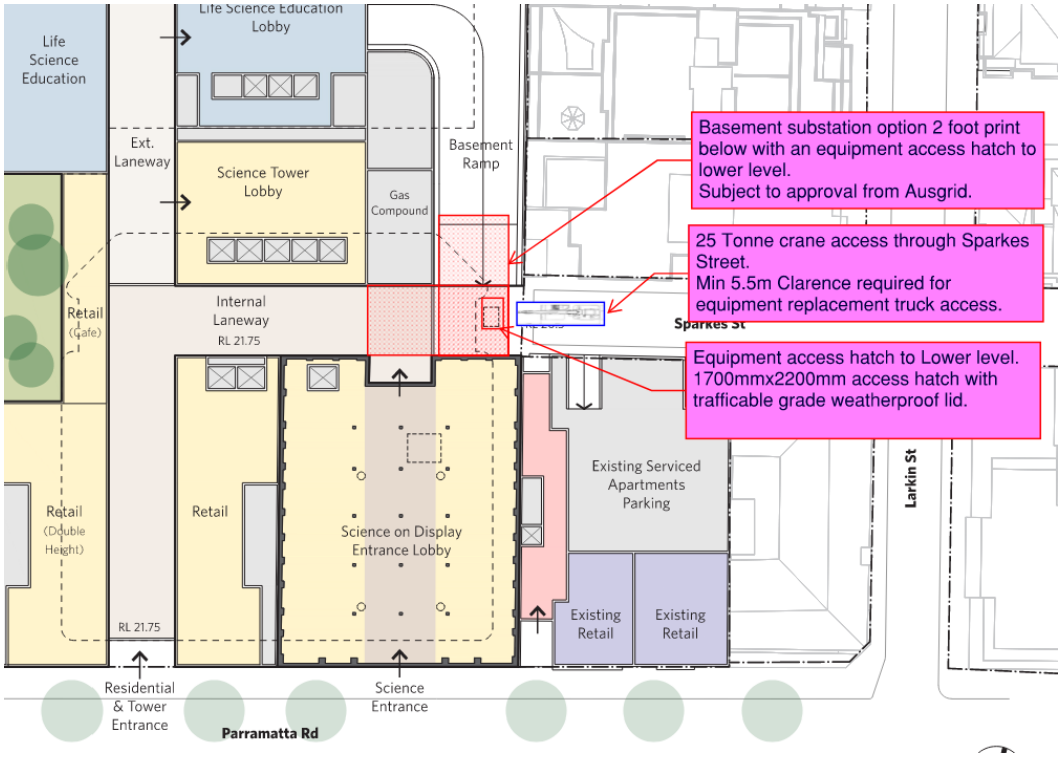


Figure 9 : Substation Option 2 – Basement Substation with Access Hatch and Crane Access (Extracts from Ground Floor)

Option 3 – Basement chamber Substation with equipment access from Ground Level via an equipment access hatch.

Basement residential access ramp area should have min 5.5m clearance for equipment access via a 25tonne crane through Parramatta road. Dedicated personal egress door with 24/7 access required to basement level for authorised persons from Ausgrid.

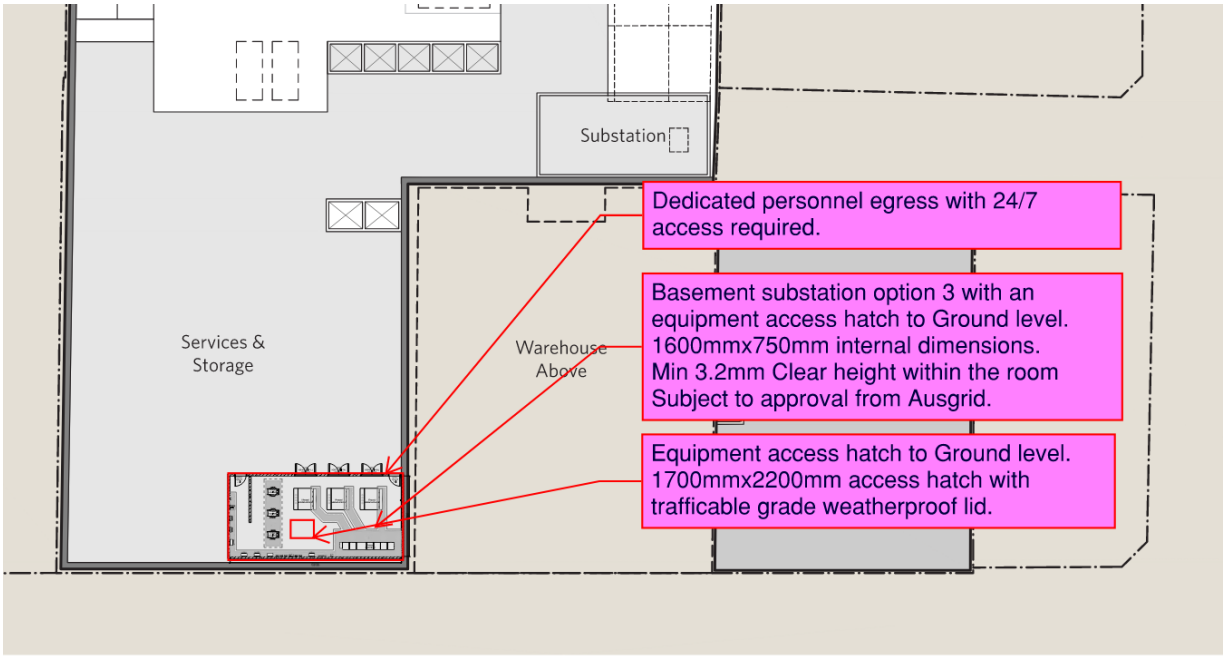


Figure 10: Substation Option 3 – Basement substation with Access hatch from Ground Level (Extracts from Basement)

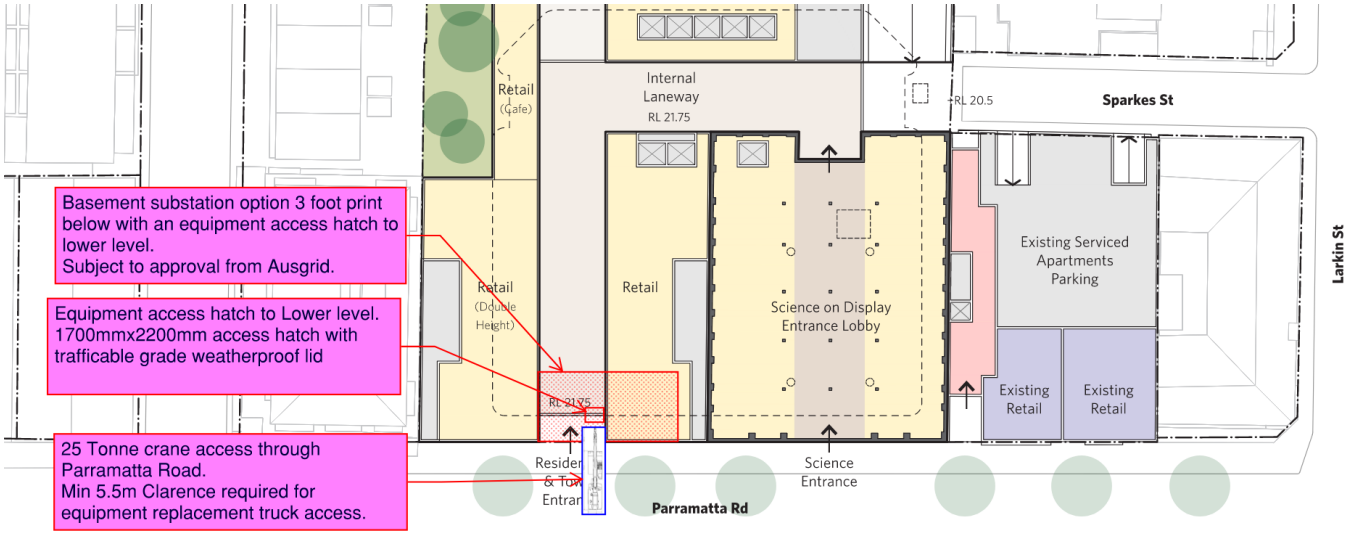


Figure 11: Substation Option 3 – Basement substation with Access hatch from Ground Level and Crane Access (Extracts from Ground Floor)

Basement car park level should include EV charging infrastructure as required by National Construction code and associated fire services requirements to be further reviewed in next design stages.

2.2 ICT services

There is existing NBN Fibre services along the parramatta road as well as the Larkin road. Before you dig Australia documents indicate that there existing NBN connections to the proposed site.

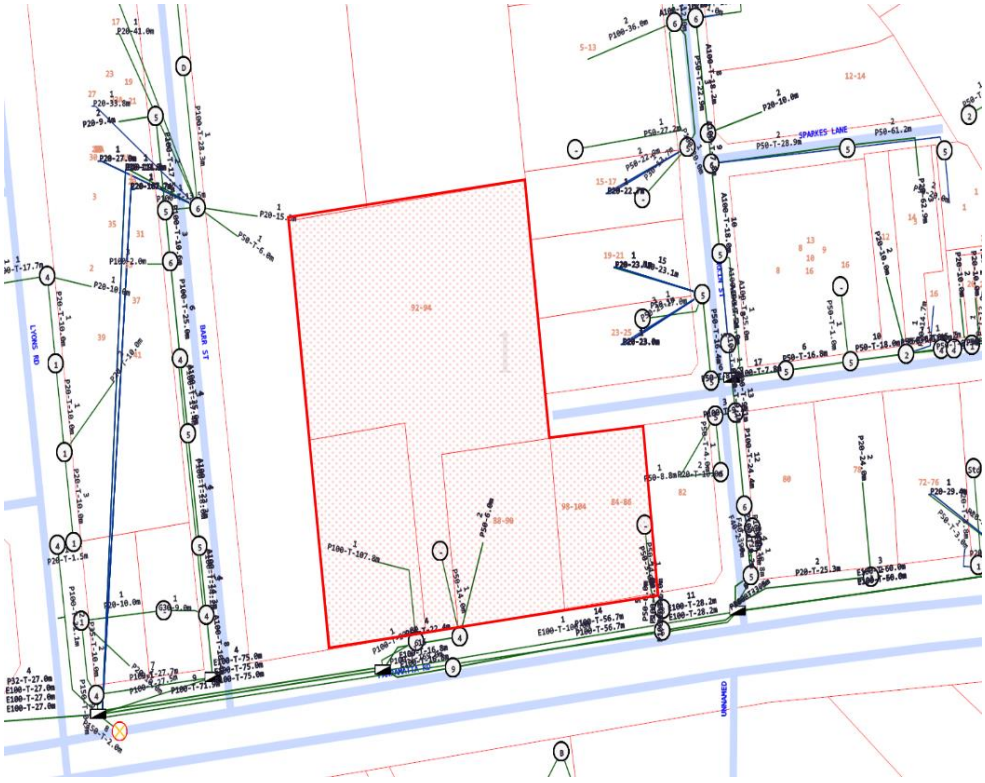


Figure 12: Existing NBN services and existing connections to existing building

ICT service strategy to be developed in consultation with project stake holders in next design stages. NBN Co services and fibre connections from Optus and AARnet and other available across Parramatta road and Larkin road for future connections.

2.3 Existing Water Services

300mm diameter water mains available along the parramatta road and 150mm diameter water mains available along the Larkin Street. As per the reviewed Before you Dig Australia(BYDA) documents, there is existing water connections to the proposed development site.

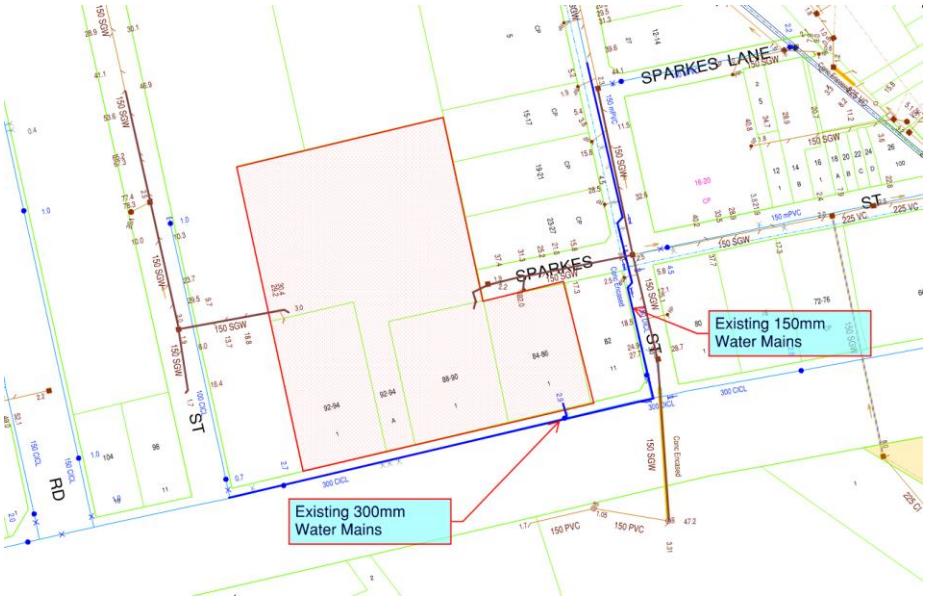


Figure 13: Existing Water Services

Existing water supply to be reconfigured or new supply to be obtained depending on the water supply arrangement requirements for the proposed building via Parramatta Road.

2.4 Existing Sewer Mains Services

As per the reviewed Sydney Water Before you Dig Australia(BYDA) documents, there are two separate Sewer mains connections available to the proposed development site via Barr street and the Sparkes Street.

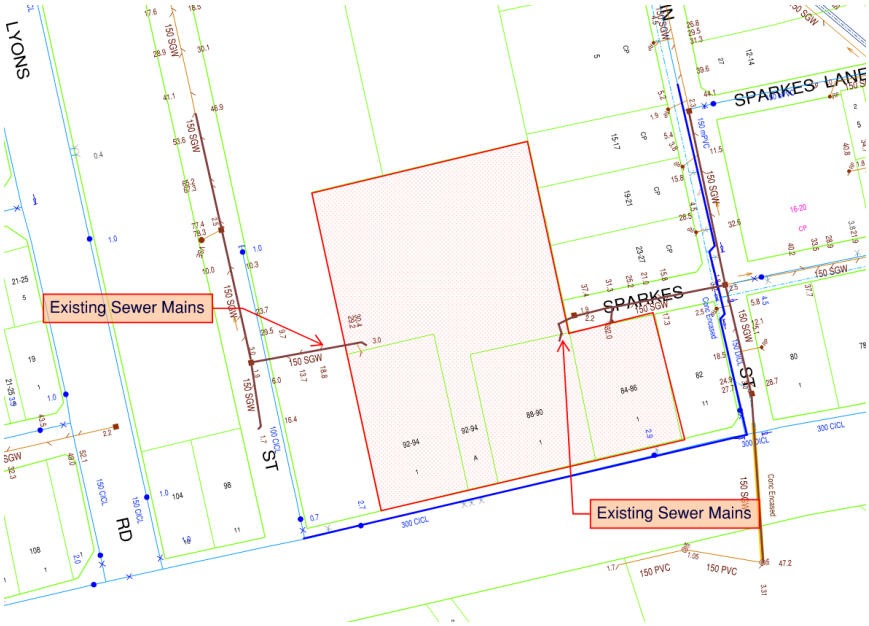


Figure 14: Existing Sewer Mains

Existing Sewer mains connection to proposed site to be reconfigured as required for proposed building.

2.5 Existing Natural Gas Services (Jemena)

As per the reviewed Jemena Before you Dig Australia(BYDA) documents, there is high pressure and medium pressure Gas available along the Parramatta road and Medium pressure gas available along the Larkin street.

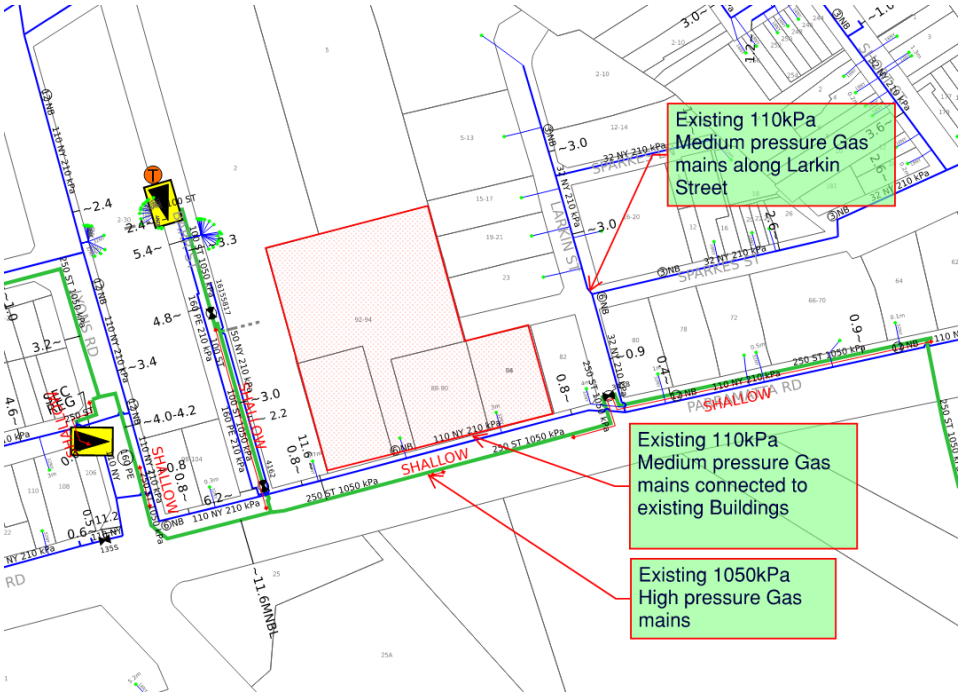


Figure 15: Existing Natural Gas Supply

As the proposed building to be designed as a full electric building we do not anticipate any new gas connections requirement to site. Existing gas connection to existing building (Veriu Serviced apartments) to be further discussed in next design phase.

2.6 Laboratory Gases

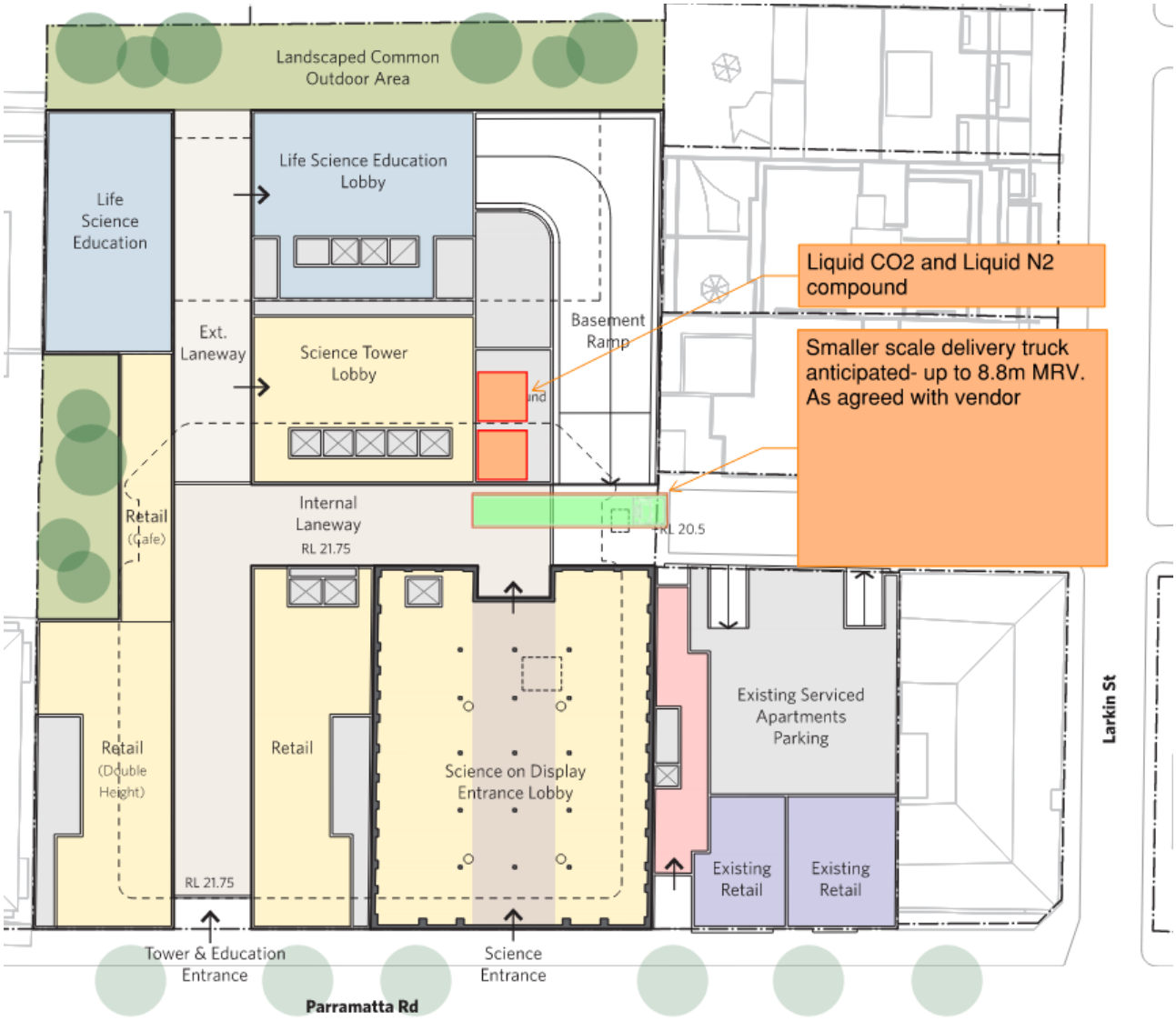


Figure 16 : Liquid CO2 and Liquid N2 compound

Gases requirements for laboratory are driven by functional requirements of each laboratories. To provide flexibility within the base-building. We have made the following allowances within the building footprint.

2.6.1 Cryogenic Bulk Store

We have provisioned for the following liquid vessel:

- Liquid Nitrogen
- Liquid CO2

Based on benchmarking from two similar scale projects we estimate that liquid capacity of 3,000L and 1,500L would be required for Nitrogen and Carbon Dioxide, respectively. 4m clear height would be required at these capacities. These assumed volumes are relatively conservative given the commercial nature of this development and the fact that the benchmarks used are fairly intense research usage facilities as follows:

Westmead Institute for Medical Research (PC2, animal facility, PC3, 12,000m2)

- LN2- 3,000L
- LCO2- 1,500L

UniSA CRI (PC2, animal facility, 27,000m2- circa 60% of this is life science space)

- LN2- 3,000L
- LCO2- 1,500L

2.6.2 Gas Cylinders Stores

An allowance for a gas cylinder store has been provided within Basement 1. The store has been sized to house maximum quantity of cylinders while remain to be considered a “minor store”. 2,000L aggregate water capacity (approximately 20 G-size cylinders) of class 2.2 (inert gas) can be located within. Mechanical ventilation to this store will be required. Gas risers will be required to reticulate gas supply from this store up to laboratory areas.

Additional gases may also be required, pending laboratory requirements. It is recommended that a gas cylinder storage area be allowed for on each level to allow for specialised gases that may be required specific to each laboratory to be located outside of the laboratory area. Mechanical exhaust provision should be allowed for in the event that ventilated gas cylinders cabinet are required to suit flammable and/or hazardous gases.

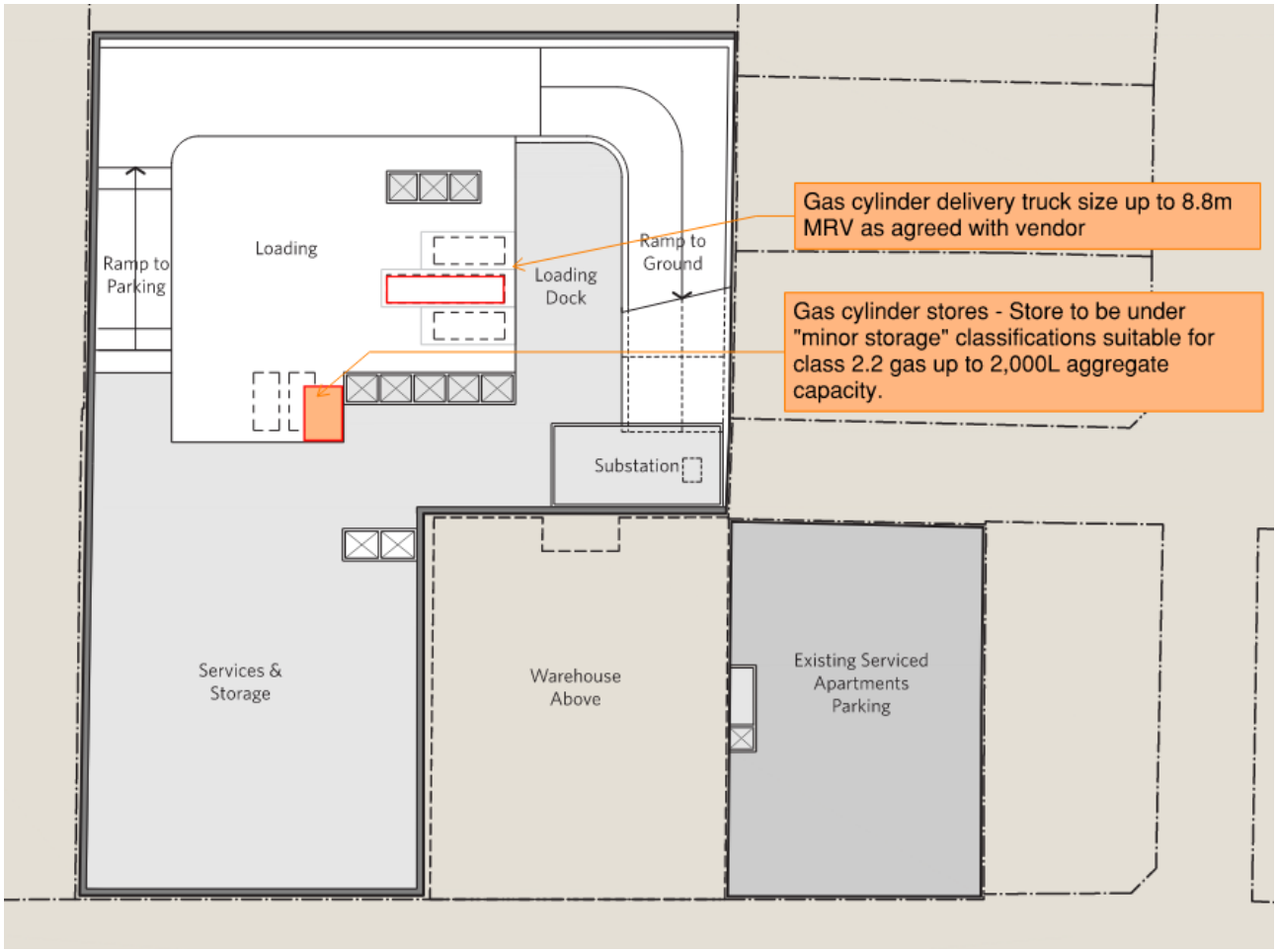


Figure 17: Proposed Location for Gas Cylinder Store in Basement Level

2.6.3 Delivery Vehicle Dimension

Due to the limitations of the roads and entry to the basement, we have consulted with BOC to determine the best delivery vehicle options for the development. These are based on the cryogenic storage volumes and bottled gas assumptions noted above, which we believe are appropriate for this development.

BOC have confirmed that delivery vehicle sizes will be as follows:

- Cryogenic Liquids: Cryospeed delivery truck- equivalent to a 8.8m long MRV
- Gas Cylinders: Rigid flat bed delivery truck- equivalent to a 8.8m long MRV

The MRV (medium rigid vehicle) tracking studies and turning circles etc are noted in the traffic report to demonstrate that the vehicles can service the site through the available street network, and can get into and out of the building to the basement level loading dock.

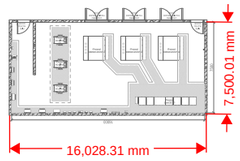
Confirmation e-mails from BOC are included in Appendix C.

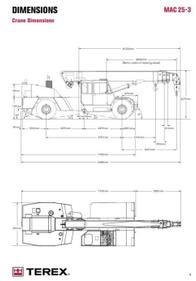
Appendix A : Site Services Markup – Substation Options

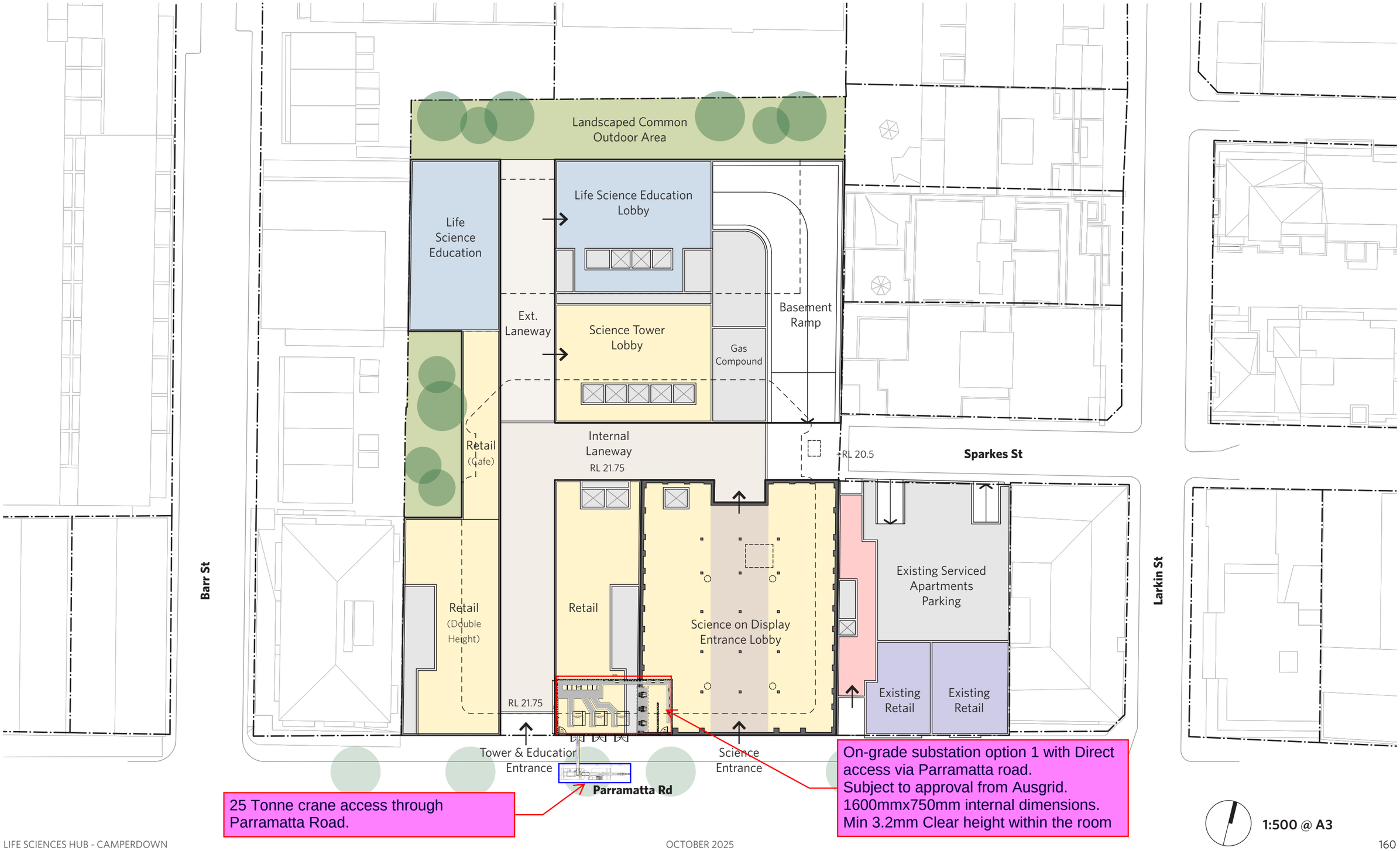
Substation Option 1

REFERENCE SCHEME PLANS

Ground Level





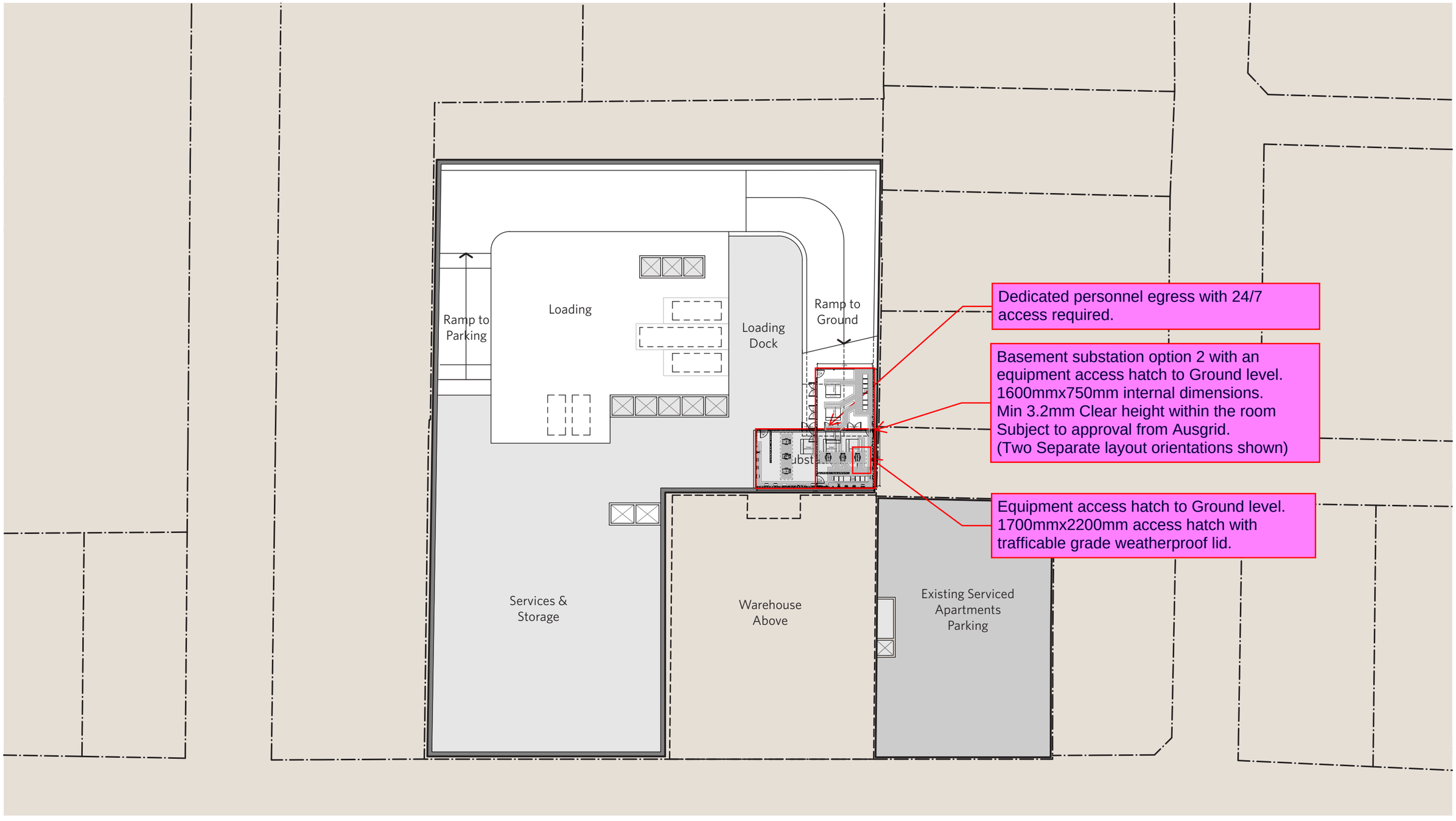


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Substation Option 2

REFERENCE SCHEME PLANS

Basement 1

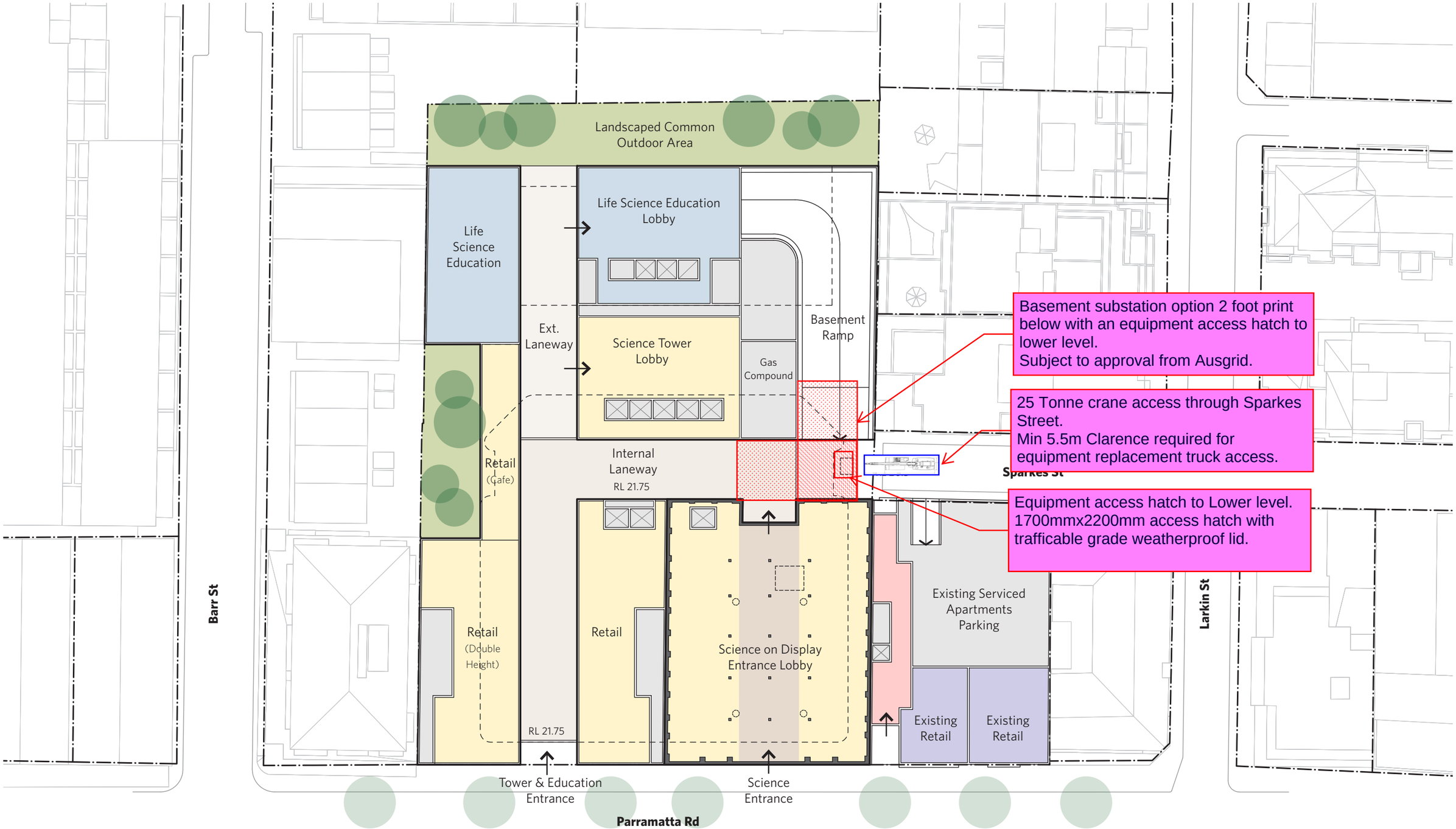


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Substation Option 2

REFERENCE SCHEME PLANS

Ground Level

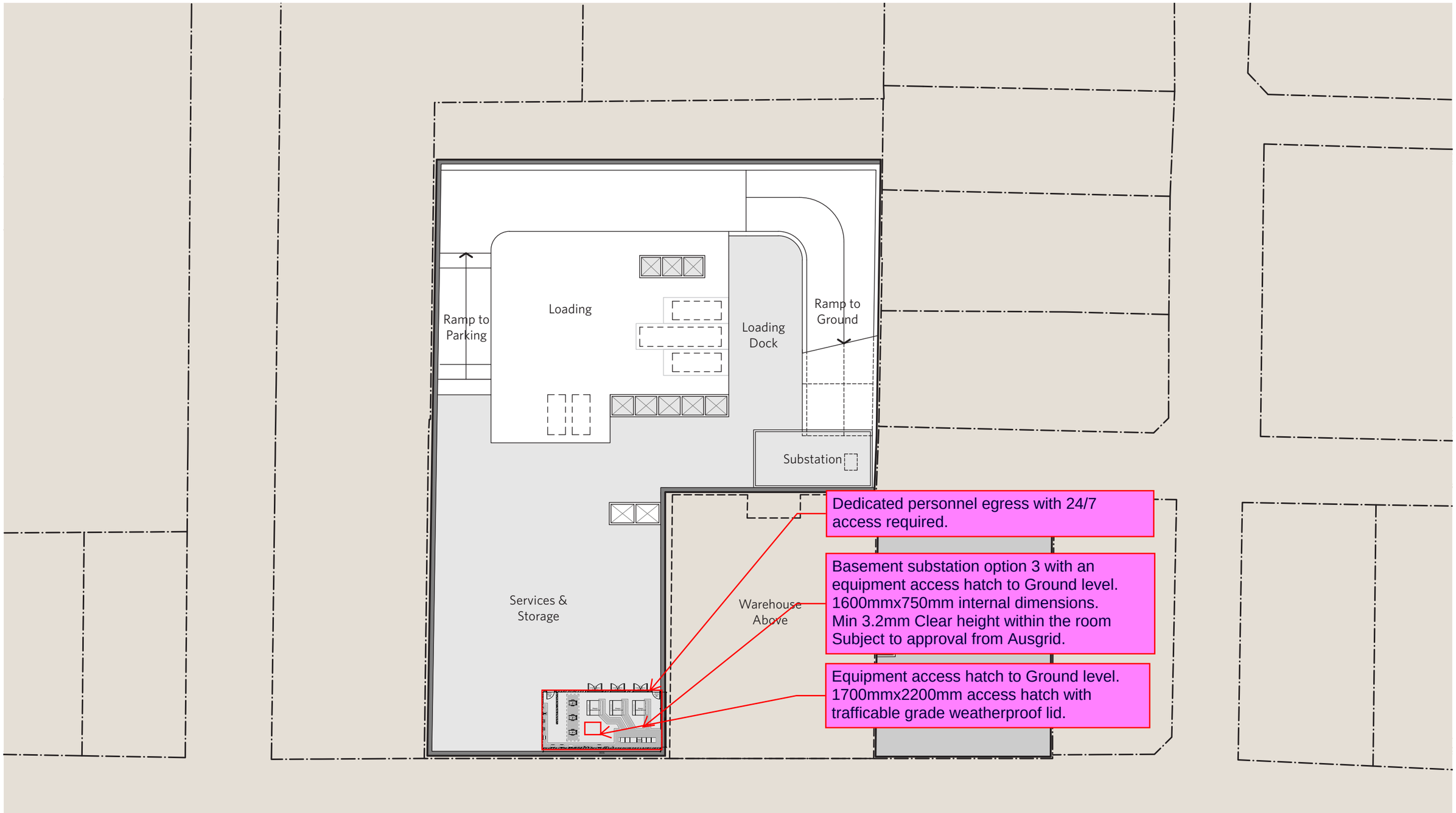


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Substation Option 3

REFERENCE SCHEME PLANS

Basement 1



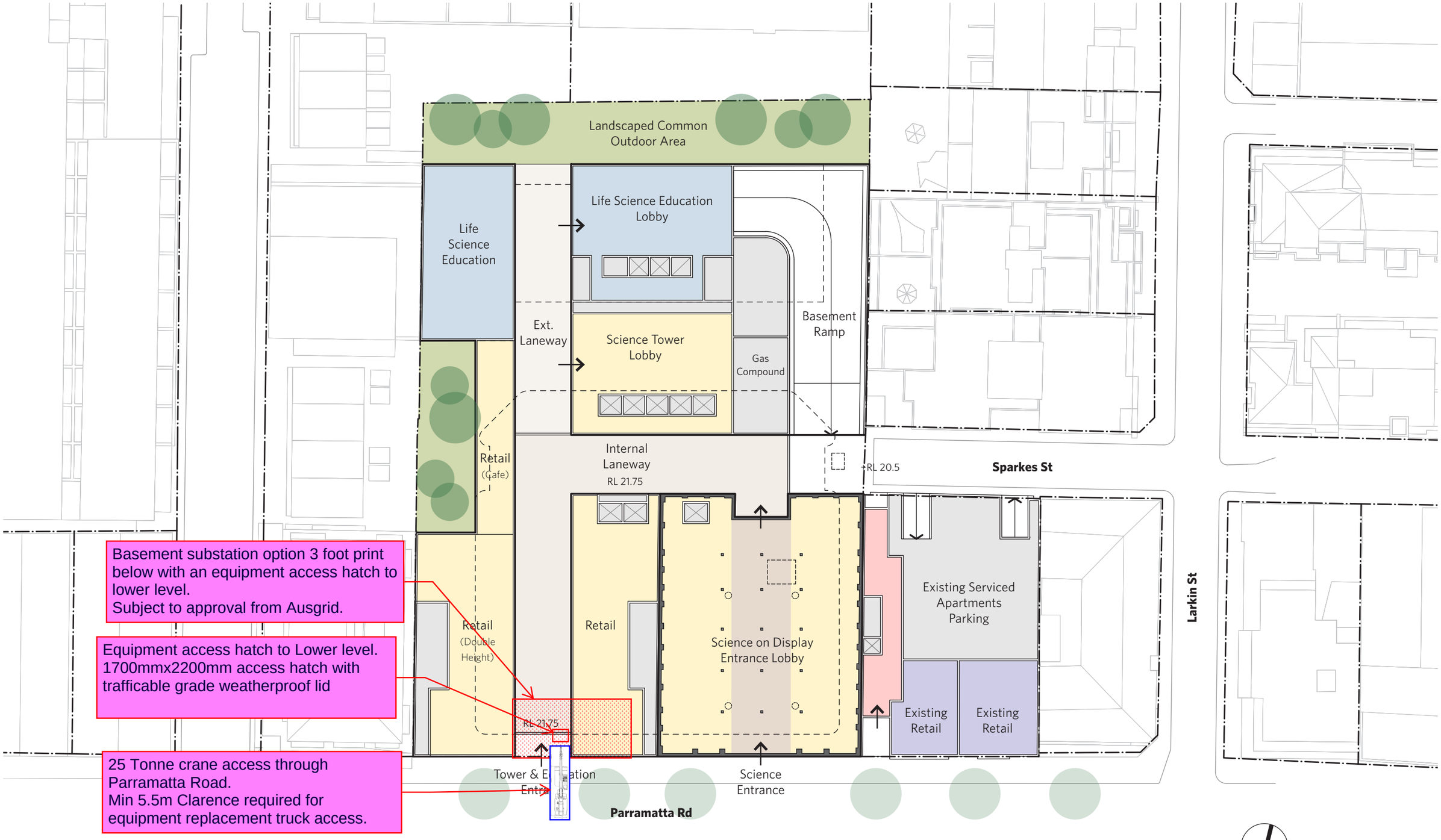
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Substation Option 3

REFERENCE SCHEME PLANS

Ground Level

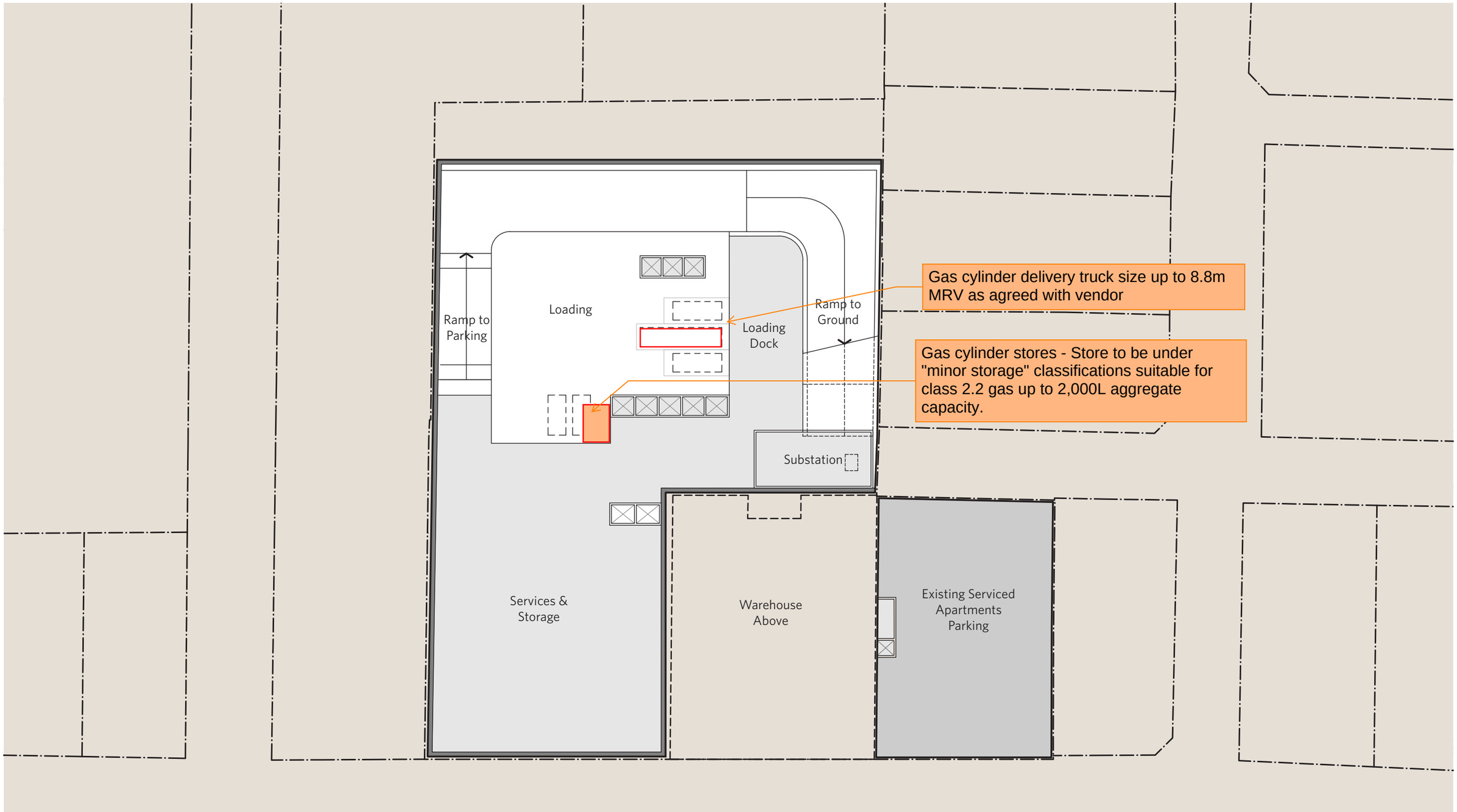


1:500 @ A3

Appendix B : Site Services Markup – Laboratory Gas

REFERENCE SCHEME PLANS

Basement 1

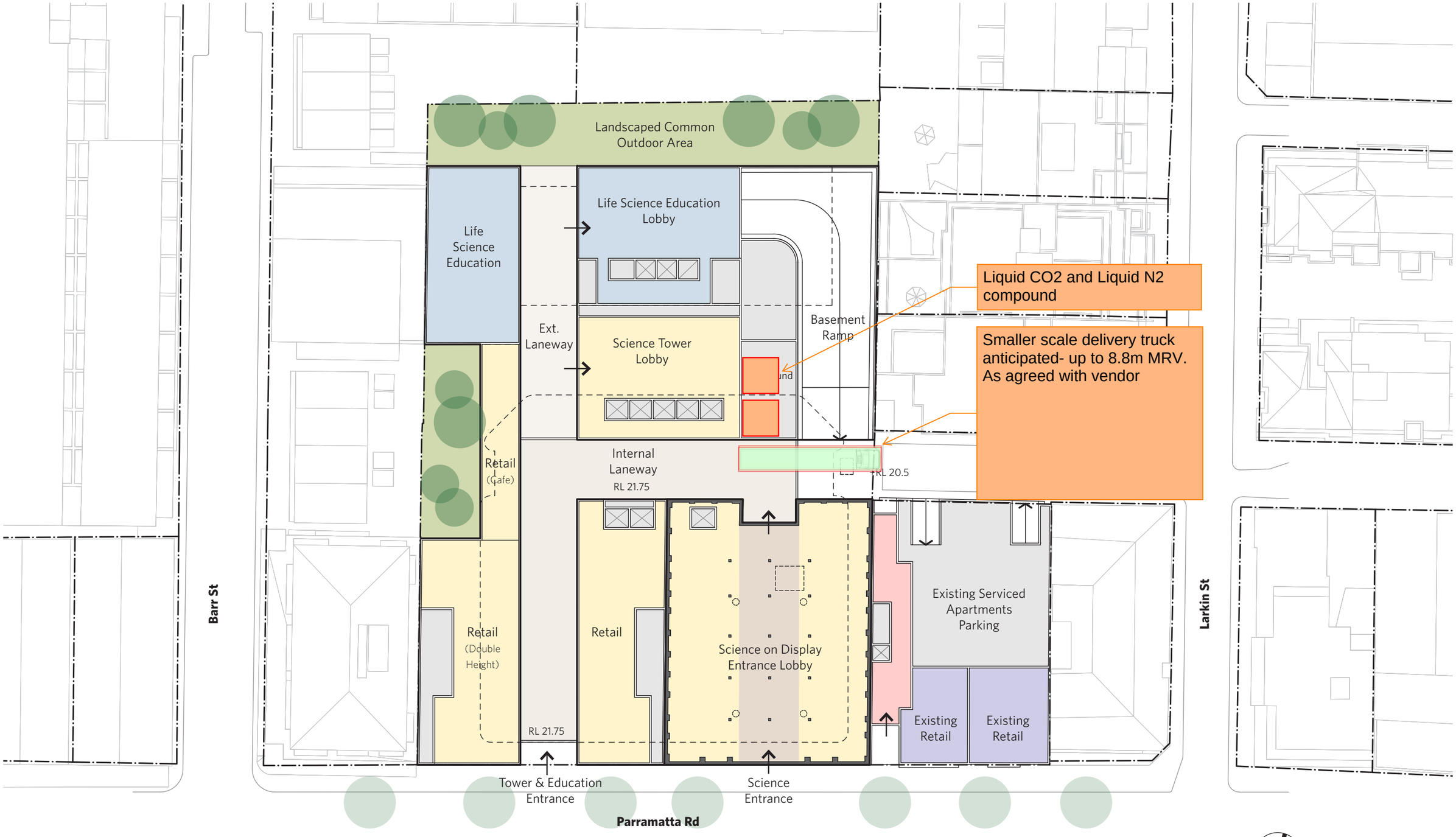


1006

1:500 @ A3

REFERENCE SCHEME PLANS

Ground Level



1:500 @ A3

Appendix C: Correspondence with BOC (Laboratory Gases)

Julian Soper

From: Justin Emmanuel <Justin.Emmanuel@boc.com>
Sent: Thursday, 10 September 2026 9:55 AM
To: James Wilby
Cc: Julian Soper
Subject: RE: New high rise lab building camperdown

Hi Gents

Further to my conversation with Julian yesterday, I can summarise the following:

- If your proposal is to put in a 3000 L tank for LN2 and a 1500 L tank for CO2, we have better delivery options
- We can deliver to these 2 sized vessels with our smaller trucks even if it means we have to deliver up to twice a week for each product
- Anything bigger than a 3000 L vessel will require us to use our bulk tankers and at this point in time we don't see that as an option in the location as we will need mandatory traffic control (at all times) to get in and out and it wont be practical
- Another matter to consider is if the site will have 24/7 access – if that is the case BOC wont have to deliver during peak hours and can deliver in the wee hours of the night or early in the morning with minimal disruption

Many thanks

Justin

From: James Wilby <James.Wilby@arup.com>
Sent: Monday, 7 September 2026 9:02 AM
To: Justin Emmanuel <Justin.Emmanuel@boc.com>
Cc: Julian Soper <Julian.Soper@arup.com>
Subject: RE: New high rise lab building camperdown

CYBERSECURITY ALERT: This is an email from an external organization. Use caution, especially with links and attachments. More

Morning Justin

Would you be able to provide any feedback and clarity on serving options for this site before Wednesday ? Julian and I have a meeting with the developer then where the more we can inform them the better. If you would like to call again let me know, maybe easier to explain over a video call.

Thanks again

From: James Wilby
Sent: 02 September 2026 09:58
To: justin.emmanuel@boc.com
Subject: FW: New high rise lab building camperdown

Sent to wrong email address – see below

James Wilby
Mechanical Engineer

From: James Wilby
Sent: Tuesday, 1 September 2026 12:25 PM
To: justin.emmanuel@boc.com.au
Cc: Julian Soper <Julian.Soper@arup.com>
Subject: New high rise lab building camperdown [Filed 01 Sep 2026 12:25]

Morning Justin

Thanks for calling me and for your time.

The only streets with access to the proposed site are Sparkes and Larkin.

We have done some traffic studies with an MRV (8.8m long) and an HRV (12.5m long) and compared different options of reversing in/out etc to see what existing signage and street car parking would be lost.

There is no significant dedicated turning circle planned for the site – there is a ramp area to the basement where we believe an MRV could conduct a 3-point turn, but an HRV would need to be able to reverse along Sparkes St.

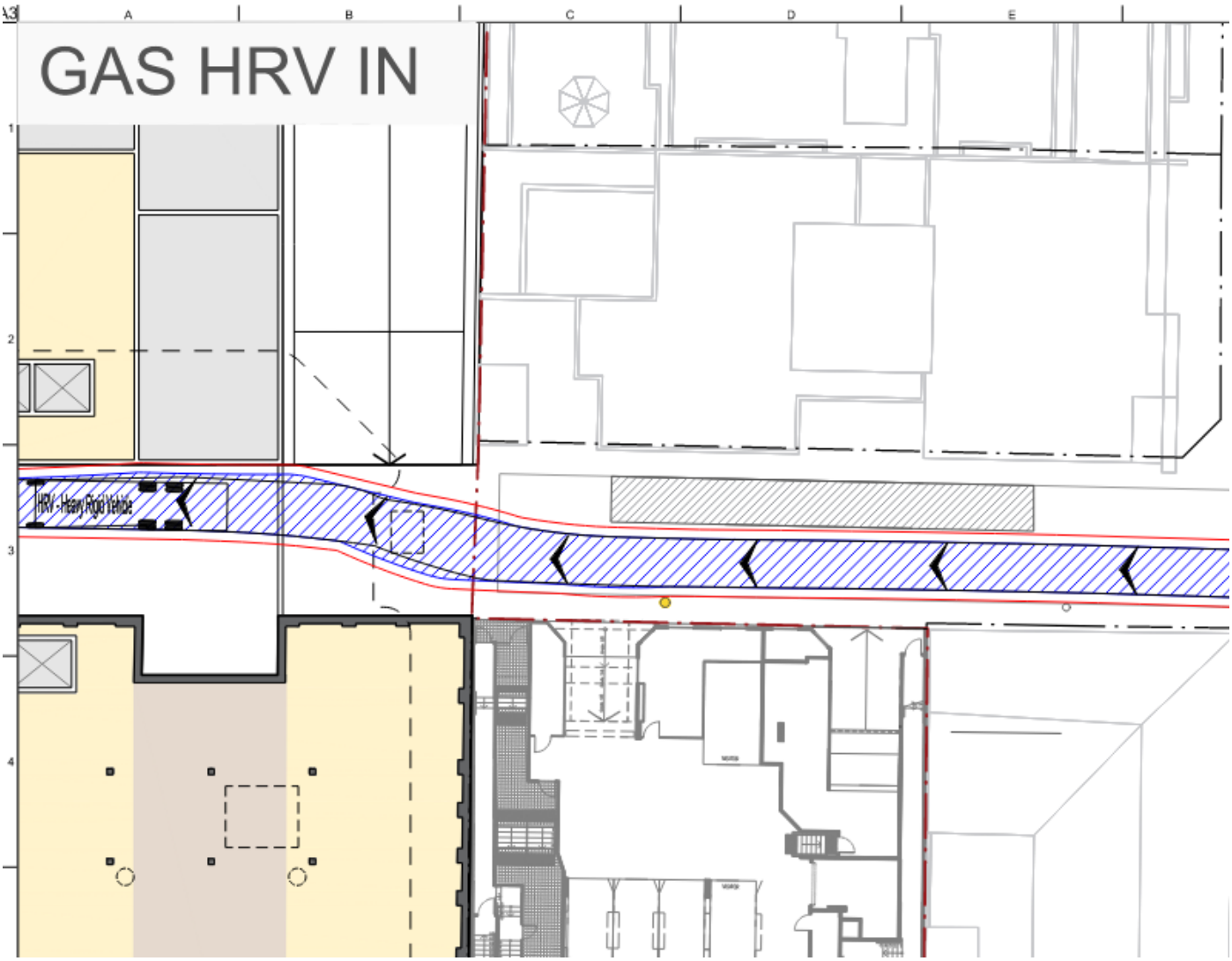
What are your thoughts on the HRV option, would BOC consider this as workable, and if it were only the MRV that was feasible, what size deliveries could be made for LN2 and CO2?



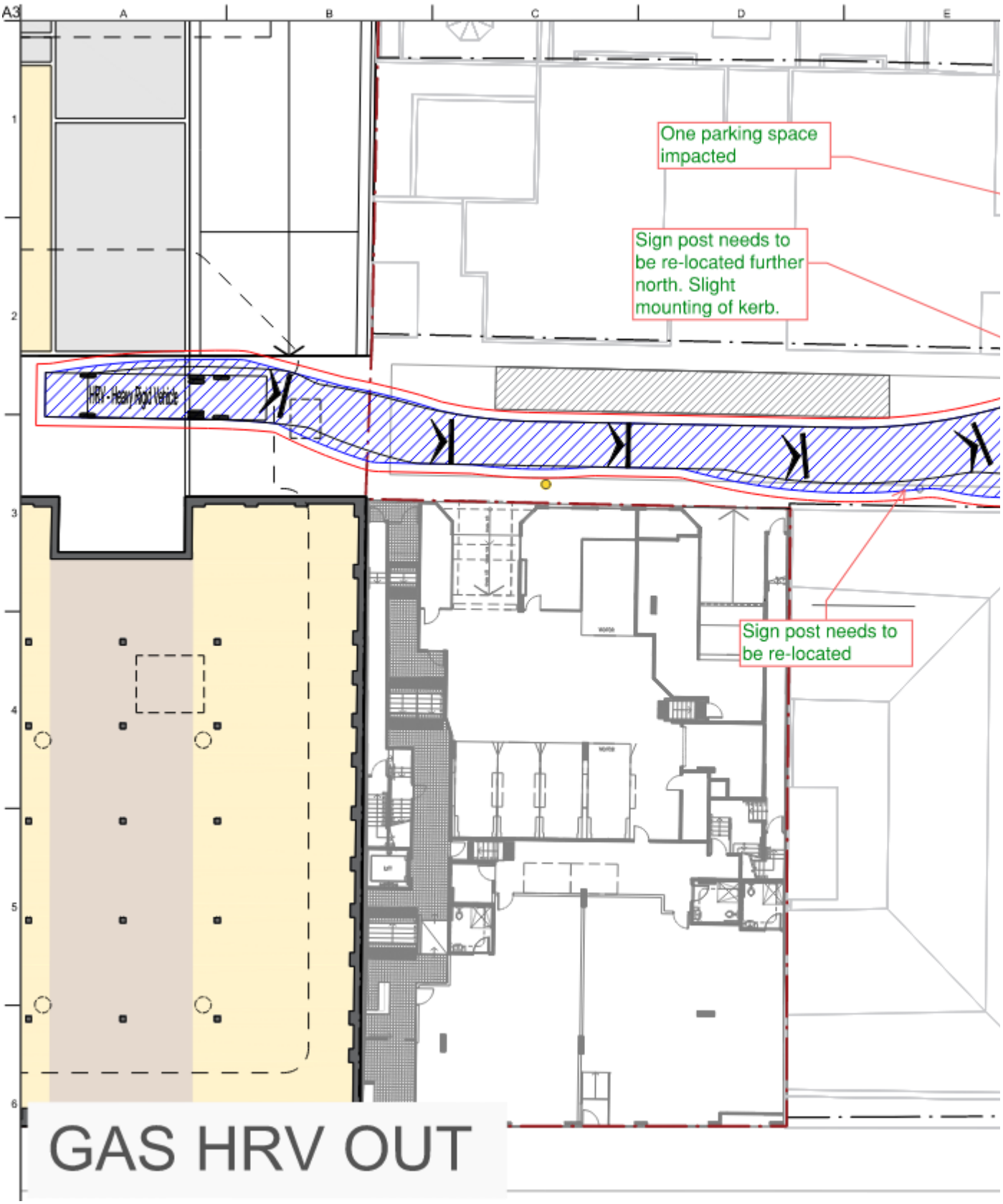
The following snips are confidential, can I please ask you don't share outside BOC at the time being, thanks.

Thanks for your time, my colleague Julian may add more clarity to our request.

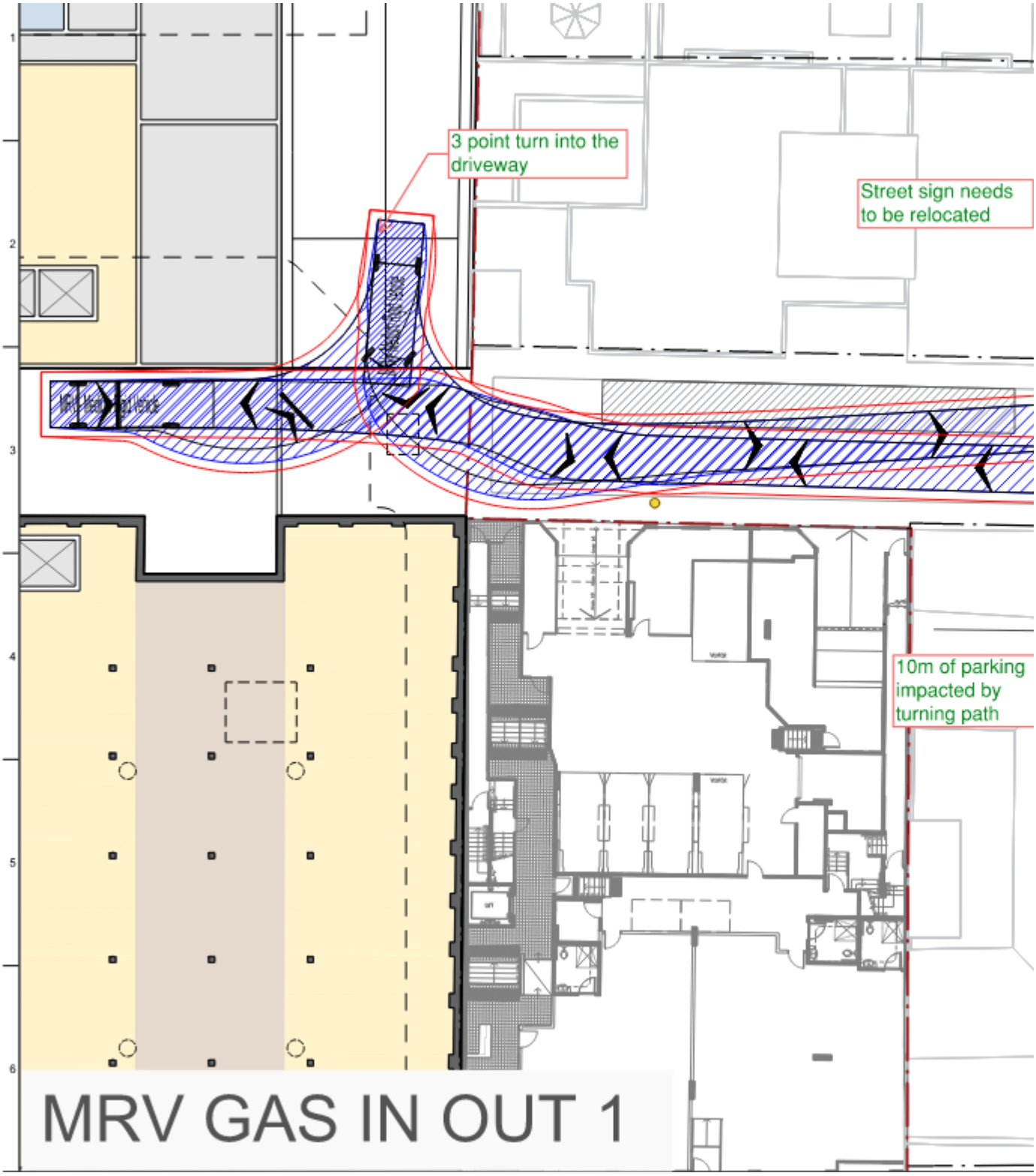
HRV IN option on the proposed site layout



HRV OUT option on the proposed site layout



MRV IN and OUT option



James Wilby
Mechanical Engineer

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Julian Soper

From: Justin Emmanuel <Justin.Emmanuel@boc.com>
Sent: Tuesday, 15 September 2026 1:17 PM
To: Julian Soper; James Wilby
Subject: RE: New high rise lab building camperdown

Hi Julian

Further to our conversation this afternoon, I can advise that a 8.8 metre entrance allowance will allow the BOC truck to be able to get in to deliver cylinders

Cheers

Justin

From: Justin Emmanuel
Sent: Monday, 7 September 2026 11:27 AM
To: 'Julian Soper' <Julian.Soper@arup.com>; James Wilby <James.Wilby@arup.com>
Subject: RE: New high rise lab building camperdown

Hi Julian

Thanks for the added detail. As soon as I get some advise from my team I will be in touch.

Please think about other options including dedicated traffic control for delivery during business hours, option for delivery after hours. If we have access to site 24/7 BOC can deliver at off peak hours with minimal disruption

Will talk shortly

Cheers

Justin

From: Julian Soper <Julian.Soper@arup.com>
Sent: Monday, 7 September 2026 11:15 AM
To: Justin Emmanuel <Justin.Emmanuel@boc.com>; James Wilby <James.Wilby@arup.com>
Subject: RE: New high rise lab building camperdown

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Hi Justin,

I think it would be best for us to have a discussion with you to talk through what the traffic engineers have looked at. Some options have traffic control (the question is who provides this), others don't. It isn't a particularly busy area- no worse than the RPA Hospital precinct where we understand liquid Oxygen tankers routinely deliver in some fairly difficult situations.

Attachment A18

Water cycle and stormwater management

ARUP
80 YEARS

Wentworth Capital

Life Sciences Hub, 84-94 Parramatta Road, Camperdown

Water Cycle & Stormwater Management Technical Memo

Reference: 304985-00

E | 30 July 2026



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Job number 304985-00

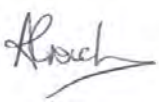
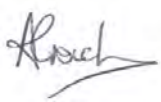
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Document Verification

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Document title	Water Cycle & Stormwater Management Technical Memo
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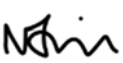
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A	4 July 2025	**Filename**	304985-00_Camperdown_Water Cycle & Stormwater Management Assessment Technical Memo
		Description	Camperdown Water Cycle & Stormwater Management Technical Memo

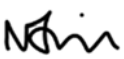
	Prepared by	**Checked by**	**Approved by**
Name	Nikita Sethi	Andrew Crouch	Andrew Crouch
Signature			

Revision	**Date**		
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		Description	Camperdown Water Cycle & Stormwater Management Technical Memo – Updated following EU comments

	Prepared by	**Checked by**	**Approved by**
Name	Nikita Sethi	Michael Burgess	Michael Burgess
Signature			

Revision	**Date**		
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		Description	Camperdown Water Cycle & Stormwater Management Technical Memo – Updated to latest reference scheme

	Prepared by	**Checked by**	**Approved by**
Name	Nikita Sethi	Michael Burgess	Michael Burgess
Signature			

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		Name	Nikita Sethi	Michael Burgess	Michael Burgess
		Signature			
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		Description	Camperdown Water Cycle & Stormwater Management Technical Memo – Updated to latest reference scheme		
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		Name	Nikita Sethi	Michael Burgess	Michael Burgess
		Signature			

Issue Document Verification with Document ✓

Contents

Glossary 6

Acronyms 6

1. Introduction 8
1.1 Site Description 8
1.2 Objectives 10
2. Relevant Stormwater Management Legislation 10
2.1 Sydney Development Control Plan 2012 10
2.2 Sydney Water On-site Stormwater Detention Policy 11
3. Existing Site Stormwater Management 11
3.1 Topography of the Site 11
3.2 Existing Stormwater Infrastructure 13
3.3 Existing Flood Behaviour 16
4. Post-Development Stormwater Management Concept Plan 19
4.1 Proposed development 19
4.2 Proposed Site Stormwater Drainage Network 20
4.3 Flood Management 21
4.4 Stormwater Quantity Management 22
4.5 Stormwater Quality Management 22
5. Summary 24

Tables

Table 1: Summary of Best Practice WSUD Devices 23

Figures

Figure 1: Locational Context 9
Figure 2: Site Location 10
Figure 3: Johnstons Catchment CoS Topography 12
Figure 4: Site Topography 13
Figure 5: Creeks Surrounding Site 14
Figure 6: Sydney Water Trunk Drainage Line 16
Figure 7: Peak Flood Depths 1% AEP Event 18
Figure 8: Peak Flood Depths PMF Event 18
Figure 9: Planning Envelope for proposed development 19
Figure 10: Proposed development- 3D Perspective 20
Figure 11: Site Discharge Points 21

Appendices

Appendix A

Post-development Stormwater Management Concept Plan

Appendix B

Correspondence with Sydney Water

Glossary

Term	Meaning
Annual Exceedance Probability (AEP)	The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. 1% AEP flood is approximately equal to 1 in 100 year Average Recurrence Interval (ARI) flood event (or simply 100 year flood). It has 1% chance of occurring in a given year.
Australian Height Datum (AHD)	A common national plan of level corresponding approximately to mean sea level.
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrence of a flood as big as or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 100 year ARI flood event occurs on average once every 100 years.
Basement Car Parking or Below-Ground Car Parking	The car parking area generally below ground level where inundation of the surrounding areas may raise water levels above the entry level to the basement, resulting in inundation. Basement car parks are areas where the means of drainage of accumulated water in the car park has an outflow discharge capacity significantly less than the potential inflow capacity.
Flood Planning Level (FPL)	The combinations of flood levels and freeboards selected for floodplain risk management purposes, as determined in flood studies and floodplain risk management studies and plans.
Floodplain	The area of land which is subject to inundation of floods up to and including the probable maximum flood (PMF) event. (Interim Floodplain Management Policy 2014)
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation.

Acronyms

Acronym	Definition
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ARI	Average Recurrence Interval
ARR	Australian Rainfall and Runoff
BoM	Bureau of Meteorology
BYDA	Before You Dig Australia
CoS	City of Sydney
DCP	Development Control Plan
DEM	Digital Elevation Model
FIRA	Flood Impact and Risk Assessment
FPL	Flood Planning Level
FSR	Floor Space Ratio
GFA	Gross Floor Area

Acronym	Definition
GPT	Gross Pollutant Trap
LEP	Local Environmental Plan
LGA	Local Government Area
NSW	New South Wales
OSD	On-site Detention
PMF	Probable Maximum Flood
SWC	Sydney Water Corporation
WSUD	Water Sensitive Urban Design

1. Introduction

This Water Cycle & Stormwater Management Technical Memo is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the *Sydney Local Environmental Plan 2012* for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown.

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88 – 94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site-specific provision for 88-94 Parramatta Road that enables up to 6.5:1 floor space ratio for non-residential uses only.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.5:1 floor space ratio (retaining the existing MU1 Mixed Use zone)
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

1.1 Site Description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1.

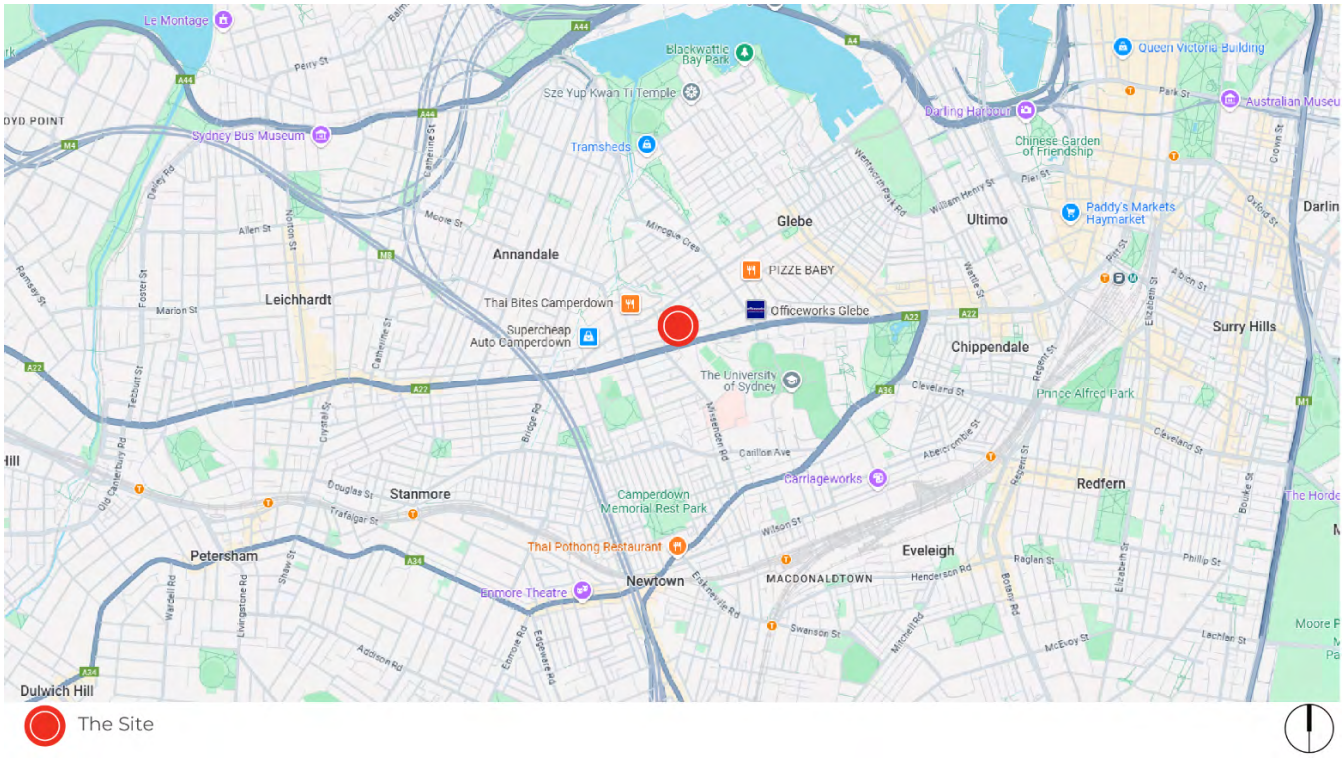


Figure 1: Locational Context

Source: Google Maps, edits by Collier Urban Planning.

An additional map showing the site location is provided in Figure 2.

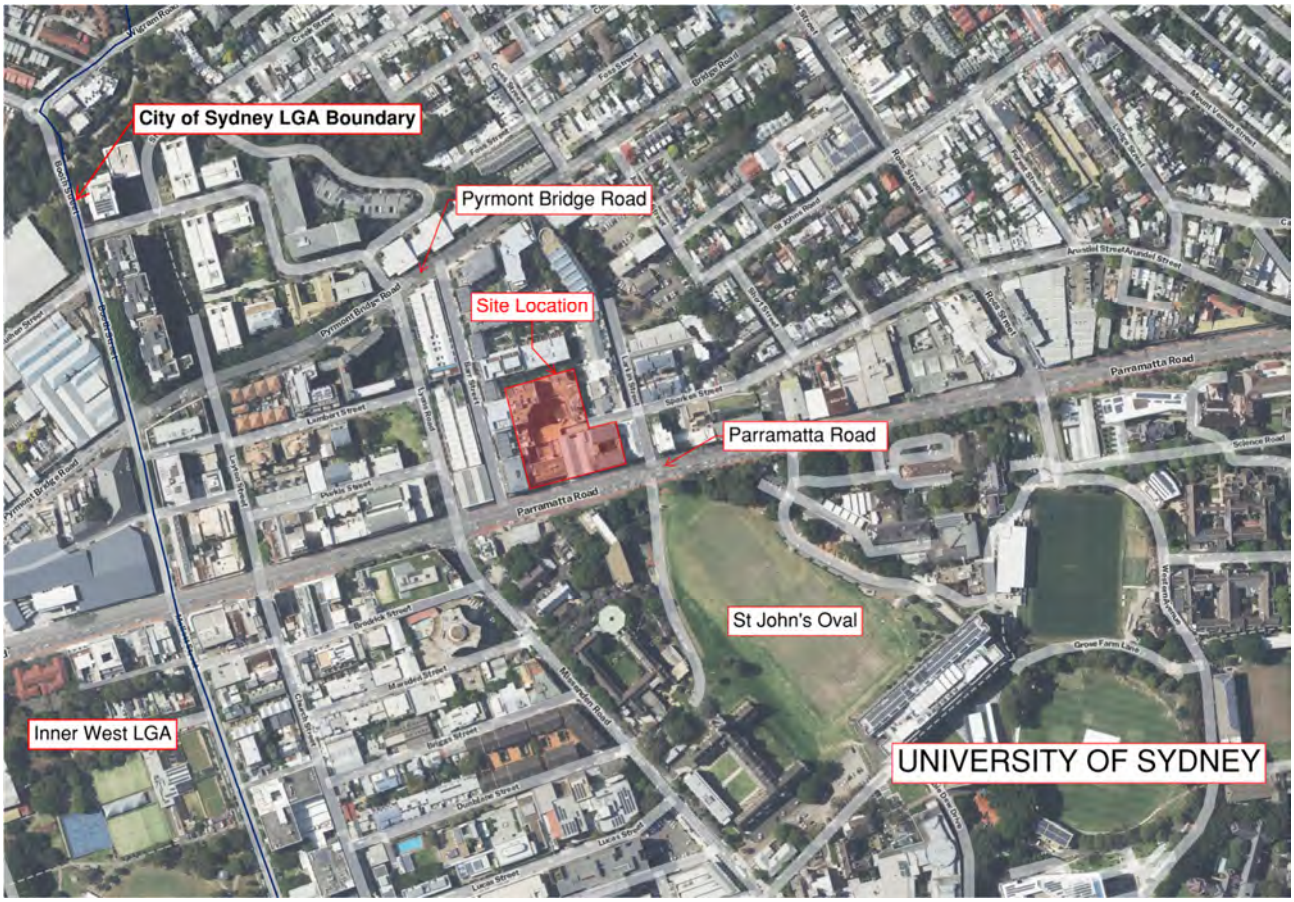


Figure 2: Site Location

Map Source: NSW Spatial Digital Tin (SDT) Explorer

1.2 Objectives

This water cycle and stormwater management assessment includes the following:

- Description of existing stormwater network surrounding the site;
- Description of high-level water cycle management options on the site;
- Water cycle management strategy, including provisions for stormwater and Water Sensitive Urban Design (WSUD);
- Post-development stormwater management concept design layout plan.

2. Relevant Stormwater Management Legislation

2.1 Sydney Development Control Plan 2012

The Sydney Development Control Plan 2012 (DCP) applies to the development of the site. It includes controls related to stormwater management, in addition to other planning controls, that must be adhered to. Particular controls related to stormwater are included in Section 3.7 of the DCP.

2.1.1 Drainage and Stormwater Management

Section 3.7.2 includes a summary of controls related to stormwater management for development proposals. The key requirements of this section include that a local drainage management plan is required for sites

greater than 1,800m^2 in size. Minor drainage systems for sites greater than 1,000m^2 are required to convey the 5% average exceedance interval event, with the major drainage network conveying larger events.

The DCP requires that post-development stormwater volumes during an average rainfall year are the greater of a) 70% of the volume if no measures were applied to reduce stormwater volume or, b) the equivalent volume generated if the site were 50% pervious. Stormwater detention devices are to be designed to ensure that overland flow paths have sufficient capacity in all design rainfall events, discharge to the public stormwater system without affecting adjoining properties.

2.1.2 Stormwater Quality

Section 3.7.3 includes a summary of controls related to stormwater quality for development proposals. The following stormwater quality reduction targets apply to developments greater than 1,000m^2 in size:

- Reduce the baseline annual pollutant load for litter and vegetation larger than 5mm by 90%;
- Reduce the baseline annual pollutant load for total suspended solids by 85%;
- Reduce the baseline annual pollutant load for total phosphorus by 65%;
- Reduce the baseline annual pollutant load for total nitrogen by 45%.

This performance is to be confirmed in a site stormwater quality assessment including water quality modelling, in subsequent stages.

2.1.3 Water re-use, recycling and harvesting

Section 3.7.5 contains a clause that says: “Development proposals that seek to re-use water runoff from paved surfaces for irrigation and wash down purposes are to incorporate measures into the design of the development that will treat the water to ensure that it is fit for this purpose. These measures are to clean the water to exclude contaminants such as litter, sediment and oil”.

2.2 Sydney Water On-site Stormwater Detention Policy

The requirements for on-site detention (OSD) in the City of Sydney Local Government Area are outlined in the Sydney Water On-site Stormwater Detention Policy 2021. This policy states that, “the OSD system must be site-specific and off-set the stormwater runoff coming from the development”. It is a requirement that any OSD system must be able to store runoff caused by the storm up to the 100-year Average Recurrence Interval (1% AEP equivalent), and that runoff is discharged in a controlled manner that downstream stormwater assets can handle.

Some developments may be exempt from providing OSD based on their site area, location in the catchment or where an existing building is being refurbished and the existing drainage system is being maintained.

3. Existing Site Stormwater Management

3.1 Topography of the Site

3.1.1 Catchment topography

The site is situated within Johnstons Creek Catchment, which spans both the CoS and Inner West LGA’s. The proposed development site lies completely within the CoS LGA.

The site is located approximately halfway down the Johnston’s Creek catchment on its eastern side. The catchment slopes from south to north, with its topography steep in upper areas, and generally flatter further down the catchment particularly in the lower areas close to Rozelle Bay. The topography and boundary of the portion of the catchment within the CoS LGA is seen in Figure 3.

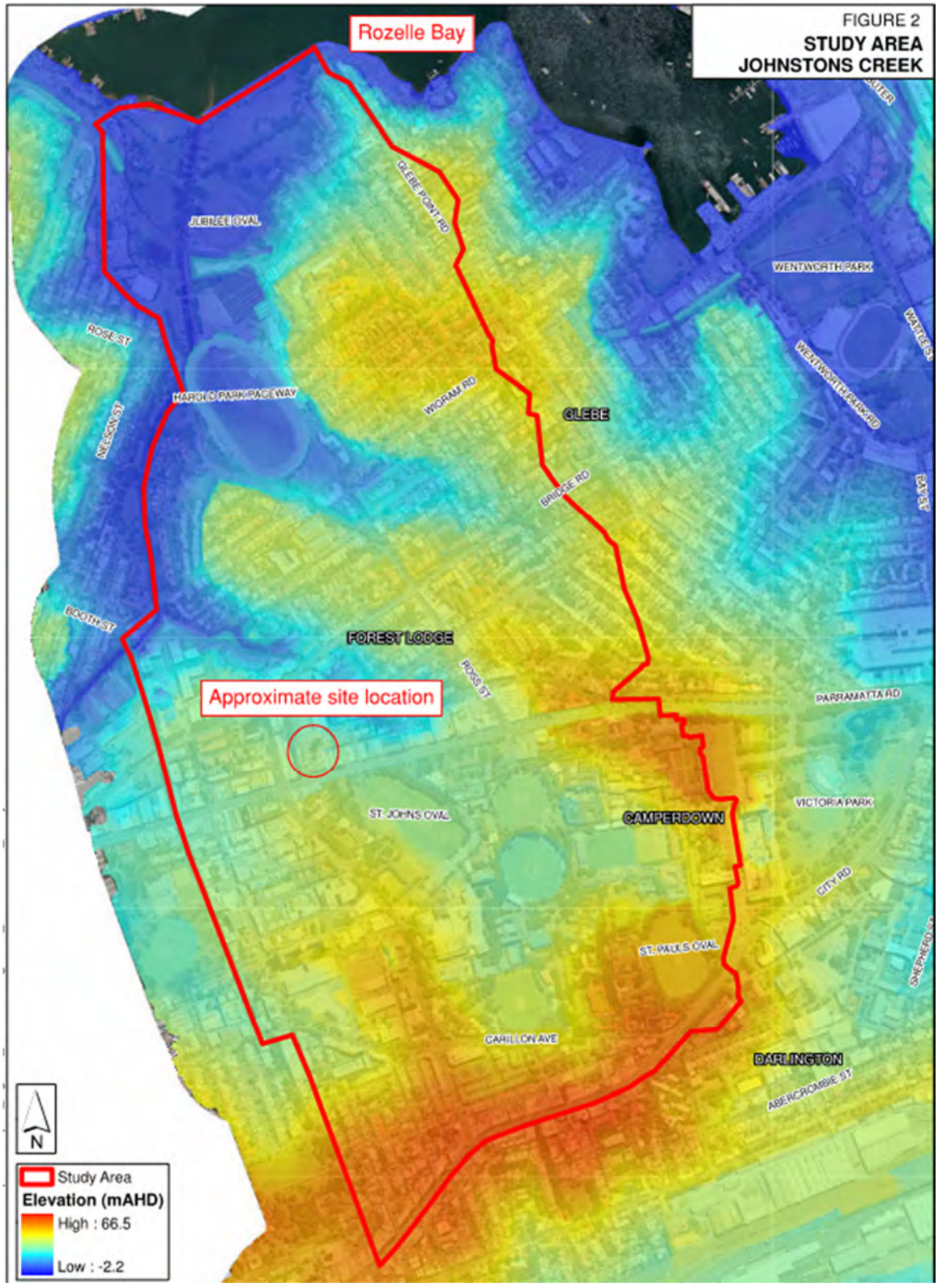


Figure 3: Johnstons Catchment CoS Topography

Source: CoS Johnstons Creek Catchment Flood Study (WMAwater, 2015)

3.1.2 Site topography

Figure 4 shows the existing site topography. Survey of the site undertaken by Crux Surveying Australia in 2024 was used as an input to the figure.

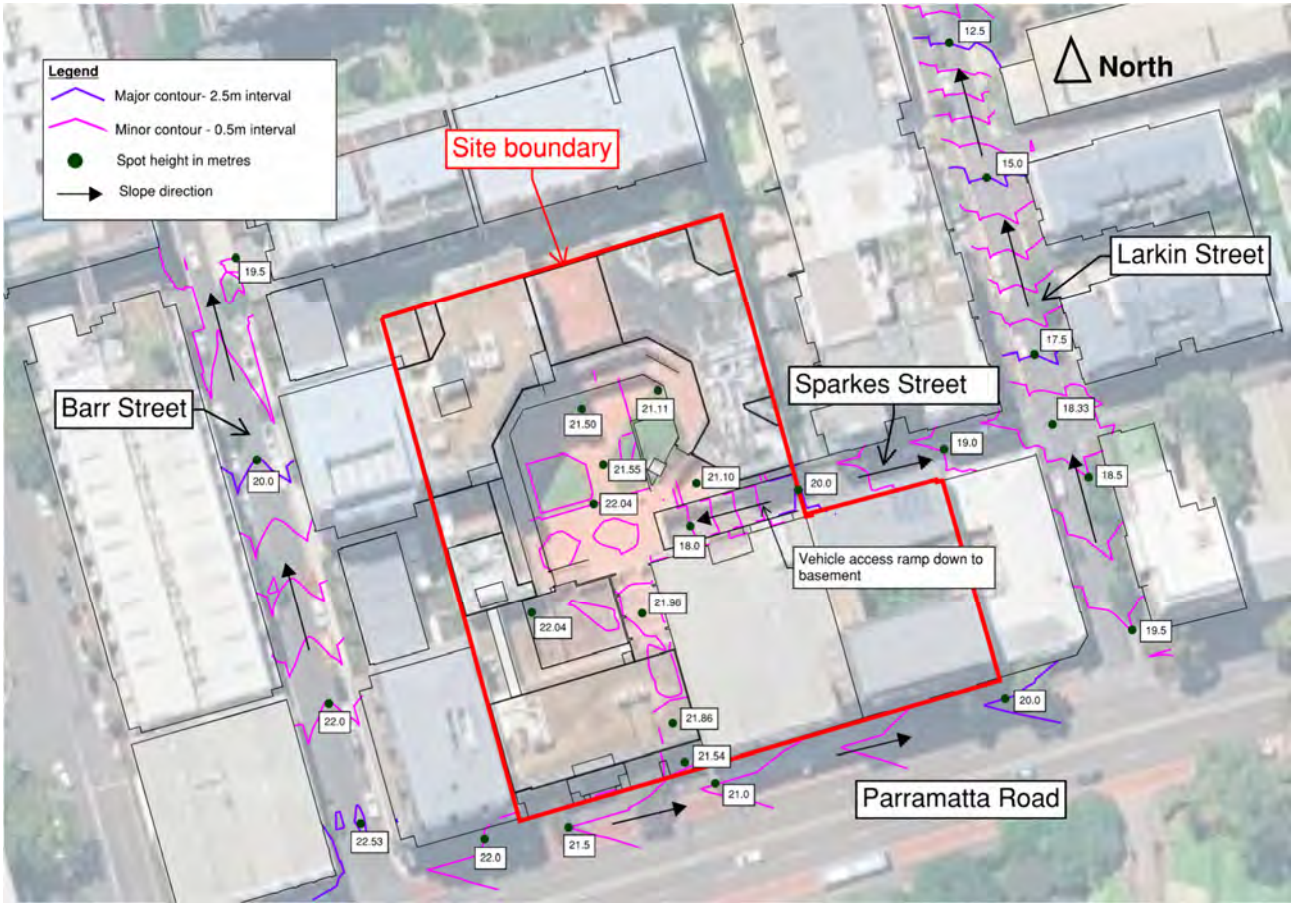


Figure 4: Site Topography

The site topography slopes from south to north along Barr Street and Larkin Street. Additionally, the site slopes from west to east along Parramatta Road. It is to be noted that Sparkes Street connects into the site, and slopes west to east from the basement entrance towards Larkin Street, with the basement entrance starting at 20.0m AHD. On the south side of the basement entrance there is a vehicle access ramp that slopes down to the basement of the existing building. Within the site boundary levels vary due to existing constructed elements.

3.2 Existing Stormwater Infrastructure

3.2.1 Overview

The Johnstons Creek catchment is serviced by a major and minor drainage system. Stormwater runoff from properties is first directed into the CoS owned minor street drainage network, and then these flows are routed into the Sydney Water owned and maintained SWC55 trunk drainage system. Stormwater flows at the existing site all flow from the upper catchment, from south to north. Flows in the SWC55 are eventually discharged into the Rozelle Bay via a large open channel.

It can be seen in Figure 5 the location of the site in relation to Orphan School Creek, Johnstons Creek, and Rozelle Bay, where stormwater from the site will ultimately be discharged to.

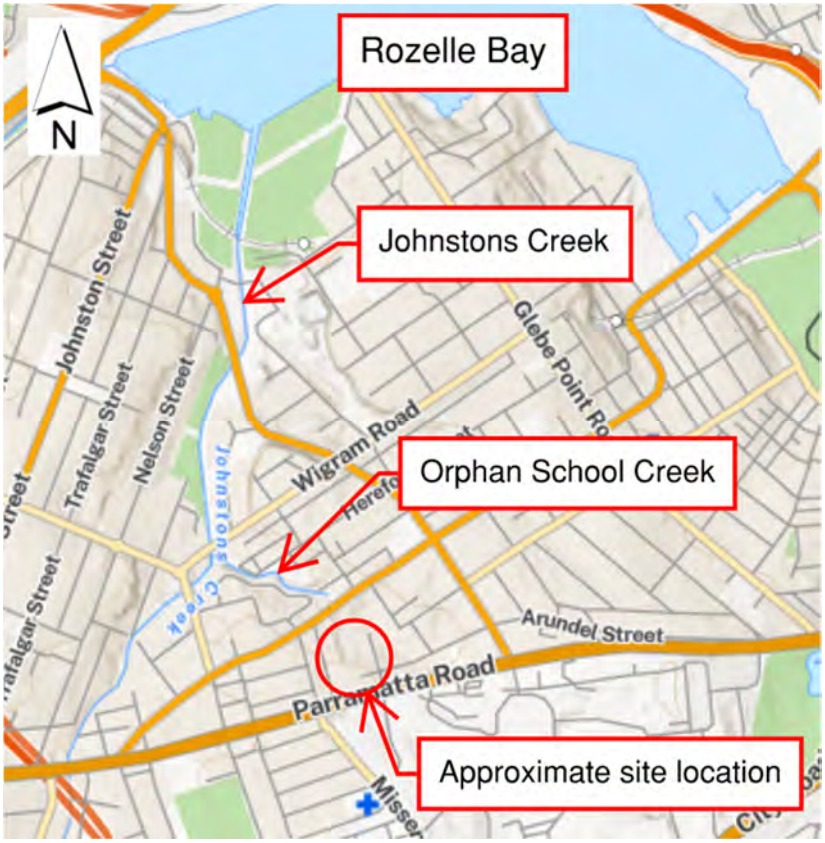


Figure 5: Creeks Surrounding Site

Map Source: NSW Spatial Digital Tin (SDT) Explorer

3.2.2 Stormwater Infrastructure Surrounding the Site

Information on existing stormwater infrastructure surrounding the site was obtained from:

- Subsurface utilities investigation conducted by Crux Surveying Australia, dated 24 August 2024;
- Responses from Before You Dig Australia (BYDA) enquiries made on the 29 May 2025 and 17 June 2025;
- CoS Johnstons Creek Catchment Flood Study by WMAwater, Final Report, September 2015;
- Google street view at and surrounding the site location.

Existing stormwater infrastructure in the immediate vicinity of the site belongs to CoS and is shown in Figure 6.

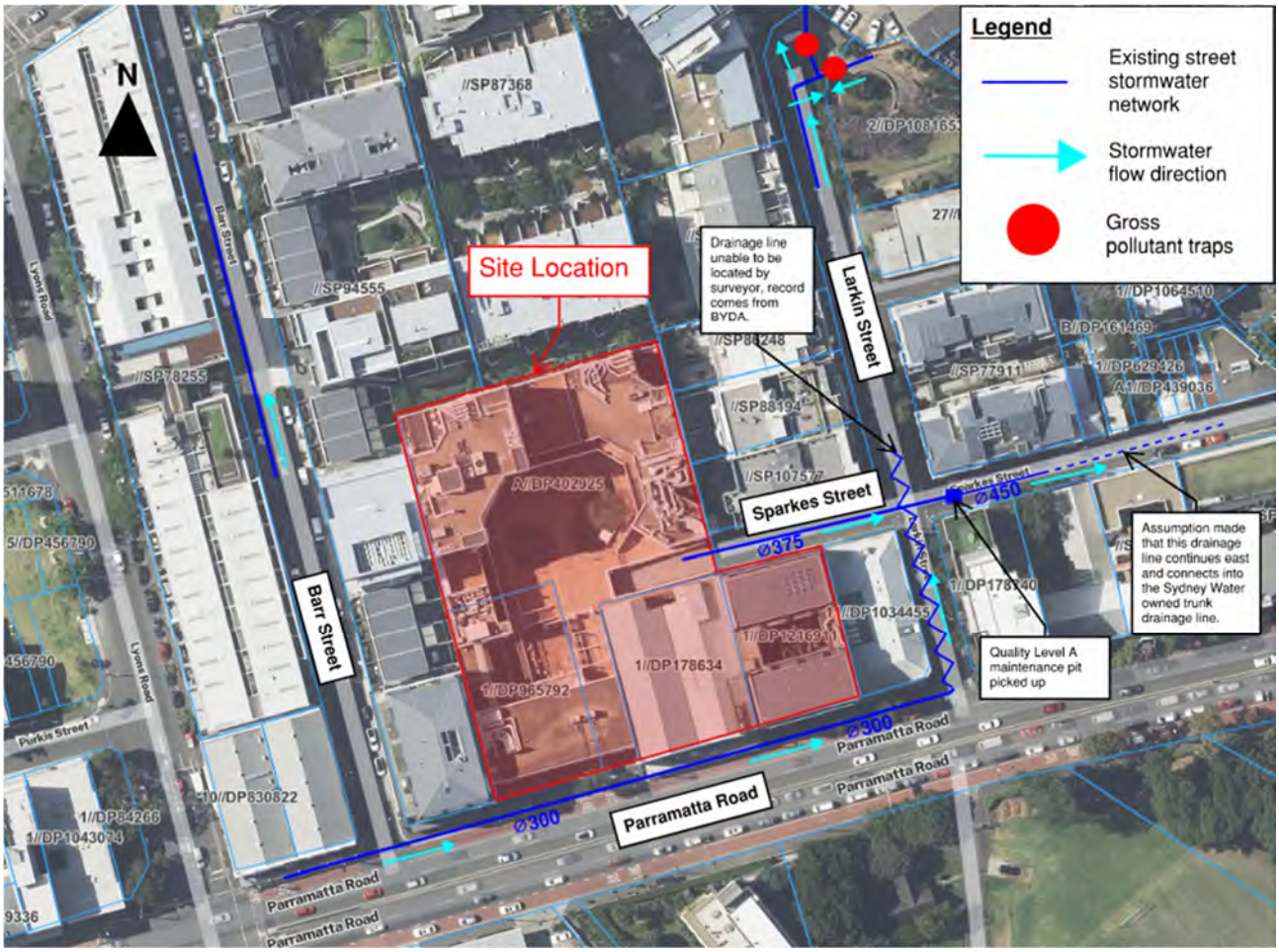


Figure 6: Existing Stormwater Infrastructure Surrounding the Site

Map Source: NSW Spatial Digital Tin (SDT) Explorer

There is a 300mm diameter drainage line that runs west to east along Parramatta Road that carries runoff from part of the existing site. This drainage line is assumed to connect into a line that runs north up Larkin Street according to BYDA data, although it is noted this drainage line was unable to be located by Crux Surveyors. From here this runoff drains to the east in a 450mm drainage line according to the survey data, and it is assumed this drainage line continues east along Sparkes street and connects into the Sydney Water trunk drainage network seen in Figure 6, based on the existing fall of the road.

There is also a 375mm drainage line that runs east along Sparkes Street that also connects into the 450mm line which carries runoff from part of the existing site and eventually drains into the trunk drainage network.

It is recommended that the unlocated drainage line that runs north on Larkin Street is further investigated in subsequent stages to confirm its existence, connection points, and route. Additionally, drainage infrastructure along Sparkes street east of its intersection with Larkin Street should be confirmed.

For the purpose of this assessment, it has been assumed that all stormwater runoff from the existing site either drains south into the Parramatta Road drainage line, or east into the Sparkes Street drainage line, with all runoff eventually draining east into the Orphan School Creek Branch of the Sydney Water trunk drainage network.

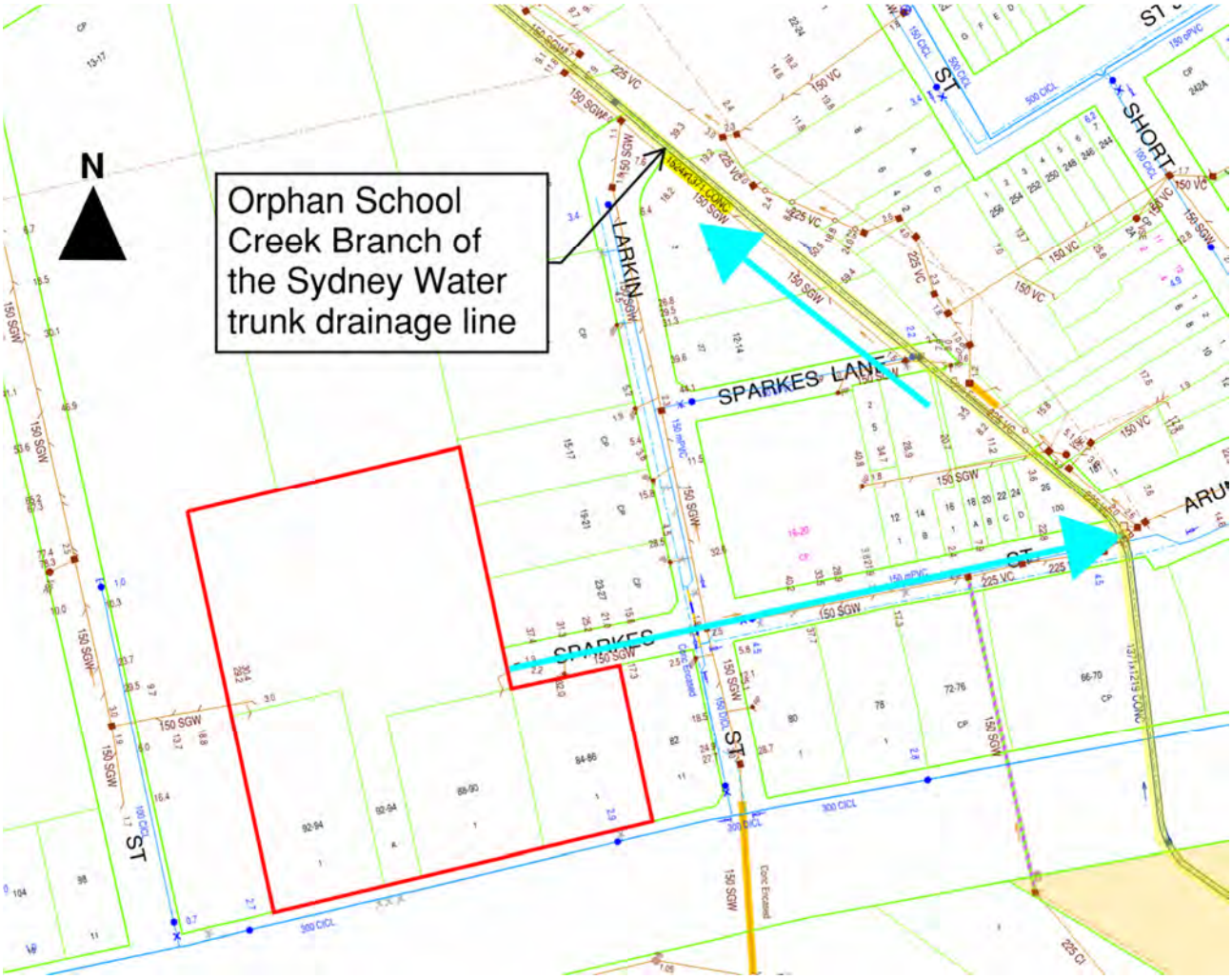


Figure 6: Sydney Water Trunk Drainage Line

Source: BYDA response- (Sydney Water, 2025)

3.2.3 Riparian Corridor

There are no riparian corridors that run through the site. The nearest riparian corridor is for the Orphan School Creek watercourse. This watercourse is classified as being a first order watercourse in accordance with the Strahler system. This riparian corridor is located approximately 180m from the site location.

See Figure 5 for the location of the Orphan School Creek watercourse.

3.3 Existing Flood Behaviour

The flood study applicable to the proposal is the Johnstons Creek Catchment Flood Study (WMAwater, 2015), prepared for the City of Sydney. The flood model was reviewed by Arup and minor updates were made to reflect the present-day site condition.

The results indicate the site is located on the fringe of an overland flow path, located to the east of the site. Flooding is predicted to occur once the capacity of the stormwater network is exceeded, particularly within trapped sag points (e.g. Parramatta Road), from which surface flows cannot easily escape. Larkin Street acts as an overland flow path corridor once the water level within the trapped sag at Parramatta Road ponds high enough to drain away to the north. This overland flow path is activated in events as frequent as the 20% AEP. There are no other overland flow routes draining from the Parramatta Road sag point, which makes this area susceptible to localised flooding.

Flood depths at the site from the revised baseline model prepared by Arup are shown in Figure 7 for the 1% AEP event, and in Figure 8 for the Probable Maximum Flood (PMF).

In the 1% AEP event, flooding affects a small portion of the Parramatta Road corridor on the south-east boundary of the site area (Figure 7), with the peak depth of 0.10 m adjacent to the existing Veriu building at the south-east corner of the site. The majority of the site is above the 1% AEP flood level.

In the PMF, the majority of the southern frontage on Parramatta Road is impacted by flooding. The peak flood level within the sag point at Parramatta Road is approximately 21.72 m AHD, and the depth is predicted to be 2.45 m. Results from the updated flood model by Arup indicate that the existing basement car park entrance is not impacted by flooding within Sparkes Street and Larkin Street.

Further details on the flood risk to the site and a description of updates made to the flood models provided by Council can be found in the *Life Sciences Hub, 84-94 Parramatta Road Camperdown Flood Risk Assessment Technical Memo*.



Figure 7: Peak Flood Depths 1% AEP Event

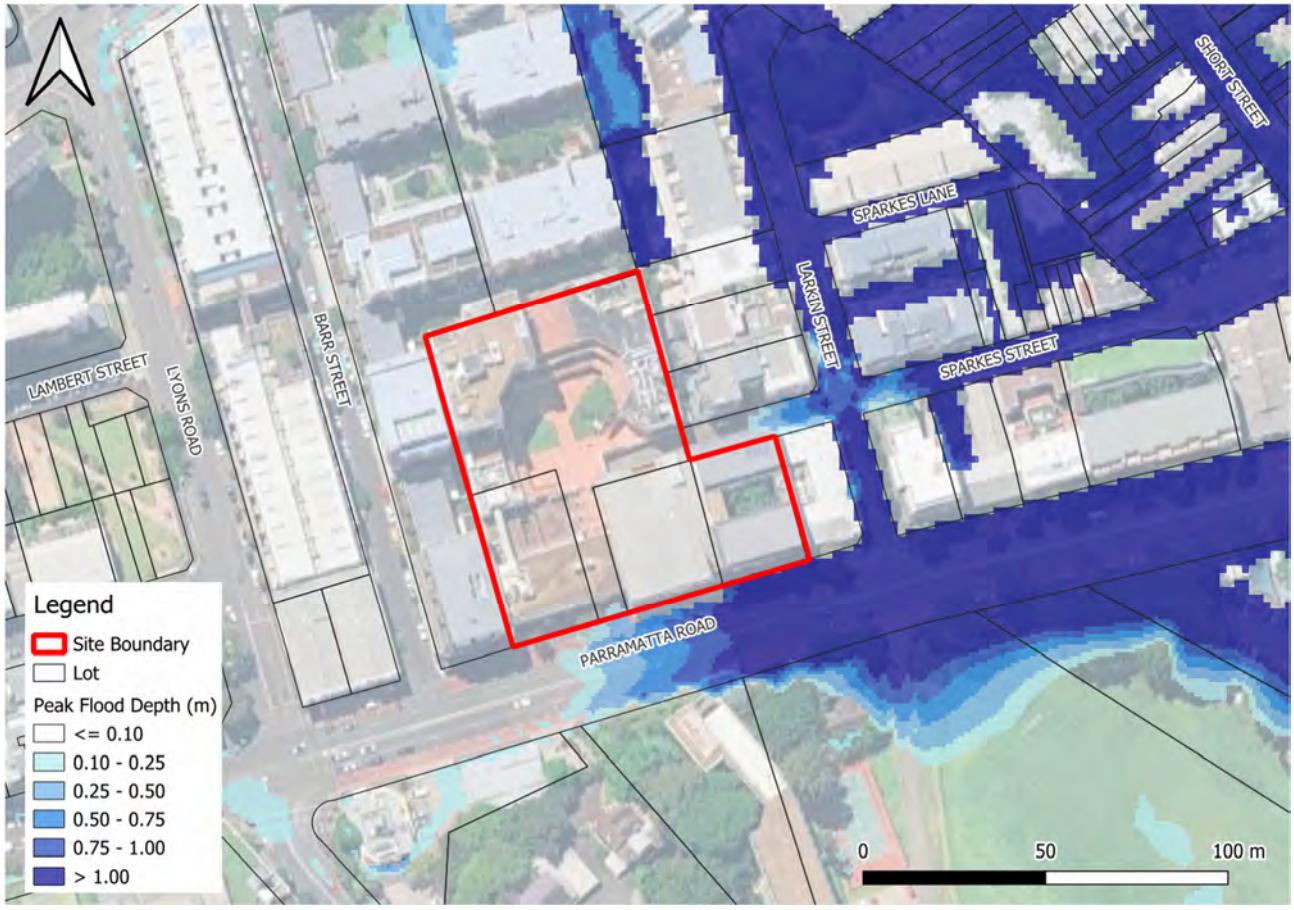


Figure 8: Peak Flood Depths PMF Event

4. Post-Development Stormwater Management Concept Plan

4.1 Proposed development

Figure 9 illustrates the planning envelope for the Planning Proposal being prepared for the site. This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Colliers Urban Planning.

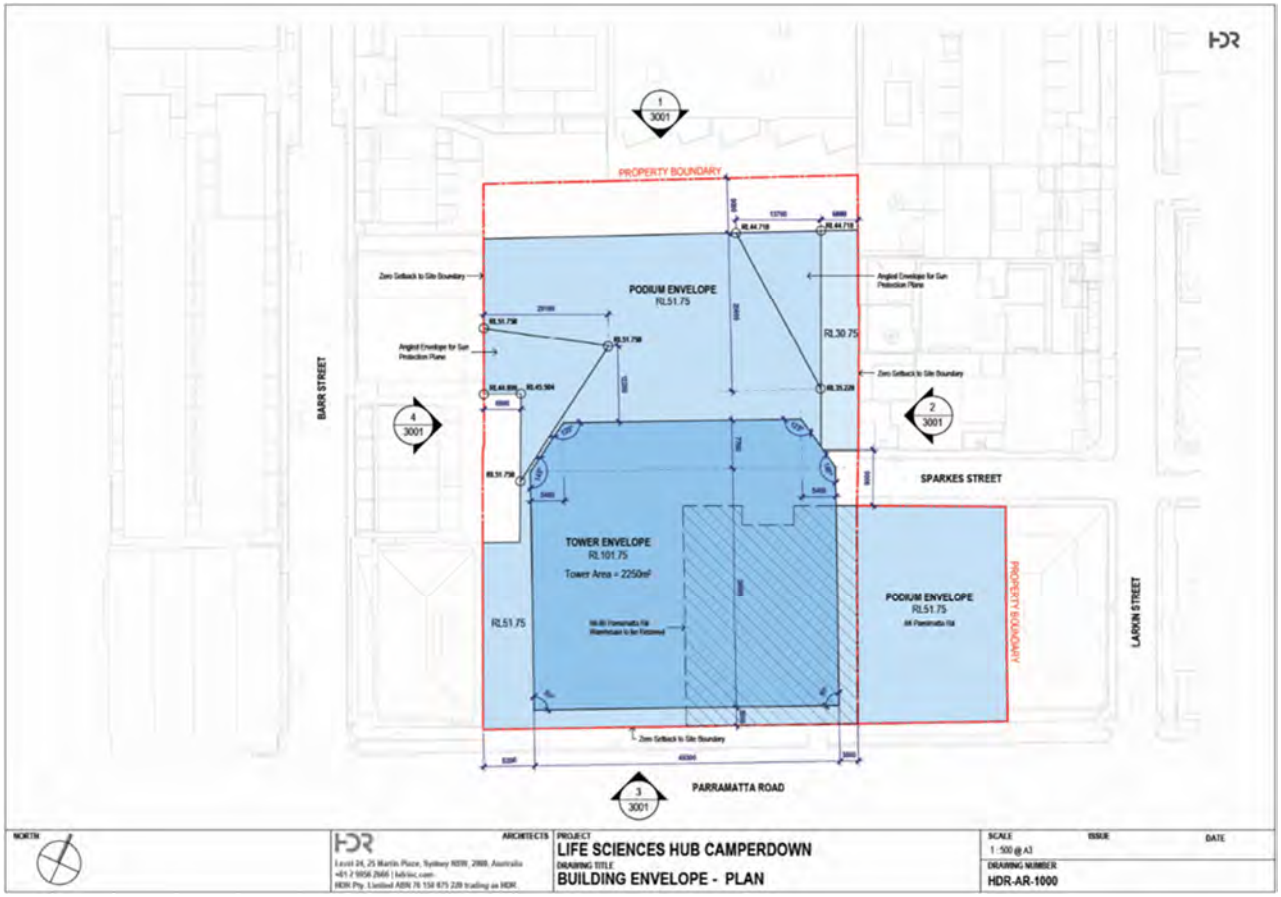


Figure 9: Planning Envelope for proposed development

A reference design developed in line with the planning envelope has been developed and a 3d perspective is illustrated in Figure 10. The development comprises:

- **Life Science Tower Block** - 27,685 m^2 GFA, 15 storeys + 2 plant levels & 3 basement levels (80 m height)
- **Ancillary Life Science Block** – 6,647 m^2 GFA, 8 storeys (29.7 m height)
- **Serviced Apartments Block (Veriu)** – 3,545 m^2 GFA, 9 storeys – 6 existing + 3 additional (29.3 m height)

The total development site area is approximately 6,200 m^2.

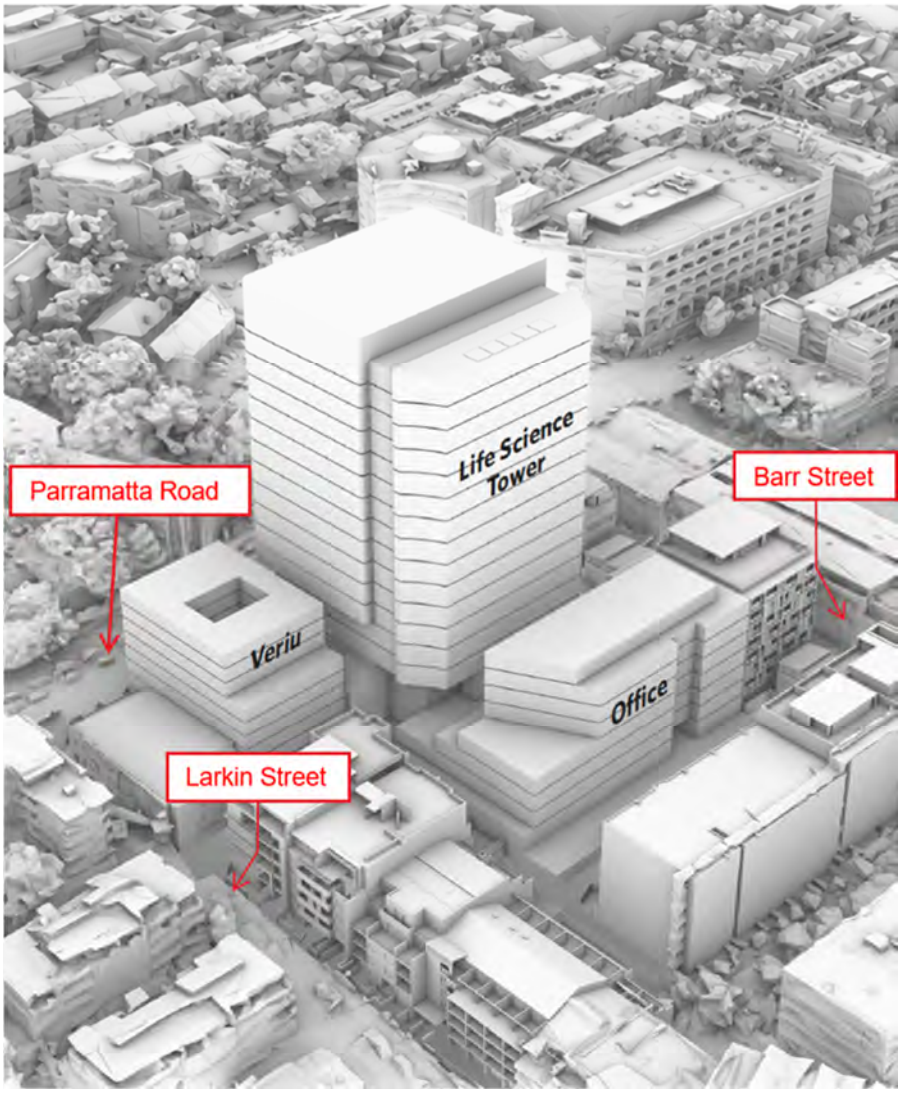


Figure 10: Proposed development- 3D Perspective

Source: Wentworth Capital

For the purpose of this technical memo, the reference design drawings have been utilised as a basis for commenting on the ability of the proposed development to achieve CoS stormwater quantity, quality floodplain management requirements.

4.2 Proposed Site Stormwater Drainage Network

Stormwater runoff from the new Life Science Tower and Life Science Education blocks will be directed to a proposed discharge point east of the site on Sparkes street. Roof drainage from the Veriu Serviced Apartments will utilise the existing discharge points on Parramatta Road.

Stormwater runoff from the development will be captured from each of the new building roofs, the laneways and landscaped areas through a proposed site drainage network, and then be discharged to a rainwater tank that will sit on basement level 1 in the services and storage area. A Gross Pollutant Trap (GPT)/ cartridge filtration system is proposed to be placed downstream of the rainwater tank to provide additional treatment prior to discharge to the existing Sparkes Street drainage pit.

These proposed and retained discharge points are shown on Figure 11.

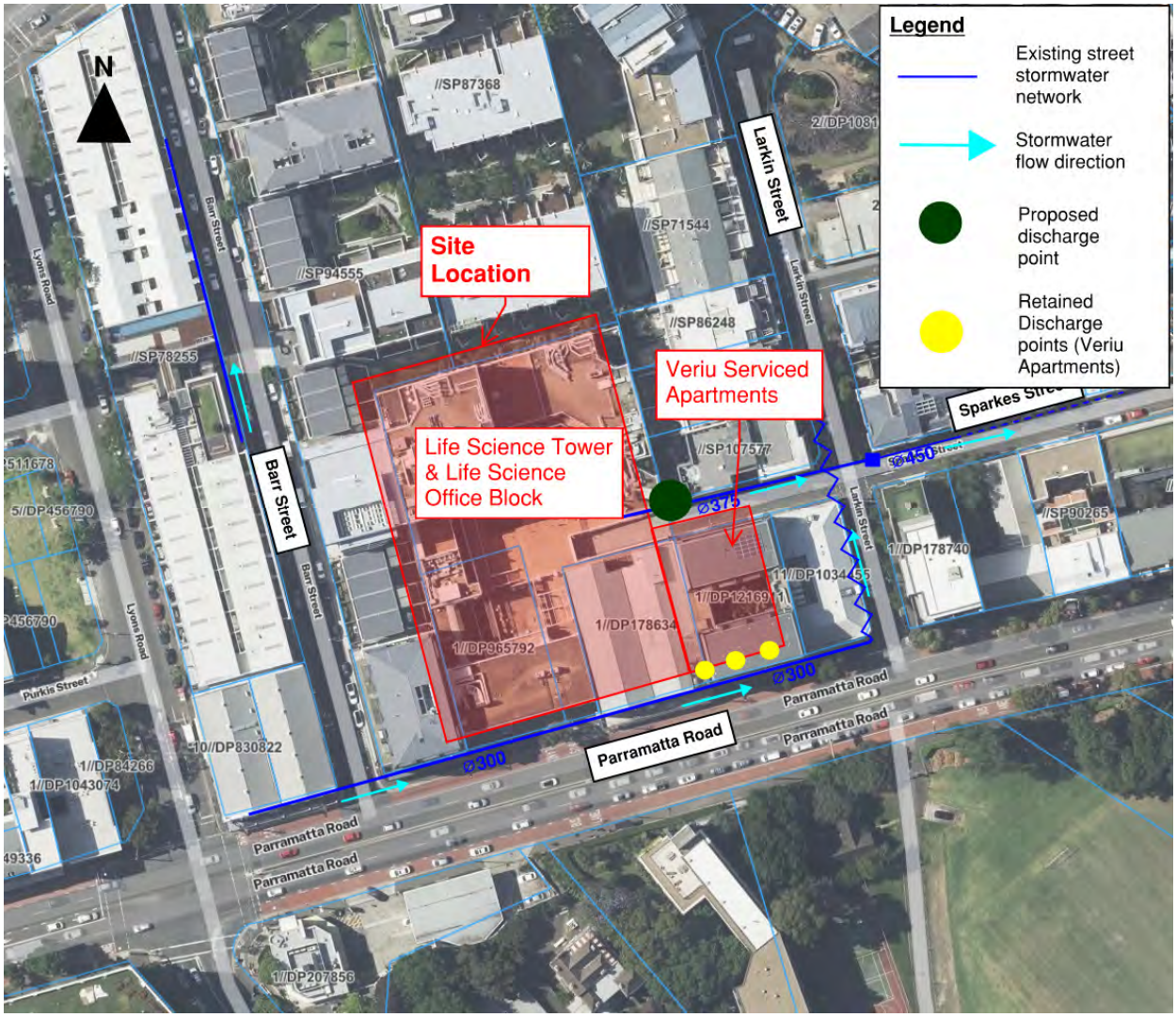


Figure 11: Site Discharge Points

Map Source: NSW Spatial Digital Tin (SDT) Explorer

Further details on how stormwater will be managed at the proposed site are found in Appendix A , which contains a Post-development Stormwater Management Concept Plan. It should be noted this concept plan has been developed for the purpose of this Planning Proposal only and will be need to refined following further design development prior to a DA submission.

4.3 Flood Management

As discussed in the *Life Sciences Hub, 84-94 Parramatta Road Camperdown Flood Risk Assessment Technical Memo*, whilst the site is located on the fringe of the floodplain, the proposed development can mitigate the flood risks through the application of controls in the CoS Sydney Interim Floodplain Management Policy 2014 and consideration of other relevant guidelines such as the NSW Flood Risk Management Manual.

The proposal is not anticipated create significant adverse impacts to surrounding receptors since the proposed building footprint remains similar to the existing condition, the impervious fraction of the site is not anticipated to increase, and no new overland flow paths will be created or blocked as a result of the development. The ground floor level of the proposed Life Sciences building is to be set above the PMF level (at 21.75 m AHD) and the new basement entrance at Sparkes Street is proposed to have a crest level of 20.5 m AHD, which is above the adjacent PMF level at Sparkes Street.

Further details can be found in the *Life Sciences Hub, 84-94 Parramatta Road Camperdown Flood Risk Assessment Technical Memo*.

4.4 Stormwater Quantity Management

The proposed development of the site will not alter the overall building footprint of the site and thus will not result in an increase in the current impervious fraction of the site.

Sydney Water were contacted directly on 16 June 2025 for advice as to whether the development would require OSD. Sydney Water responded on 19 June 2025 to advise that there is an agreement with the University of Sydney that OSD will not be required within the Camperdown Campus if the stormwater runoff drains to Johnstons Creek. Since the future owner of this development is the University of Sydney and the stormwater runoff drains to Johnstons Creek, OSD is not required and is not proposed as part of this development. This correspondence with Sydney Water is included in Appendix B. Note this may need to be confirmed again during the detailed DA.

4.5 Stormwater Quality Management

In order to meet CoS's water quality reduction targets as outlined in 2.1.2 of this memo, a preliminary strategy for stormwater quality management has been proposed that includes a rainwater tank and a GPT/cartridge filtration system. These devices will be sized to meet the CoS water quality targets. There is also the opportunity to assess the feasibility of other treatment methods such as green roofs and bioretention. These strategies would be considered in more detail as part of the future detailed design DA.

The final arrangement and design of these features will be determined at later design stages, with the performance of the proposed treatment train to be confirmed using MUSIC water quality modelling.

A summary of these potential strategies and their associated benefits is included in Table 1.

Stormwater Quality Treatment Measure	Description	Example Photos
Gross pollutant trap	Gross pollutant traps (GPTs) are stormwater quality improvement devices which can be located at points of entry into the stormwater network, on-line within intermediate pits along the network, or at discharge points. GPTs improve stormwater quality by removing visually obtrusive litter and even coarse sediment (depending on the device selected). GPTs are most suitable at locations that generate high levels of litter, such as commercial areas.	 Image source: Blacktown City Council, n.d.
Cartridge filtration system	Cartridge filtration systems such as Ocean Protect's JellyFish and StormFilter are offline stormwater quality treatment measures that primarily target the removal of finer pollutants including suspended solids, and particulate-bound pollutants (nutrients, metals and hydrocarbons).	 Image source: Ocean Protect, 2024

Stormwater Quality Treatment Measure	Description	Example Photos
Rainwater tank	Rainwater tanks (above-ground or below-ground) collect runoff from the roof which is stored for reuse. While the main purpose of rainwater harvesting is conservation of water by reducing potable water demand, rainwater tanks also improve stormwater quality by removing the pollutants contained within the roof runoff when this is captured by the tank.	 Image source: Blacktown City Council, n.d.
Green roofs	Multi-layered systems that cover the roof of a building with vegetation cover/landscaping over a drainage layer. Designed to intercept and retain precipitation, reducing the volume of runoff and attenuating peak flows. Mimics greenfield state of building footprint for high density developments, good removal of pollutants	 Image source: Green Roofs Australia, 2015
Bioretention basin / Raingarden	Bioretention basins / raingardens are densely planted basins comprised of appropriate vegetation and filtration media. They are recognised to have high nutrient removal performance. Stormwater filtered through the densely planted vegetation percolates through the filter media, where nutrients are retained through fine filtration, adsorption and some biological uptake.	 Image source: Landscape & Urban Design, 2014

Table 1: Summary of Best Practice WSUD Devices

5. Summary

A review of available information for the proposed redevelopment at 88-94 Parramatta Road, Camperdown, has been undertaken to determine water cycle and stormwater management requirements at the site. A proposed stormwater management strategy has also been prepared based on the reference design drawings provided, consistent with the planning envelope for the site illustrated in Figure 9. The key outcomes of this review include:

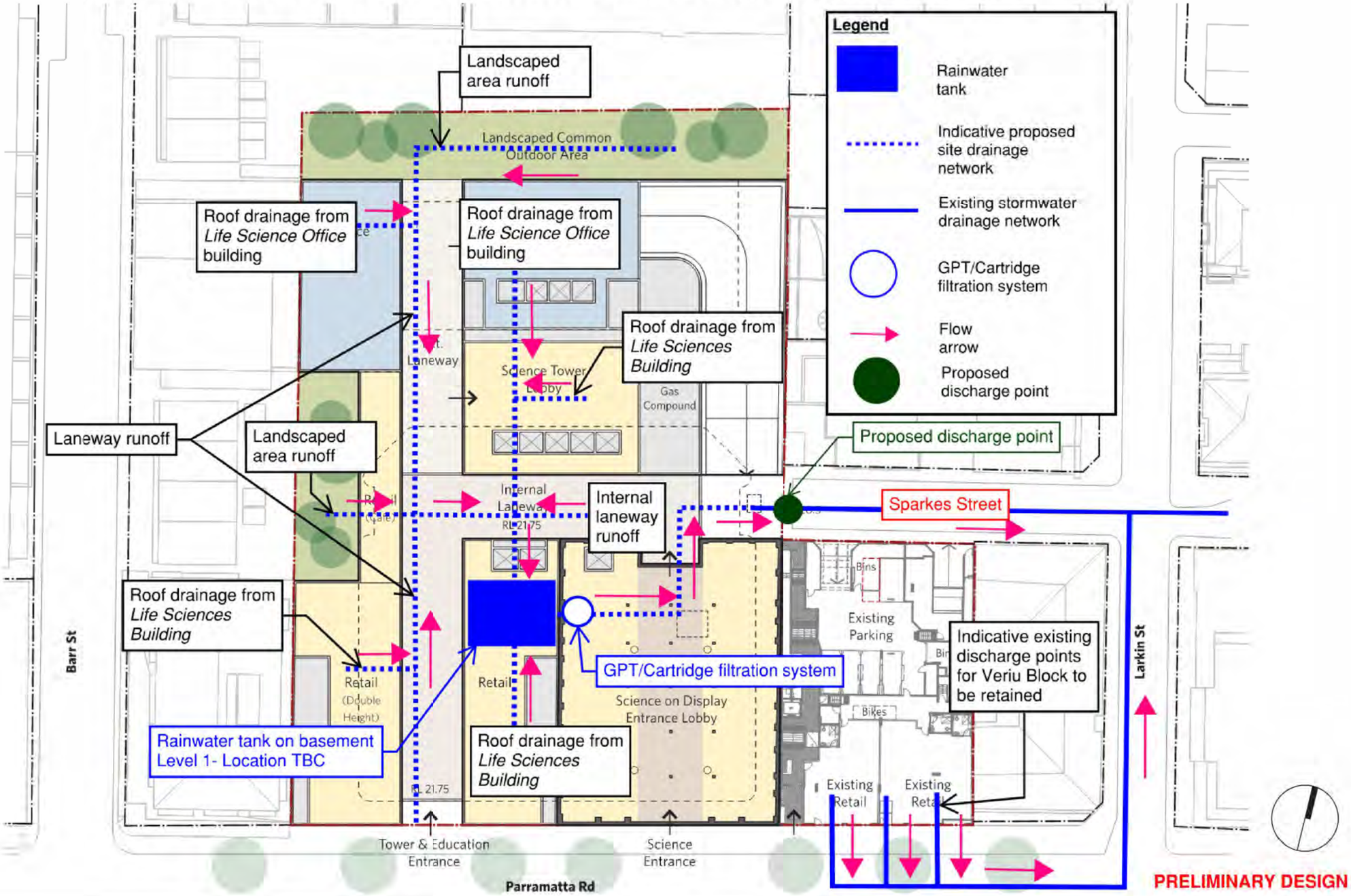
- New site drainage will collect stormwater runoff from the Life Sciences Tower and Life Science Education block and will be directed to the proposed discharge point at Sparkes Street, with runoff ultimately draining into the Sydney Water owned trunk drainage line and into Johnstons Creek.
- Existing stormwater infrastructure and discharge points to Parramatta Road will be retained for the Veriu Serviced Apartments.
- The proposed development is to include a combination of stormwater quality strategies to meet the CoS water quality targets, including a rainwater tank and a GPT/cartridge filtration system. The final configuration of these will be determined at later design stages.
- Based on advice from Sydney Water it is understood that OSD is not required as part of the proposed development and is not proposed. However, this may need to be confirmed again during the detailed DA.

A.1 Appendix A

Post-Development Stormwater Management Concept Plan

A3

Mark-up has been overlaid on Reference Scheme Ground Floor Plan (17/07/2026) provided by Wentworth Capital



C	30/7/26	NS	MB	MB
Issue	Date	By	Chkd	Appd

Scales:

Design Model Version

Client: Wentworth Capital

Engineering Certification (RPEQ)
Name: ..... Area: .....
Signature: ..... Date: .....
RPEQ No: .....

Job Title: Life Sciences Hub
84-94 Parramatta Road
Camperdown

Scale at A3: NOT TO SCALE

Discipline: Civil

ARUP

CONSULT AUSTRALIA
Member Firm
Arup Pty Ltd
ABN 18 000 966 165

Drawing Title: Post-development Stormwater Management Concept Plan

Drawing Status: **Preliminary Design**

Job No	Drawing No	Issue
304985-00	CIDR-SKT-0001	C

Do not scale

Drafted By:

Drafting Checked:

© Arup

1043

A.2 Appendix B

Correspondence with Sydney Water

Nikita Sethi

From: Stormwater <Stormwater@sydneywater.com.au>
Sent: Thursday, 19 June 2025 3:07 PM
To: Nikita Sethi
Cc: Andrew Crouch
Subject: RE: [External] Camperdown Project- Need for OSD, PSD and SSR Requirements - 84-94 Parramatta Road, Camperdown

Follow Up Flag: Follow up
Flag Status: Flagged

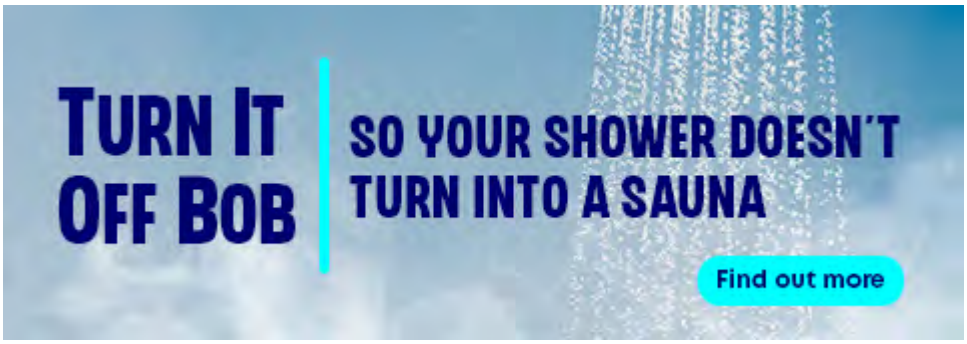
Nikita,

There is an agreement with University of Sydney that Sydney Water will not ask On-Site Detention within Camperdown Campus if the stormwater drains to Johnstons Creek. Therefore, Sydney Water will not ask On-Site Detention, if you can confirm that the future owner of this development site would be University of Sydney.

Best Regards

Planning and Technical
Water and Environment Services
Sydney Water, Level 13, 1 Smith Street, Parramatta NSW 2150

Sydney WATER



Sydney Water acknowledges the traditional custodians of the waters and land on which we work, live and learn.

From: Nikita Sethi <Nikita.Sethi@arup.com>
Sent: Monday, 16 June 2025 11:40 AM
To: Stormwater <Stormwater@sydneywater.com.au>
Cc: Andrew Crouch <andrew.crouch@arup.com>
Subject: [External] Camperdown Project- Need for OSD, PSD and SSR Requirements

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.

Good morning,

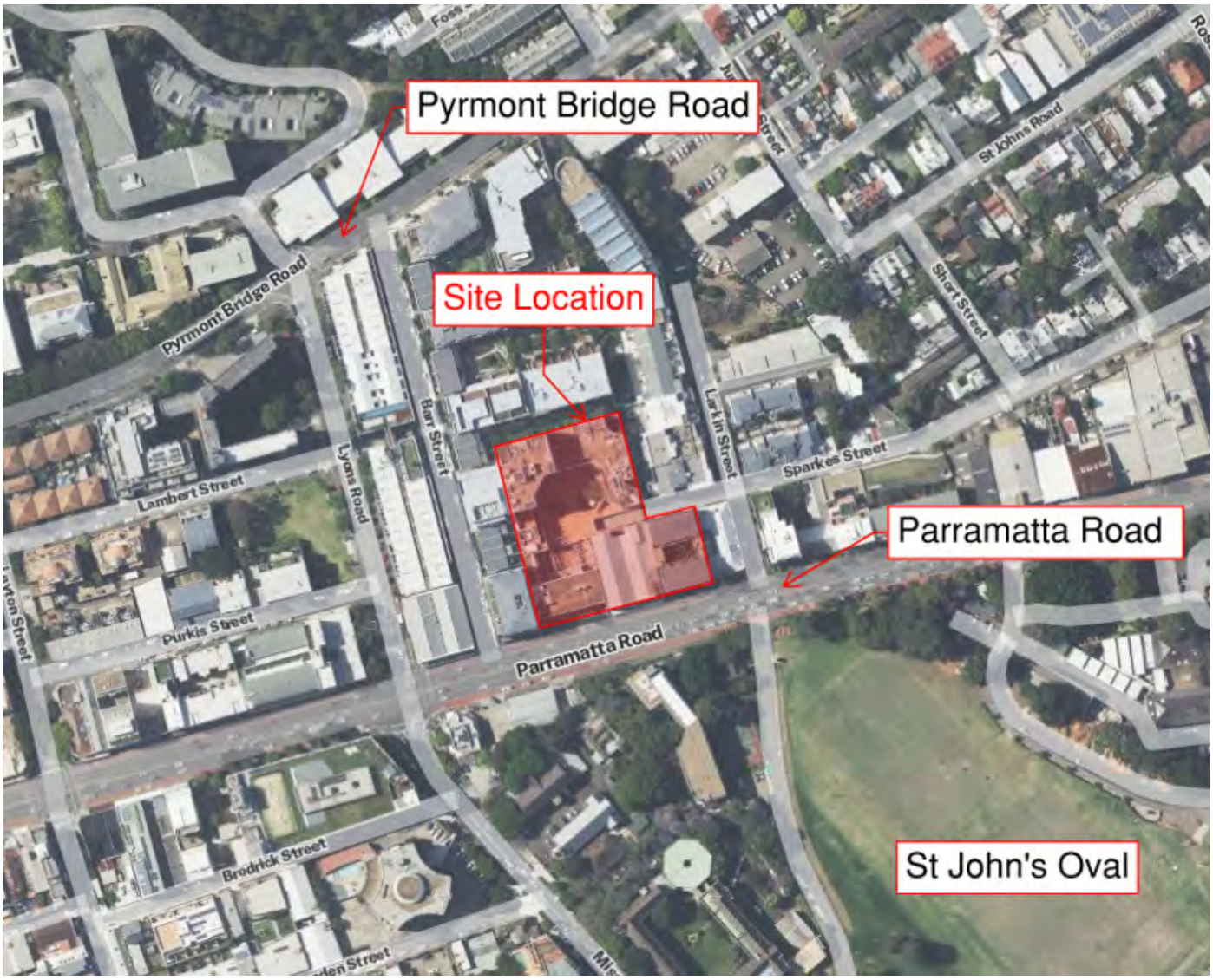
We are currently working on a project that will support a planning proposal for the future redevelopment of a site in Camperdown. The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney

Local Government Area (LGA). The land is owned by the University of Sydney, and the study area is shown in the figure below. It is approximately 6,200m^2 in size.

The future development will be a "Life Sciences Hub" that will be mixed use of commercial and residential. This proposal involves the construction of additional storeys on existing buildings, and as the site is already fully covered by buildings there would not be an increase in the site impervious area.

Would you please be able to let us know if OSD is required for this project?

If OSD is required, are you able to provide information regarding the Permitted Site Discharge (PSD) and Site Storage Requirement (SSR)?



Thank you,

Kind Regards,

Nikita Sethi
Graduate Civil Engineer
B Civil Eng (Hons), BCom (International Business)

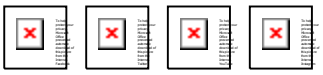
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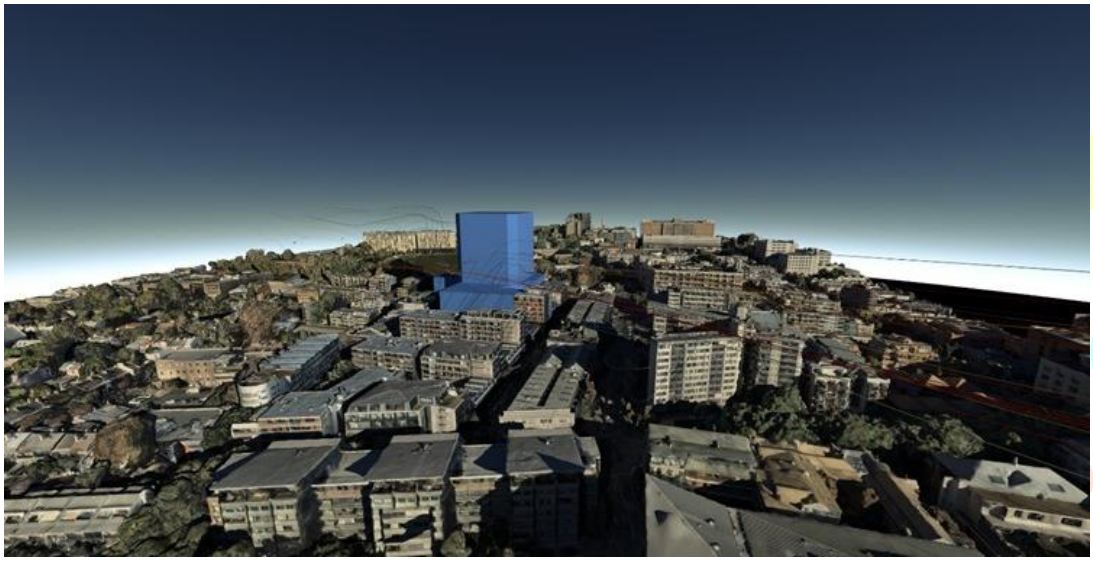
Attachment A19

Wind tunnel environmental wind assessment

84-94 Parramatta Road, Camperdown

5 February 2026

Wind Tunnel Environmental Wind Assessment



MEL CONSULTANTS

84-94 Parramatta Road, Camperdown
Wind Tunnel Environmental Wind Assessment

REPORT NO: **376-25-L2T-RP-00-00**
Confidential

REVISION HISTORY

REVISION NO	DATE ISSUED	COMMENT
0	5 February 2026	

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PREPARED BY:

M Hapsari
Engineer, MEL Date: 4 February 2026

REVIEWED BY:

Y. Padayatchy
Senior Engineer, MEL Date: 4 February 2026

ADDITIONAL REVIEW AND RELEASED BY:

B. Gilhome
CEO/Managing Director, L2T Date: 5 February 2026

CONTENTS

Summary **3**

1. Introduction **4**

1.1 Site description *5*

2. Wind Tunnel Model **6**

3. Environmental Wind Criteria **8**

3.1 Suggested Pedestrian Comfort Criteria *9*

4. Experimental Techniques **11**

5. Discussion of Results **13**

5.1 Wind safety assessment *13*

5.2 Wind comfort assessment *14*

5.2.1 Pedestrian streetscapes 14

5.2.2 Neighbouring buildings and terraces 14

5.2.3 Podium terrace 14

6. Conclusion **20**

APPENDIX A – Velocity and turbulence profiles *21*

APPENDIX B – Pedestrian safety plots *22*

SUMMARY

A wind-tunnel study has been conducted to quantify the environmental wind conditions for the proposed 84-94 Parramatta Road development envelope in Camperdown, New South Wales. The study measured mean and peak wind speeds around the Existing and Proposed development envelope, and combined them with long-term wind climate model to compare them to prescribed criteria.

At ground level, conditions satisfy the safety criterion, and the walking comfort criterion at a minimum. On the podium level terrace, exceedances of the wind safety criterion were measured near the southeast and southwest corners with the remainder of the terrace area satisfying the wind safety criterion and walking comfort criterion. These locations should be reassessed as the activation becomes fixed and as the detailed design evolves. Terraces on nearby buildings satisfy the safety criterion and walking comfort criterion at a minimum.

1. INTRODUCTION

This environmental wind assessment report is submitted to the City of Sydney on behalf of University of Sydney / Wentworth Capital in support of a Planning Proposal for an amendment to the Sydney Local Environmental Plan 2012 for the introduction a new site specific Floor Space Ratio (FSR) and Height of Buildings development standard for the purpose of a built life sciences research facility and ancillary uses at 88-94 Parramatta Road, Camperdown.

This Planning Proposal seeks approval for the amendment of Floor Space Ratio (FSR) and Height of Buildings in the Sydney Local Environmental Plan 2012. Specifically, approval is sought for the following:

88-94 Parramatta Road

- A new maximum building height of part 80 metres, part 30 metres.
- A new site specific provision for 88-94 Parramatta Road that enables 6.5:1 of additional uplift for non-residential uses.
- A site-specific clause limiting the maximum amount of residential floor space that can be provided on the site.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

84 Parramatta Road

- A new mapped maximum height of 30 metres.
- A new mapped maximum floor space ratio for the Veriu site (84 Parramatta Road) of 4.8:1, retaining the mixed use zone on the site.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.
-

Full details of the proposed amendments are outlined in the Planning Proposal Report prepared by Ethos Urban.

1.1 Site description

The site is located at 84-94 Parramatta Road, Camperdown within the City of Sydney Local Government Area (LGA). The site is situated on the traditional land of the Gadigal people.

The land is owned by the University of Sydney and is located on the opposite side of Parramatta Road from the main University of Sydney Camperdown/Darlington campus. The site fronts Parramatta Road along its southern boundary and is bounded by a mixture of residential and commercial uses to the north, east, and west of the site. The site is located just 4km south-west of the Sydney CBD, and 2.5km west of Central Station, and is currently largely used by the University of Sydney for university purposes.

The site's locational context is shown at Figure 1**.**

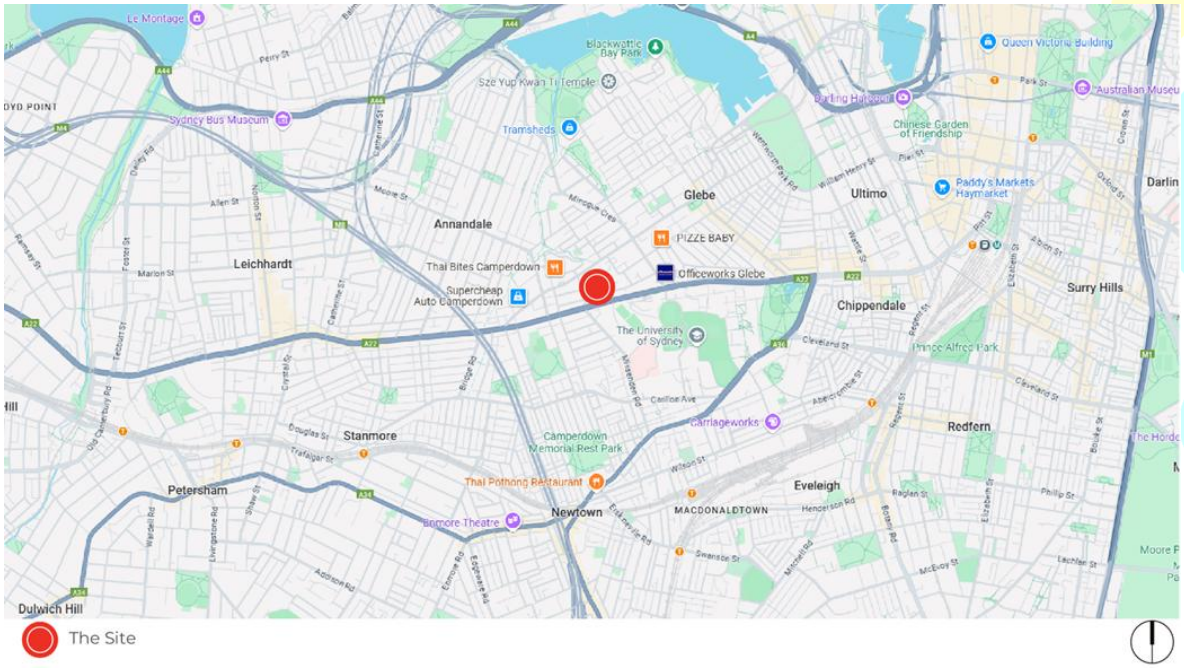


Figure 1: Locational context (Google Maps, edits by Ethos Urban)

2. WIND TUNNEL MODEL

A 1/400 scale building envelope model of the 84-94 Parramatta Road development was constructed based on the digital model *'251219 Envelope for Wind Analysis.3dm'* received 22 December. The model was inserted into a proximity model of surrounding buildings out to a minimum radius of 300m. No existing street trees were included within the model. Photographs of wind-tunnel model inserted into the proximity model are presented in Figure 2 to Figure 4.



Figure 2: View from the southeast of the 1/400 scale model of the proposed 84-94 Parramatta Road development in the wind tunnel

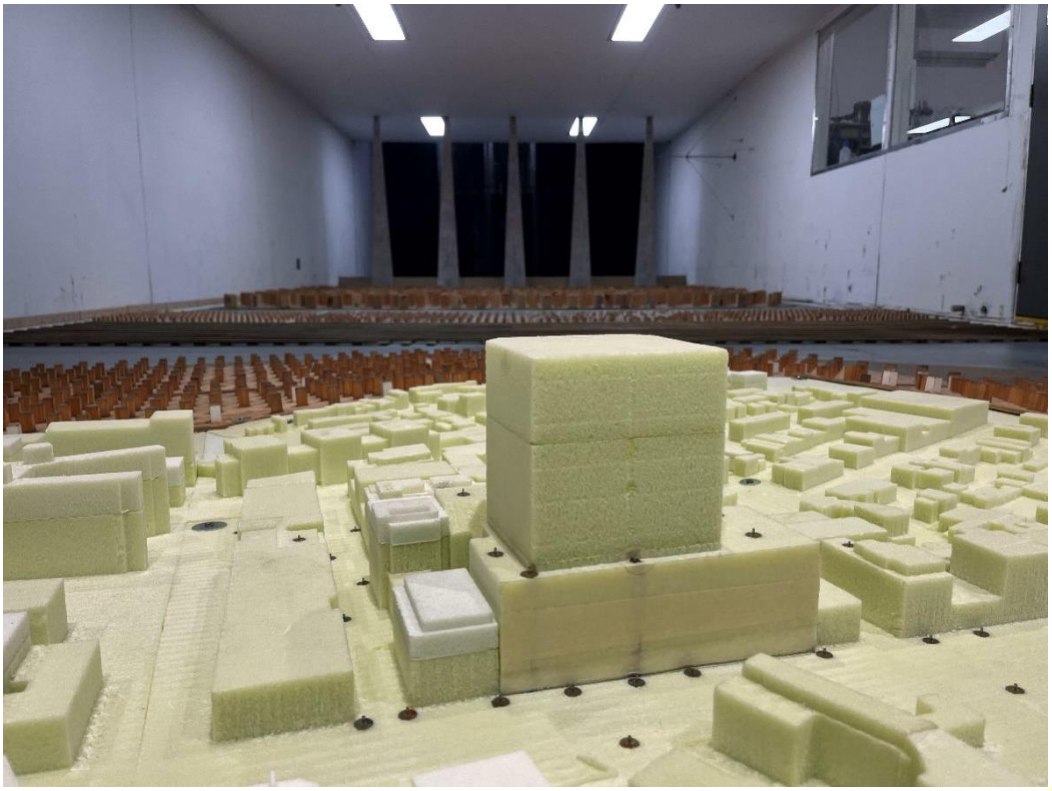


Figure 3: Close-up view from the south of the 1/400 scale model of the proposed 84-94 Parramatta Road development in the wind tunnel

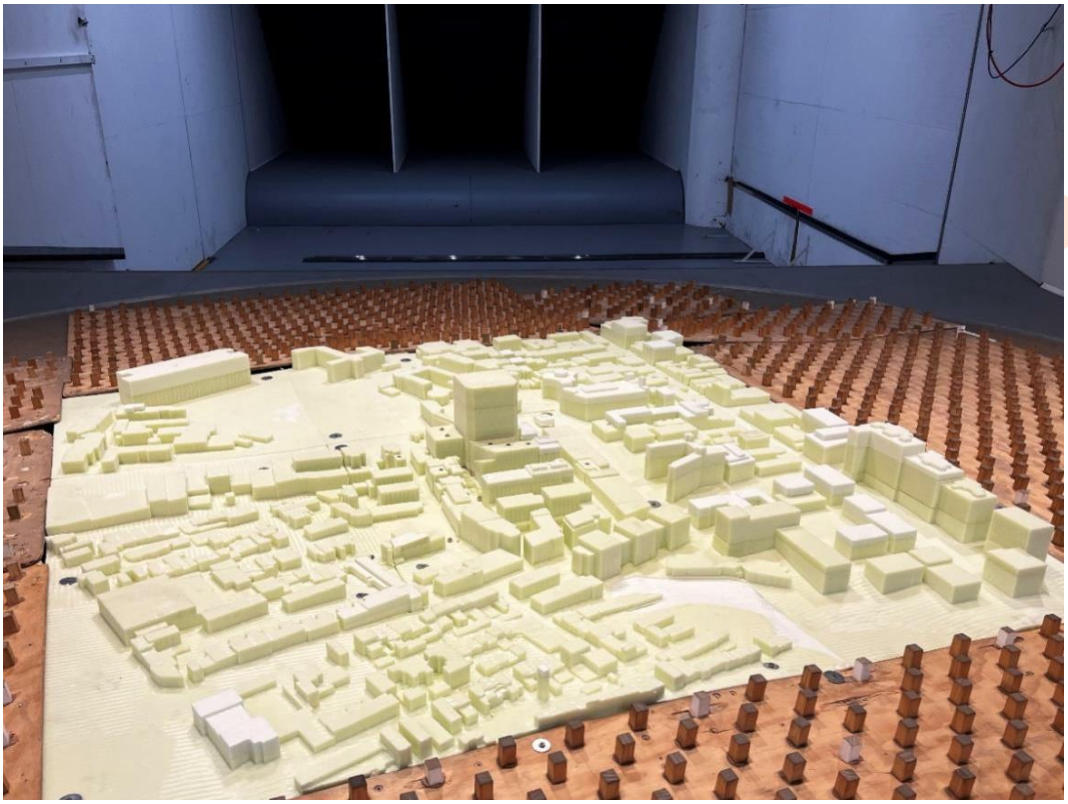


Figure 4:View from the north of the 1/400 scale model of the proposed 84-94 Parramatta Road development in the wind tunnel

3. ENVIRONMENTAL WIND CRITERIA

The advancement of wind tunnel testing techniques, using large boundary layer flows to simulate the natural wind, has facilitated the prediction of wind speeds likely to be induced around a development. To assess whether the predicted wind conditions are likely to be acceptable or not, the wind speeds as defined in the The City of Sydney DCP 2012 (City of Sydney, 2012), Section 5.1.9 (the DCP) for comfort and safety will be used. These criteria are as follows:

Wind Safety Standard is an annual hourly maximum peak 0.5 second gust wind speed measured between 6am and 10pm Eastern Standard Time of 24 meters per second.

Wind Comfort Standard is an hourly mean wind speed (defined below) for each wind direction, with probability of exceedance less than 5% per annum measured between 6 am and 10 pm Eastern Standard Time, of equal to or less than:

- 4 metres/second for sitting areas
- 6 metres/second for standing areas
- 8 metres/second for walking areas

Mean wind speed means the maximum of:

- Hourly mean wind speed, or
- Gust equivalent mean wind speed (gust wind speed divided by 1.85)

It is noted that the above Safety Standard is assessed for each wind direction and is a pass/fail criteria, while the Comfort Standards are assessed based on the summation of probabilities of exceedance across all wind directions to determine whether a location satisfies the threshold criterion.

3.1 Suggested Pedestrian Comfort Criteria

Figure 5 shows the extent of the assessment area, which extends a distance equal to the maximum extent of the building footprint, and the test locations within it. Probe numbers where acceptable wind conditions are prescribed by the Provision 3 of the DCP are:

- Outdoor dining (probes 2, 25): sitting or no worse than existing
- Bus stops (probes 7, 12): Standing or no worse than existing
- Parks (probes 15, 22): sitting or no worse than existing
-



Figure 5: Test Locations around the proposed 84-94 Parramatta Road development

The following wind criteria are suggested for the surrounding streetscapes:

- Pedestrian transit areas: Walking Criterion
- Outdoor terraces: Walking Criterion[1]

All areas of the development must satisfy the pedestrian wind safety criterion.

[1] The wind conditions at outdoor terraces have been suggested to satisfy the walking criterion as these terraces could be considered elective when external conditions would be perceived as acceptable for the desired activity. Users of these terraces will need to be educated on the wind effects and loose objects should not be left unattended in outdoor areas.

4. EXPERIMENTAL TECHNIQUES

The building model was tested in a model of the natural wind generated by flow over roughness elements augmented by vorticity generators at the beginning of the wind tunnel working section. The approach Terrain Categories have been assessed based on the definitions in AS/NZS1170.2:2021 (Standards Australia, 2021) and has been determined as Terrain Category 3 for all wind directions.

The velocity and turbulence profiles for Terrain Category 3 are provided in Appendix A.

A combination of Irwin probes and hot-wire anemometers were used to measure the local wind speeds at locations in and around the development. The Test Locations in the surrounding streetscapes and elevated outdoor communal and private terraces are shown in Figure 5.

The wind-tunnel velocity measurements were made for an equivalent 1-hour period in full scale and filtered to determine the mean and an equivalent full scale 0.5 second gust wind speed for 16 wind directions.

The following velocity ratios were measured in the wind tunnel:

$$mean\ \bar{V}_R = \frac{\bar{V}_{local}}{\bar{V}_{300m}}$$

$$gust\ \hat{V}_R = \frac{\hat{V}_{local}}{\bar{V}_{300m}}$$

where $\bar{V}_{local}$ is the mean velocity, $\hat{V}_{local}$ is the gust velocity, and $\bar{V}_{300m}$ Is the mean velocity at the free-stream reference height of 300m.

These measured velocity ratios were combined with a statistical model of the local wind climate that relates wind speed to a probability of exceedance. The model of the wind climate also includes the directional variation of wind speed (frequency). The measured wind speeds are assessed against the pedestrian safety and the pedestrian comfort criteria. The pedestrian safety criterion is applied to the annual hourly maximum wind gusts for each wind direction. The pedestrian comfort criteria are based on all wind directions combined (i.e. summation of exceedances across 360° of wind direction) and the pedestrian comfort criterion utilises the maximum of either the hourly mean wind speed, or the gust equivalent mean wind speed (GEM) as follows:

$$\text{Mean wind speed for comfort criterion} = \max\left(\bar{V}, \frac{\hat{V}}{1.85}\right)$$

where $\bar{V}$ is the mean wind speed, $\hat{V}$ is the 0.5-second gust wind speed and $\hat{V}/1.85$ is the gust equivalent mean (GEM) velocity.

The two model configurations examined by this study are as follows:

- Existing Configuration:
    - Existing surrounding proximity model
    - Existing building at the development site (University of Sydney Medical Foundation Building)

- Proposed Configuration
    - Existing surrounding proximity model
    - Proposed 84-94 Parramatta Road development

The wind-tunnel study has been undertaken to meet or exceed the requirements of the Australasian Wind Engineering Society Quality Assurance Manual for Wind Tunnel Studies (2019). Existing trees on and around the site are not initially modelled as they can be removed or die during development.

5. DISCUSSION OF RESULTS

The assessment of the wind safety and comfort criteria are presented in Table 1. The table details the yearly exceedances for wind comfort and peak wind speed for wind safety, and the results compared to the wind safety and suggested comfort criteria. A test location will satisfy the sitting, standing and walking criteria if the percentage for which a given mean wind speed is exceeded is below 5% while a test location will fail the safety criterion if the annual maximum 0.5 second gust wind speed from any of the 16 wind directions is greater than 24m/s.

In addition to the tabular format, summaries of the highest wind criteria achieved at each test location have been presented in Figure 6 and Figure 7 for the existing and proposed configurations, respectively.

The figures present the pedestrian safety and comfort criteria satisfied using a colour code system, where different colours have been used to represent the wind criteria satisfied at each test location.

5.1 Wind safety assessment

For the Proposed Configuration, the wind conditions at all test locations in the surrounding streetscapes and the roof terraces of neighbouring buildings satisfy the safety criterion. The wind conditions at the podium level terrace have been shown to mostly satisfy the safety criterion, except near the southeast (location T5) and southwest corners (location T7) of the building where conditions were shown to be unsafe. At the time of the wind tunnel study, no activation on the building's podium have been specified and no balustrading was included in the model. Thus, the wind conditions measured herein are indicative only and will be reassessed as the design evolves.

The annual maximum 0.5 second gust wind speed from each of the 16 wind directions are presented in polar plots and compared against the safety criterion in Appendix B.

5.2 Wind comfort assessment

5.2.1 Pedestrian streetscapes

For the Proposed Configuration, the ground level wind conditions around the proposed 84-94 Parramatta Road development have been shown to satisfy the walking comfort standard at a minimum, with many locations satisfying the standing or sitting comfort standards.

Outdoor dining at location 2 and at location 25, and parks at location 15 and 22 are no worse than in the existing condition and are in line with the recommended criteria set out in Section 3.1. Bus stops at location 7 and 12 satisfy the Walking Criterion against and existing Standing Criterion. Location 12 bus shelter was not modelled and hence is expected to achieve the Standing criterion. Refinements to the building massing during detailed design and model details such as wall and railing adjacent bus stop is expected to bring wind comfort in line with the recommended criterion. It should be noted that previous CFD studies of an indicative reference scheme (331-25-L2T-TN-00-00), these locations became less windy when compared to the envelope study (331-25 -L2T-RP-01-00).

5.2.2 Neighbouring buildings and terraces

For the Proposed Configuration, the wind conditions at Test Locations on the roof terraces of the neighbouring buildings have been shown to generally satisfy similar wind criteria or better compared to that of the Existing Configuration.

5.2.3 Podium terrace

For the Proposed Configuration, the wind conditions at Test Locations on the podium level terrace have been shown to satisfy the walking comfort standard as a minimum. At the time of the wind tunnel study, no activation on the building's podium have been specified. Thus, the wind conditions measured herein are indicative only and will be reassessed as the design evolves.

Table 1: Pedestrian wind comfort and safety for all test locations (= or no worse than existing)*

	Wind Criteria								
	Comfort							Safety	
	Yearly exceedance of given wind speed				Mean wind speed (+5% of the year)	Recommended criterion	Result	Peak wind speed	Result
Test location	Configuration	Sitting (4m/s)	Standing (6m/s)	Walking (8m/s)					
1	Proposed	15.90%	3.50%	0.40%	5.5	Walking	Pass	16.1	Pass
	Existing	4.70%	0.40%	0.00%	4	Walking	Pass	11.6	Pass
2	Proposed	16.00%	2.20%	0.30%	5.2	Sitting*	Pass	16.2	Pass
	Existing	7.90%	1.30%	0.20%	4.5	Sitting	Pass	15.7	Pass
3	Proposed	32.70%	9.80%	2.00%	6.9	Walking	Pass	18.7	Pass
	Existing	12.70%	1.90%	0.20%	5	Walking	Pass	15.2	Pass
4	Proposed	34.10%	11.20%	2.80%	7.2	Walking	Pass	21	Pass
	Existing	13.30%	1.80%	0.20%	5	Walking	Pass	15.5	Pass
5	Proposed	28.10%	6.30%	0.90%	6.2	Walking	Pass	17	Pass
	Existing	13.00%	1.00%	0.10%	4.8	Walking	Pass	12	Pass
6	Proposed	27.50%	7.00%	1.50%	6.4	Walking	Pass	19.3	Pass
	Existing	14.90%	2.20%	0.20%	5.2	Walking	Pass	15.6	Pass
7	Proposed	35.80%	12.20%	3.40%	7.4	Standing	Fail	23.3	Pass
	Existing	14.80%	1.30%	0.10%	5	Standing	Pass	12.3	Pass
8	Proposed	24.40%	5.30%	1.00%	6.1	Walking	Pass	18.7	Pass
	Existing	22.90%	4.40%	0.50%	5.9	Walking	Pass	16.5	Pass
9	Proposed	24.40%	4.90%	0.70%	6	Walking	Pass	15.8	Pass
	Existing	17.60%	3.50%	0.50%	5.5	Walking	Pass	17.3	Pass
10	Proposed	36.80%	15.60%	4.90%	8	Walking	Pass	23.3	Pass
	Existing	25.20%	8.00%	2.10%	6.7	Walking	Pass	20.5	Pass
11	Proposed	37.30%	16.30%	4.70%	7.9	Walking	Pass	20.3	Pass
	Existing	13.10%	1.70%	0.20%	5	Walking	Pass	14.1	Pass
12	Proposed	23.40%	9.40%	2.50%	7.1	Standing	Fail	20	Pass
	Existing	12.60%	1.60%	0.20%	5	Standing	Pass	14.8	Pass
13	Proposed	23.50%	7.20%	1.40%	6.5	Walking	Pass	18.1	Pass
	Existing	18.00%	2.90%	0.30%	5.4	Walking	Pass	15.9	Pass
14	Proposed	20.50%	5.70%	1.30%	6.2	Walking	Pass	22.6	Pass
	Existing	20.60%	5.50%	1.20%	6.2	Walking	Pass	20.5	Pass
15	Proposed	28.90%	10.10%	2.70%	7	Sitting*	Pass	20.1	Pass
	Existing	27.40%	8.90%	1.90%	6.8	Sitting	Pass	18.3	Pass
16	Proposed	9.80%	0.80%	0.00%	4.6	Walking	Pass	12.1	Pass
	Existing	8.70%	0.70%	0.00%	4.5	Walking	Pass	12.4	Pass
17	Proposed	9.40%	0.80%	0.10%	4.6	Walking	Pass	12.9	Pass
	Existing	5.50%	0.20%	0.00%	4.1	Walking	Pass	11.3	Pass
18	Proposed	17.00%	3.00%	0.50%	5.4	Walking	Pass	18.2	Pass
	Existing	21.00%	4.70%	0.80%	5.9	Walking	Pass	18.3	Pass
19	Proposed	36.80%	12.70%	2.70%	7.3	Walking	Pass	18.9	Pass
	Existing	39.00%	15.70%	4.40%	7.8	Walking	Pass	21.2	Pass
20	Proposed	11.60%	1.10%	0.00%	4.8	Walking	Pass	12.8	Pass

	Existing	11.40%	1.30%	0.10%	4.9	Walking	Pass	13.6	Pass
	Proposed	12.30%	1.30%	0.10%	4.9	Walking	Pass	13.9	Pass
21	Existing	9.20%	1.00%	0.10%	4.5	Walking	Pass	14.9	Pass
	Proposed	23.50%	4.90%	0.60%	6	Sitting*	Pass	16.3	Pass
22	Existing	18.30%	2.50%	0.20%	5.4	Sitting	Pass	14.8	Pass
	Proposed	2.70%	0.40%	0.00%	3.5	Walking	Pass	13.3	Pass
23	Existing	3.00%	0.60%	0.00%	3.5	Walking	Pass	14.3	Pass
	Proposed	8.80%	0.80%	0.10%	4.5	Walking	Pass	12.8	Pass
24	Existing	6.50%	0.40%	0.00%	4.3	Walking	Pass	11.8	Pass
	Proposed	8.50%	0.90%	0.10%	4.5	Siting*	Pass	14.8	Pass
25	Existing	6.20%	0.70%	0.10%	4.2	Sitting	Pass	13.2	Pass
	Proposed	21.70%	4.50%	0.50%	5.9	Walking	Pass	15.5	Pass
26	Existing	9.40%	1.10%	0.10%	4.6	Walking	Pass	15.3	Pass
	Proposed	15.20%	2.60%	0.40%	5.3	Walking	Pass	16.8	Pass
27	Existing	10.50%	1.90%	0.30%	4.9	Walking	Pass	16.5	Pass
	Proposed	24.70%	4.70%	0.70%	5.9	Walking	Pass	16.2	Pass
28	Existing	19.70%	3.80%	0.60%	5.7	Walking	Pass	17.6	Pass
	Proposed	11.10%	1.30%	0.10%	4.8	Walking	Pass	15.1	Pass
29	Existing	9.30%	0.80%	0.00%	4.5	Walking	Pass	13.6	Pass
	Proposed	1.80%	0.10%	0.00%	3.2	Walking	Pass	10	Pass
30	Existing	1.30%	0.00%	0.00%	3.2	Walking	Pass	9.2	Pass
	Proposed	3.10%	0.20%	0.00%	3.6	Walking	Pass	11.5	Pass
31	Existing	1.70%	0.10%	0.00%	3.3	Walking	Pass	10	Pass
	Proposed	15.50%	2.10%	0.20%	5.2	Walking	Pass	14.3	Pass
32	Existing	13.10%	1.80%	0.10%	5	Walking	Pass	14.1	Pass
	Proposed	13.00%	0.90%	0.10%	4.8	Walking	Pass	12.8	Pass
33	Existing	8.00%	0.50%	0.00%	4.4	Walking	Pass	12.3	Pass
	Proposed	13.50%	1.60%	0.20%	5	Walking	Pass	14.3	Pass
34	Existing	10.50%	0.60%	0.00%	4.6	Walking	Pass	12.1	Pass
	Proposed	19.80%	4.60%	0.80%	5.9	Walking	Pass	18.1	Pass
35	Existing	22.80%	4.30%	0.50%	5.9	Walking	Pass	16.4	Pass
	Proposed	1.50%	0.20%	0.00%	3.2	Walking	Pass	12.3	Pass
36	Existing	7.80%	0.70%	0.10%	4.4	Walking	Pass	13.8	Pass
	Proposed	8.30%	1.00%	0.00%	4.6	Walking	Pass	13.1	Pass
37	Existing	0.10%	0.00%	0.00%	2.4	Walking	Pass	6.9	Pass
	Proposed	5.90%	0.30%	0.00%	4.1	Walking	Pass	11.8	Pass
38	Existing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Proposed	16.00%	2.40%	0.30%	5.3	Walking	Pass	15	Pass
39	Existing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Proposed	16.90%	3.90%	0.50%	5.7	Walking	Pass	16.7	Pass
40	Existing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Proposed	4.00%	0.20%	0.00%	3.8	Walking	Pass	10.9	Pass
41	Existing	2.30%	0.00%	0.00%	3.5	Walking	Pass	10.1	Pass
	Proposed	14.60%	2.90%	0.40%	5.3	Walking	Pass	16.7	Pass
42	Existing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Proposed	33.10%	12.50%	3.20%	7.4	Walking	Pass	20.6	Pass
N1	Existing	22.70%	5.60%	1.00%	6.1	Walking	Pass	19	Pass
	Proposed	8.60%	0.60%	0.00%	4.5	Walking	Pass	12.8	Pass
N2	Existing	4.60%	0.20%	0.00%	3.9	Walking	Pass	10.4	Pass
	Proposed	16.60%	2.90%	0.30%	5.4	Walking	Pass	15.7	Pass
N3	Existing	7.20%	1.40%	0.20%	4.4	Walking	Pass	15.9	Pass
	Proposed	11.10%	0.90%	0.10%	4.7	Walking	Pass	14.3	Pass
N4	Existing	9.60%	0.70%	0.00%	4.6	Walking	Pass	12.7	Pass
	Proposed	25.10%	6.50%	1.40%	6.3	Walking	Pass	20.4	Pass
N5	Existing	22.00%	5.30%	0.80%	6.1	Walking	Pass	18	Pass
	Proposed	21.60%	4.30%	0.70%	5.8	Walking	Pass	17.4	Pass
N6	Existing	24.00%	5.20%	1.20%	6	Walking	Pass	20.2	Pass
	Proposed	20.40%	3.20%	0.30%	5.6	Walking	Pass	15	Pass
N7	Existing	14.90%	2.00%	0.20%	5.1	Walking	Pass	14.7	Pass
T1	Proposed	24.60%	9.30%	2.70%	7	Walking	Pass	18.6	Pass
T2	Proposed	25.00%	9.30%	2.80%	7.1	Walking	Pass	22.3	Pass
T3	Proposed	31.70%	14.90%	5.00%	8	Walking	Pass	21.6	Pass
T4	Proposed	35.20%	14.00%	3.90%	7.6	Walking	Pass	22.9	Pass
T5	Proposed	42.00%	23.90%	11.50%	9.8	Walking	Fail	26	Fail
T6	Proposed	16.10%	2.60%	0.30%	5.3	Walking	Pass	15.5	Pass
T7	Proposed	39.40%	23.10%	11.90%	10.1	Walking	Fail	26.3	Fail
T8	Proposed	28.10%	11.10%	3.90%	7.6	Walking	Pass	23.2	Pass

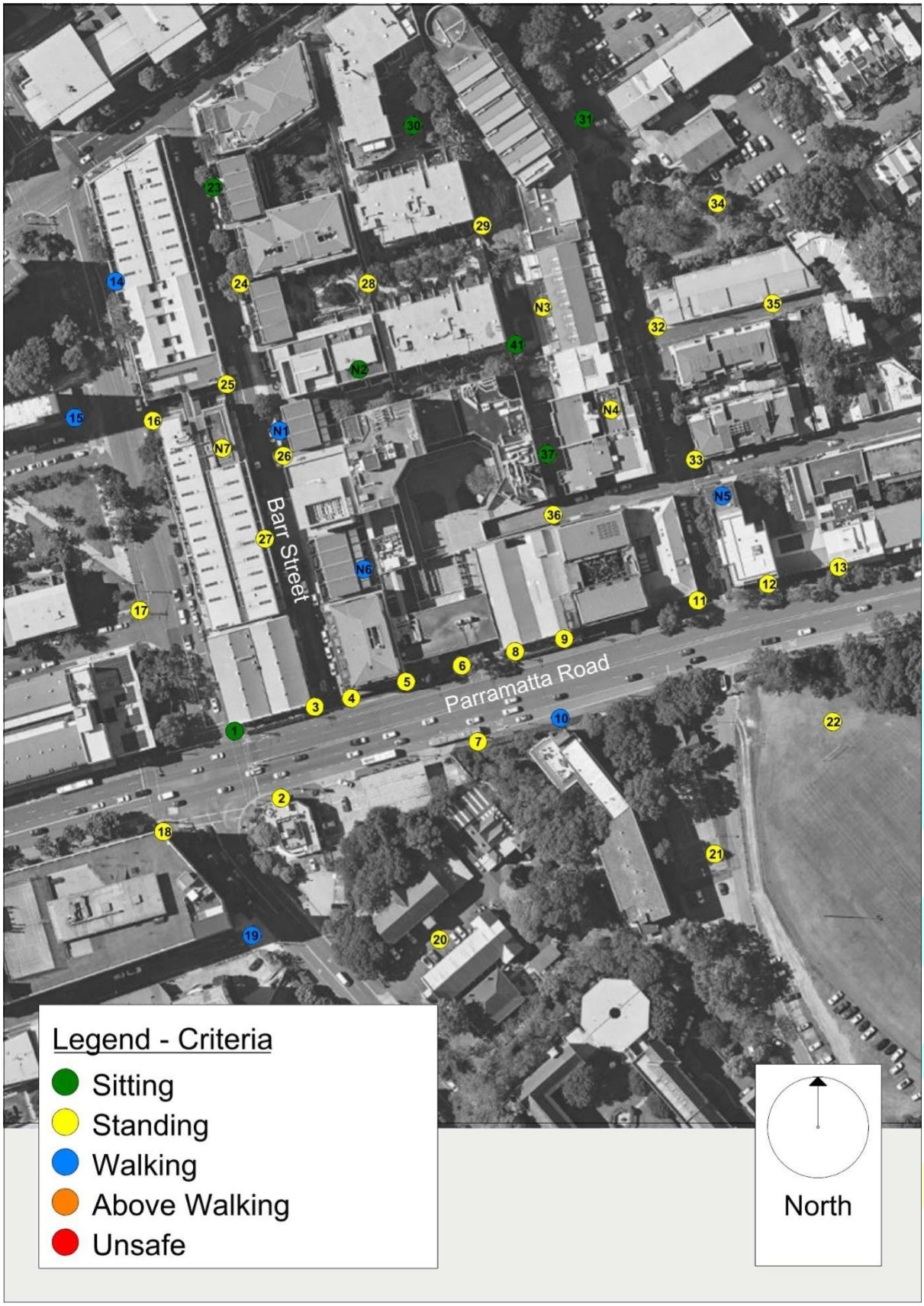


Figure 6: Summary of wind criteria satisfied for the Existing Configuration of 84-94 Parramatta Road development.

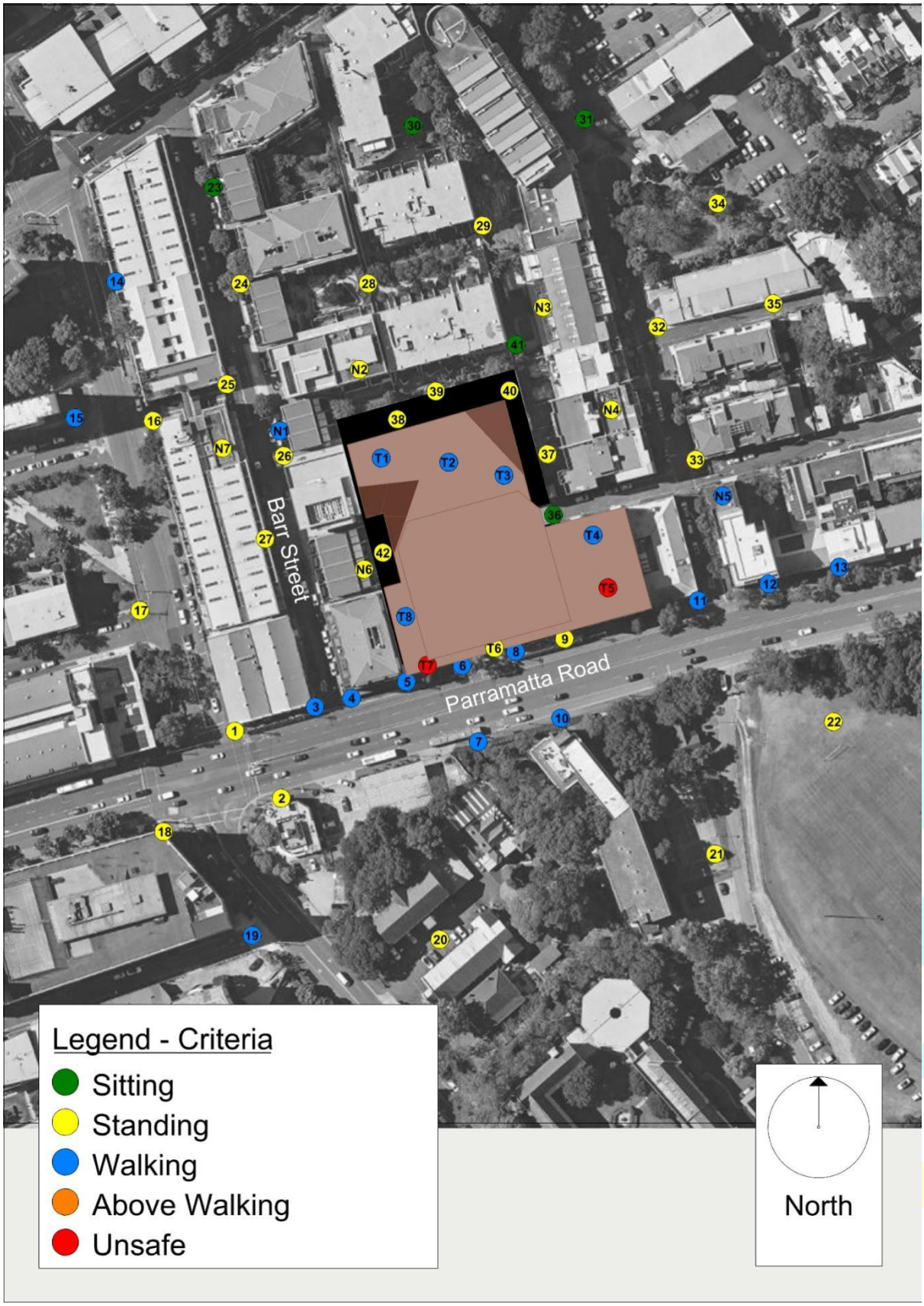


Figure 7: Summary of wind criteria satisfied for the Proposed Configuration of 84-94 Parramatta Road development

6. CONCLUSION

An assessment of the environmental wind conditions on and around the proposed development at 84-94 Parramatta Road, Camperdown has been performed. The analysis was based on wind-tunnel tests completed in one of MEL Consultants' boundary layer wind tunnel facilities on a 1/400 scale model. The wind tunnel results were processed to obtain a statistical picture of the expected wind conditions which were compared to prescribed criteria. The main findings were:

Pedestrian streetscapes

- For the Proposed Configuration, the wind conditions at all Test Locations on the surrounding pedestrian streetscapes satisfy the safety and walking comfort standards at a minimum.

Podium terrace

- For the Proposed Configuration, exceedances of the wind safety criterion were measured near the southeast and southwest corners of the podium level terrace, with the remainder of the terrace area satisfying the wind safety and walking comfort criterion. It is to be noted that at the time of the wind tunnel study, no activation on the building's podium have been specified. Thus, the wind conditions measured therefore are indicative only and will be reassessed as the design evolves.

Roof terrace of neighbouring buildings

- For the Proposed Configuration, the wind conditions at all Test Locations on the neighbouring building's roof terrace satisfy the safety and walking comfort criterion at a minimum.

APPENDIX A – Velocity and turbulence profiles

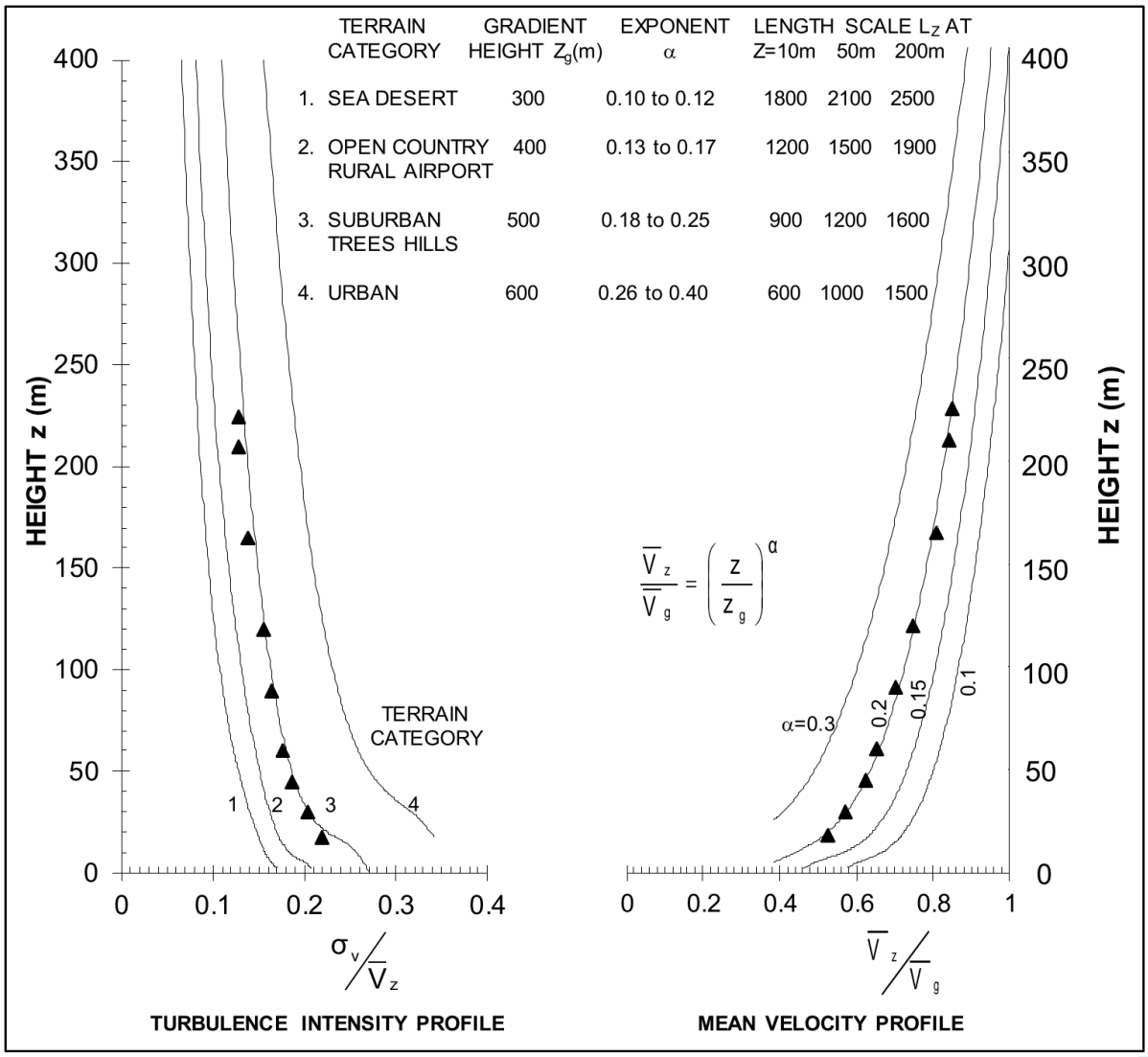


Figure A 1 : 1/400 scale TC3 boundary layer turbulence intensity and mean velocity profiles in the MEL Consultants' boundary layer wind tunnel 4.8x2.2m working section, scaled to full-scale dimensions

APPENDIX B – Pedestrian safety plots

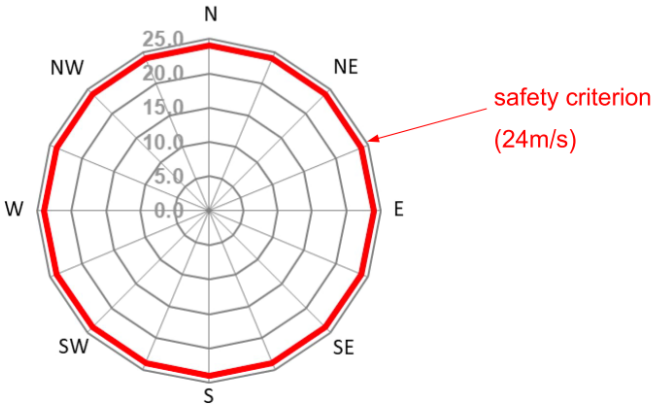
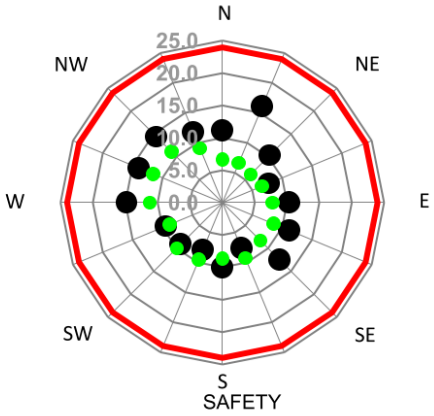


Figure B1 – Environmental wind safety criterion for Sydney Region based on local 0.5 second peak gust wind speed.

Test Location **1**

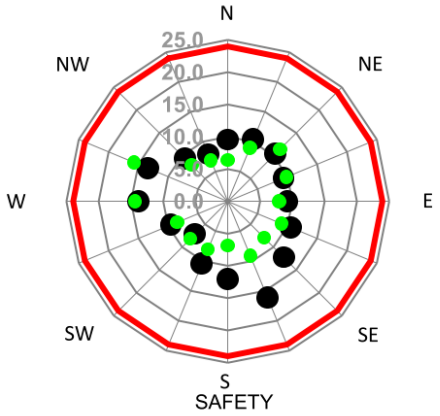


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	15.9%	3.5%	0.4%	5.5	Pass	16.1	Pass
● Existing Configuration	4.7%	0.4%	0.0%	4.0	Pass	11.6	Pass
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Test Location **2**

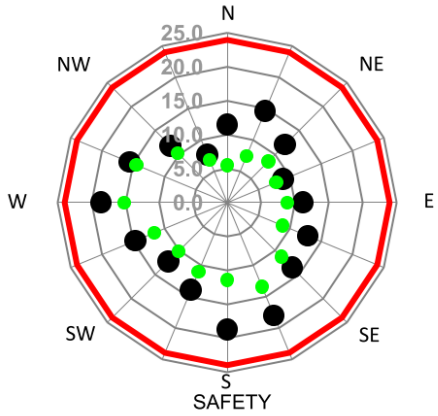


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	16.0%	2.2%	0.3%	5.2	Pass	16.2	Pass
● Existing Configuration	7.9%	1.3%	0.2%	4.5	Pass	15.7	Pass
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Test Location **3**

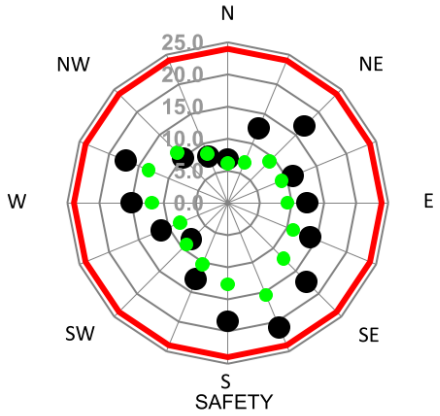


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	32.7%	9.8%	2.0%	6.9	Pass	18.7	Pass
● Existing Configuration	12.7%	1.9%	0.2%	5.0	Pass	15.2	Pass
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Test Location **4**

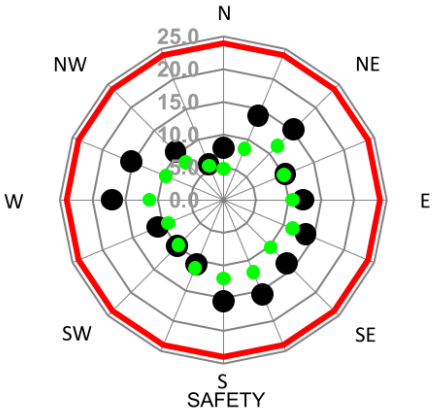


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	34.1%	11.2%	2.8%	7.2	Pass	21.0	Pass
● Existing Configuration	13.3%	1.8%	0.2%	5.0	Pass	15.5	Pass
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Test Location **5**

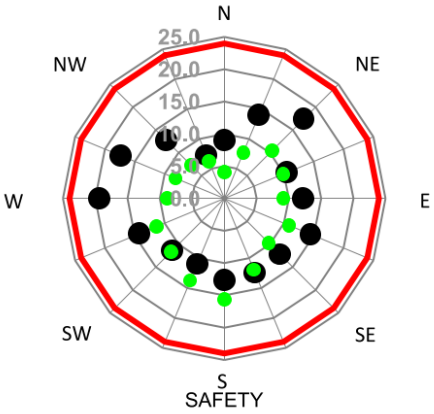


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	28.1%	6.3%	0.9%	6.2	Pass	17.0	Pass
● Existing Configuration	13.0%	1.0%	0.1%	4.8	Pass	12.0	Pass
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Test Location **6**

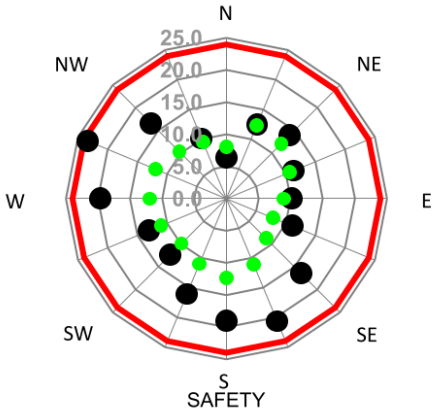


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	27.5%	7.0%	1.5%	6.4	Pass	19.3	Pass
● Existing Configuration	14.9%	2.2%	0.2%	5.2	Pass	15.6	Pass
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Test Location **7**

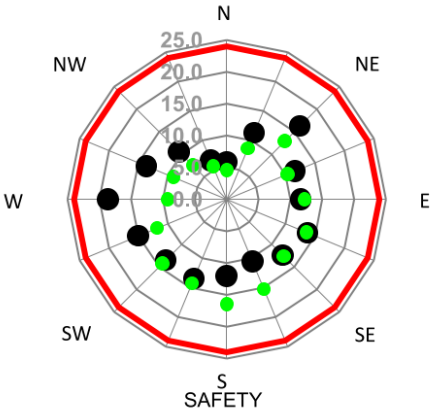


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	35.8%	12.2%	3.4%	7.4	Pass	23.3	Pass
● Existing Configuration	14.8%	1.3%	0.1%	5.0	Pass	12.3	Pass
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Test Location **8**

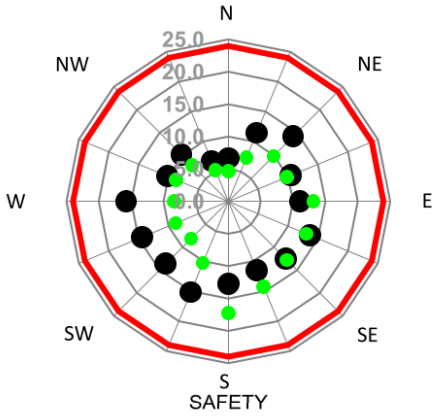


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	24.4%	5.3%	1.0%	6.1	Pass	18.7	Pass
● Existing Configuration	22.9%	4.4%	0.5%	5.9	Pass	16.5	Pass
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Test Location **9**

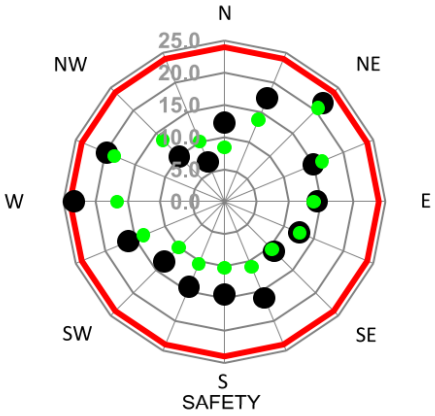


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	24.4%	4.9%	0.7%	6.0	Pass	15.8	Pass
● Existing Configuration	17.6%	3.5%	0.5%	5.5	Pass	17.3	Pass
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Test Location **10**

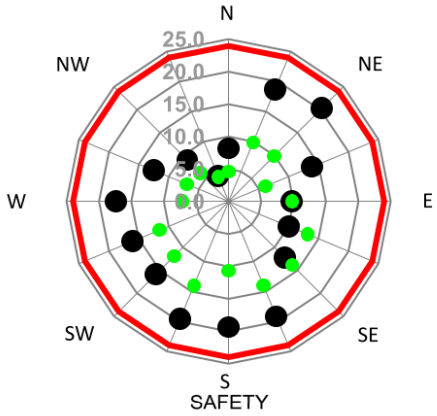


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	36.8%	15.6%	4.9%	8.0	Pass	23.3	Pass
● Existing Configuration	25.2%	8.0%	2.1%	6.7	Pass	20.5	Pass
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Test Location **11**

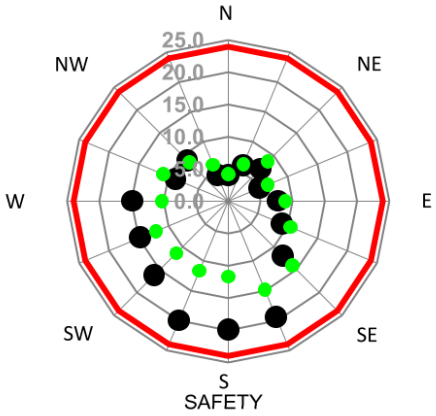


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● **Proposed Configuration**	37.3%	16.3%	4.7%	7.9	Pass	20.3	Pass
● **Existing Configuration**	13.1%	1.7%	0.2%	5.0	Pass	14.1	Pass
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Test Location **12**

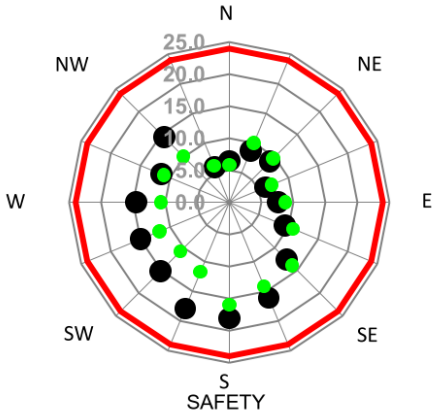


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	23.4%	9.4%	2.5%	7.1	Pass	20.0	Pass
● Existing Configuration	12.6%	1.6%	0.2%	5.0	Pass	14.8	Pass
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Test Location **13**

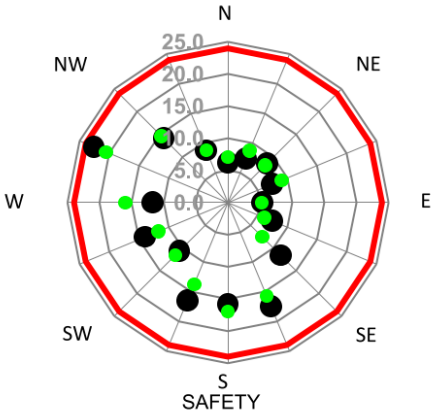


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	23.5%	7.2%	1.4%	6.5	Pass	18.1	Pass
● Existing Configuration	18.0%	2.9%	0.3%	5.4	Pass	15.9	Pass
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Test Location **14**

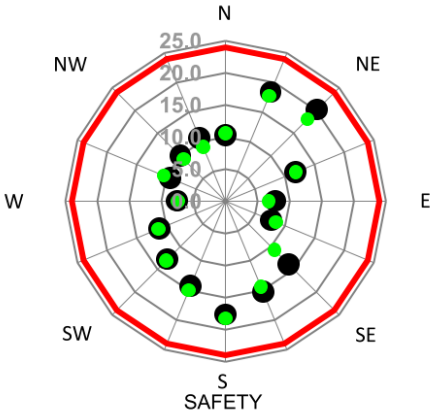


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	20.5%	5.7%	1.3%	6.2	Pass	22.6	Pass
● Existing Configuration	20.6%	5.5%	1.2%	6.2	Pass	20.5	Pass
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Test Location **15**

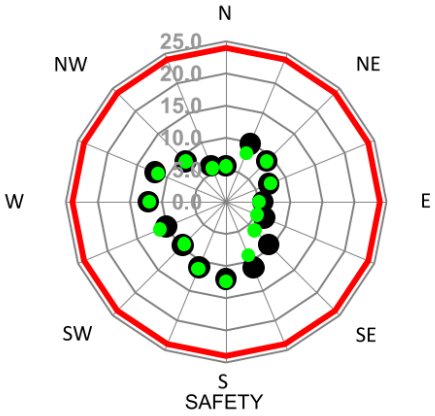


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	28.9%	10.1%	2.7%	7.0	Pass	20.1	Pass
● Existing Configuration	27.4%	8.9%	1.9%	6.8	Pass	18.3	Pass
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Test Location **16**

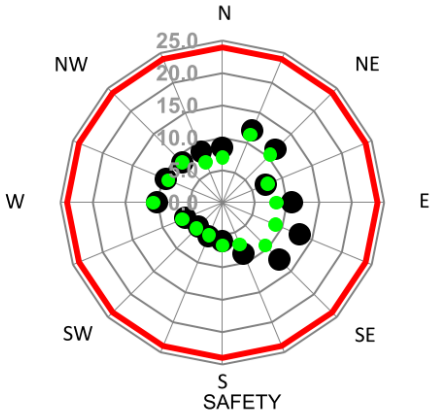


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	9.8%	0.8%	0.0%	4.6	Pass	12.1	Pass
● Existing Configuration	8.7%	0.7%	0.0%	4.5	Pass	12.4	Pass
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Test Location **17**

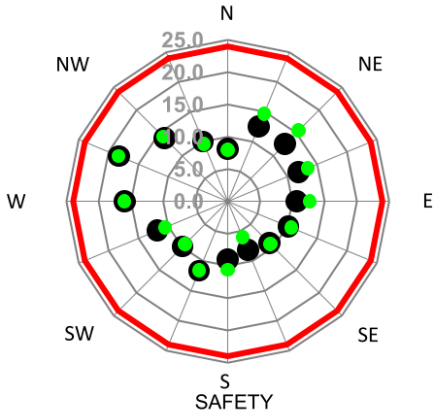


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	9.4%	0.8%	0.1%	4.6	Pass	12.9	Pass
● Existing Configuration	5.5%	0.2%	0.0%	4.1	Pass	11.3	Pass
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Test Location **18**

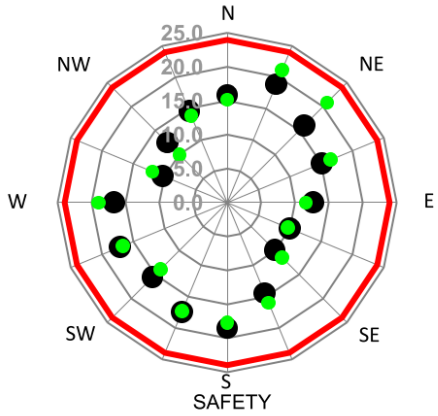


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	17.0%	3.0%	0.5%	5.4	Pass	18.2	Pass
● Existing Configuration	21.0%	4.7%	0.8%	5.9	Pass	18.3	Pass
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Test Location **19**

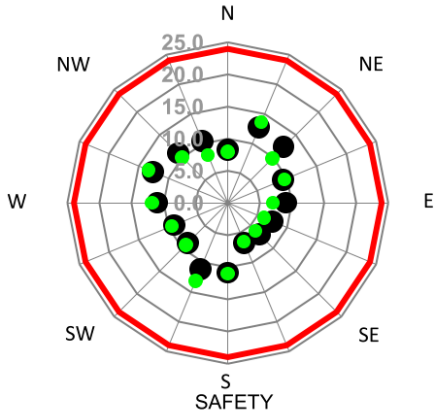


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	36.8%	12.7%	2.7%	7.3	Pass	18.9	Pass
● Existing Configuration	39.0%	15.7%	4.4%	7.8	Pass	21.2	Pass
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Test Location **20**

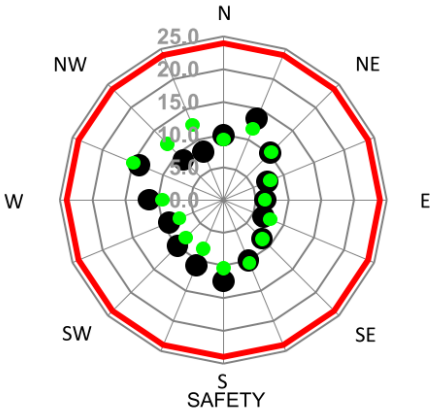


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	11.6%	1.1%	0.0%	4.8	Pass	12.8	Pass
● Existing Configuration	11.4%	1.3%	0.1%	4.9	Pass	13.6	Pass
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Test Location **21**

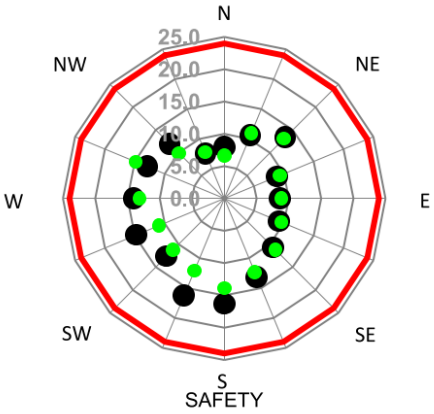


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	12.3%	1.3%	0.1%	4.9	Pass	13.9	Pass
● Existing Configuration	9.2%	1.0%	0.1%	4.5	Pass	14.9	Pass
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Test Location **22**

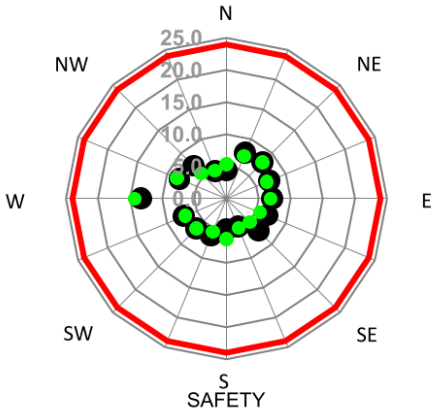


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	23.5%	4.9%	0.6%	6.0	Pass	16.3	Pass
● Existing Configuration	18.3%	2.5%	0.2%	5.4	Pass	14.8	Pass
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Test Location **23**

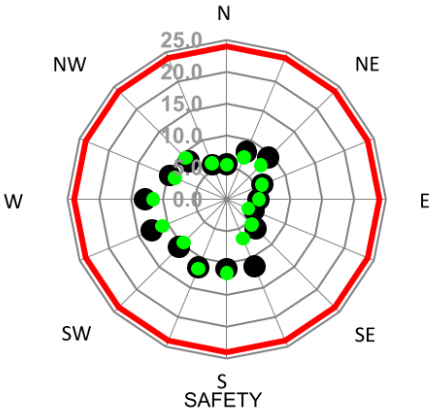


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	2.7%	0.4%	0.0%	3.5	Pass	13.3	Pass
● Existing Configuration	3.0%	0.6%	0.0%	3.5	Pass	14.3	Pass
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Test Location **24**

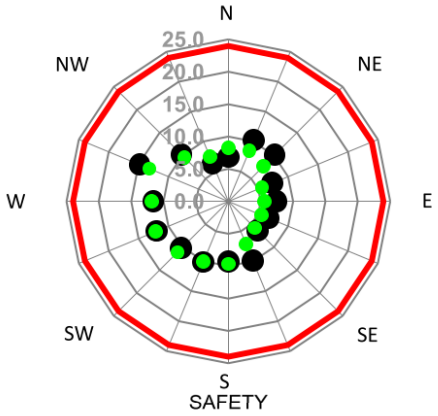


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	8.8%	0.8%	0.1%	4.5	Pass	12.8	Pass
● Existing Configuration	6.5%	0.4%	0.0%	4.3	Pass	11.8	Pass
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Test Location **25**

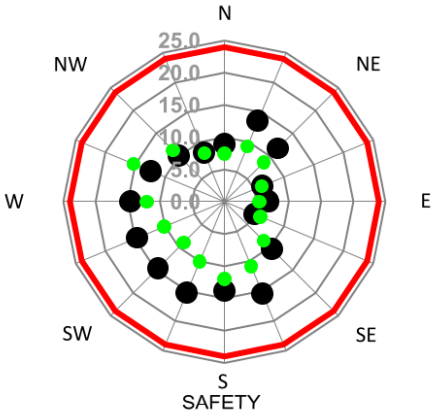


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	8.5%	0.9%	0.1%	4.5	Pass	14.8	Pass
● Existing Configuration	6.2%	0.7%	0.1%	4.2	Pass	13.2	Pass
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Test Location **26**

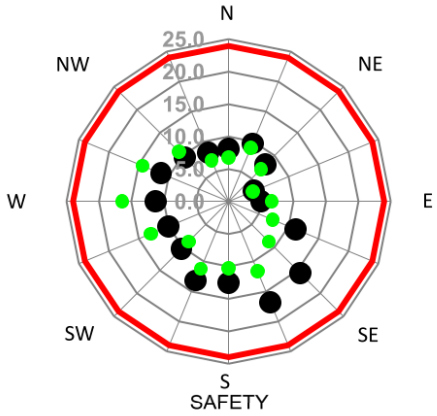


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	21.7%	4.5%	0.5%	5.9	Pass	15.5	Pass
● Existing Configuration	9.4%	1.1%	0.1%	4.6	Pass	15.3	Pass
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Test Location **27**

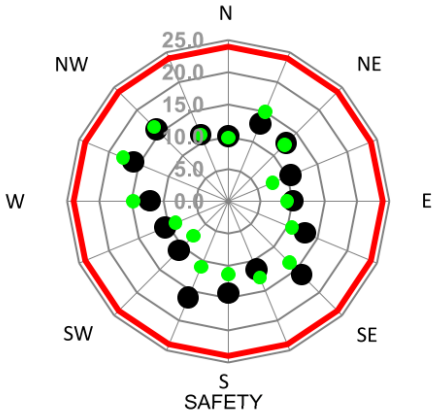


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	15.2%	2.6%	0.4%	5.3	Pass	16.8	Pass
● Existing Configuration	10.5%	1.9%	0.3%	4.9	Pass	16.5	Pass
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Test Location **28**

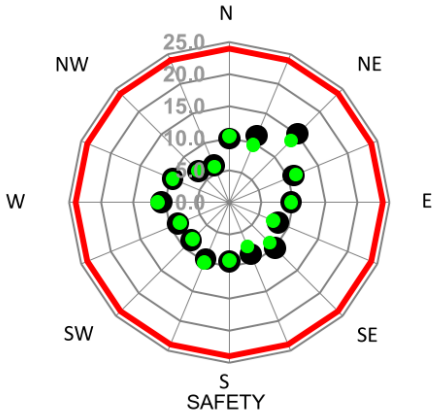


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	24.7%	4.7%	0.7%	5.9	Pass	16.2	Pass
● Existing Configuration	19.7%	3.8%	0.6%	5.7	Pass	17.6	Pass
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Test Location **29**

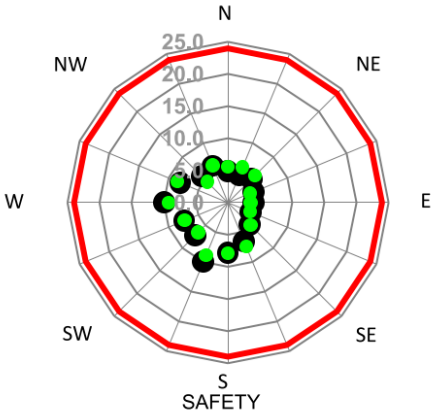


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	11.1%	1.3%	0.1%	4.8	Pass	15.1	Pass
● Existing Configuration	9.3%	0.8%	0.0%	4.5	Pass	13.6	Pass
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Test Location **30**

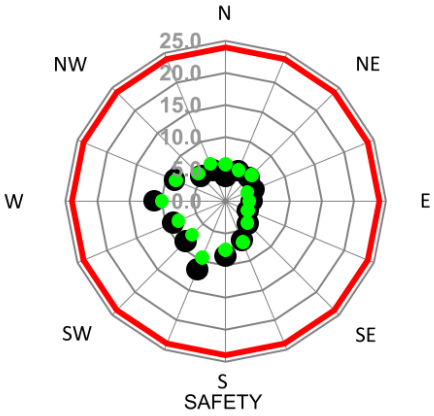


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● **Proposed Configuration**	1.8%	0.1%	0.0%	3.2	Pass	10.0	Pass
● **Existing Configuration**	1.3%	0.0%	0.0%	3.2	Pass	9.2	Pass
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Test Location **31**

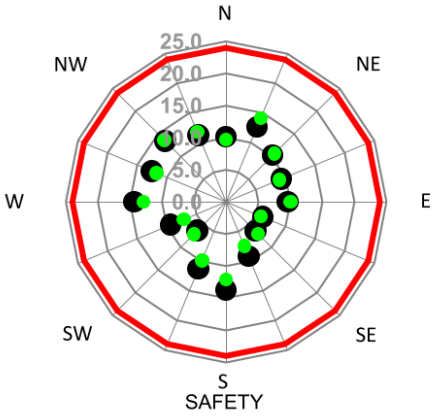


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	3.1%	0.2%	0.0%	3.6	Pass	11.5	Pass
● Existing Configuration	1.7%	0.1%	0.0%	3.3	Pass	10.0	Pass
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Test Location **32**

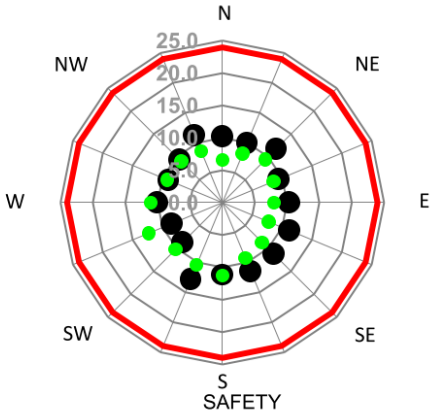


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	15.5%	2.1%	0.2%	5.2	Pass	14.3	Pass
● Existing Configuration	13.1%	1.8%	0.1%	5.0	Pass	14.1	Pass
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Test Location **33**

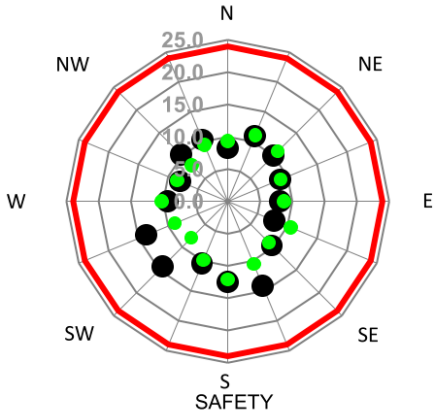


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	13.0%	0.9%	0.1%	4.8	Pass	12.8	Pass
● Existing Configuration	8.0%	0.5%	0.0%	4.4	Pass	12.3	Pass
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Test Location **34**

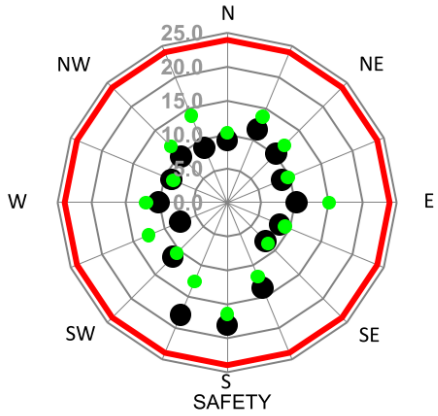


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	13.5%	1.6%	0.2%	5.0	Pass	14.3	Pass
● Existing Configuration	10.5%	0.6%	0.0%	4.6	Pass	12.1	Pass
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Test Location **35**

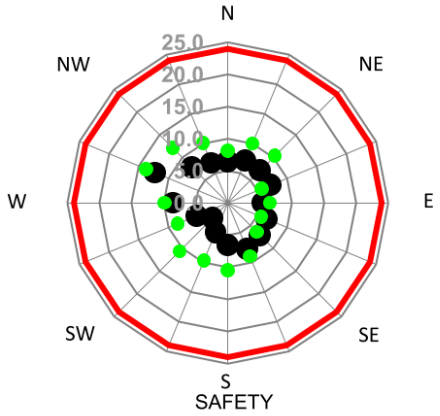


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 6m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	19.8%	4.6%	0.8%	5.9	Pass	18.1	Pass
● Existing Configuration	22.8%	4.3%	0.5%	5.9	Pass	16.4	Pass
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Test Location **36**

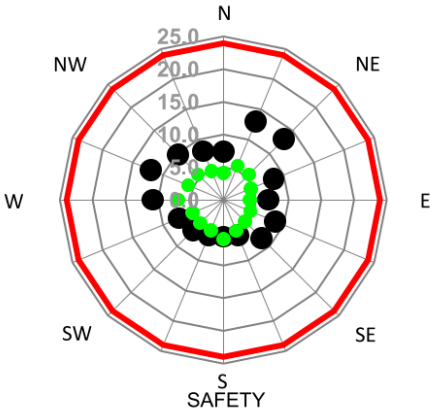


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	1.5%	0.2%	0.0%	3.2	Pass	12.3	Pass
● Existing Configuration	7.8%	0.7%	0.1%	4.4	Pass	13.8	Pass
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Test Location **37**

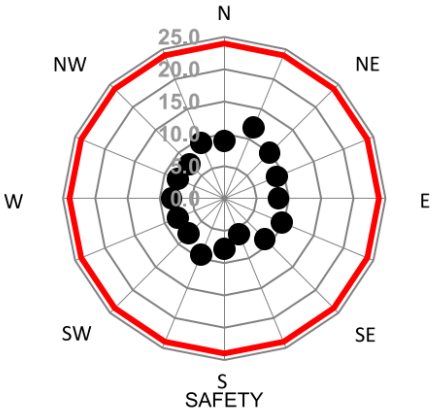


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	8.3%	1.0%	0.0%	4.6	Pass	13.1	Pass
● Existing Configuration	0.1%	0.0%		2.4	Pass	6.9	Pass
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Test Location **38**

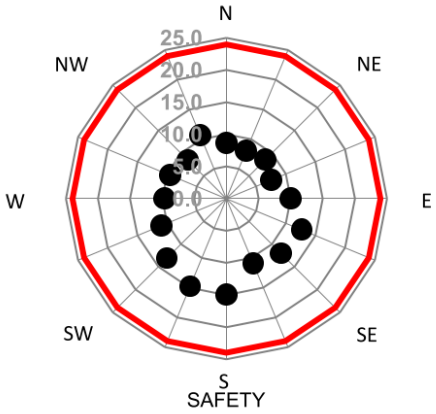


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 6m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	5.9%	0.3%	0.0%	4.1	Pass	11.8	Pass
● Existing Configuration							
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Test Location **39**

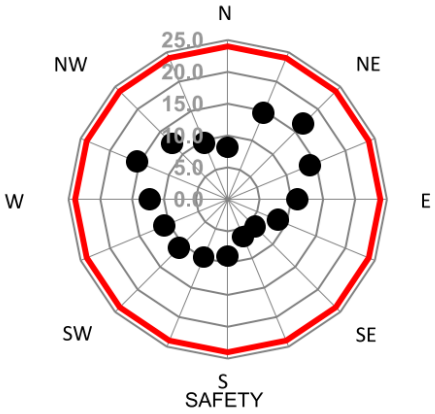


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	16.0%	2.4%	0.3%	5.3	Pass	15.0	Pass
● Existing Configuration							
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Test Location **40**

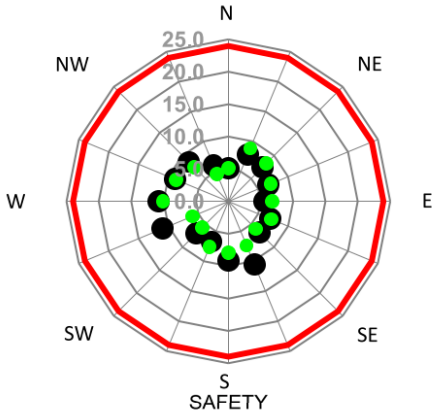


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	16.9%	3.9%	0.5%	5.7	Pass	16.7	Pass
● Existing Configuration							
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Test Location **41**

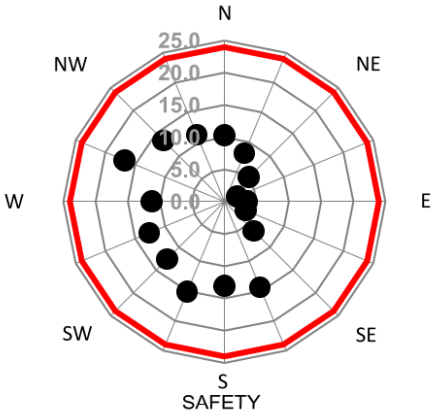


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	4.0%	0.2%	0.0%	3.8	Pass	10.9	Pass
● Existing Configuration	2.3%	0.0%	0.0%	3.5	Pass	10.1	Pass
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Test Location **42**

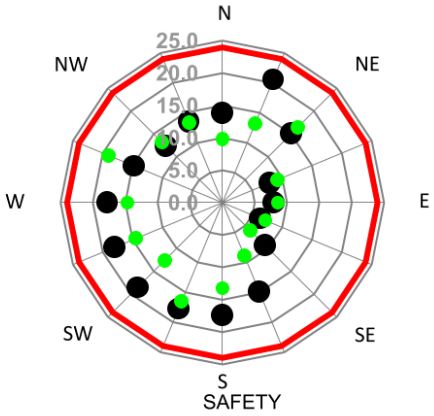


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	14.6%	2.9%	0.4%	5.3	Pass	16.7	Pass
● Existing Configuration							
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Test Location **N1**

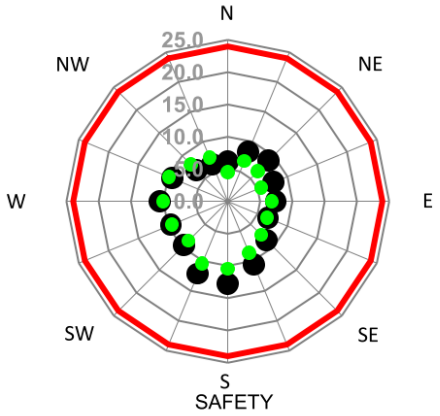


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	33.1%	12.5%	3.2%	7.4	Pass	20.6	Pass
● Existing Configuration	22.7%	5.6%	1.0%	6.1	Pass	19.0	Pass
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Test Location **N2**

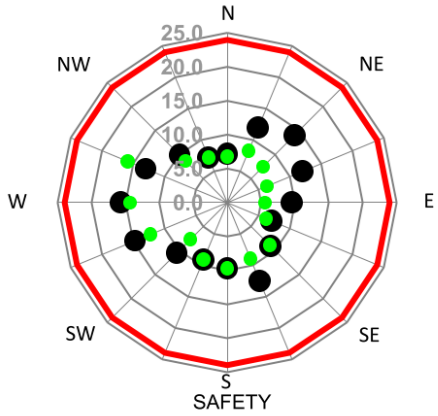


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	8.6%	0.6%	0.0%	4.5	Pass	12.8	Pass
● Existing Configuration	4.6%	0.2%	0.0%	3.9	Pass	10.4	Pass
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Test Location **N3**

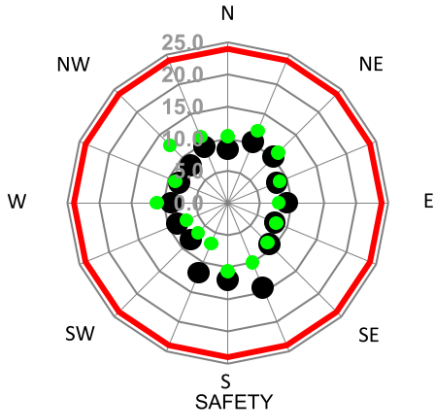


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	16.6%	2.9%	0.3%	5.4	Pass	15.7	Pass
● Existing Configuration	7.2%	1.4%	0.2%	4.4	Pass	15.9	Pass
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Test Location **N4**

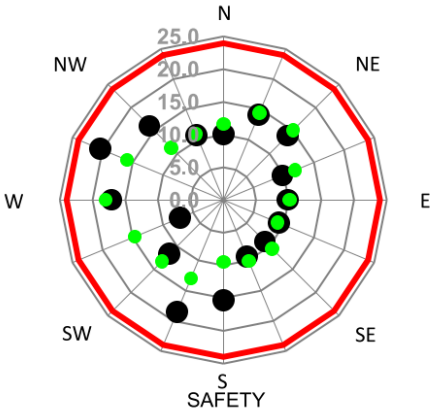


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	11.1%	0.9%	0.1%	4.7	Pass	14.3	Pass
● Existing Configuration	9.6%	0.7%	0.0%	4.6	Pass	12.7	Pass
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Test Location **N5**

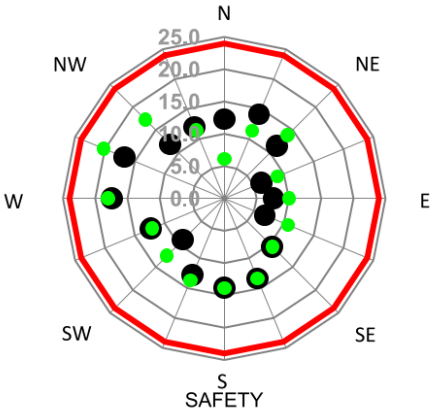


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	25.1%	6.5%	1.4%	6.3	Pass	20.4	Pass
● Existing Configuration	22.0%	5.3%	0.8%	6.1	Pass	18.0	Pass
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Test Location **N6**

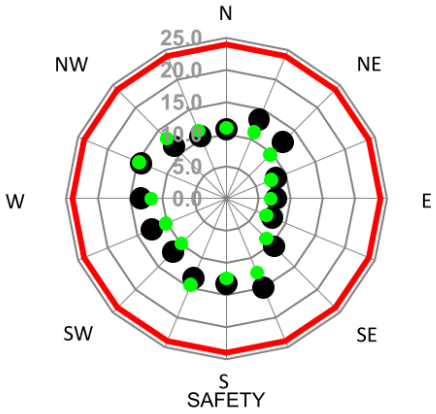


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	21.6%	4.3%	0.7%	5.8	Pass	17.4	Pass
● Existing Configuration	24.0%	5.2%	1.2%	6.0	Pass	20.2	Pass
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Test Location **N7**

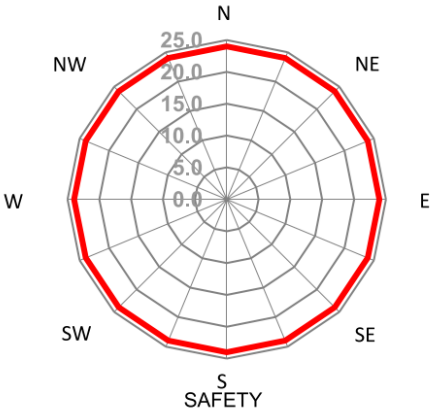


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	20.4%	3.2%	0.3%	5.6	Pass	15.0	Pass
● Existing Configuration	14.9%	2.0%	0.2%	5.1	Pass	14.7	Pass
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Test Location **0**

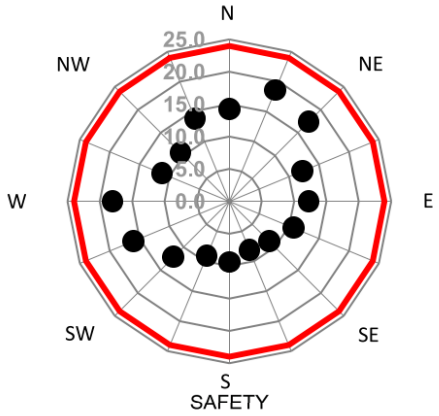


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration							
● Existing Configuration							
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Test Location **T1**

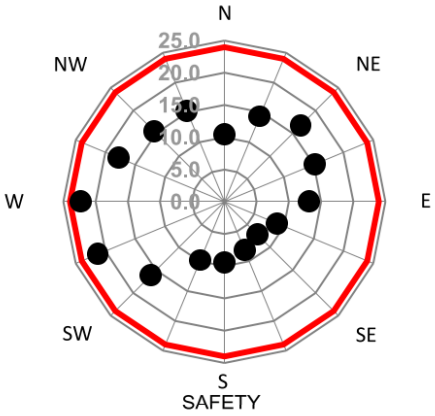


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	24.6%	9.3%	2.7%	7.0	Pass	18.6	Pass
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Test Location **T2**

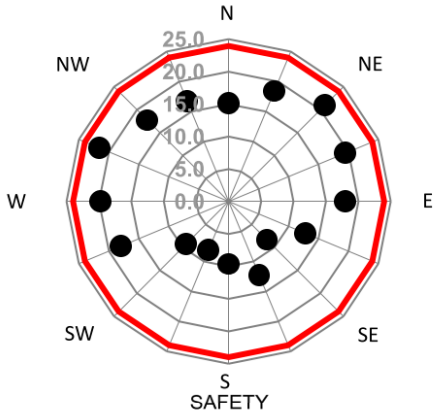


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	25.0%	9.3%	2.8%	7.1	Pass	22.3	Pass
●							
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Test Location **T3**

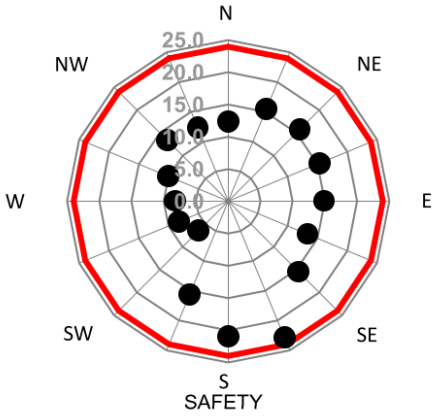


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	31.7%	14.9%	5.0%	8.0	Pass	21.6	Pass
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Test Location **T4**

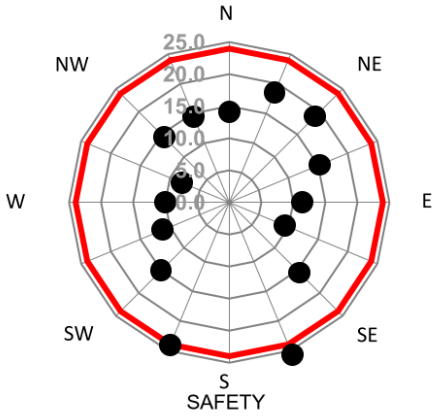


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	35.2%	14.0%	3.9%	7.6	Pass	22.9	Pass
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Test Location **T5**

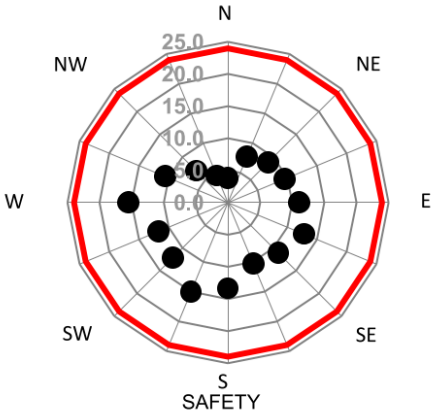


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	42.0%	23.9%	11.5%	9.8	NA - Safety criterion failed	26.0	Fail
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Test Location **T6**

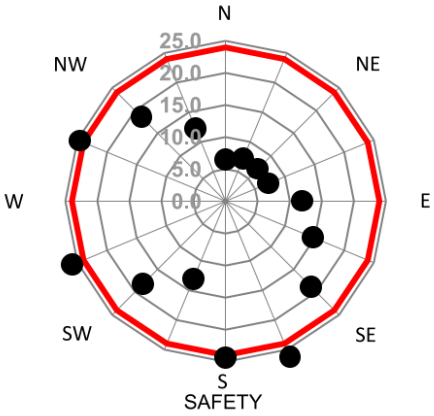


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	16.1%	2.6%	0.3%	5.3	Pass	15.5	Pass
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Test Location **T7**

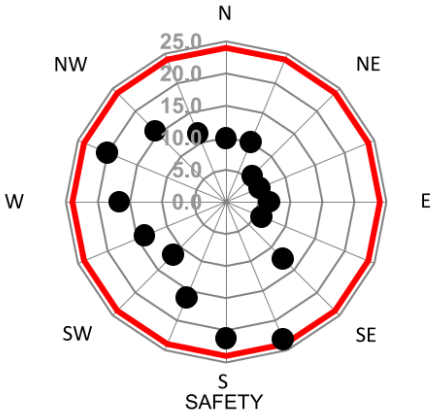


Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	39.4%	23.1%	11.9%	10.1	NA - Safety criterion failed	26.3	Fail
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Test Location **T8**



Local peak 0.5 second gust wind speed (m/s)

Safety Wind Speed = 24m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 5% of year)	Result (compared against Target wind speed of 8m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 24m/s)
	Sitting (4m/s) %	Standing (6m/s) %	Walking (8m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	28.1%	11.1%	3.9%	7.6	Pass	23.2	Pass
●							
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Attachment B

Draft Sydney development control plan 2012 – 84-86 and 88-94 Parramatta Road, Camperdown

CITY OF SYDNEY

Sydney Development Control Plan – 84-86 & 88-94 Parramatta Road, Camperdown



Sydney DCP 2012 – 84-86 & 88-94 Parramatta Road, Camperdown
October 2026

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Contents

Schedule 1 – Amendment to Sydney Development Control Plan 2012 4

Table of figures

Figure 6.X - Building envelope - plan 5
Figure 6.X - Building envelope - massing - axonometric south east view 6
Figure 6.X - Building envelope - massing - axonometric south west view 6
Figure 6.X - Building envelope - north elevation 7
Figure 6.X - Building envelope - east elevation 7
Figure 6.X - Building envelope - south elevation 8
Figure 6.X - Building envelope - west elevation 8

The purpose of this Development Control Plan

The purpose of this Development Control Plan (DCP) is to amend *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 84-86 & 88-94 Parramatta Road, Camperdown.

This plan is to be read in conjunction with Planning Proposal – 84-86 & 88-94 Parramatta Road, Camperdown.

Citation

This amendment may be referred to as *Sydney Development Control Plan 2012 – 84-86 & 88-94 Parramatta Road, Camperdown*.

Land covered by this plan

This plan applies to the land identified as 84-86 & 88-94 Parramatta Road, Camperdown, which is:

– 84-86 Parramatta Road, Camperdown – Lot 1 DP 1216911

– 88-90 Parramatta Road, Camperdown – Lot 1 DP 178634

– 92-94 Parramatta Road, Camperdown – Lot A DP 402925 & Lot 1 DP 965792

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 Sydney Development Control Plan 2012

This plan amends Sydney Development Control Plan 2012 by:

1. Amending Figure 6.1 Specific sites map to include 84-86 & 88-94 Parramatta Road, Camperdown.
2. Inserting a new section 6.3.X 84-86 & 88-94 Parramatta Road, Camperdown, as shown at Schedule 1.
3. Updating figure numbers as required.

Schedule 1 – Amendment to Sydney Development Control Plan 2012

6.3.X 84-86 & 88-94 Parramatta Road, Camperdown

The following objectives and provisions apply to 84-86 & 88-94 Parramatta Road, Camperdown, 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 84-86 Parramatta Road is developed for serviced apartments only, and 88-94 Parramatta Road is developed for health or medical related high technology industry uses.

If a development at 84-86 & 88-94 Parramatta Road, Camperdown, seeks to utilise additional height and/or floor space permitted by clause 6.XX, 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 biomedical and life sciences research facility at 88-94 Parramatta Road featuring a high-quality built form which:
    i. is of appropriate bulk and scale for its location;
    ii. maintains and protects sun access to neighbouring residents;
    iii. ensures the development results in a comfortable and safe wind environment in adjacent public places;
    iv. ensures the building podium responds appropriately to the existing streetscape of Parramatta Road; and
    v. maximises opportunities to retain significant portions of the warehouse building at 88-90 Parramatta Road, including façade, columns, roof form and wooden floors, beams and trusses.
b. Deliver a serviced apartment development at 84-86 Parramatta Road which:
    i. is of appropriate bulk and scale for its location; and
    ii. maintains and protects amenity for existing residents including sun access.
c. Define a maximum building envelope in which all future development is to be comfortably contained.
d. Ensure development is consistent with Australian best practice performance benchmarks for ecologically sustainable development.
e. Ensure development can accommodate all servicing, loading and delivery requirements.

f. Improve the Parramatta Road streetscape through active frontages and the incorporation of high quality public art.

Figure 6.X - Building envelope - plan

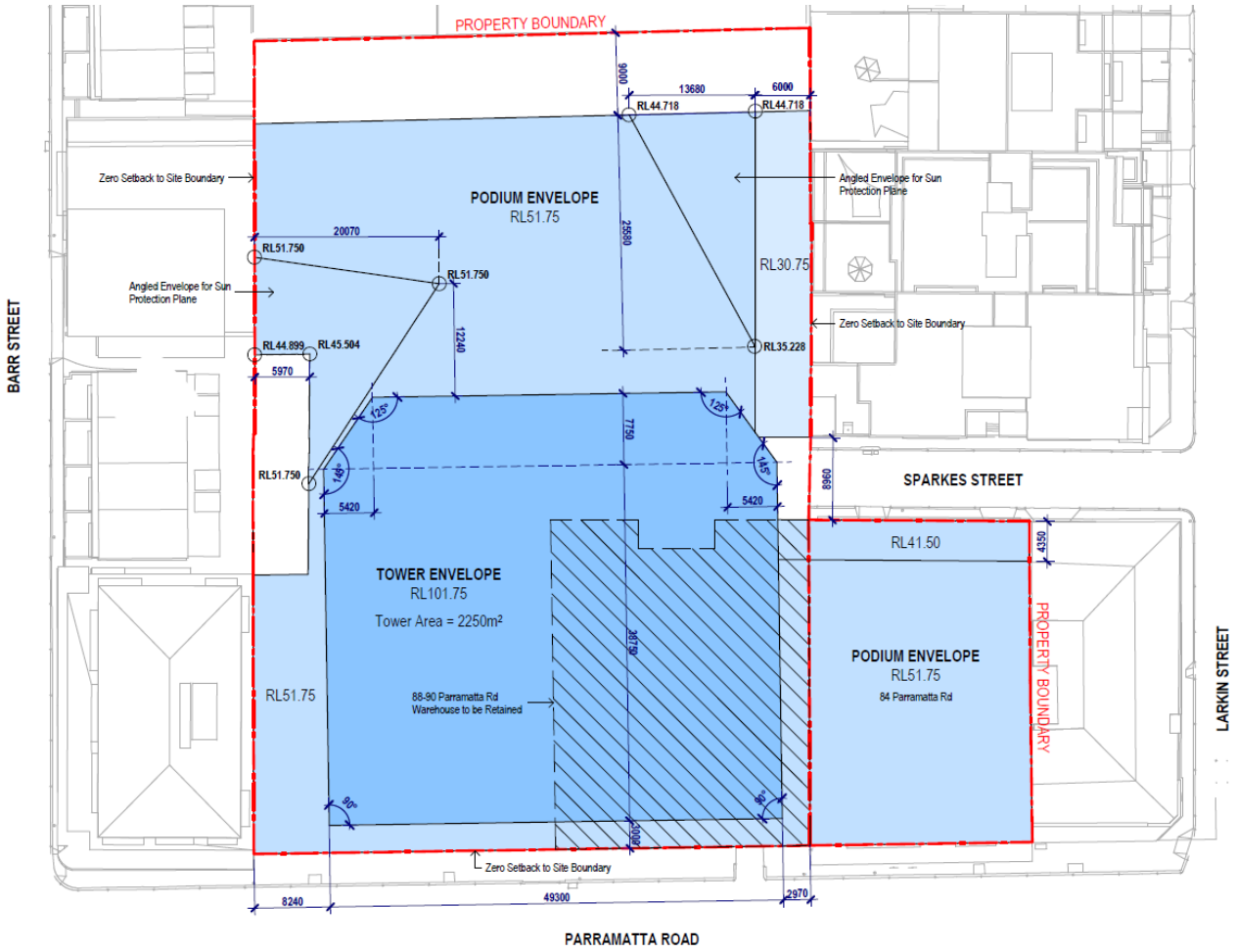


Figure 6.X - Building envelope - massing - axonometric south east view

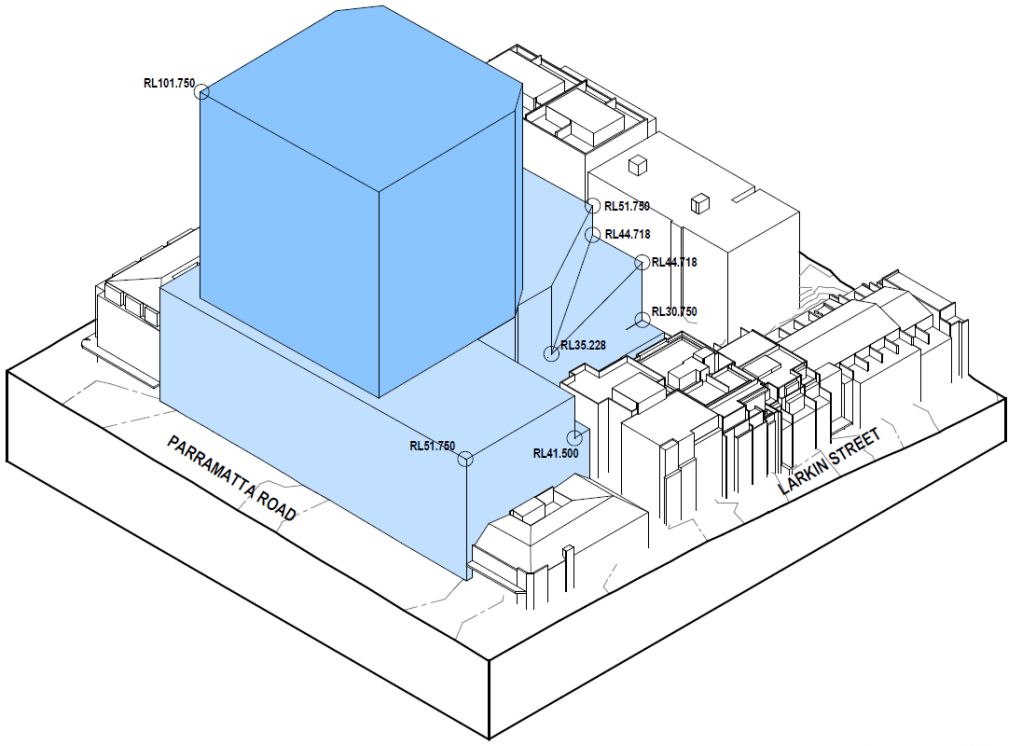


Figure 6.X - Building envelope - massing - axonometric south west view

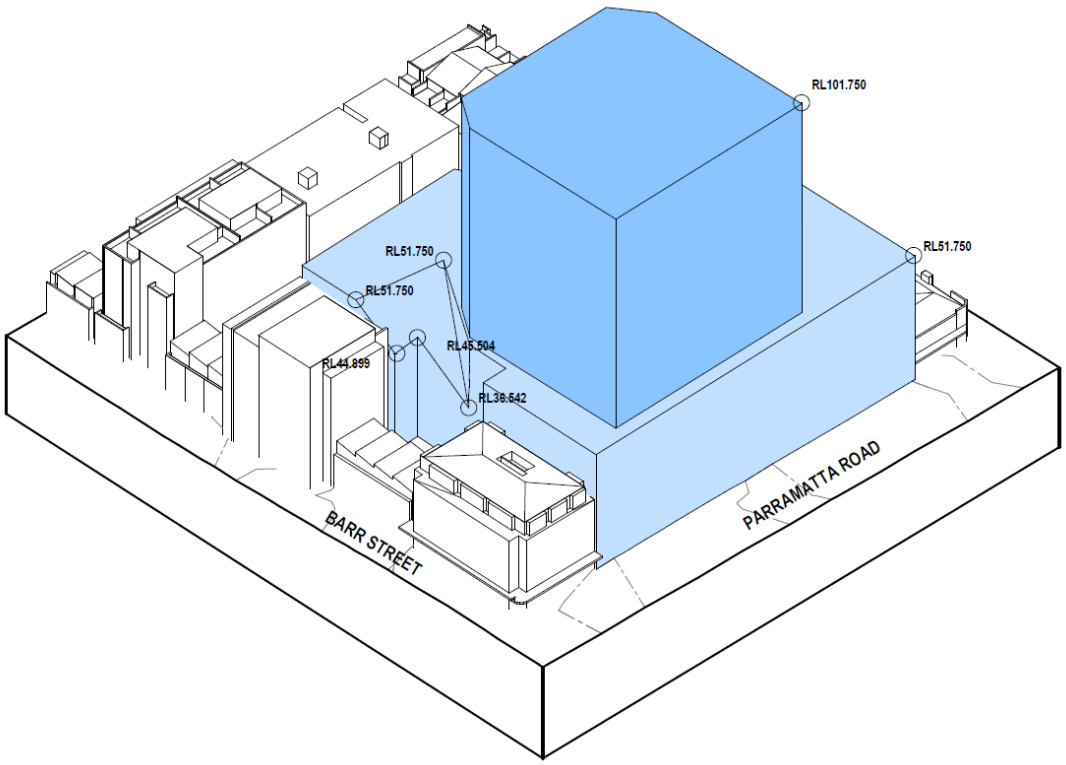


Figure 6.X - Building envelope - north elevation

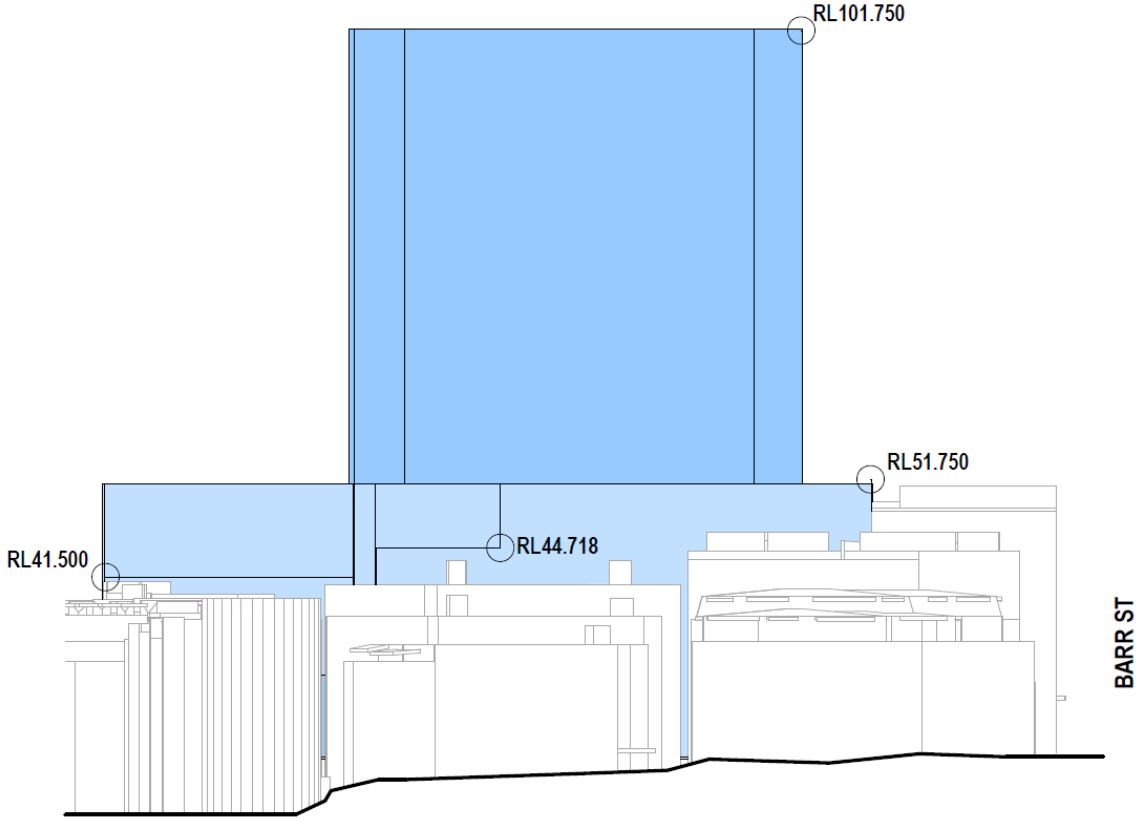


Figure 6.X - Building envelope - east elevation

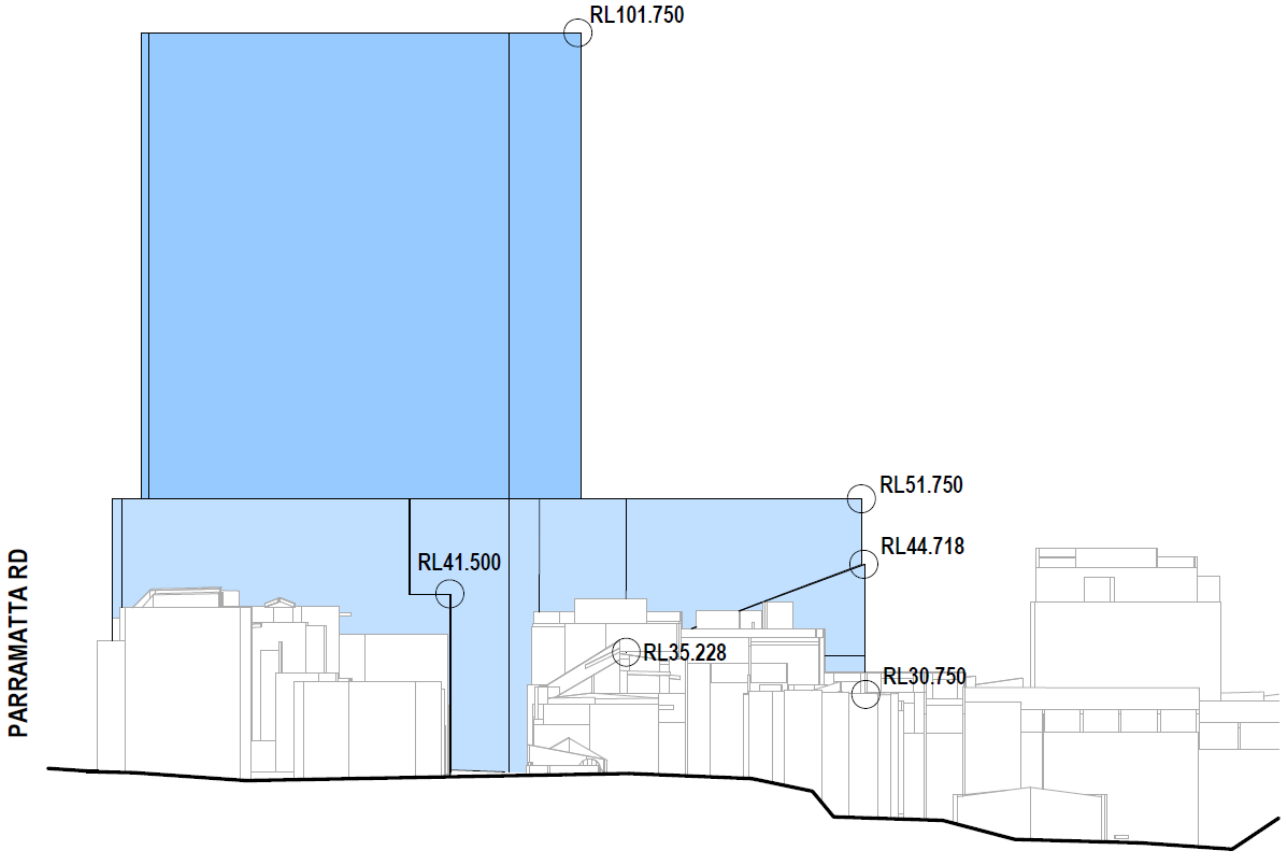


Figure 6.X - Building envelope - south elevation

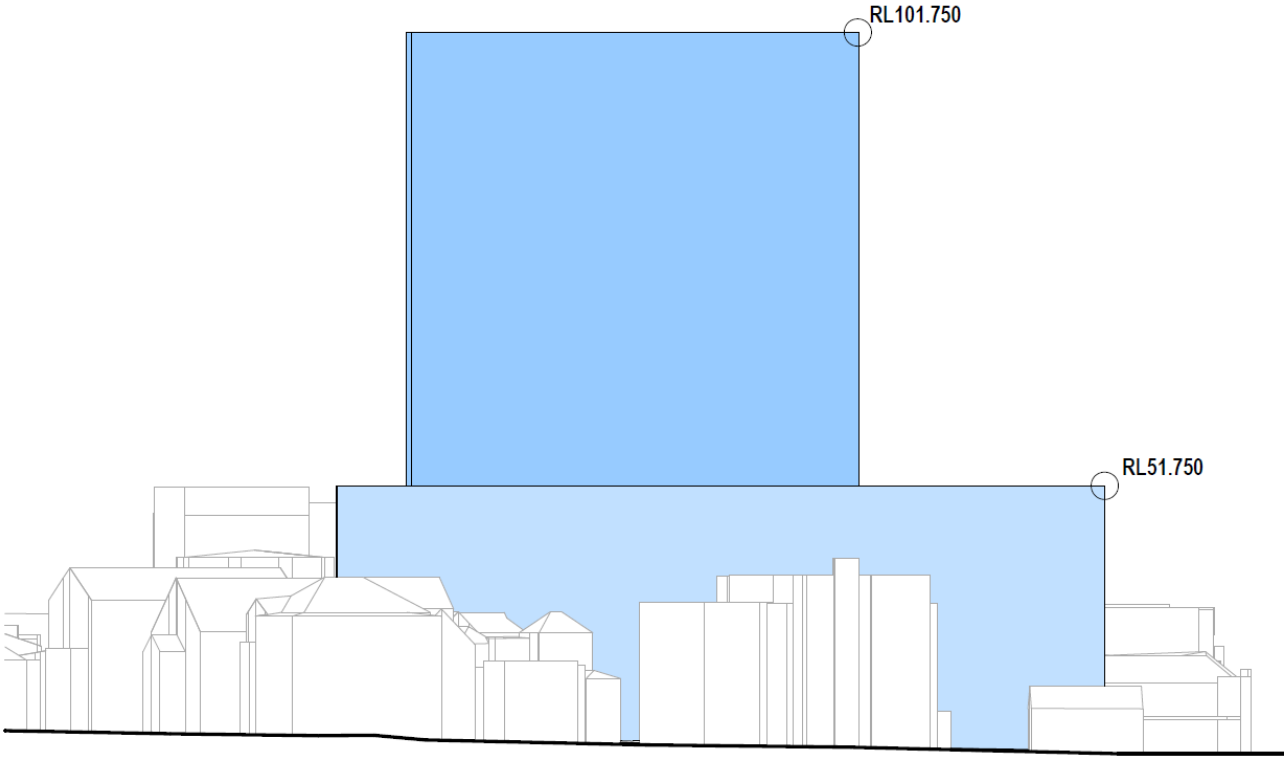
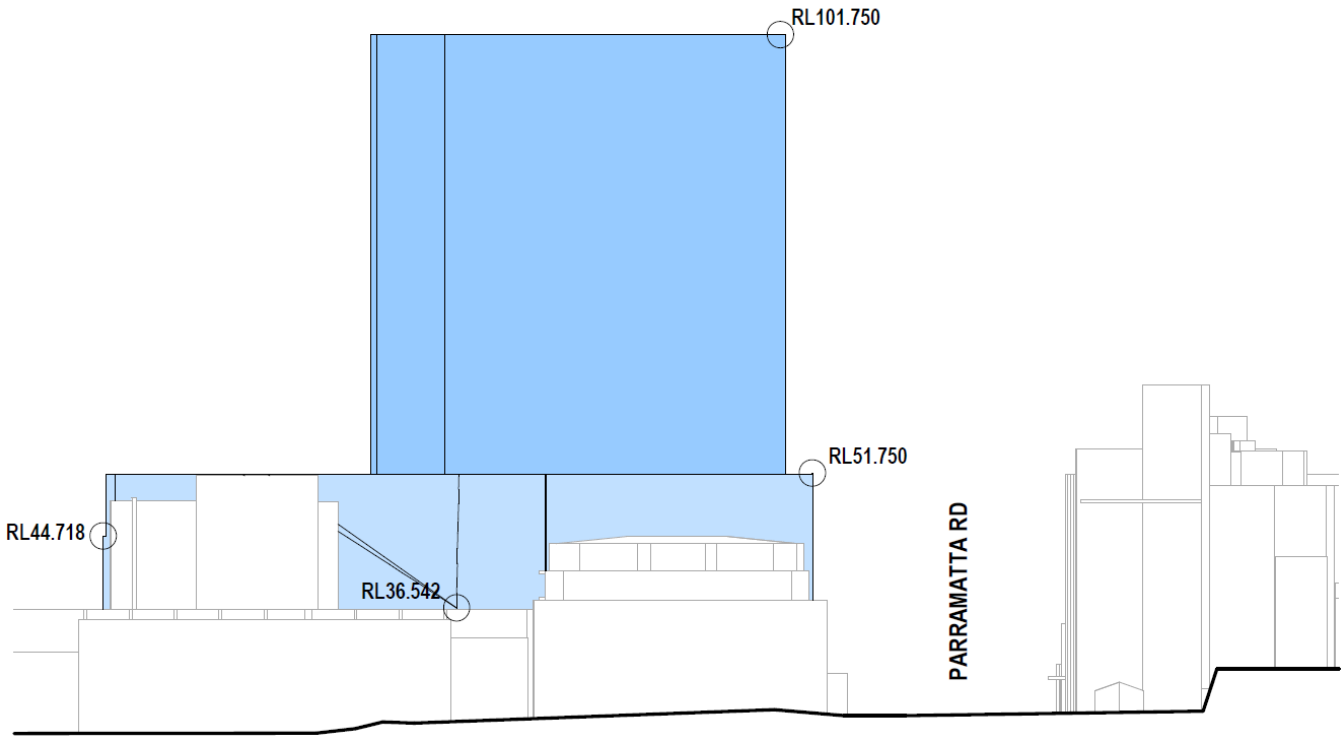


Figure 6.X - Building envelope - west elevation



6.3.X.1 Built form

1. Development is not to exceed the building envelope shown in Figures 6.X to 6.X.

2. A floor-to-floor height of at least 4.5 metres is required for all laboratory floor space to accommodate the required mechanical plant to support biomedical and life sciences research.
3. The form of the warehouse building, including façade and parapet, at 88-90 Parramatta Road should be conserved and be legible when viewed from Parramatta Road.
4. Original fabric and structure of the warehouse building at 88-90 Parramatta Road should be conserved and adapted where possible, with new building services and access points located in areas that have already undergone substantial modification.

6.3.X.2 Sustainability and landscaping

1. Development at 88-94 Parramatta Road must achieve, as a minimum, a 5-star Green Star Buildings v1 rating.
2. Landscaped open space with adequate deep soil is to be provided along the northern boundary of the site.

6.3.X.3 Transport and access

1. All vehicular access, including basement parking, servicing and waste collection, is to be via Sparkes Street.
2. A Delivery Servicing Plan must be prepared for the site for submission with any subsequent development application. In addition to the requirements outlined in Schedule 7 of Sydney DCP, the Delivery Servicing Plan must:
    a. demonstrate how laboratory gases, including cryogenic liquids, will be delivered noting the dimensions of delivery vehicles and limitations of Sparkes and Larkin Streets, and any associated management measures during delivery to minimise impacts to any neighbouring properties, including 84-86 Parramatta Road, and pedestrians.
    b. demonstrate how the substation on-site will be serviced and any associated management measures during servicing.
    c. demonstrate how the loading dock access interacts with Sparkes Street and any internal laneways within the site, to minimise impacts to pedestrians.
3. New development must provide bike parking in accordance with the minimum rates for office premises or business premises.

6.3.X.4 Design excellence

1. A competitive design process is to be undertaken in accordance with clause 6.21 of the Sydney Local Environmental Plan 2012 and the City of Sydney Competitive Design Policy.
2. The competition is to include a minimum of 3 invited competitors, with the selection of competitors to include a mix of emerging and established architectural practices.
3. Jury composition is to be in accordance with the policy or guideline requirements of the relevant consent authority.
4. The City will nominate at least one observer to the competitive design process, including jury deliberations and any Design Integrity Assessment process, at its discretion.
5. Any additional floor space pursued for a building demonstrating design excellence under clause 6.21D(3)(b) of the Sydney LEP 2012, is to be accommodated within the building envelope shown in Figures 6.X – 6.X.

6.3.X.5 Public art

1. Public art, delivered in accordance with the City's Guidelines for Public Art in Private Development, should be located on the Parramatta Road frontage of the site.

Attachment C

Public benefit offer dated 9 October 2026

WENTWORTH

9 October 2026

Monica Barone
Chief Executive Officer
City of Sydney
456 Kent Street
Sydney NSW 2000

Attention Brett Calear, Senior Project Manager – Planning Agreement

Dear Ms Barone,

Revised Public Benefit Offer: 88-94 Parramatta Road Camperdown

Spark Sub TC Pty Ltd (Wentworth) (the Proponent) has prepared this revised Public Benefit Offer (PBO) to accompany a request for a planning proposal relating to land at 84-94 Parramatta Road, Camperdown (the site). The Proponent has prepared this PBO with the intent to enter into a Voluntary Planning Agreement (VPA) with the City of Sydney Council (City) for the purposes of section 7.7(3) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The proposal relates to the collective sites fronting Parramatta Road which will directly support the ongoing growth of health related startups associated within the Tech Central Cluster, with a building envelope shaped with consideration of solar access to surrounding residents and in consideration of first principle environmental controls to protect public amenity. Wentworth recognises that as this area continues to grow, it is critical that there is investment in new and upgraded local infrastructure to meet the needs of the people who live and work in the vicinity of the development. In this regard, the proposed terms of our PBO are set out in the following subsections.

Proposed land and development to which the PBO relates

This PBO only applies to land identified as 88-94 Parramatta Road, Camperdown. Specifically, the site to which this PBO relates comprises of three (3) allotments, legally identified within Table 1 below. The PBO relates to a request for a Planning Proposal for the same site, plus an additional lot at 84 Parramatta Road (not subject to this PBO).

The purpose of the request for a Planning Proposal is to introduce new maximum Height of Buildings and Floor Space Ratio (FSR) development standards for the site, specifically enabling:

- A new maximum building height of part 80 metres, part 30 metres.
- A new mapped maximum floor space ratio for 84 Parramatta Road of 4.8:1.
- A new site specific provision for 88-94 Parramatta Road that enables an additional 6.5:1 (on top of the mapped FSR and design excellence bonus) for non-residential uses.
- Retention of the existing warehouse at 88-90 Parramatta Road.
- Amendments to the Sydney Development Control Plan 2012 (Sydney DCP 2012) to address site specific outcomes.

Table 1 Lot details relevant to this PBO

Address	Legal description	Site area	Owner
88 – 90 Parramatta Road	Lot 1 DP 178634	977m^2	University of Sydney
92 – 94 Parramatta Road	Lot A DP 402925	3,320m^2	University of Sydney
	Lot 1 DP 965792	1,064m^2	University of Sydney

Public benefit offer terms

Wentworth acknowledge that there is a nexus between new non-residential development uplift beyond the existing FSR development standard and the need for infrastructure contributions to fund local public infrastructure and facilities. In this regard, the terms of this PBO will allow Wentworth to engage with the City of Sydney Council on how public benefits can be delivered through both monetary contributions and works-in-kind to better the immediate precinct environment and support any additional demands generated by the proposal.

Wentworth's proposal seeks to provide the following public benefits (responding to Council's feedback provided on 26th August), to be formalised via a future VPA with the City.

Public Art Commitment

Wentworth is committed to delivering Public Art on site, comprising up to 0.5% of the total cost of development. Specific details and design will be formalised via a future VPA with the City.

Sustainability Commitments

In accordance with the Request for a Planning Proposal, Wentworth is committed to delivering the following:

- 5-star Green Star rating, ensuring the future development is Net Zero ready
- Best practice procurement and management to be embedded via Green Star rating

Works-in-Kind

- **Sparks Street Upgrade**

  Upgrade of Sparkes Street from the development up to and including the intersection with Larkin Street to improve pedestrian amenity, such as:

  - Installation of new street lighting and relocation of existing light poles as necessary to meet City standards, and accommodate servicing traffic to and from the development.
  - Installation of a painted pedestrian crossing on Larkin Street.
  - Aligning kerb ramps to the Sparkes and Larkin Street intersection and installation of kerb blisters if possible.
  - Relocation of street signage as necessary.
  - Installation of additional in-street tree planting if possible.
  - Widening the footpaths (particularly the northern footpath) to be accessible and compliant with the City of Sydney Streets Code if possible.

The specific design details of the renewed Sparkes Street will be subject to detailed design development, which will be supported by plans that clearly outline the parameters of this works in kind contribution.

Other Contributions to be dealt with in future development application

- **Local Infrastructure Contribution**

  A proposed offer for a local infrastructure monetary contribution is proposed, in accordance with the Section 7.11 City of Sydney Development Contributions Plan. This contribution it to be inclusive of all infrastructure contributions applicable, and is to be calculated at the detailed DA stage based on the following calculation:

  The net population increase of residents, workers and visitors × The contribution rate per resident, worker and visitor

- **Affordable Housing Levy**

  A proposed offer consistent with the Sydney LEP for a monetary contribution offer towards affordable housing at 1% of any non-residential GFA and 3% for any residential GFA, based on the amount of floorspace proposed as part of a detailed DA.

- **Public domain and footpath upgrades**

  As part of the proposed development, Wentworth will upgrade finishes along the Parramatta Road interface to the satisfaction of Council. These works will be included in the design competition brief and will be undertaken in accordance with the design codes and technical specifications contained within the City's Public Domain Manual.

Wentworth has prepared this Public Benefit Offer to accompany a request for a planning proposal relating to land at 84-94 Parramatta Road, Camperdown. We submit the abovementioned offer, now agreed with City of Sydney Council, to be included in a Voluntary Planning Agreement to support the Planning Proposal. We trust that this offer clearly demonstrates our commitment via public art commitments, sustainability initiatives and works-in-kind to better the immediate precinct environment and meet the needs of the people who live and work in and in the vicinity of the site.

With the benefits of this proposal in mind, we are seeking to formalise this offer through a VPA that will be prepared and executed as part of the finalisation of the planning proposal. Should you require any additional information, or should you have any queries about this matter, please do not hesitate to contact the undersigned.

Yours sincerely,

[redacted]

Paul Apostoles
Director
Spark Sub TC Pty Ltd

Docusign Envelope ID: DC008F56-FC4D-80D6-8108-95D44417F3FF

THE UNIVERSITY OF SYDNEY

Debbie McNamara
Chief University Infrastructure Officer

12 October 2026

Mr Graham Jahn AM
Chief Planner / Executive Director – City Planning, Development and Transport
City of Sydney
456 Kent Street
Sydney NSW 2000

Your Ref: 2026/485748 | VPA File No: VPA/2026/4

Dear Mr Jahn

Camperdown Life Sciences Planning Proposal, 84–94 Parramatta Road, Camperdown – Landowner acknowledgment of Revised Public Benefit Offer

I refer to the City's letter of 26 August 2026 (Ref 2026/485748) regarding the draft Public Benefit Offer associated with the Planning Proposal for 84–94 Parramatta Road, Camperdown (lodged 4 March 2026), and to the Revised Public Benefit Offer dated 09 October 2026 (the PBO) submitted in response by Spark Sub TC Pty Ltd (the Proponent).

The University of Sydney (the **University**) is the registered proprietor of the land to which the PBO relates, being 88–94 Parramatta Road, Camperdown (being the whole of the land contained in folio identifier 1/178634, A/402925 and 1/965792) (the **Land**).

The University acknowledges that the Proponent has submitted the PBO to the City and that, should the Planning Proposal proceed, a planning agreement giving effect to the PBO will be required to be entered into and registered on the title of the Land as part of the finalisation of the Planning Proposal. The University confirms that it has no objection in principle to the registration of such an agreement on the title of the Land, subject to the University approving the final terms of the planning agreement.

The University provides this acknowledgment on the understanding that the planning agreement will be drafted so that the obligations to deliver the public benefits set out in the PBO are triggered only by a future State Significant Development Application (or other development application) for the life sciences development contemplated by, and consistent with planning controls introduced by, the current Planning Proposal, and are not triggered by any other development application in respect of the Land (including any smaller-scale application) that the University may pursue should that development not proceed. The University notes that the Proponent is the party responsible for delivering the public benefits set out in the PBO, and that the University does not assume any obligation to deliver the public benefits or any other obligation under the planning agreement beyond those (if any) which the University expressly agrees to in the final planning agreement. The University will review the terms of the planning agreement prior to its execution.

T +61 2 9114 0857 | E debbie.mcnamara@sydney.edu.au
G12 Services Building
The University of Sydney
NSW 2006 Australia

Yours sincerely

Signed by:
[redacted]
28119F7FA0EC4CD...

Deborah (Debbie) McNamara
Chief University Infrastructure Officer

Signed for **The University of Sydney (ABN 15 211 513 464)** by its attorney **Deborah Anne McNamara** pursuant to **Power of Attorney Bk 4855 No197** (who states that by executing this document that the attorney has received no notice of revocation of the power of attorney).

cc: Brett Calear, Senior Project Manager – Planning Agreement, City of Sydney
cc: Paul Apostoles, Director, Spark Sub TC Pty Ltd (Wentworth)

Item 5.

Fire Safety Reports

File No: S105001.002

Summary

The City of Sydney (the City) regularly receives building reports from Fire and Rescue NSW in relation to inspections carried out by Fire and Rescue NSW Authorised Officers. These inspection reports are to be brought to Council and Council is required to determine whether to exercise its power to issue fire safety orders under Division 9.3 and Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act).

In response to Fire and Rescue NSW reports, City staff undertake inspections to ensure fire safety measures are in full operation and that building exits are clear and unimpeded. Fire and Rescue NSW inspections reveal fire safety concerns that require Council as the appropriate regulatory authority to use its discretion and address the concerns observed at the time of the inspection.

Fire and Rescue NSW has powers under the Act to carry out inspections of buildings and it is required to forward its findings to the City.

Fire and Rescue NSW reports received by the City are required to be tabled before Council.

Attached are details of 4 reports received by the City from Fire and Rescue NSW. The attachments deal with 4 properties and include the Fire and Rescue NSW reports and the findings (preliminary or final) by City staff, along with other documentation relevant to that property.

Recommendation

It is resolved that Council:

(A) note the contents of the Fire Safety Reports Summary Sheet, as shown at Attachment A to the subject report

(B) note the inspection reports by Fire and Rescue NSW, as shown at Attachments B to E to the subject report

(C) note the contents of Attachment B and exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 730-742 George Street, Haymarket, subject to consideration of any representations received

(D) note the contents of Attachment C and exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 3 Crick Avenue, Elizabeth Bay, subject to consideration of any representations received

(E) note the contents of Attachment D and not exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 133-141 Botany Road, Waterloo at this time

(F) note the contents of Attachment E and exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 152-164 Bulwara Road, Pyrmont, subject to consideration of any representations received.

Attachments

Attachment A. Fire safety reports summary sheet

Attachment B. Inspection report - 730-742 George Street, Haymarket

Attachment C. Inspection report - 3 Crick Avenue, Elizabeth Bay

Attachment D. Inspection report - 133-141 Botany Road, Waterloo

Attachment E. Inspection report - 152-164 Bulwara Road, Pyrmont

Background

1. The City receives inspection reports and recommendations from Fire and Rescue NSW in relation to inspections carried out on buildings located within the local government area.

2. Under the Environmental Planning and Assessment Act 1979, (the Act), Fire and Rescue NSW has the power to carry out inspections of buildings to determine if the building has adequate provision for fire safety and/or is compliant with legislation.

3. On average, the City receives approximately 50 such reports each year. They can be prompted by reports from the police or others who have a concern relating to fire safety of a building.

4. The inspection is undertaken to ensure fire safety measures are in full operation and that building exits are clear and unimpeded.

5. When Fire and Rescue NSW carries out such an inspection, a report and any recommendations must be provided to the City.

6. Under the Act, Council is then required to table the report and make a determination as to whether it will exercise its power to issue a Fire Safety Order 1 or 2 in Schedule 5, Part 2 of the Act.

    (a) Fire Safety Order 1 requires a person to do or stop doing certain specified things to improve fire safety.

    (b) Fire Safety Order 2 requires a person to cease conducting an activity on premises where that activity constitutes, or is likely to constitute, a life-threatening hazard or a threat to public health or public safety.

7. Attached are the details of the reports received from Fire and Rescue NSW, including recommendations for further action. The properties have also been inspected by City staff.

Risks

8. This approach is within the City's risk appetite, which states:

    - We are committed to conducting our activities in full compliance with applicable laws, regulations and relevant industry standards.

Relevant legislation

9. Environmental Planning and Assessment Act 1979.

GRAHAM JAHN AM

Chief Planner / Executive Director City Planning, Development and Transport

Andrew Thomas, Executive Manager Planning and Development

Attachment A

Fire safety reports summary sheet

Fire safety reports summary sheet

Total number of properties tabled: 4

Report – October 2026

Att.	Premises specifics	Actions/ Recommendation
A	Not applicable – Summary Sheet	Summary of clause 17, Schedule 5 matters tabled at Council meeting.
B	730-742 George Street, Haymarket	Premises inspected; owners have been issued with a Notice of Intention to give a Fire Safety Order; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
C	3 Crick Avenue, Elizabeth Bay	Premises inspected; owners have been issued with a Notice of Intention to give a Fire Safety Order; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
D	133-141 Botany Road, Waterloo	Premises inspected; owners have been issued with corrective action correspondence; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
E	152-164 Bulwara Road, Pyrmont	Premises inspected; owners have been issued with a Notice of Intention to give a Fire Safety Order; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.

Attachment B

Inspection report
730-742 George Street, Haymarket



Figure 1: 730-742 George Street, Haymarket, viewed from the north-west

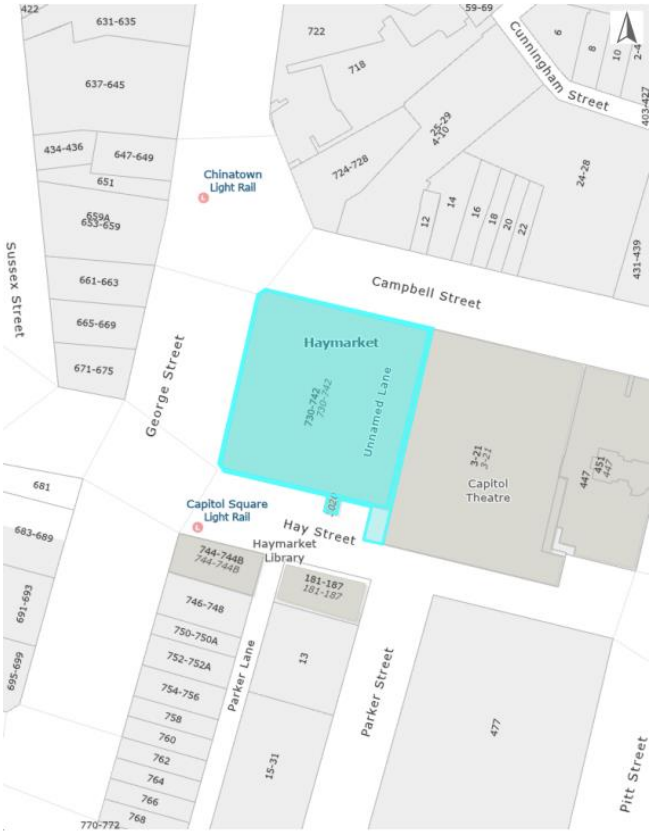


Figure 2: Location map of 730-742 George Street, Haymarket

Council investigation officer inspection and recommendation report; Clause 17(2) Part 8 of Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act)

Officer: **Doug McLennan**

Date: **14 August 2026**

Premises: **730-742 George Street, Haymarket**

Executive summary

1. The City of Sydney (the City) received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises dated 16 July 2026 with respect to matters of fire safety.

2. The premises consists of a 5 storey building used for hotel accommodation, offices, retail and car park at lower levels.

3. The City inspected the premises on 5 August 2026, accompanied by the building manager. This inspection identified deficiencies in fire safety. To address this, a Notice of Intention to Give a Fire Safety Order (NOI) has been issued under the *Environmental Planning and Assessment Act 1979 NSW* (the Act).

Chronology

Date	Event
16 July 2026	FRNSW correspondence was received.
5 August 2026	The City inspected the premises identifying deficiencies in fire safety.
8 September 2026	The City issued a NOI.

Fire and Rescue NSW report

4. Fire and Rescue NSW conducted an inspection of the subject premises on 16 April 2026.

Issues

5. The report from Fire and Rescue NSW detailed issues as shown in the table below.

Ref.	Issue	City response
	Provisions for Fire Safety	
	Automatic Fire Detection and Alarm System	
1	Fire Brigade Panel (FBP)	
1A	The doors leading to the main FBP, were not marked with the words 'FIRE PANEL', in letters not less than 50mm high.	The City's Inspection on 5 August 2026 confirmed the signage was missing. To address this, the City issued a NOI on 8 September 2026 requiring signage to be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
1B	An external wall mounted visual alarm device was not located on the front façade of the building at the designated building entry point to indicate the location of the FBP.	During the City's inspection on 5 August 2026, it was observed that this matter had already been rectified, addressing this issue.
1C	Zone Block Plan – A permanent, water and fade resistant zone block plan, depicting all the relevant information of the installation, was not securely mounted adjacent to the FBP or mimic panel	The City's Inspection on 5 August 2026 confirmed the block plan was missing. To address this, the City issued a NOI on 8 September 2026. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
	Fire Hydrant System	
2	The hydrant booster assembly	
2A	Location – The hydrant booster connection is not located within the façade of the building containing the principal building entrance and is more than 20m from the principal pedestrian entrance.	During the City's inspection on 5 August 2026, it was observed the building has multiple entrances. The principal pedestrian access to the building is from Campbell Street. The booster assembly was observed to be located within the Campbell Street façade and within

Ref.	Issue	City response
		20m of the principal pedestrian entrance to the building. As the booster assembly is situated within 20m of the principal pedestrian entrance, it is considered compliant with the relevant requirements. Accordingly, no action is required, and no non-compliance was identified.
2B	The type and arrangement of fire brigade booster assembly is not consistent with the requirements of AS 2419.1-2021. In this regard, the current configuration is not deemed acceptable.	The City's inspection on 5 August 2026 confirmed that the booster assembly did not comply with the applicable fire hydrant system requirements. In response to this, the City issued a NOI on 8 September 2026 requiring upgrading of the fire hydrant system. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
2C	Clearances – Adequate clearances have not been provided to the booster inlet connections. In this regard, hose connection would be compromised due to the alignment of the boost inlets within the enclosure.	The City’s inspection on 5 August 2026 found booster connections did not have adequate clearances. In response to this, the City issued a NOI on 8 September 2026 requiring upgrade of the fire hydrant system. Follow up inspections will be undertaken to ensure the work is completed, addressing this.
2D	The hydrant and sprinkler booster connections are not clearly marked with signage to distinguish the hydrant system booster from the sprinkler system booster, to assist in firefighting operations.	The City’s Inspection on 5 August 2026 confirmed the signage was missing. To address this, the City issued a NOI on 8 September 2026, requiring signage be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.

Ref.	Issue	City response
2E	Storz couplings, compatible with FRNSW firefighting hose connections were not provided to the booster connections	The City's Inspection on 5 August 2026 confirmed Storz connections were not provided. To address this, the City issued a NOI on 8 September 2026 requiring compatible hose connections be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
3	The pumproom – All doors leading to the pumproom were not identified by appropriate signs or other visual aids, so the pumproom and its entrance can be readily located by the attending fire brigade. In this regard, the pumproom was difficult to locate. Furthermore, the door accessing the pump room was not fitted with a lock compatible with FRNSW access key	During the City's inspection on 5 August 2026, it was noted that this matter had been already rectified, addressing this issue.
4	The internal hydrants throughout 'the premises' are not located within the required fire-isolated stairways.	The City's inspection on 5 August 2026 found the booster assembly was not compliant with the hydrant standard. In response to this, the City issued a NOI on 8 September 2026, requiring upgrading of the fire hydrant system. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
5	The system performance and hydraulic design parameters of the hydrant systems would fail to achieve the requirements specified in Section 2 of AS 2419.1-2021	
6	In light of items "2" through to "5" above, FRNSW brings to your attention a position statement published by FRNSW on 12 September 2024. The statement is shown below: *"Fire hydrant system in existing building or premises* *When a consent authority (e.g. Council) is assessing the adequacy of an existing fire hydrant system installed in accordance with the provisions of Ordinance 70 and Ministerial Specification 10 (or earlier), FRNSW recommend that the system be upgraded to meet the requirements of AS 2419.1:2021 to facilitate the needs of*	

Ref.	Issue	City response
	FRNSW appropriate to firefighting operations. *FRNSW acknowledge that all aspects of AS 2419.1:2021 may not be able to be complied with due to the characteristics and constraints of the existing fire hydrant system and/or building or premises. A bespoke upgrade solution may be required."*	
	Automatic Fire Suppression System (Sprinklers) Notwithstanding that the Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS) on display lists the sprinkler system to the minimum standard of performance: BCA Specification E1.5 and AS 2118.1-1995, based on the information listed on the block plan (located at the sprinkler valves), the sprinkler system appears to be installed in accordance with AS 2118.1-1982 (ground floor, level 1, part level 2 and basement levels - circa 1995) and AS 2118.1-1999 (level 2 to level 5 residential occupancies – circa 2010. Notwithstanding this, the following comments are provided having regard to AS 2118.1-2017 which is the current standard adopted by the NCC:	
7	The sprinkler booster	
7A	A sign marked with the maximum allowable inlet pressure at the connection was not provided at the booster assembly.	The City's inspection on 5 August 2026 found no signage at the booster assembly. In response to this, the City issued a NOI on 8 September 2026, requiring upgrading of the fire hydrant system. Follow up inspections will be undertaken to ensure the work is completed, addressing this.
7B	The enclosure containing the booster connection was not labelled "SPRINKLER BOOSTER CONNECTION".	
8	A plan of the protected building (block plan) of the complete sprinkler system was not provided adjacent to the sprinkler boost inlets, contrary to the requirements.	The City's inspection on 5 August 2026 found no block at the booster assembly. In response to this, the City issued a NOI on 8 September 2026, requiring a block plan be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this.

Ref.	Issue	City response
9	The sprinkler valves are not located in a room with direct egress to a road or open space. In this regard, the sprinkler valves are located within the room labelled 'Fire Control Room' in the basement level. Furthermore, all doors leading to the sprinkler valves and sprinkler pump were not fitted with a 003 key lock, compatible with FRNSW access key, or a location plate/signage identifying the location of the sprinkler control valves (and pumpset).	The City's inspection on 5 August 2026 found no direct access to the room containing the sprinkler valves, no signage, and doors accessible by FRNSW. In response to this, the City issued a NOI on 8 September 2026, requiring certification of the sprinkler system to confirm compliance. Follow up inspections will be undertaken to ensure the work is completed, addressing this.
	Regulatory Requirements	
	Fire Safety – Essential Fire Safety Measures The following Essential Fire Safety Measures were noted as having not been maintained in an operational state as per their original design and installation standard, contrary to the requirements of Section 81 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR 2021):	
10	Automatic Fire Suppression System:	
10A	Sprinkler system – There were 4 sprinkler heads fitted with protective caps located above the entry to the retail atrium (ground floor) on the Hay Street side of the building. FRNSW received email correspondence from the Property Manager on 17 April 2026, advising that 'the installation covers had been removed'. A photograph was provided with the correspondence to demonstrate such.	During the City's inspection on 5 August 2026, it was noted that this matter had been already rectified, addressing this issue.
11	Mechanical Air Handling System	
11A	The Fire Fan Control Panel was displaying 3 faults identified as 'SEF-B1-R1', 'SEF-B1-R1 Function' and 'SEF-2.1 Karaoke' assumed to relate to an issue with the Smoke Exhaust Fans	During the City's inspection on 5 August 2026, it was noted that this matter had been already rectified, addressing this issue.

Ref.	Issue	City response
	FRNSW received email correspondence from the Property Manager on 17 April 2026, advising that 'the Fire Contractor has advised the systems are operational and it is a programming issue they are aware of and will resolve with the Mechanical Contractor' FRNSW received further email correspondence from the Property Manager on 21 April 2026, advising: *'Attached please see the FIP at Capitol Square. The 3 fan fault lights have been cleared. The Contractor confirmed the fans were operational the issue being the modules that monitor the fan status had a short to earth'.*	
	Fire Safety Statements	
12	Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS):	
12A	The AFSS and FSS on display within the building appear to contain irregularities and/or inconsistencies. In this regard the following comments are provided: i. The Fire Hydrant System is listed to *E1.3 of the BCA & AS 2419.1-1994*, however the installation standard is consistent with Ordinance 70 and Ministerial Specification No.10. Refer to comments above in relation to the installed system. ii. The Automatic Fire Suppression (sprinklers) is listed to BCA Specification E1.5 & AS 2118.1-1995, however the sprinkler block plans indicated AS 2118.1-1995 & AS 2118.1-1999 as the installation standards. An audit/review of the installed system is recommended to ensure the correct standard of performance is listed	The City's inspection on 5 August 2026 found installed systems were not consistent with the standard of performance recorded on the premises Fire Safety Schedule. In response to this, the City issued a NOI on 8 September 2026 requiring upgrade of the hydrant system and certification of the sprinkler system. Follow up inspections will be undertaken to ensure the work is completed, addressing this.
	Other Findings	
13	K Square Karaoke Tenancy:	
13A	The correspondence received on 21 March 2026, alleged that 'the smoke alarms are all covered with plastic wrap'	During the City's inspection on 5 August 2026, it was noted that this

Ref.	Issue	City response
	throughout the 'K Squared Karaoke Lounge'. Photographs were provided with the correspondence to support the allegation.	matter had already been rectified, addressing this issue.
13B	Access was not available into the 'K Square Karaoke' tenancy at the time of the inspection on 16 April 2026, as the business was not operating. The sign on the door indicated opening hours were from 5pm-4am.	
13C	The Property Manager advised FRNSW at the time of the inspection, that he would follow up once the business was open to confirm whether the smoke detectors were covered and if so, he would ensure any items covering the detectors would be removed.	
13D	FRNSW received email correspondence from the Property Manager on 17 April 2026, advising; '*I gained access to the Premises at 1.22pm yesterday and can confirm that no smoke detectors were covered'.* A series of photographs were provided with the correspondence to demonstrate such.	

6. FRNSW have recommended that the City inspect the subject premises and appropriately address noted (and other) deficiencies identified within their report.

Council investigation officer recommendations

7. Due to fire safety concerns mentioned above, a Notice of Intention (NOI) to give a fire safety order under the Act was issued on 8 September 2026. After the NOI's representation period expires on 30 October 2026 and any received representations are considered, a Fire Safety Order may be issued to ensure adequate fire safety systems are in place throughout the building.

8. It is recommended that the Commissioner of FRNSW be informed of the City's decision.

File Ref. No: FRN13/7559 - BFS26/2093 - SRID 7000000897
TRIM Ref. No: D26/101183
Contact: Mark Knowles

16 July 2026

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance / Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
'CAPITOL SQUARE'
730-742 GEORGE STREET, HAYMARKET ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence on 21 March 2026 concerning the adequacy of the provision for fire safety in or in connection with the premises.

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected the premises on 16 April 2026.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

COMMENTS

The following items were identified in relation to the provisions for fire safety:

Provisions for Fire Safety

Automatic Fire Detection and Alarm System

1. Fire Brigade Panel (FBP):

   A. The doors leading to the main FBP, were not marked with the words 'FIRE PANEL', in letters not less than 50mm high, contrary to the requirements of Clause 3.9.2 of AS1670.1-2018.

B. An external wall mounted visual alarm device was not located on the front façade of the building at the designated building entry point to indicate the location of the FBP, contrary to the requirements of Clause 3.8 of AS 1670.1–2018.

C. Zone Block Plan – A permanent, water and fade resistant zone block plan, depicting all the relevant information of the installation, was not securely mounted adjacent to the FBP or mimic panel, contrary to the requirements of Clause 3.10 of AS1670.1-2018.

Fire Hydrant System

Notwithstanding that the Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS) on display lists the hydrant system to the minimum standard of performance: *E1.3 of the BCA and AS 2419.1-1994*, the fire hydrant system appears to be installed in accordance with Ordinance 70 and Ministerial Specification No.10. Notwithstanding this, the following items have been identified, including deviations from the current adopted Australian Standard AS 2419.1-2021:

2. The hydrant booster assembly:

   A. Location – The hydrant booster connection is not located within the façade of the building containing the principal building entrance and is more than 20m from the principal pedestrian entrance, contrary to the requirements of Clause 7.3 of AS 2419.1-2021.

   B. The type and arrangement of fire brigade booster assembly is not consistent with the requirements of AS 2419.1-2021. In this regard, the current configuration is not deemed acceptable as specified in Clause 7.4 and Clause 7.5 of AS 2419.1-2021.

   C. Clearances – Adequate clearances have not been provided to the booster inlet connections, contrary to Clause 7.3.3 and Clause11.2.1.2 of AS 2419.1–2021. In this regard, hose connection would be compromised due to the alignment of the boost inlets within the enclosure.

   D. The hydrant and sprinkler booster connections are not clearly marked with signage to distinguish the hydrant system booster from the sprinkler system booster, to assist in firefighting operations, contrary to the requirements of Clause 11.3.1 of AS 2419.1–2021.

   E. Storz couplings, compatible with FRNSW firefighting hose connections were not provided to the booster connections, contrary to the requirements of Clauses 9.3 and 9.4 of AS 2419.1-2021.

3. The pumproom – All doors leading to the pumproom were not identified by appropriate signs or other visual aids, so the pumproom and its entrance can be readily located by the attending fire brigade, contrary to the requirements of Clause 6.11.1 of AS 2419.1-2021. In this regard, the

pumproom was difficult to locate. Furthermore, the door accessing the pump room was not fitted with a lock compatible with FRNSW access key.

4. The internal hydrants throughout 'the premises' are not located within the required fire-isolated stairways, contrary to the requirements of Clause 3.6.2 of AS 2419.1-2021.

5. The system performance and hydraulic design parameters of the hydrant systems would fail to achieve the requirements specified in Section 2 of AS 2419.1-2021.

6. In light of items "2" through to "5" above, FRNSW brings to your attention a position statement published by FRNSW on 12 September 2024. The statement is shown below:

   Fire hydrant system in existing building or premises

   When a consent authority (e.g. Council) is assessing the adequacy of an existing fire hydrant system installed in accordance with the provisions of Ordinance 70 and Ministerial Specification 10 (or earlier), FRNSW recommend that the system be upgraded to meet the requirements of AS 2419.1:2021 to facilitate the needs of FRNSW appropriate to firefighting operations.

   FRNSW acknowledge that all aspects of AS 2419.1:2021 may not be able to be complied with due to the characteristics and constraints of the existing fire hydrant system and/or building or premises. A bespoke upgrade solution may be required.

   https://www.fire.nsw.gov.au/__data/assets/pdf_file/0023/4379/Position-statement-summary-Fire-hydrant-system-in-existing-building-or-premises.pdf

   It is recommended that the existing fire hydrant system be upgraded to to meet the requirements of the current Australian Standard AS 2419.1 for an equivalent new building, as the current system no longer suits the operational needs of FRNSW.

Automatic Fire Suppression System (Sprinklers)

Notwithstanding that the Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS) on display lists the sprinkler system to the minimum standard of performance: *BCA Specification E1.5 and AS 2118.1-1995*, based on the information listed on the block plan (located at the sprinkler valves), the sprinkler system appears to be installed in accordance with AS 2118.1-1982 (ground floor, level 1, part level 2 and basement levels - circa 1995) and AS 2118.1-1999 (level 2 to level 5 residential occupancies – circa 2010).

Notwithstanding this, the following comments are provided having regard to AS 2118.1-2017 which is the current standard adopted by the NCC:

7. The sprinkler booster:

   A. A sign marked with the maximum allowable inlet pressure at the connection was not provided at the booster assembly, contrary to the requirements of Clause 4.14.1 of AS 2118.1–2017.

   B. The enclosure containing the booster connection was not labelled "SPRINKLER BOOSTER CONNECTION", contrary to the requirements of Clause 4.14 of AS 2118-2017.

8. A plan of the protected building (block plan) of the complete sprinkler system was not provided adjacent to the sprinkler boost inlets, contrary to the requirements of Clause 8.3 of AS 2118.1-2017.

9. The sprinkler valves are not located in a room with direct egress to a road or open space, contrary to the requirements of Clause E1D5 and Specification 17 of the NCC. In this regard, the sprinkler valves are located within the room labelled 'Fire Control Room' in the basement level. Furthermore, all doors leading to the sprinkler valves and sprinkler pump were not fitted with a 003 key lock, compatible with FRNSW access key, or a location plate/signage identifying the location of the sprinkler control valves (and pumpset), contrary to the requirements of Clause 8.4 of AS 2118.1-2017.

Regulatory Requirements

Fire Safety – Essential Fire Safety Measures

The following Essential Fire Safety Measures were noted as having not been maintained in an operational state as per their original design and installation standard, contrary to the requirements of Section 81 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR 2021):

10. Automatic Fire Suppression System:

    A. Sprinkler system – There were 4 sprinkler heads fitted with protective caps located above the entry to the retail atrium (ground floor) on the Hay Street side of the building.

       FRNSW received email correspondence from the Property Manager on 17th April 2026, advising that *'the installation covers had been removed'.* A photograph was provided with the correspondence to demonstrate such.

11. Mechanical Air Handling System:

    A. The Fire Fan Control Panel was displaying 3 faults identified as 'SEF-B1-R1', 'SEF-B1-R1 Function' and 'SEF-2.1 Karaoke' assumed to relate to an issue with the Smoke Exhaust Fans.

    FRNSW received email correspondence from the Property Manager on 17th April 2026, advising that *'the Fire Contractor has advised the systems are operational and it is a programming issue they are aware of and will resolve with the Mechanical Contractor'.*

    FRNSW received further email correspondence from the Property Manager on 21st April 2026, advising: *'Attached please see the FIP at Capitol Square. The 3 fan fault lights have been cleared. The Contractor confirmed the fan's were operational the issue being the modules that monitor the fan status had a short to earth'.*

Fire Safety Statements

12. Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS):

    A. The AFSS and FSS on display within the building appear to contain irregularities and/or inconsistencies. In this regard the following comments are provided:

        i. The Fire Hydrant System is listed to *E1.3 of the BCA & AS 2419.1-1994*, however the installation standard is consistent with Ordinance 70 and Ministerial Specification No.10. Refer to comments above in relation to the installed system.

        ii. The Automatic Fire Suppression (sprinklers) is listed to *BCA Specification E1.5 & AS 2118.1-1995*, however the sprinkler block plans indicated AS 2118.1-1995 & AS 2118.1-1999 as the installation standards. An audit/review of the installed system is recommended to ensure the correct standard of performance is listed.

Other Findings

13. K Square Karaoke Tenancy:

    A. The correspondence received on 21 March 2026, alleged that *'the smoke alarms are all covered with plastic wrap'* throughout the 'K Squared Karaoke Lounge'. Photographs were provided with the correspondence to support the allegation.

    B. Access was not available into the 'K Square Karaoke' tenancy at the time of the inspection on 16th April 2026, as the business was not operating. The sign on the door indicated opening hours were from 5pm-4am.

C. The Property Manager advised FRNSW at the time of the inspection, that he would follow up once the business was open to confirm whether the smoke detectors were covered and if so, he would ensure any items covering the detectors would be removed.

D. FRNSW received email correspondence from the Property Manager on 17th April 2026, advising; '*I gained access to the Premises at 1.22pm yesterday and can confirm that no smoke detectors were covered'.* A series of photographs were provided with the correspondence to demonstrate such.

Notwithstanding this, it would be at Council's discretion as the appropriate regulatory authority, to determine whether further investigation is required in this instance.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review item no. 1 through to item no. 13 of this report and conduct an inspection.

b. Address any other deficiencies identified on the premises.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. FRNSW refers this matter to the Council as the appropriate regulatory authority and awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

LIMITATIONS

The items listed in the comments of this report are based on the following limitations:

- FRNSW's inspection of the premises may have been conducted without having the development consent and / or approved plans as a reference.
- FRNSW's inspection of the premises was a non-invasive visual inspection.
- FRNSW authorised fire officers may not have been able to access all areas of the premises at the time of inspection.
- The following parts of the premises were not able to be inspected:
    - The Palace Hotel
    - K Square Karaoke tenancy

Please do not hesitate to contact Mark Knowles of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call (02) 9742 7434. If you have any questions or concerns regarding the above matters. Please ensure that you refer to file reference FRN13/7559 - BFS26/2093 - SRID 7000000897 for any future correspondence concerning this matter.

Yours faithfully



Mark Knowles
Senior Building Surveyor
Fire Safety Compliance Unit

Attachment C

Inspection Report
3 Crick Avenue, Elizabeth Bay



Figure 1: 3 Crick Avenue, Elizabeth Bay NSW, viewed from west

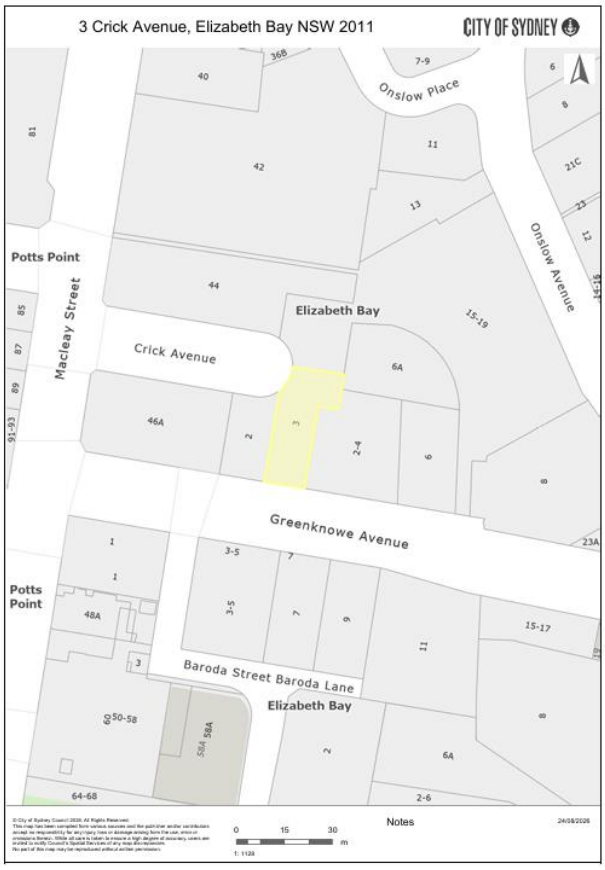


Figure 2: Location map of 3 Crick Avenue, Elizabeth Bay

Council Investigation Officer Inspection and Recommendation Report; Clause 17(2) Part 8 of Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act)

Officer: **Lutfor Rahman**

Date: **3 September 2026**

Premises: **3 Crick Avenue, Elizabeth Bay**

Executive Summary

1. The City of Sydney (the City) received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises dated 10 August 2026 with respect to matters of fire safety.

2. The premises consists of a 4-storey building used for residential purposes.

3. The City inspected the premises on 24 August 2026, accompanied by the Strata Manager and fire contractor. This inspection identified deficiencies in fire safety. To address this, a Notice of Intention to Give a Fire Safety Order (NOI) has been issued under the *Environmental Planning and Assessment Act 1979* NSW (the Act).

Chronology

Date	Event
10 August 2026	FRNSW correspondence was received.
24 August 2026	The City inspected the premises identifying deficiencies in fire safety.
3 September 2026	The City issued a NOI.

Fire and Rescue NSW Report

4. Fire and Rescue NSW conducted an inspection of the subject premises on 5 August 2026.

Issues

5. The report from Fire and Rescue NSW (FRNSW) detailed issues as shown in the table below.

Ref.	Issue	City response
	Fire Resistance	
1	The ground floor fire door, adjacent to the main entry, failed to return to the fully closed position (and self-latch) after each opening.	The City's inspection on 24 August 2026 observed that one of the ground floor fire doors on the corridor, adjacent to the main door failed to return to the fully closed position. In response, the City issued a NOI on 3 September 2026 requiring doors to be rectified. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
2	Multiple openings in the external walls of the premises appear to be less than 3m from the boundary and do not appear to have been protected.	The City's inspection on 24 August 2026 observed multiple openings in the external wall were within 3 meters from the boundary fence and not protected. In response, the City issued a NOI on 3 September 2026 requiring protection of openings. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
Automatic Smoke Detection and Alarm Systems (ASDAS)		
3	A Zone Block Plan, depicting all the relevant information of the installation, was not provided at the Fire Brigade Panel.	The City's inspection on 24 August 2026 observed that an older version of block plan is currently installed near the Fire Brigade Panel. In response, the City issued a NOI on 3 September 2026 requiring an updated block plan be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.

Ref.	Issue	City response
4	The spacing between detectors throughout the premises does not appear to be in accordance with the requirements of Section 5 of AS 1670.1-2018. In that regard, no detectors appear to be installed in the corridors adjacent to the stair.	The City's inspection on 24 August 2026 could not confirm the design layout of the existing detector system. In response, the City issued a NOI on 3 September 2026 requiring a confirmation of existing detector layout, spacing and locations comply with the standard, addressing this issue. Follow up inspections will be undertaken to ensure any work required is completed, addressing this issue.
5	A smoke detector has not been provided on each side of the fire door (being held open but required to be self-closing) within 1.5m of the opening.	The City's inspection on 24 August 2026 observed the detector had not been provided on each side of the fire door. In response, the City issued an NOI on 3 September 2026, requiring additional detectors as necessary. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
Egress		
6	All exit doors within the premises incorporate a round tulip style handle in lieu of a lever handle.	The City's inspection on 24 August 2026 found all exits door within the premises incorporate a round tulip style handle. In response, the City issued a NOI on 3 September 2026 requiring installation of single handled, downward action door sets to all exit doors. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.

Ref.	Issue	City response
7	Appropriate signage has not been provided to all fire doors.	The City's inspection dated 24 August 2026 confirmed appropriate signage had been provided to all fire doors, addressing this issue.
8	The travel distances from the entry doors of multiple Sole Occupancy Units (SOUs) exceeds 6m to the exit. Travel distances are in excess of 14m from a number of SOUs.	The City's inspection on 24 August 2026 confirmed travel distances exceed 14m. In response, the City issued a NOI on 3 September 2026 requiring compartmentation of the existing stairway to address the excessive travel distances. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
9	Doorways from multiple SOUs open directly into what is in effect, the fire isolated stairway.	The City's inspection on 24 August 2026 confirmed doorways open directly into the fire isolated stairway. This issue has been addressed by a historical a Fire Order issued by former South Sydney Council, in July 1992, requiring a stair pressurisation system to address the non-compliant fire isolated stairway. The required stair pressurisation system was observed during the City's inspection. The City issued a NOI on 3 September 2026 requiring certification of this stair pressurisation system to confirm compliance, addressing this issue.
Fire Hydrant		
10	The building appears to have a total floor area greater than 500m^2 and is therefore required to be provided with a fire hydrant system in accordance with Clause E1D2 of the NCC. In this regard, the premises does not have a hydrant system installed	The City's inspection on 24 August 2026 found the floor area of the building was approximately 1800m^2. In response, the City issued a NOI on 3 September 2026, requiring either the installation of a hydrant system or documentation be

Ref.	Issue	City response
	and hydrant coverage available from the street hydrants may not comply.	submitted confirming the street hydrants provide adequate coverage, addressing this issue. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
Sprinkler System		
11	The building has a rise in stories of more than 4 and has not been provided with a sprinkler system.	The City's inspection on 24 August 2026 confirmed that the building is not provided with a sprinkler system. The building is a 4-storey masonry and concrete structure constructed circa 1937, at a time when sprinkler protection was not required for this class of building. Having regard to the ongoing maintenance of current fire safety measures, the installation of a sprinkler system is not considered warranted at this time. No further action is required to address this issue.
Stair Pressurisation		
12	The isolation switch associated with the stair pressurisation fan was not locked and was fitted with appropriated signage. Furthermore, the Control Panel, adjacent to the roof top fan, has not been appropriately secured to prevent unauthorised access.	The City’s inspection on 24 August 2026 confirmed the isolation switch was not locked, and the control panel had not been secured. In response, the City issued a NOI on 3 September 2026, requiring defects to be rectified. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.

Ref.	Issue	City response
13	At the time of the inspection, the door from the stair to the rooftop common area/laundry was chocked open. It is considered that the chocking of the door would compromise the ability of the stair pressurisation system to maintain a positive pressure within the stair shaft.	The City's inspection on 24 August 2026 confirmed that the door from the stair to the rooftop common area was closed and operating as intended, addressing this issue.
Other Findings		
14	The rooftop balustrade contained horizontal elements between 150mm and 760mm above floor level which could facilitate climbing.	The City's inspection on 24 August 2026 observe the rooftop balustrade did not meet current requirements in respect to climbing elements. In response, the City issued a NOI on 3 September 2026 requiring handrails to be upgraded to prevent falls. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
Regulatory Requirements		
Fire Safety – Essential Fire Safety Measures		
15	*Automatic Smoke Detection and Alarm System (ASDAS):* At the time of the inspection, the Fire Indicator Panel indicated that Zone 5 (Level 4) of ASDAS was disabled. Logbooks associated with the ASDAS indicated that Zone 5 has been isolated for a number of months.	The City's inspection on 24 August 2026 observed all faults had been cleared, addressing this issue.
16	Exit Signs and Emergency Lighting: Exit signage was not illuminated throughout the premises.	The City's inspection on 24 August 2026 found the exit signage had been rectified and was operational, addressing this matter.
17	Stair Pressurisation: The control panel for the stair pressurisation fan located on the rooftop appeared to indicate an error message.	The City's inspection on 24 August 2026 found the error message had been cleared, addressing this matter.

Ref.	Issue	City response
18	Emergency Lighting/Artificial Lighting: Emergency lighting/artificial lighting and was not operational in all parts of the common areas, throughout the premises. Following the inspection, FRNSW contacted the Strata Manager responsible for the premises (McCormacks Strata Management) who confirmed that they were aware of the abovementioned issues which were related to an electrical fault. On 6 August 2026, the incumbent Fire Contractor provided FRNSW with a service report confirming that the isolated zone had been reinstated and power had been restored to lighting and exit signage.	The City's inspection on 24 August 2026 found emergency lighting was operational throughout the premises, addressing this issue.
19	*Maintenance Logbooks:* The maintenance logbooks/summary records relating to the following Essential Fire Safety Measures could not be located on site. • Fire Hose Reels • Fire doors • Portable fire extinguishers	The City's inspection on 24 August 2026 confirmed the maintenance logbooks were not available at the premises. In response, the City issued a NOI on 3 September 2026 requiring maintenance logbooks be kept on the premises at all times. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.
Annual Fire Safety Statement (AFSS)		
20	At the time of the inspection, the AFSS that was displayed did not appear to be up to date.	The City's inspection on 24 August 2026 identified an outdated AFSS was displayed in the premises. In response, the City issued a NOI on 3 September 2026 requiring an AFSS to be provided. Follow up inspections will be undertaken to ensure the work is completed, addressing this issue.

6. FRNSW have recommended that the City inspect the subject premises and appropriately address noted (and other) deficiencies identified within their report.

Council Investigation Officer Recommendations

7. Due to fire safety concerns a Notice of Intention (NOI) to give a fire safety order under the Act was issued on 3 September 2026. After the NOI's representation period expired on 9 October 2026, and no representations were received, a Fire Safety Order will be issued to ensure adequate fire safety systems are in place throughout the building.

8. It is recommended that the Commissioner of FRNSW be informed of the City's decision.

File Ref. No: FRN26/2531 - BFS26/6024 - 7000003761
TRIM Ref. No: D2026/121553
Contact: Conor Hackett

10 August 2026

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
WEST END
3 CRICK AVE, POTTS POINT ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence on 3 August 2026 concerning the adequacy of the provision for fire safety in connection with 'the premises'.

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected 'the premises' on 5 August 2026.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

COMMENTS

The following items were identified in relation to the provisions for fire safety:

Fire Resistance

1. The ground floor fire door, adjacent to the main entry, failed to return to the fully closed position (and self-latch) after each opening, contrary to the requirements of Clause C4D5, Clause C4D9 and Specification 12 of the

National Construction Code 2022 Building Code of Australia – Volume One (NCC) and AS1905.1.

2. Multiple openings in the external walls of the premises appear to be less than 3m from the boundary and do not appear to have been protected - in accordance with the methods specified in Clause C4D5 - contrary to the requirements of Clause C4D3 of the NCC.

Automatic Smoke Detection and Alarm System (ASDAS):

3. A Zone Block Plan, depicting all the relevant information of the installation, was not provided at the Fire Brigade Panel, contrary to the requirements of Clause 3.10 of AS1670.1-2018.

4. The spacing between detectors throughout the premises does not appear to be in accordance with the requirements of Section 5 of AS 1670.1-2018. In that regard, no detectors appear to be installed in the corridors adjacent to the stair.

5. A smoke detector has not been provided on each side of the fire door (being held open but required to be self-closing) within 1.5m of the opening, contrary to the requirements of Clause 3.19 of AS 1670.1-2018.

Egress

6. All exit doors within the premises incorporate a round tulip style handle in lieu of a lever handle, contrary to the requirements of Clause D3D26 of the NCC.

7. Appropriate signage has not been provided to all fire doors, in accordance with the requirements of Clause D3D28 of the NCC.

8. The travel distances from the entry doors of multiple Sole Occupancy Units (SOUs) exceeds 6m to the exit, contrary to the requirements of Clause D2D5 of the NCC. Travel distances are in excess of 14m from a number of SOUs.

9. Doorways from multiple SOUs open directly into what is in effect, the fire isolated stairway, contrary to the requirements of E2D12 of the NCC.

Fire Hydrant

10. The building appears to have a total floor area greater than 500m^2 and is therefore required to be provided with a fire hydrant system in accordance with Clause E1D2 of the NCC. In this regard, the premises does not have a hydrant system installed and hydrant coverage available from the street hydrants may not comply with the requirements of Clauses 3.5.2 & 3.5.3.2 of AS 2419.1-2021.

    When assessing fire hydrant requirements for the premises, it is recommended that Council review the FRNSW Technical Information Sheet - Fire hydrant concessions for existing buildings.

Sprinkler System

11. The building has a rise in stories of more than 4 and has not been provided with a sprinkler system, contrary to the requirements of Clause E1D4 and E1D6 of the NCC. See FRNSW Position Statement Summary for further details.

Stair Pressurisation

12. The isolation switch associated with the stair pressurisation fan was not locked and was fitted with appropriated signage in accordance with the requirements of Clause 4.10.1 of AS1668.1-2015. Furthermore, the Control Panel, adjacent to the roof top fan, has not been appropriately secured to prevent unauthorised access.

13. At the time of the inspection, the door from the stair to the rooftop common area/laundry was chocked open. It is considered that the chocking of the door would compromise the ability of the stair pressurisation system to maintain a positive pressure within the stair shaft, contrary to the requirements of E2D4 of the NCC and AS1668.1-2015.

Other Findings

14. The rooftop balustrade contained horizontal elements between 150mm and 760mm above floor level which could facilitate climbing, contrary to the requirements of Clause D3D20 of the NCC.

Regulatory Requirements

Fire Safety – Essential Fire Safety Measures

Section 81 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (the DCFS Regulation) requires maintenance of Essential Fire Safety Measures to a standard no less than when first installed. In that regard, the following is noted:

15. *Automatic Smoke Detection and Alarm System (ASDAS):*

    At the time of the inspection, the Fire Indicator Panel indicated that Zone 5 (Level 4) of ASDAS was disabled. Logbooks associated with the ASDAS indicated that Zone 5 has been isolated for a number of months.

16. *Exit Signs and Emergency Lighting:*

    Exit signage was not illuminated throughout the premises.

17. *Stair Pressurisation:*

    The control panel for the stair pressurisation fan located on the rooftop appeared to indicate an error message.

18. *Emergency Lighting/Artificial Lighting:*

Emergency lighting/artificial lighting and was not operational in all parts of the common areas, throughout the premises.

Following the inspection, FRNSW contacted the Strata Manager responsible for the premises (McCormacks Strata Management) who confirmed that they were aware of the abovementioned issues which were related to an electrical fault.

On 6 August 2026, the incumbent Fire Contractor provided FRNSW with a service report confirming that the isolated zone had been reinstated and power had been restored to lighting and exit signage.

19. *Maintenance Logbooks:*

The maintenance logbooks/summary records relating to the following Essential Fire Safety Measures could not be located on site, contrary to the provisions of Section 81A(2) of the DCFS Regulation.

- Fire Hose Reels
- Fire doors
- Portable fire extinguishers

Annual Fire Safety Statements

20. Section 88 of the DCFS Regulation requires the AFSS be updated annually. At the time of the inspection, the AFSS that was displayed did not appear to be up to date.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review item no. 1 through to item no. 20 of this report and conduct an inspection.

b. Conduct a Fire Safety Audit on the building to ensure all deficiencies within the building, including but not limited to the items highlighted in this report are adequately addressed.

c. Address any other deficiencies identified on the premises.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. FRNSW refers this matter to the Council as the appropriate regulatory authority and

awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

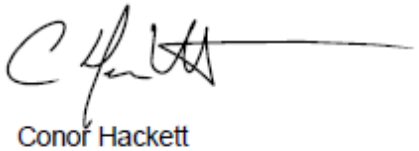
LIMITATIONS

The items listed in the comments of this report are based on the following limitations:

- FRNSW's inspection of the premises may have been conducted without having the development consent and / or approved plans as a reference.
- FRNSW's inspection of the premises was a non-invasive visual inspection.
- FRNSW authorised fire officers may not have been able to access all areas of the premises at the time of inspection.
- Sole Occupancy Units were unable to be inspected:

Please do not hesitate to contact Conor Hackett of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call (02) 9742 7434 if there are any questions or concerns about the above matters. Please refer to file reference FRN26/2531 - BFS26/6024 - 7000003761 regarding any correspondence concerning this matter.

Yours faithfully



Conor Hackett
Senior Building Surveyor
Fire Safety Compliance Unit

Attachment D

Inspection Report
133-141 Botany Road, Waterloo



Figure 1: 133-141 Botany Road, Waterloo



Figure 2: Location map of 133-141 Botany Road, Waterloo

Council Investigation Officer Inspection and Recommendation Report; Clause 17(2) Part 8 of Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act)

Officer: **Hieu Van Luu**

Date: **26 August 2026**

Premises: **133-141 Botany Road, Waterloo**

Executive Summary

1. The City of Sydney (the City) received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises dated 24 July 2026 with respect to matters of fire safety.

2. The premises consists of a 4-storey building used for residential apartments with shops and car parking at lower levels.

3. The City inspected the premises on 13 August 2026, accompanied by a representative of the Owners Strata Plan. This inspection identified fire safety provisions requiring maintenance, which can be addressed under the City's instruction.

Chronology

Date	Event
24 July 2026	FRNSW correspondence was received.
13 August 2026	The City inspected the premises identifying deficiencies in fire safety.
20 August 2026	The City issued a corrective action letter requiring identified deficiencies be rectified by 18 November 2026. This includes maintenance works to the fire hydrant system, smoke detection and alarm system, removing fire door obstruction and displaying a fire safety statement.

Fire and Rescue NSW Report

4. Fire and Rescue NSW conducted an inspection of the subject premises on 26 March 2026.

Issues

5. The report from Fire and Rescue NSW detailed issues as shown in the table below.

Ref.	Issue	City response
	Fire Resistance	
1	A screen door has been installed between the laundry and the car park, in conjunction with the required fire door. At the time of the inspection the fire door was choked open.	The City's inspection on 13 August 2026 confirmed that the fire door had been chocked open and that a screen door had been installed in conjunction with the fire door. In response, the City issued a corrective action letter on 20 August 2026, requiring the screen door to be removed and the fire door not to be choked open by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.
	Fire Hydrant System	
2	The booster assembly is provided with a 150mm diameter liquid filled pressure gauge which displays the pressure at the hydrant pump. An engraved warning sign is not fixed in a prominent position at the booster assembly.	The City's inspection on 13 August 2026 confirmed an engraved warning sign was not fixed in a prominent position. In response, the City issued a corrective action letter on 20 August 2026, requiring an engraved warning sign to be installed in a prominent position at the booster assembly by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.
3	Rubbish was obstructing clear access to the booster assembly.	The City's inspection on 13 August 2026 found rubbish had been removed, addressing this issue.
4	The doors to the booster enclosure were not fitted with a device capable of securing the door in not less than a 90º open position.	The City's inspection on 13 August 2026 found the booster enclosure doors were not fitted with hold open devices.

Ref.	Issue	City response
		In response, the City issued a corrective action letter on 20 August 2026, requiring the booster enclosure doors to be fitted with hold-open devices by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.
	Fire Safety – Essential Fire Safety Measures	
5	**Automatic Smoke Detection and Alarm System**	
	The Fire Brigade, at the time of their inspection, identified a few faults and isolations.	The City's inspection on 13 August 2026 faults and isolations associated with ongoing lift maintenance works. In response, the City issued a corrective action letter on 20 August 2026, requiring all faults and isolations be cleared by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.
6	**Hydrant Pump**	
	At a follow up inspection on 21 April 2026, it was noted that the hydrant pump test drain/discharge copper pipework had been removed and the 'Crank Isolate' control switch on the pump control panel was switched off/isolated. The last entry in the logbook dated 8 April 2026 indicated 'No test' was undertaken, likely due to the missing pipework. The aural alarm was 'Silenced', the pump control panel also displayed "Auto Mode Bypass" and "AC Failure". Strata management were contacted and agreed to investigate. At a subsequent inspection on 2 June 2026, it was noted	The City's inspection on 13 August 2026 found the hydrant pump pipework had been reinstated and the pump returned to normal operating conditions, addressing this issue.

Ref.	Issue	City response
	that the pipework had been reinstated and the pump returned to normal operating conditions.	
	Fire Safety Statements	
7	An Annual Fire Safety Statement was not displayed at the premises.	The City's inspection on 13 August 2026 found Annual Fire Safety Statement was not displayed at the premises. In response, the City issued a corrective action letter on 20 August 2026, a requiring a fire safety statement to be displayed by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.
8	**Automatic Smoke Detection & Alarm System**	
	The strata manager indicated that scheduled works included the replacement of smoke detectors with thermal detectors. An investigation may be required by council to confirm whether the system is maintained to the standard it was first installed and commissioned or whether appropriate development approvals are required for any amendment and/or upgrade of the automatic smoke detection and alarm system.	The City's inspection on 13 August 2026 found no issues with the detection system, aside from the faults and isolations on the fire indicator panel. In response, the City issued a corrective action letter on 20 August 2026 requiring all faults and isolations to be cleared by 18 November 2026. Follow up inspections will be undertaken to ensure the works are completed in accordance with the City's instruction.

Fire Rescue Recommendations

6. FRNSW have made no direct recommendation within their report other than legislative notification and advised that it is at the City's discretion to inspect and address any other deficiencies identified on the premises.

Council Investigation Officer Recommendations

7. As a result of site inspections undertaken by the Council investigation officer a corrective action letter was issued on 20 August 2026 to building owners to address the fire safety deficiencies identified by the City and FRNSW.

8. A follow up inspection after the expiry of the corrective action letter will be undertaken by the City to ensure the works are completed in accordance with the City's instruction.

9. It is recommended that the Commissioner of FRNSW be informed of the City's decision.

File Ref. No: FRN26/1007 - BFS26/1815 - 7000000705
TRIM Ref. No: D2026/105159
Contact: Conor Hackett

24 July 2026

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au
hvluu@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
SP95695
133-141 BOTANY RD, WATERLOO NSW 2017 ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence concerning the adequacy of the provision for fire safety in or in connection with the premises.

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected the premises on 26 March 2026.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

COMMENTS

The following items were identified in relation to the provisions for fire safety:

Provisions for Fire Safety

Fire Resistance

1. A screen door has been installed between the laundry and the car park, in conjunction with the required fire door. At the time of the inspection the fire door was chocked open, contrary to the requirements of Clause C4D5 and Specification 12 of the NCC. It is noted that the screen door has been

mechanically fixed to the metal doorframe, it is unclear whether the screen door and associated fixings form part of the tested specimen which has been subjected to fire resistance tests in accordance with AS 1530.4 and AS 1905.1.

Fire Hydrant System

2. The booster assembly is provided with a 150mm diameter liquid filled pressure gauge which displays the pressure at the hydrant pump discharge/manifold, indicating the booster is installed 'in series' with the fixed on-site fire pumps. However, an engraved warning sign is not fixed in a prominent position at the booster assembly, contrary to the requirements of Clause 7.6(c) of AS2419.1-2005.

3. Rubbish was obstructing clear access to the booster assembly, contrary to the requirements of Clause 7.3 of AS 2419.1–2005.

4. The doors to the booster enclosure were not fitted with a device capable of securing the door in not less than a 90º open position, contrary to the requirements of Clause 7.9.2 of AS 2419.1-2005.

Regulatory Requirements

Fire Safety – Essential Fire Safety Measures

Section 81 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (the DCFS Regulation) requires that an Essential Fire Safety Measure must be maintained to a standard no less than when it was first installed. In that regard, the following is noted:

5. *Automatic Smoke Detection and Alarm System:*

   At the time of the inspection the Fire Indicator Panel (FIP) displayed the following:

   - 'General Fault'
   - 'Disablements'.
   - 'Fault tx activated'.
   - 'Service'
   - 'Zone Control' indicated that zones 1-5 were in fault.

   Logbooks associated with the automatic smoke detection and alarm system indicated a history of faults and disablements commencing 1 December 2025.

6. *Hydrant Pump:*

   At a follow up inspection on 21 April 2026, it was noted that the hydrant pump test drain/discharge copper pipework had been removed and the 'Crank Isolate' control switch on the pump control panel was switched off/isolated. The last entry in the logbook dated 8 April 2026 indicated 'No test' was

undertaken, likely due to the missing pipework. The aural alarm was 'Silenced', the pump control panel also displayed "Auto Mode Bypass" and "AC Failure".

Strata management were contacted and agreed to investigate. At a subsequent inspection on 2 June 2026, it was noted that the pipework had been reinstated and the pump returned to normal operating conditions.

Annual Fire Safety Statements

7. Clause 89(4)(b) of the DCFS Regulation states that the AFSS must be prominently displayed in the building. At the time of the inspection the AFSS could not be located.

Automatic Smoke Detection & Alarm System

8. Following the issue of the FRNSW Notice of Intention to Serve an Order, the strata manager indicated that scheduled works included the replacement of smoke detectors with thermal detectors, stating that "*there is no DA or CDC required for these works*". Furthermore, it appeared that additional detectors were being installed within sole-occupancy units.

   Noting that the FRNSW Order required the repair or reinstatement of faults and disablements only, an investigation may be required by council to confirm whether the system is maintained to the standard it was first installed and commissioned in accordance with the requirements of Section 81 of the DCFS Regulation or whether appropriate development approvals are required for any amendment and/or upgrade of the automatic smoke detection and alarm system.

FRNSW believes that there are inadequate provisions for fire safety within the building.

NOTICE OF INTENTION TO SERVE AN ORDER

FRNSW issued a Notice of Intention to Serve an Order (**1**) dated 30 March 2026 under the provisions of Section 9.34 of the EP&A Act to have item no. 5 of this report rectified.

REPRESENTATIONS & INSPECTION

Written representations were received concerning the proposed Order No. **1** under Schedule 5, Part 6, Section 8 of the EP&A Act. Upon hearing and considering the representation, FRNSW determined to give an Order in accordance with Schedule 5, Part 7, Section 15 of the EP&A Act.

FIRE SAFETY ORDER NO. 1

Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW issued an Order No. **1**, dated 17 July 2026 under the provisions of Section 9.34 of the EP&A Act,

to which FRNSW provided Council a copy under Schedule 5, Part 6, Section 12 of the EP&A Act. A copy of the Order is again attached for your information in Appendix 1.

RE-INSPECTION/S AND OUTCOME

Pursuant to the provisions of Section 9.32(1)(b) of the EP&A Act and Clause 112(a) of the DCFS Regulation, an inspection of 'the premises' on 23 June 2026 was conducted by Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW.

At the time of the inspection, the terms of 'the Order' issued on the premises were generally compliant however, a single fault relating to a battery was apparent at the FIP.

Following the inspection, the Strata manager, in conjunction with the incumbent Fire Service Technician, confirmed that the fault was a minor battery issue and did not impede the operation of the smoke detection and alarm system.

It is the Council's discretion to inspect and address any other deficiencies identified on the premises.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review item no. 1 through to item no. 8 of this report and conduct an inspection.

b. Address any other deficiencies identified on the premises.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. FRNSW refers this matter to the Council as the appropriate regulatory authority and awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

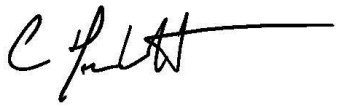
LIMITATIONS

The items listed in the comments of this report are based on the following limitations:

- FRNSW's inspection of the premises may have been conducted without having the development consent and / or approved plans as a reference.
- FRNSW's inspection of the premises was a non-invasive visual inspection.
- FRNSW authorised fire officers may not have been able to access all areas of the premises at the time of inspection.
- Sole Occupancy Units were unable to be inspected.

Please do not hesitate to contact Conor Hackett of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call (02) 9742 7434 if you have any questions or concerns regarding the above matters. Please ensure that you refer to file reference FRN26/1007 - BFS26/1815 - 7000000705 for any future correspondence concerning this matter.

Yours faithfully



Conor Hackett
Senior Building Surveyor
Fire Safety Compliance Unit

Attachment [Appendix 1 – Fire Safety Order No.1 – Issued 17 April 2026]

Appendix 1 – Fire Safety Order No.1

Fire Safety Order
ORDER No. 1

Under the *Environmental Planning and Assessment Act 1979 (EP&A Act)*
Part 9 Implementation and Enforcement – Division 9.3 Development Control Orders
Fire Safety Orders in accordance with the table to Part 2 - Schedule 5.
Give an Order in accordance with Section 9.34(1)(a)

I, **Conor Hackett** (name) **Senior Building Surveyor** (rank) **905798** (number)

being an authorised Fire Officer within the meaning of Schedule 5, Part 8, Section 16 of the *Environmental Planning and Assessment Act 1979*, and duly authorised for the purpose, I hereby order you

THE OWNERS OF SP95695 (name of the person whom Order is served) **Owner** (position, i.e. owner, building manager)

with respect to the premise

THE OWNERS OF SP95695
133-141 BOTANY RD, WATERLOO NSW 2017 ("the premises")
(name/address of premises to which Order is served)

to do or refrain from doing the following things:

Ensure the automatic smoke detection & alarm system installed in 'the premises' is fully operational, by repairing/reinstating the faults and disablements indicated on the Fire Indicator Panel.

The reasons for the issue of this Fire Safety Order – Order No. 1 are:

a At the time of the inspection on 15 April 2026, the Fire Indicator Panel displayed the following:

- 'General Fault'
- 'Disablements'.
- 'Fault tx activated'.
- 'Service'
- 'Zone Control' indicated that zones 1-5 were in fault.

b Logbooks associated with the automatic smoke detection & alarm system indicate a history of faults and disablements commencing 1st December 2025.

c To ensure that the automatic smoke detection & alarm system is capable of operating to the standard of performance to which they were designed, installed and commissioned.

d Failure to repair and maintain the automatic smoke detection and alarm system is likely to delay the timely response of firefighting operations by Fire and Rescue NSW.

e To ensure the automatic smoke detection and alarm system is capable of performing to the degree necessary to alert the occupants in the event of a of fire in 'the premises' and facilitate an evacuation in a timely manner.

f To ensure or promote the safety of persons in the event of fire.

The terms of this Fire Safety Order – Order No. 1 are to be complied with:

By no later than **16:00** on the **1 May 2026**.

Appeals

Pursuant to Section 8.18 of the Environmental Planning & Assessment Act 1979 (EP&A Act), there is no right of appeal to the Court against this Fire Safety Order – Order 1 other than an order that prevents a person from using or entering premises.

Non-Compliance with Fire Safety Order – Order No.1

Failure to comply with this Fire Safety Order – Order No.1 may result in further Orders and/or fines being issued. Substantial penalties may also be imposed under Section 9.37 of the EP&A Act for failure to comply with a Fire Safety Order – Order No.1.

Conor Hackett
Senior Building Surveyor
Fire Safety Compliance Unit

This Fire Safety Order - **Order No. 1** was mailed on **17 April 2026**.

Attachment E

Inspection report
152-164 Bulwara Road, Pyrmont



Figure 1: 152-164 Bulwara Road, Pyrmont, viewed from the south-west

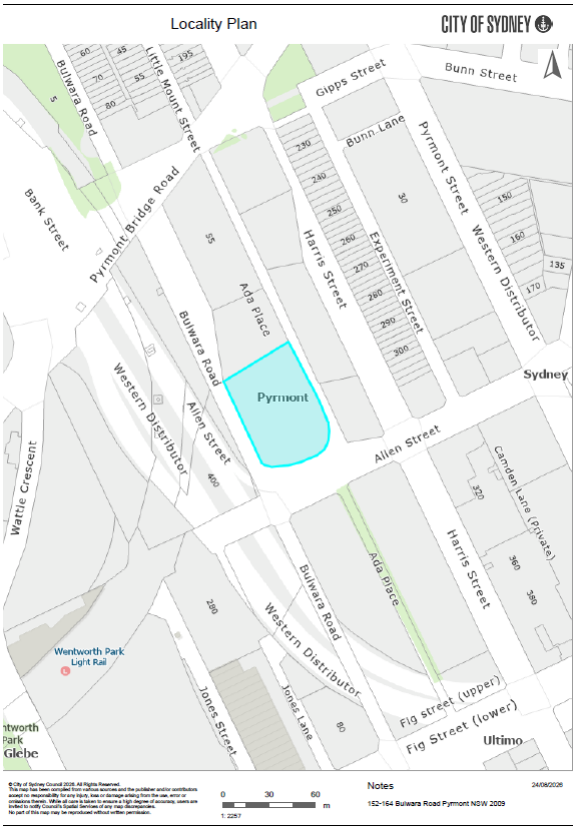


Figure 2: Location map of 152-164 Bulwara Road, Pyrmont

Council investigation officer inspection and recommendation report; Clause 17(2) Part 8 of Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act)

Officer: **Bilal Badyari**

Date: **24 August 2026**

Premises: **152-164 Bulwara Road, Pyrmont**

Executive summary

1. The City of Sydney (the City) received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises dated 10 August 2026 with respect to matters of fire safety.

2. The premises consists of a 10 storey building used for a residential accommodation with associated carpark.

3. The City inspected the Premises on 18 August 2026, accompanied by the building manager. This inspection identified deficiencies in fire safety. To address this, a Notice of Intention to Give a Fire Safety Order (NOI) has been issued under the *Environmental Planning and Assessment Act 1979* NSW (the Act).

Chronology

Date	Event
10 August 2026	FRNSW correspondence was received.
18 August 2026	The City inspected the premises identifying deficiencies in fire safety.
14 September 2026	The City issued a NOI.

Fire and Rescue NSW report

4. Fire and Rescue NSW conducted an inspection of the subject premises on 9 July 2026.

Issues

5. The report from Fire and Rescue NSW detailed issues as shown in the table below.

Ref.	Issue	City response
Fire Resistance		
1.	The self-closing device to the fire door (exit door) leading to the fire isolated stairs on level 5 of Tower 1 was damaged and not capable of returning the door to the fully closed position.	The City's inspection on 18 August 2026 found the maintenance issue relating to the self-closing device to the door had already been rectified, addressing this matter.
Egress		
2.	Exit doors leading to the fire isolated stairs incorporate tulip handles incapable of allowing the door to be opened with a single-handed downward action.	The City's inspection on 18 August 2026 found tulip handles on required exit doors throughout the building. In response, the City issued a NOI on 14 September 2026, requiring single-handed, downward-action door hardware to be installed. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
3.	The fire isolated exits from both tower one (1) and tower two (2) discharge within an enclosed central courtyard on the premises. Furthermore, egress from the central courtyard to the road (Ada Place) requires occupants to pass within 6m of unprotected openings and back through the building to access the road.	The City's inspection on 18 August 2026 confirmed that the building's exit discharge arrangements do not provide a compliant path of travel to a road or open space. In response, the City issued a NOI on 14 September 2026, requiring egress to be reconfigured. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
4.	The ground level fire door to the fire isolated stair in Tower two (2) was found propped open. The Building Manager inform FRNSW at the time of the inspection, the door was left open due to ongoing works to the lift that is currently out of order. FRNSW advised the Building Manager that the operation of the fire door was not to be impeded and should remain capable of self-closing when not being used due to	The City's inspection on 18 August 2026 found the fire door was closed and operating as intended, addressing this issue.

Ref.	Issue	City response
	risk of smoke and fire spread into the fire stairs. FRNSW advised the Building Manager to sort an arrangement to allow access to the building via the fire stairs without impeding the operation of the fire door.	
Automatic Smoke Detection and Alarm System (ASDAS)		
5.	The public corridors and other internal spaces throughout the building are not fitted with a smoke detection system.	The City's inspection on 18 August 2026 confirmed smoke detection systems were not provided to public corridors nor in other internal spaces. In response, the City issued a NOI on 14 September 2026, requiring additional smoke hazard management be provided. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
6.	The display screen on the fire indicator panel (FIP) was opaque, making it unable to be read. It was also noted that the Alarm Signalling Equipment (ASE) was displaying a fault.	The City's inspection on 18 August 2026 found the FIP display screen was opaque and displayed a fault. In response, the City issued a NOI on 14 September 2026 requiring the automatic smoke detection and alarm system to be rectified. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
Fire Hydrant System		
7.	The fire hydrant system appears to have been installed in accordance with Ordinance 70 and Ministerial Specification No.10. In this regard, the following operational concerns are raised:	
a.	The designed pressure and flows are likely to be inadequate to facilitate firefighting operations and suppress a fire at the building.	The City's inspection on 18 August 2026 confirmed several non-compliances associated with the building's fire hydrant system.

Ref.	Issue	City response
b.	The fire hydrant pumpset duty of 4.5L/s @30Mh is likely to be inadequate to facilitate firefighting operations and suppress a fire at the building.	In response, the City issued a NOI on 14 September 2026, requiring the hydrant system to be upgraded. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
c.	The hydrant booster is not provided with a water supply (feed hydrants).	
d.	The building is not provided with wayfinding signage within the fire isolated stairs on each level to inform crews of the location of internal fire hydrants.	
e.	Boost pressure signage is not installed adjacent to the fire hydrant booster.	
Automatic Fire Sprinkler System		
8.	The building appears to have an effective height of more than 25m and has not been fitted with a fire sprinkler system to the residential levels. In this regard, FRNSW brings to your attention position statement published by FRNSW on 30 August 2024.	The City's inspection on 18 August 2026 confirmed that a sprinkler system is installed within the basement carpark. No sprinkler system is provided throughout the residential levels of the building. As the building was designed and constructed at a time when automatic sprinkler protection was not a mandatory requirement and noting that the City issued a NOI on 14 September 2026 requiring upgrades to other fire safety measures that will significantly enhance the overall level of fire safety within the building, the installation of a sprinkler system throughout the residential levels is not considered warranted at this time.
Fire Safety – Essential Fire Safety Measures		
9.	The following Essential Fire Safety Measures have not been maintained:	
a.	Fire exit door to fire isolated stairs – Level 5 Tower 1	The City’s inspection on 18 August 2026 observed the door hardware was not being maintained.

Ref.	Issue	City response
		In response, the City issued a NOI on 14 September 2026, requiring the fire exit door to be maintained. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.
10.	FRNSW did not observe maintenance logbooks and/or summary records relating to the following Essential Fire Safety Measures on site.	
a.	Automatic Fire Sprinkler System	The City's inspection on 18 August 2026 confirmed maintenance logbooks and summary records were not available onsite. In response, the City issued a NOI on 14 September 2026, requiring the building's essential fire safety measures to be maintained in accordance with the standard of performance listed in the fire safety schedule. Follow up inspections will be undertaken to ensure the logbooks and records are completed, addressing this issue.
b.	Fire Detection and Alarm System (Smoke Alarms)	
c.	Fire Hydrant System	
d.	Fire hose reels	
e.	Portable fire extinguishers	
f.	Passive Fire and Smoke Systems	
g.	Fire and Smoke Hazard Management Systems	
Annual Fire Safety Statement (AFSS)		
11.	The AFSS displayed in the building was dated Nov 2023 and was not completed. It has also been noted the standard of performance for the fire hydrant system is AS 2419.1-1994. Based on the design of the hydrant system, FRNSW believes the system to be installed to Ordinance 70.	The City's inspection on 18 August 2026 confirmed that the displayed AFSS was outdated and contained inaccuracies regarding the standard of performance of the fire hydrant system. In response, the City issued a NOI on 14 September 2026, requiring an updated, correct AFSS be provided. Follow up inspections will be undertaken to ensure the works are completed, addressing this issue.

6. FRNSW have recommended that the City inspect the subject premises and appropriately address noted (and other) deficiencies identified within their report.

Council investigation officer recommendations

7. Due to fire safety concerns a Notice of Intention (NOI) to give a fire safety order under the Act was issued on 14 September 2026. After the NOI's representation period expires, received representations are considered, and a further inspection undertaken, a Fire Safety Order may be issued to ensure adequate fire safety systems are in place throughout the building.

8. It is recommended that the Commissioner of FRNSW be informed of the City's decision. The representation period for the Notice of Intention to Give a Fire Safety Order expires on 20 October 2026.

File Ref. No: FRN26/2095 - BFS26/4829 – 7000002936
TRIM Ref. No: D2026/115893
Contact: Matthew Warbrick

10 August 2026

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance / Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
DARLINGTON APARTMENTS
152 – 164 BULWARA ROAD PYRMONT (hereafter "the premises")

Fire and Rescue NSW (FRNSW) received correspondence concerning the adequacy of the provision for fire safety in or in connection with the premises.

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected the premises on 9 July 2026.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

COMMENTS

The following items were identified in relation to the provisions for fire safety:

Fire Resistance

1. The self-closing device to the fire door (exit door) leading to the fire isolated stairs on level 5 of Tower 1 was damaged and not capable of returning the door to the fully closed position, contrary to the requirements of Clause C4D9 of the National Construction Code, Volume 1 2022.

Egress

2. Exit doors leading to the fire isolated stairs incorporate tulip handles incapable of allowing the door to be opened with a single-handed downward action, contrary to the requirements of Clause D3D26 of the NCC.

3. The fire isolated exits from both tower one (1) and tower two (2) discharge within an enclosed central courtyard on the premises, contrary the requirements of Clause D2D12(2) of the NCC.

   Furthermore, egress from the central courtyard to the road (Ada Place) requires occupants to pass within 6m of unprotected openings and back through the building to access the road, contrary to the requirements of Clause D2D12(3) of the NCC.

4. The ground level fire door to the fire isolated stair in Tower two (2) was found propped open. The Building Manager inform FRNSW at the time of the inspection, the door was left open due to ongoing works to the lift, that is currently out of order.

   FRNSW advised the Building Manager that the operation of the fire door was not to be impeded and should remain capable of self-closing when not being used due to risk of smoke and fire spread into the fire stairs.

   FRNSW advised the Building Manager to sort an arrangement to allow access to the building via the fire stairs without impeding the operation of the fire door.

Automatic Smoke Detection and Alarm System (ASDAS)

5. The public corridors and other internal spaces throughout the building are not fitted with a smoke detection system, contrary to the requirements of Clause E2D5 and S20C4 of Specification 20 of the NCC.

6. The display screen on the fire indicator panel (FIP) was opaque, making it unable to be read. It was also noted that the Alarm Signalling Equipment (ASE) was displaying a fault.

Fire Hydrant System

7. The fire hydrant system appears to have been installed in accordance with Ordinance 70 and Ministerial Specification No.10. In this regard, the following operational concerns are raised:

a. The designed pressure and flows are likely to be inadequate to facilitate firefighting operations and suppress a fire at the building.

b. The fire hydrant pumpset duty of 4.5L/s @30Mh is likely to be inadequate to facilitate firefighting operations and suppress a fire at the building

c. The hydrant booster is not provided with a water supply (feed hydrants)

d. The building is not provided with wayfinding signage within the fire isolated stairs on each level to inform crews of the location of internal fire hydrants.

e. Boost pressure signage is not installed adjacent to the fire hydrant booster.

In light of this, FRNSW brings to your attention a position statement published by FRNSW on 12 September 2024 – *"Fire hydrant system in existing building or premises"*

Automatic Fire Sprinkler System

8. The building appears to have an effective height of more than 25m and has not been fitted with a fire sprinkler system to the residential levels contrary to the requirements of Clause E1D5 of the NCC. In this regard, FRNSW brings to your attention position statement published by FRNSW on 30 August 2024 - *"Fire sprinklers in Class 2 and 3 buildings"*

Regulatory Requirements

Fire Safety – Essential Fire Safety Measures

9. The following Essential Fire Safety Measures have not been maintained contrary to the requirements of Section 81 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR 2021)

    a. Fire exit door to fire isolated stairs – Level 5 Tower 1

10. In reference to Section 81A of the EPAR 2021, FRNSW did not observe maintenance logbooks and/or summary records (required by AS1851-2012) relating to the following Essential Fire Safety Measures on site.

    a. Automatic Fire Sprinkler System

    b. Fire Detection and Alarm System (Smoke Alarms)

    c. Fire Hydrant System

d. Fire hose reels.

e. Portable fire extinguishers.

f. Passive Fire and Smoke Systems

g. Fire and Smoke Hazard Management Systems

Given this, concerns are raised that adequate maintenance of these Essential Fire Safety Measures is not being undertaken in accordance with AS 1851-2012.

Annual Fire Safety Statements

11. The AFSS displayed in the building was dated Nov 2023 and was not completed, contrary to the requirements of Section 89 of the EPAR 2021.

    It has also been noted the standard of performance for the fire hydrant system is AS 2419.1-1994. Based on the design of the hydrant system, FRNSW believes the system to be installed to Ordinance 70.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review item no. 1 through to item no. 11 of this report and conduct an inspection.

b. Require the existing fire hydrant system be upgraded to meet the performance requirements of AS 2419.1-2021, to address item no. 7 of this report.

   FRNSW acknowledge that all aspects of AS 2419.1:2021 may not be able to be complied with due to the characteristics and constraints of the existing fire hydrant system and/or building or premises. A bespoke upgrade solution may be required.

c. Require the installation of an automatic fire sprinkler system throughout the building, complying with the requirements of Clause E1D5 and Specification 17 of the NCC, to address item no. 8 of this report.

a. Address any other deficiencies identified on the premises.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. FRNSW refers this matter to the Council as the appropriate regulatory authority and awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

LIMITATIONS

The items listed in the comments of this report are based on the following limitations:

- FRNSW's inspection of the premises may have been conducted without having the development consent and / or approved plans as a reference.
- FRNSW's inspection of the premises was a non-invasive visual inspection.
- FRNSW authorised fire officers may not have been able to access all areas of the premises at the time of inspection.
- The following parts of the premises were not able to be inspected:
    - Sprinkler Valve Room
    - SOU's

Please do not hesitate to contact Matthew Warbrick of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call (02) 9742 7434 if you have any questions or concerns regarding the above matters. Please ensure that you refer to file reference FRN26/2095 - BFS26/4829 – 7000002936 for any future correspondence concerning this matter.

Yours faithfully



Matthew Warbrick
Acting Senior Building Surveyor
Fire Safety Compliance Unit