Attachment A2

Urban design report – Part 2

07

07 DESIGN PROPOSAL

Design Response



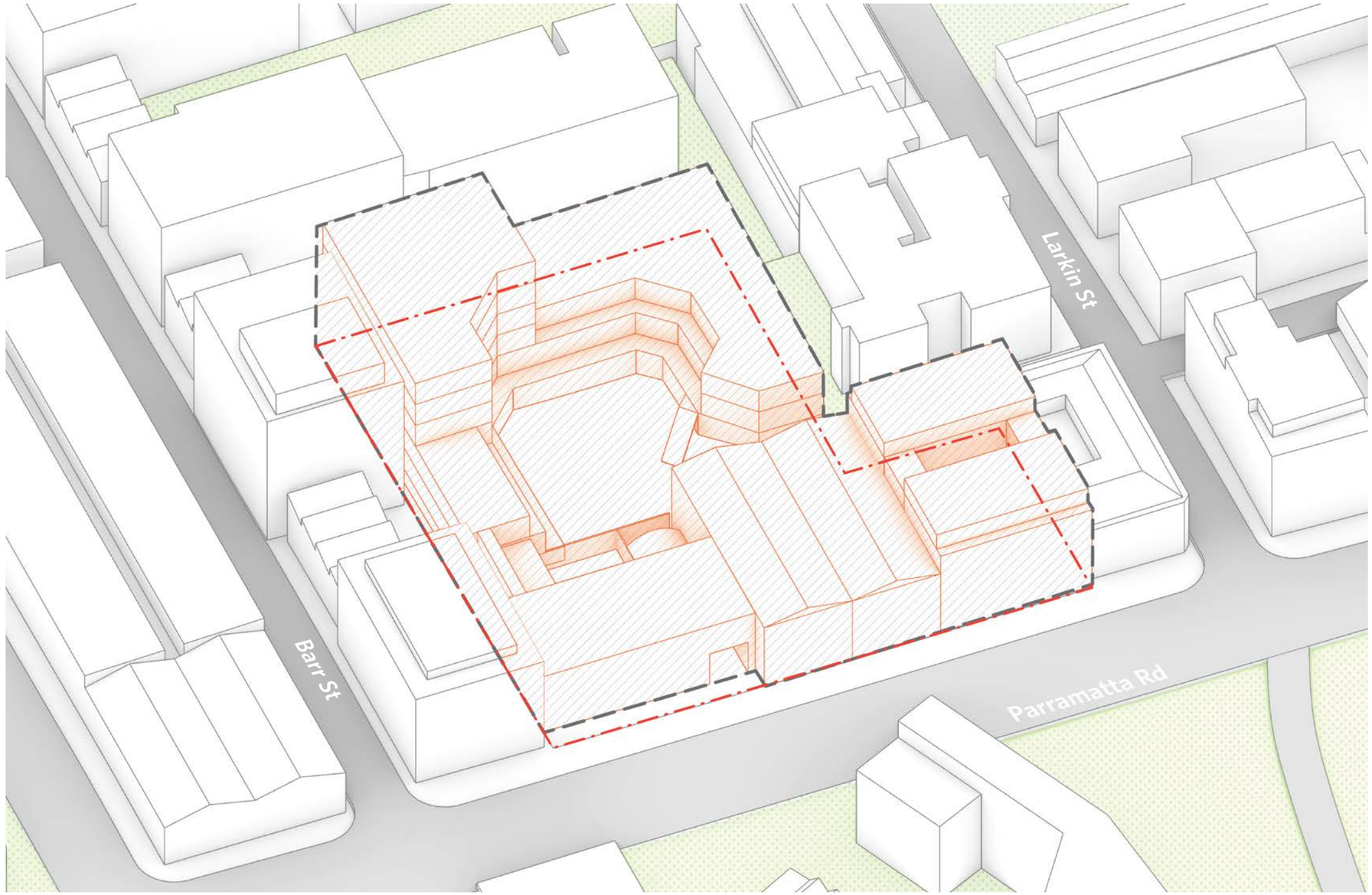
07 DESIGN PROPOSAL

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.



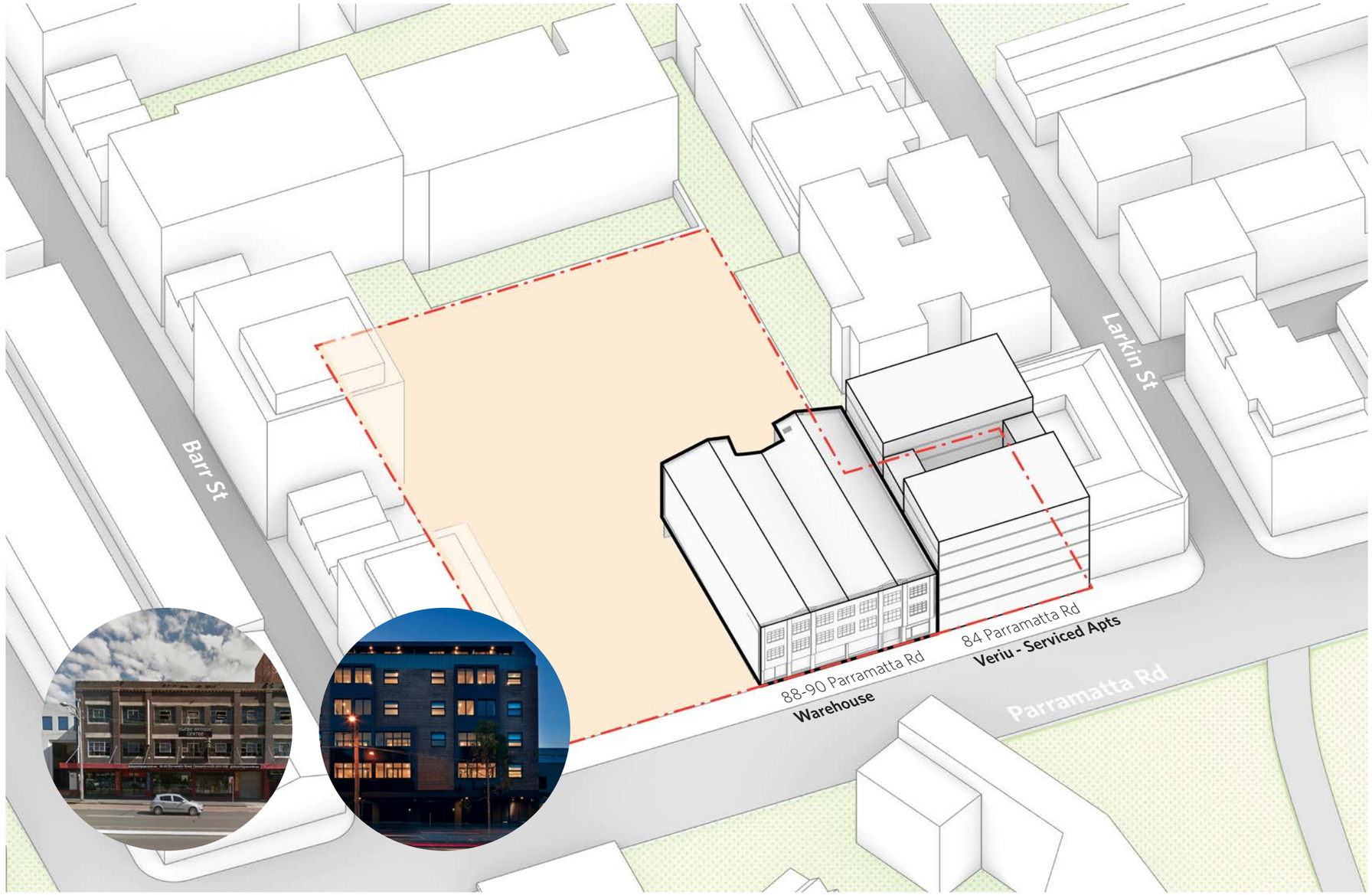
07 DESIGN PROPOSAL

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.



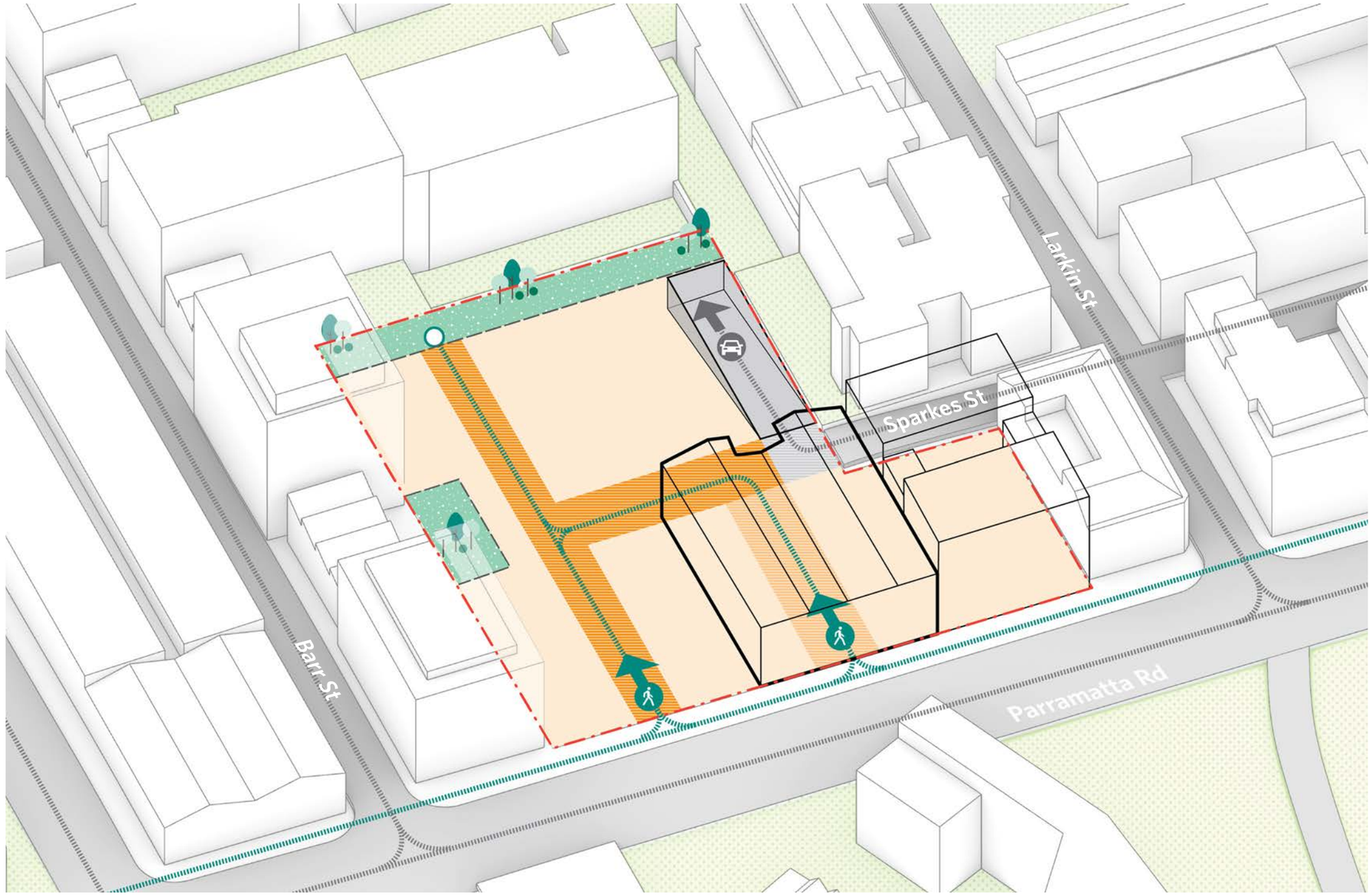
Public Domain & Site Permeability

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.

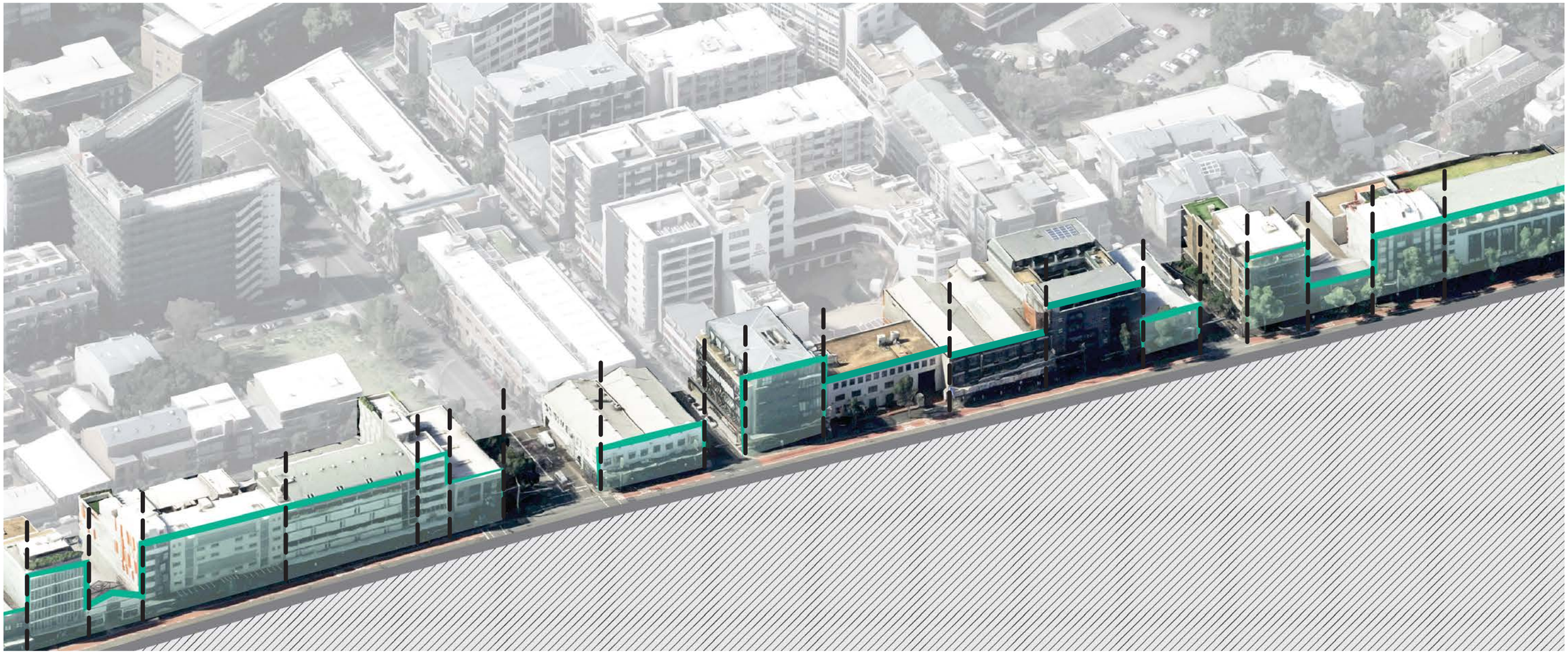
Sparkes St is proposed to provide service vehicle and parking access to the basement levels.



07 DESIGN PROPOSAL

Parramatta Rd - Responding to Street Wall Grain and Height

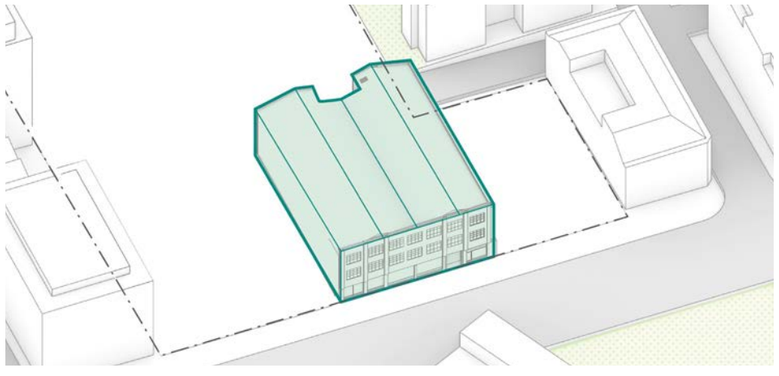
Parramatta Rd features a distinctive fragmented and varied built form. The corridor features a mix of building types, eras, and uses - from early 20th-century shopfronts and warehouses to post-war industrial buildings and pockets or recent redevelopment. We look to identify the grain of building frontages and regular variation in streetwall heights within the immediate precinct to inform the proposal.



Parramatta Rd street wall grain and rhythm.

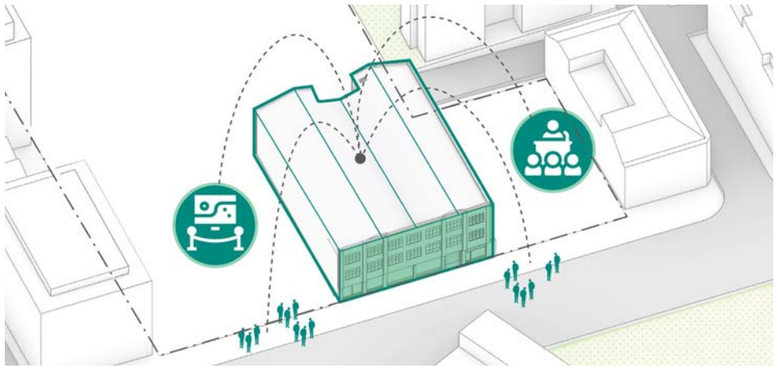
07 DESIGN PROPOSAL

Heritage Design Principles - Adaptive Reuse of the Warehouse (88-90 Parramatta



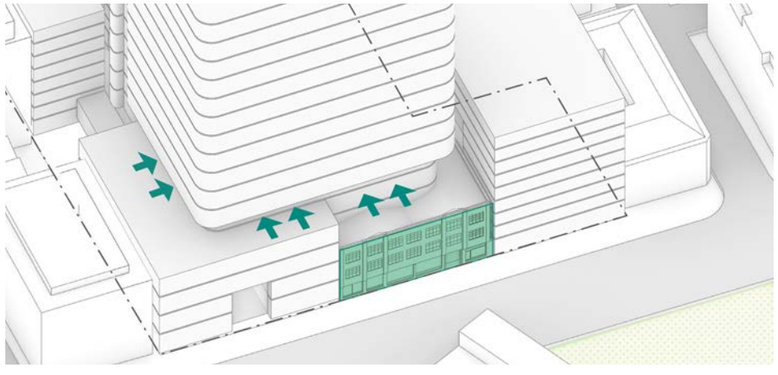
Retain and Adapt

Preserve the building's overall volume, street-facing façade, and internal spatial character, adapting it for contemporary use within the life sciences precinct.



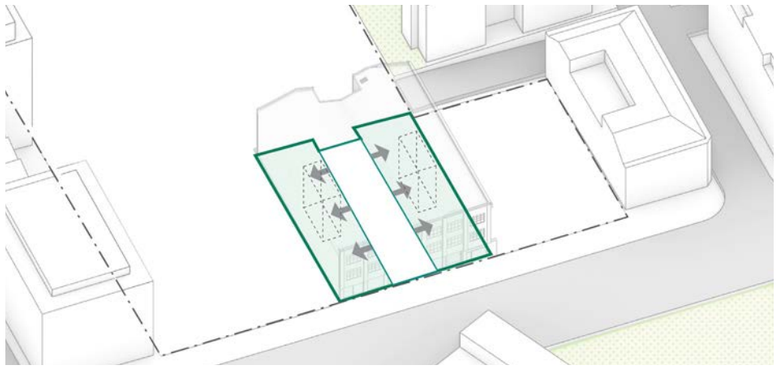
Prioritise Heritage Interpretation

Utilise the building for public-facing uses - such as exhibitions or conferences - to celebrate and interpret its historical and architectural significance.



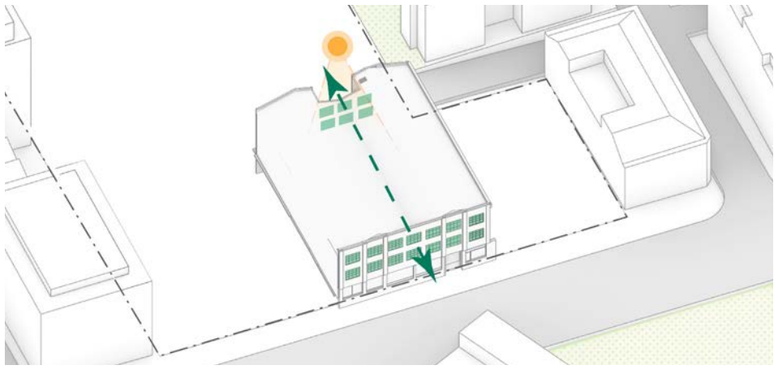
Respect Visual Curtilage

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.



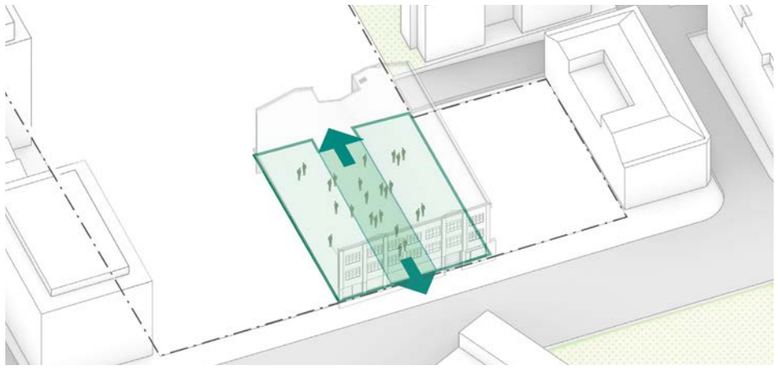
Minimise Physical Intervention

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

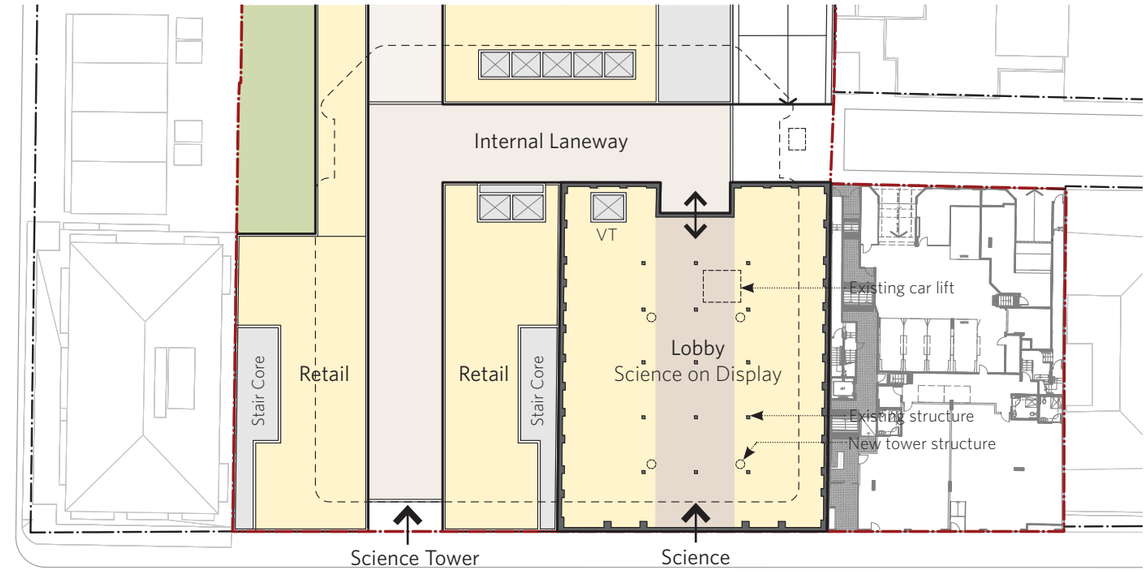
The tower above is set back front the Parramatta Rd frontage to provide a visual curtilage to the warehouse building.

Light & Ventilation

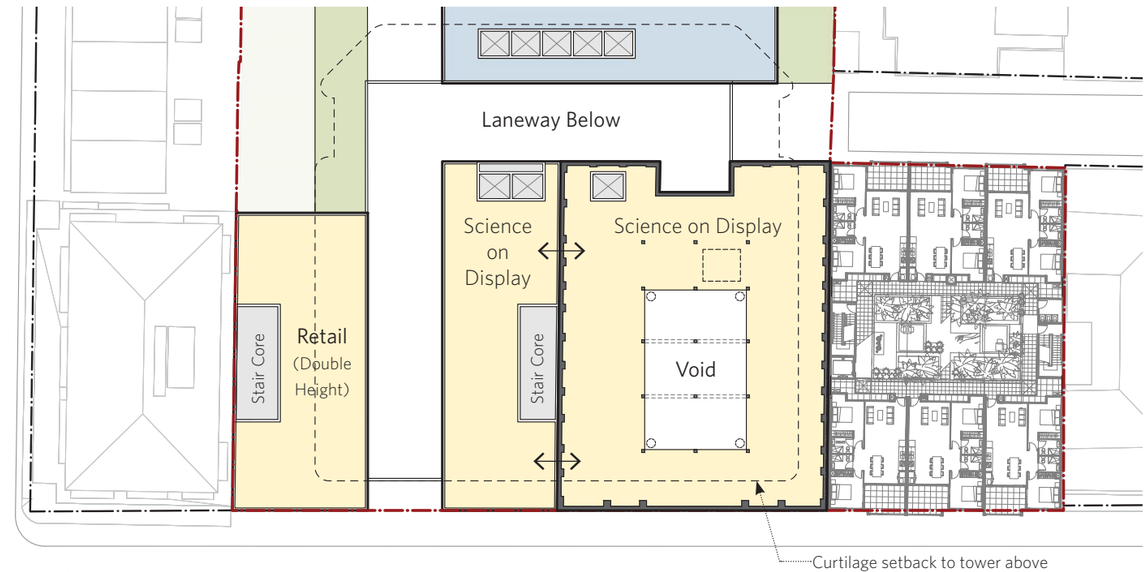
The warehouse retains its original steel framed windows to the north and south maximising opportunity for natural light and ventilation.

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

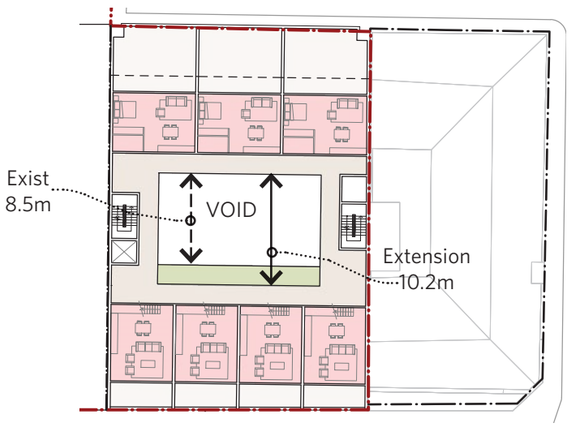
Design Response

Serviced Apartments Extension

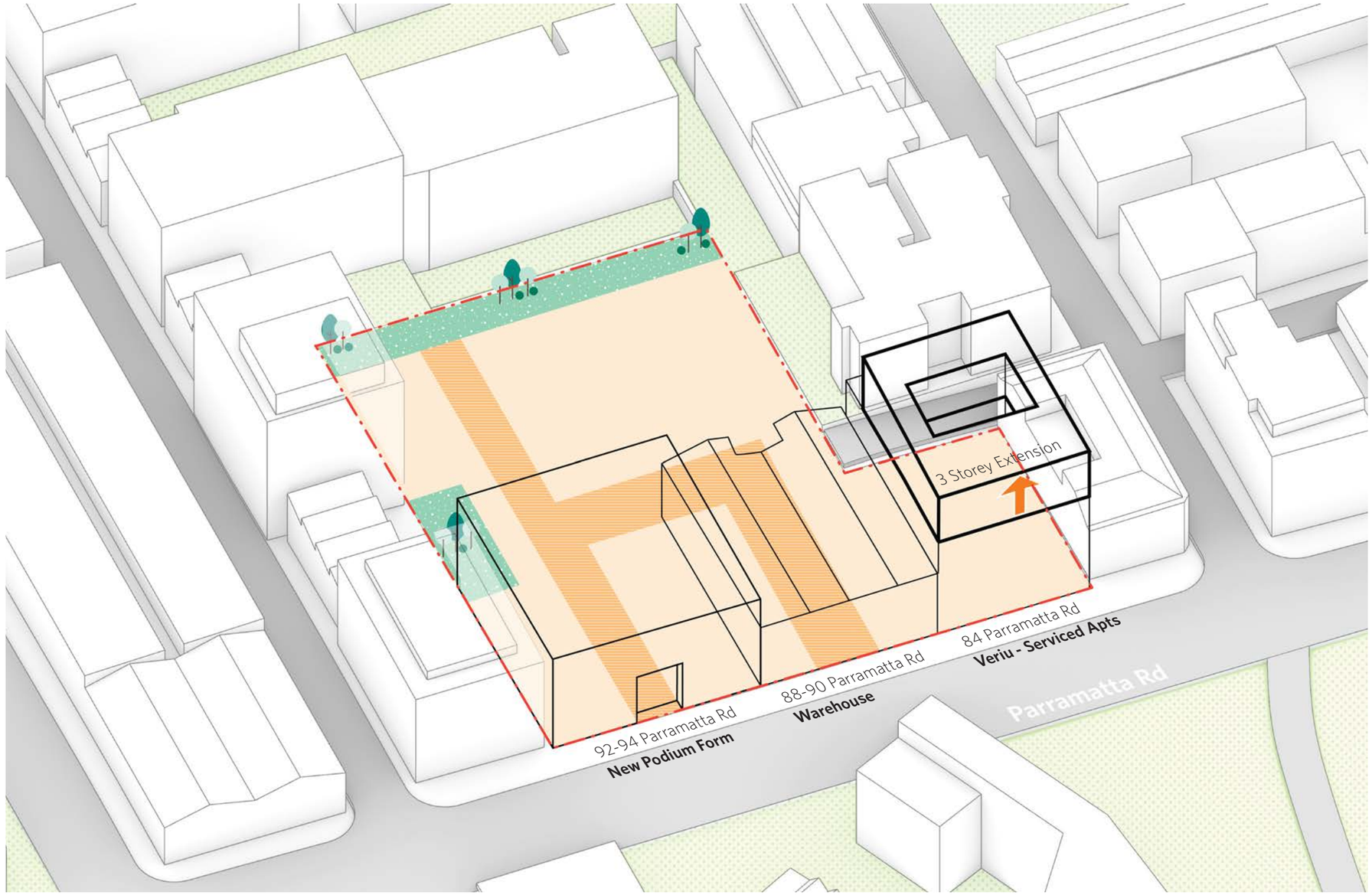
The existing Veriu serviced apartment building at 84 Parramatta Rd is to receive a 3 storey extension above the existing 6 stories. The existing structure has been designed with additional capacity to facilitate future additional stories.

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



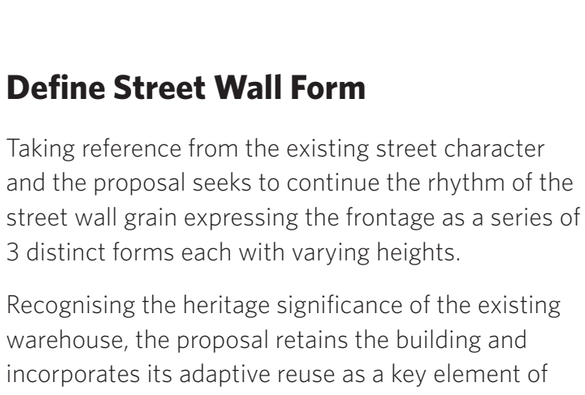
07 DESIGN PROPOSAL

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

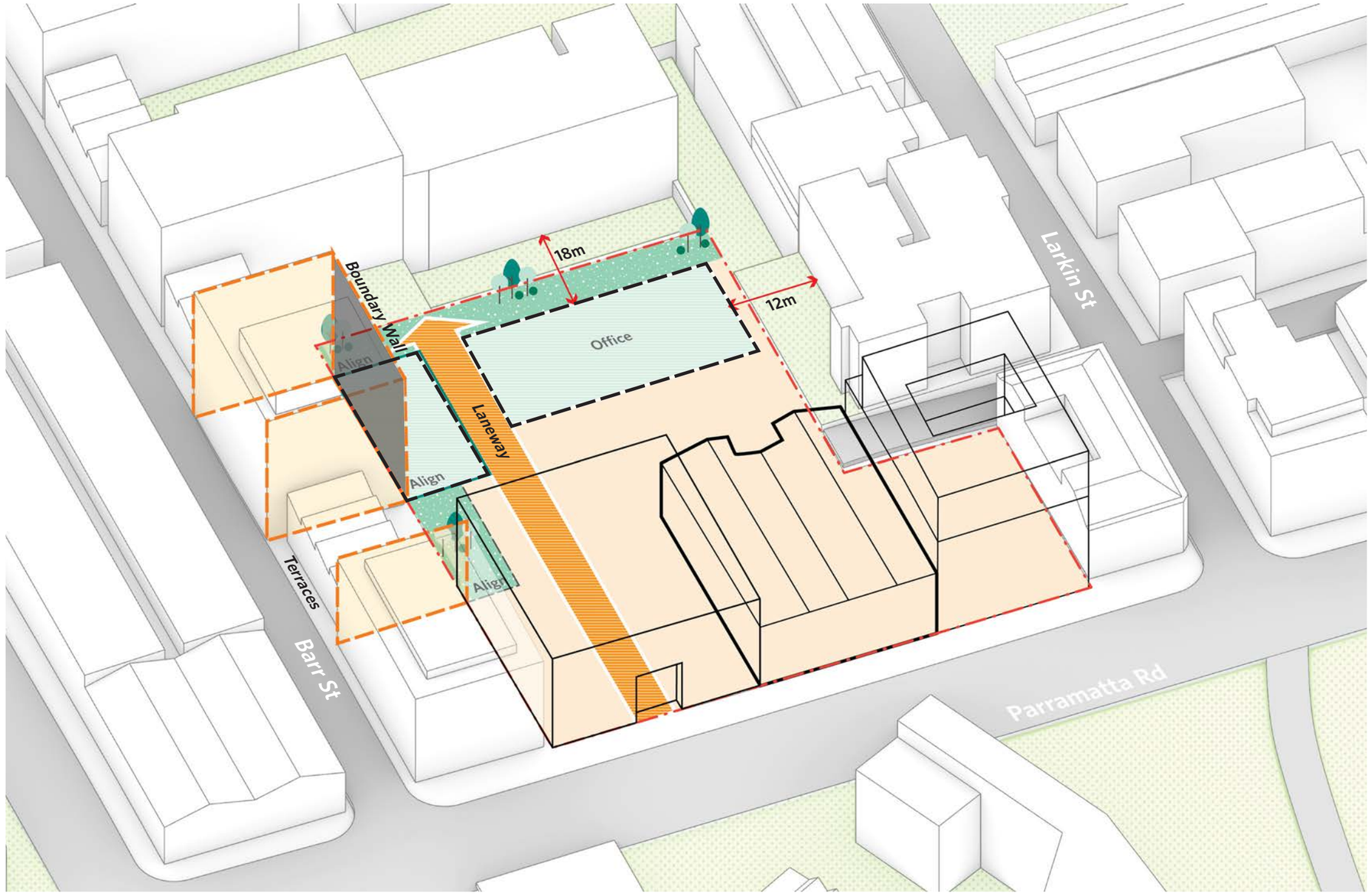
Office Building Siting

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.

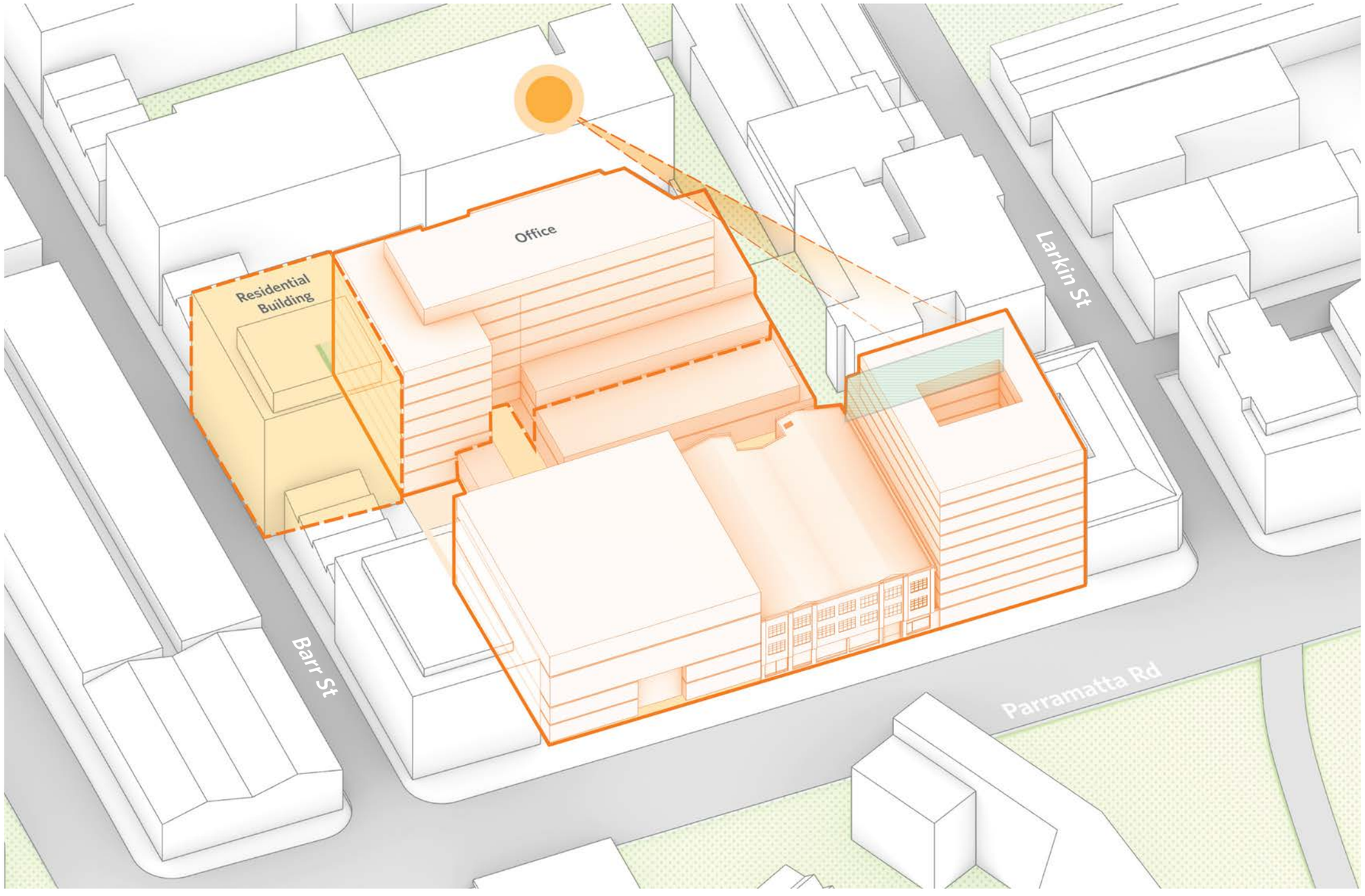


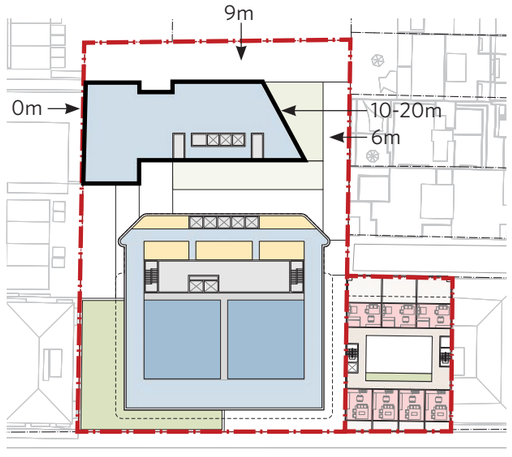
07 DESIGN PROPOSAL

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

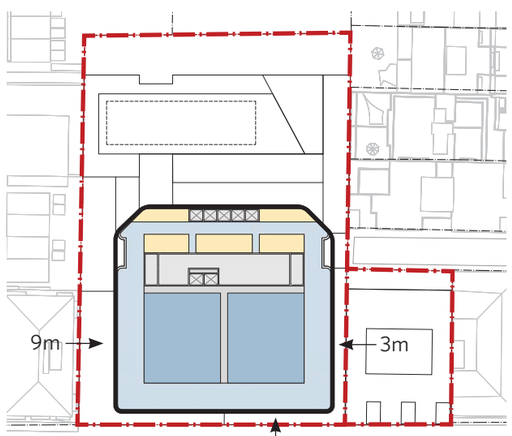
Design Response

Define Tower Massing

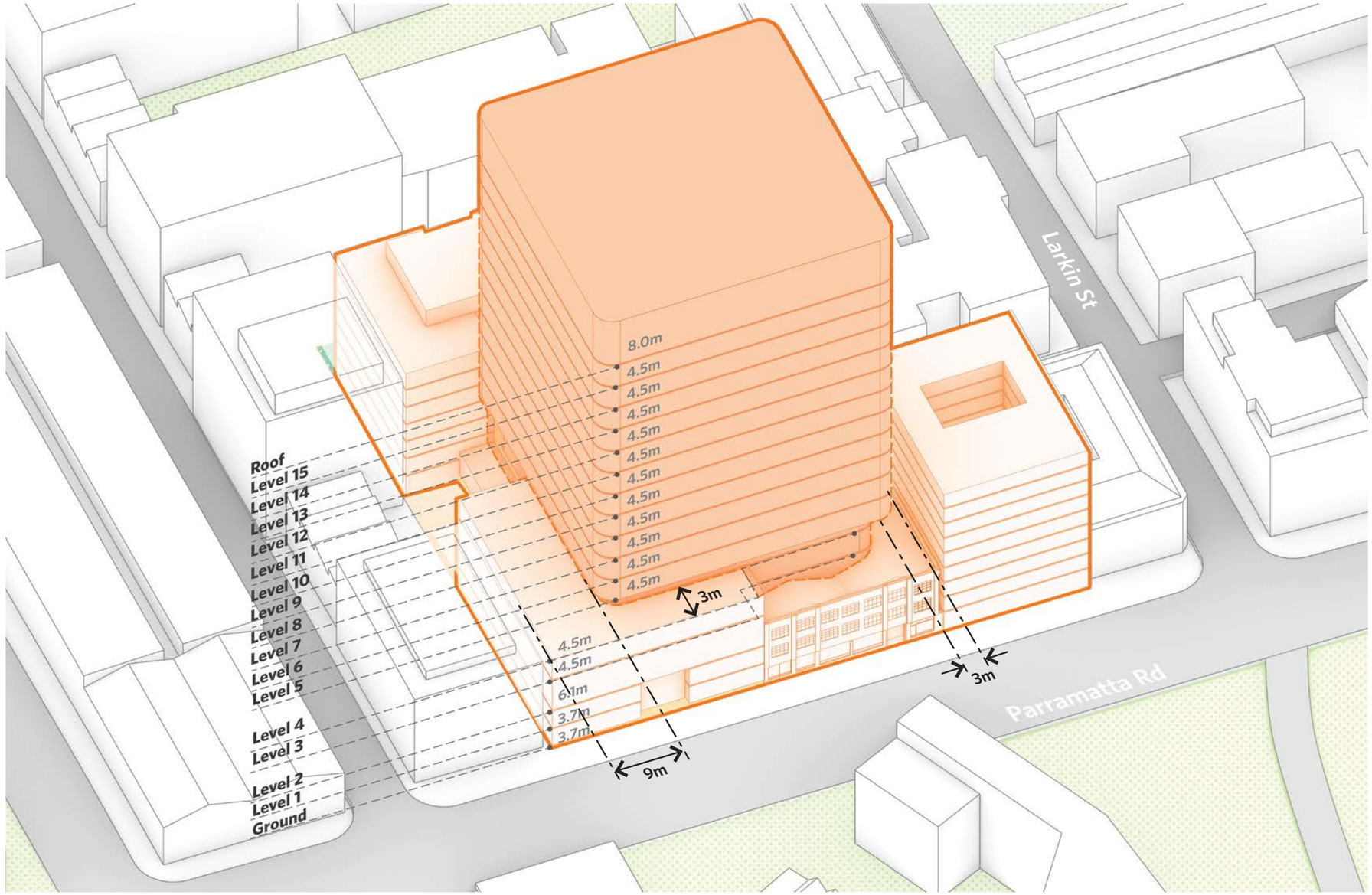
The form and placement of the tower are guided by a considered understanding of the site conditions and the specific requirements of the building typology.

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.



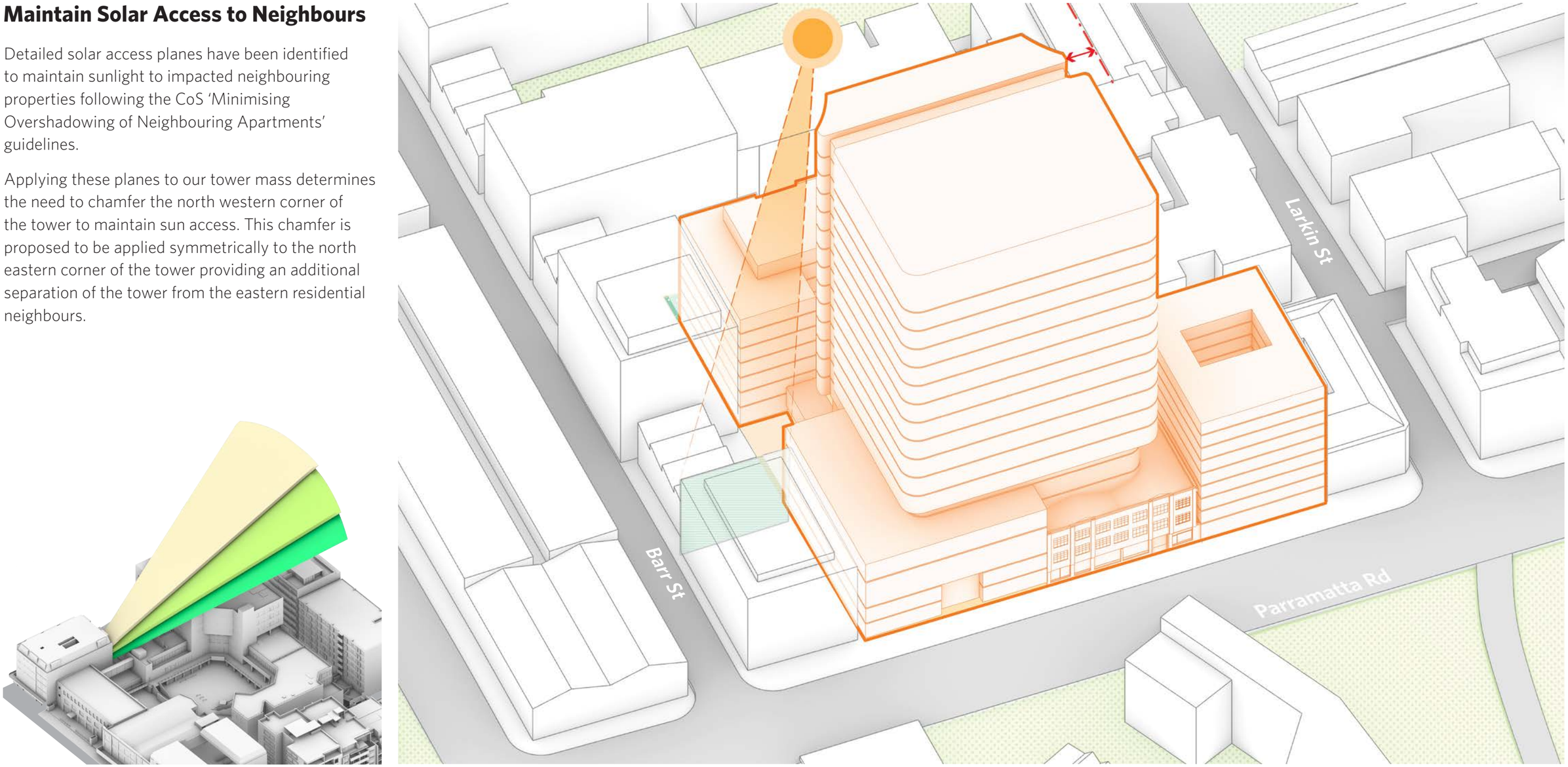
Tower Setbacks



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.

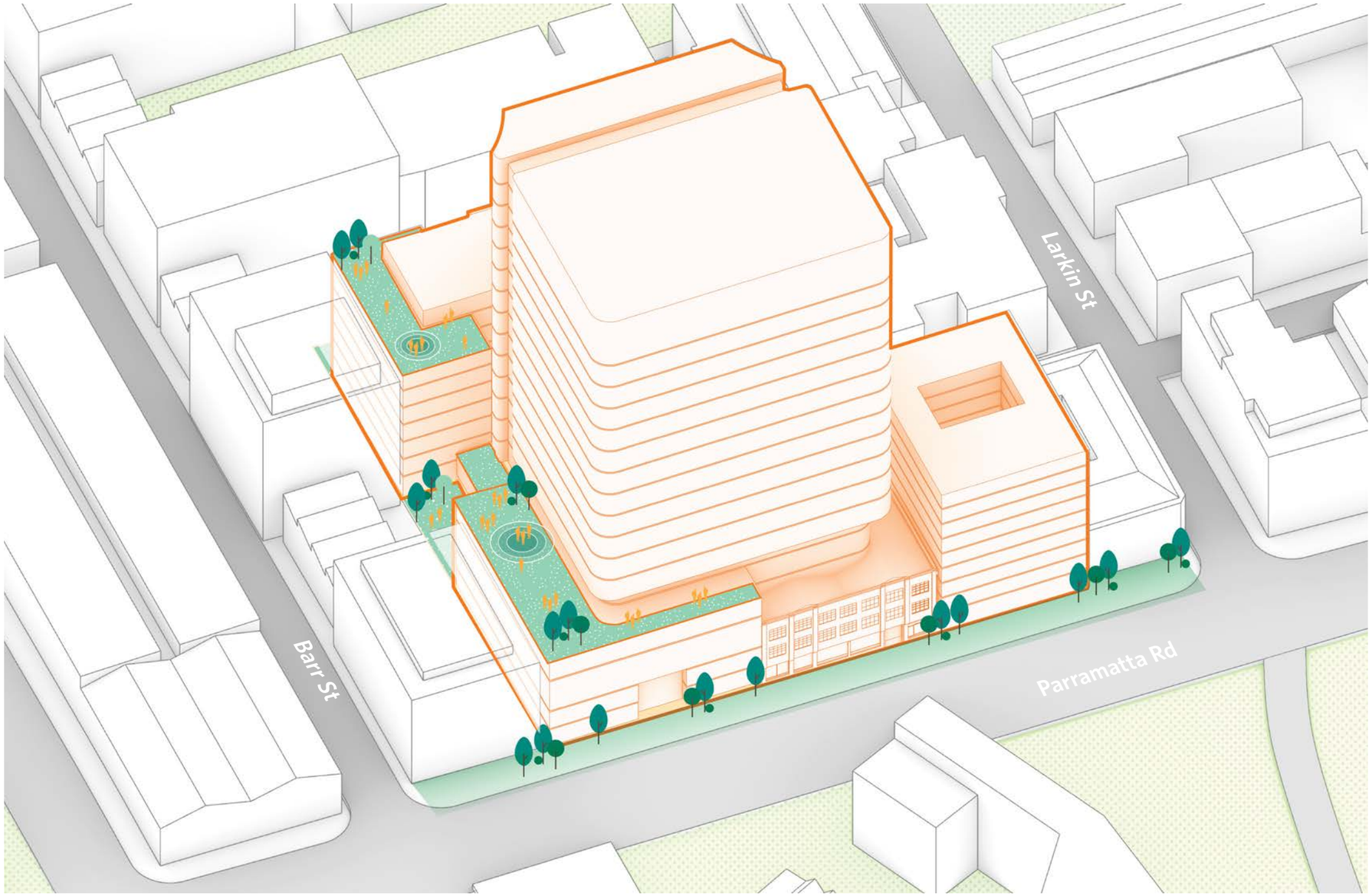
Applying these planes to our tower mass determines the need to chamfer the north western corner of the tower to maintain sun access. This chamfer is proposed to be applied symmetrically to the north eastern corner of the tower providing an additional separation of the tower from the eastern residential 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.





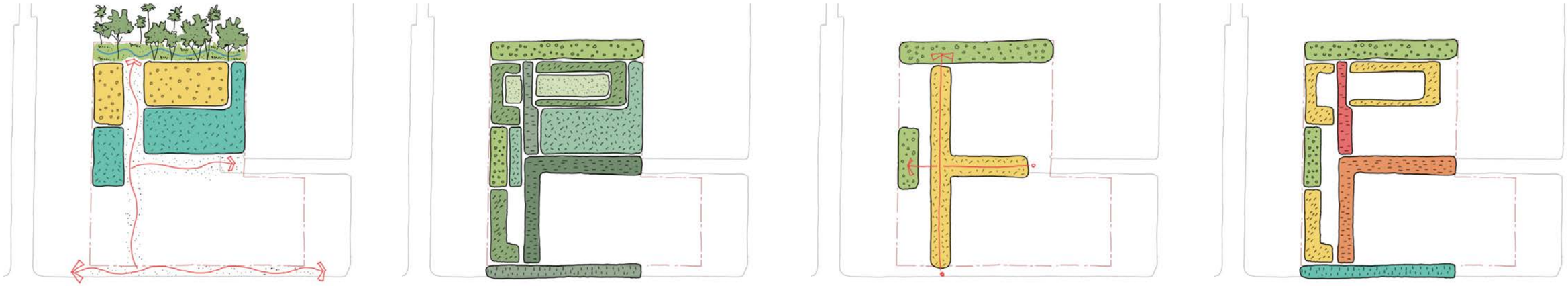
Rooftop Landscaped Spaces

07 DESIGN PROPOSAL

Design Response

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Landscape Design Principles



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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.





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North

07 LANDSCAPE & PUBLIC DOMAIN STRATEGY

Level 1 Masterplan

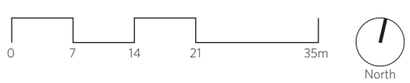
Non-accessible green roofs on Level 1 enhance onsite biodiversity by supporting a diverse mix of native species that create habitats for local fauna. In addition to mitigating the urban heat island effect, these green roofs offer a lush green outlook from the surrounding science tower, life science education 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

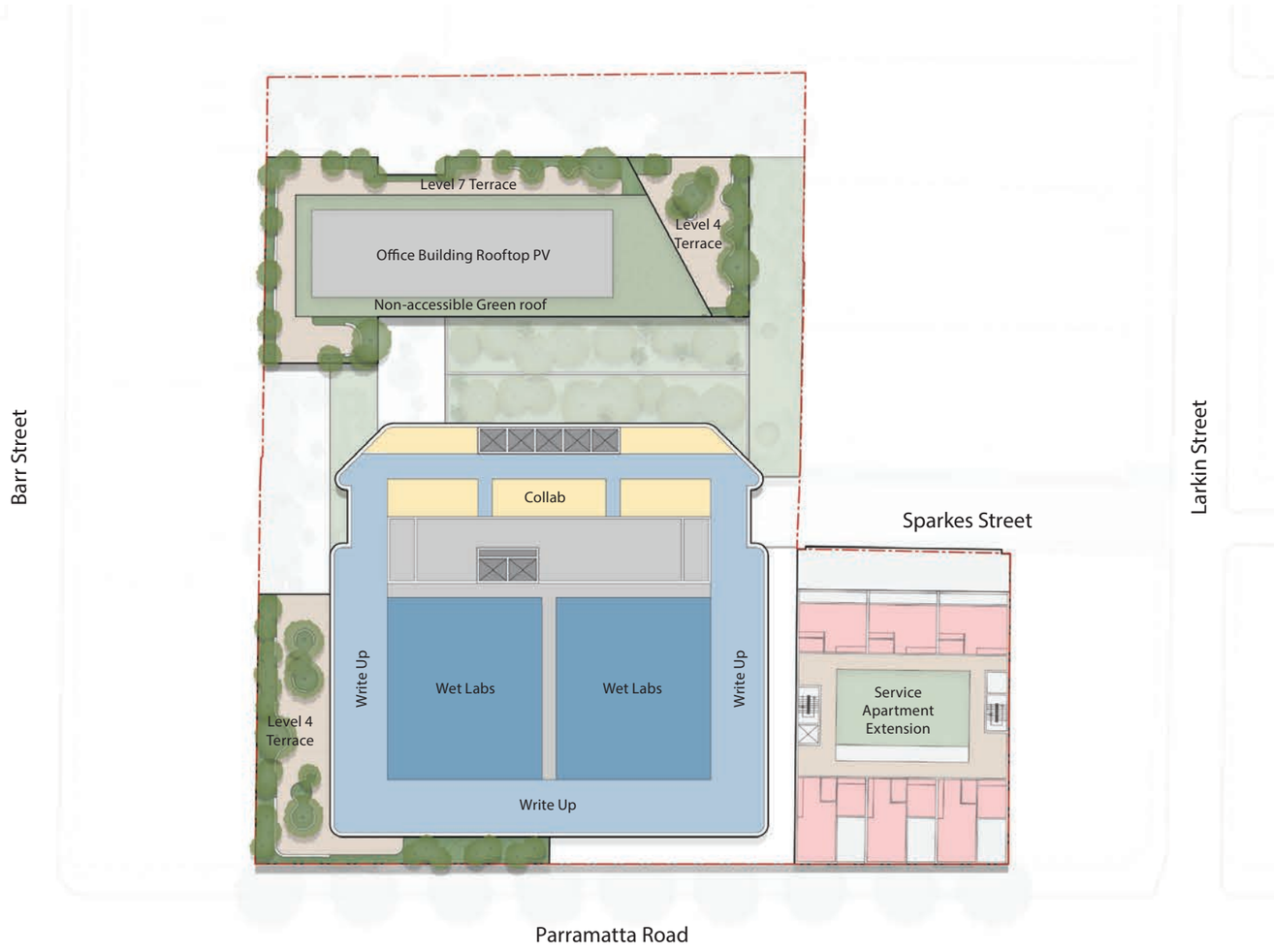
A landscaped roof terrace on the life science education building offers residents both active and passive recreational areas set within a native garden setting. It features a variety of inclusive social spaces designed for gathering and recreation.

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.

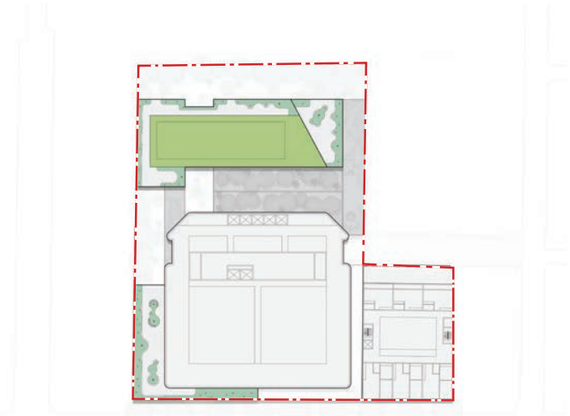
- Deep Soil
- Podium Gardens (soil depth 300-600mm)
- Podium Gardens (soil depth 800-1200mm)



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)

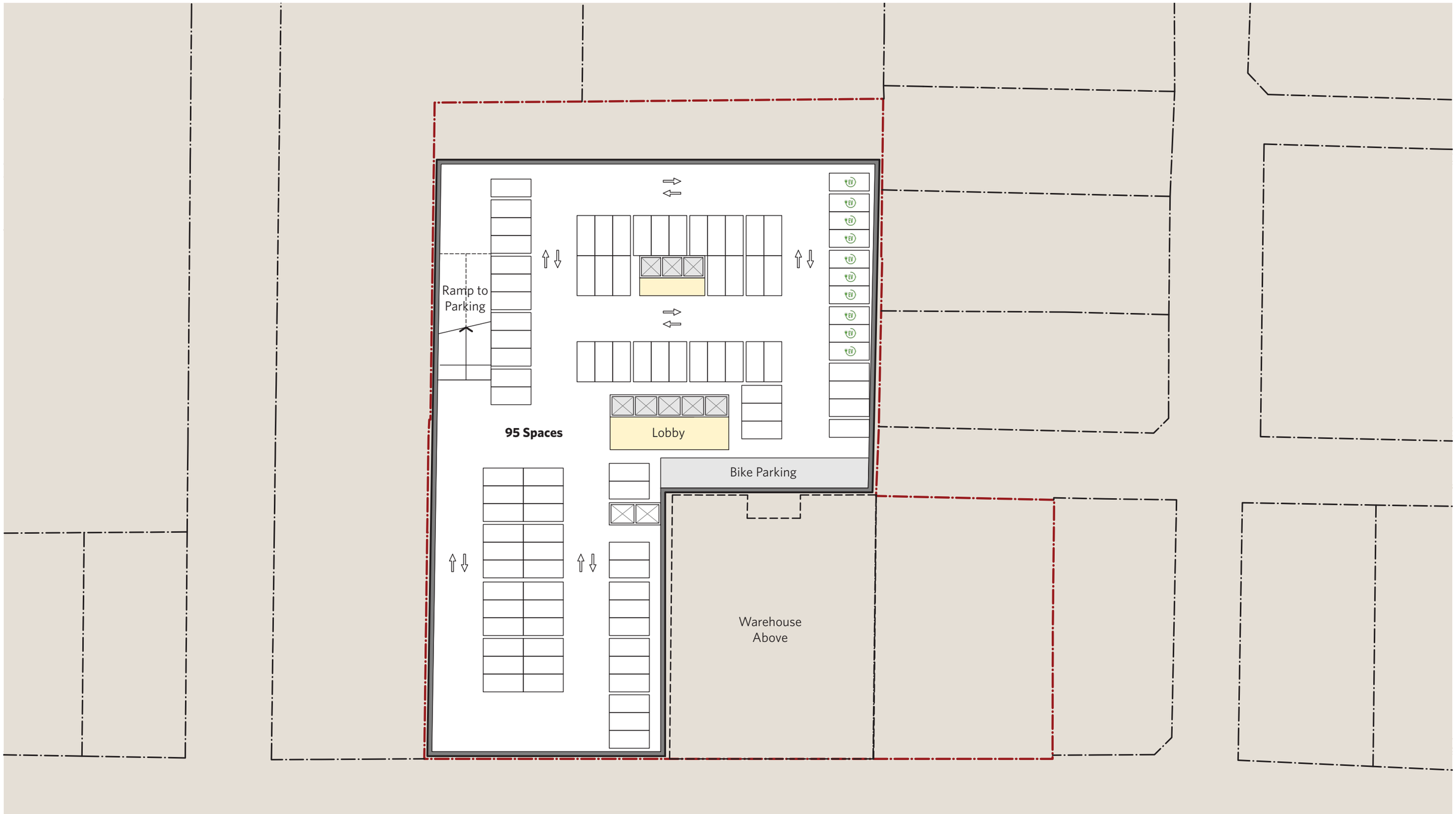

Melaleuca linariifolia
(Snow-in-summer)


Syncarpia glomulifera
(Turpentine or Yanderra)

08

08 REFERENCE SCHEME PLANS

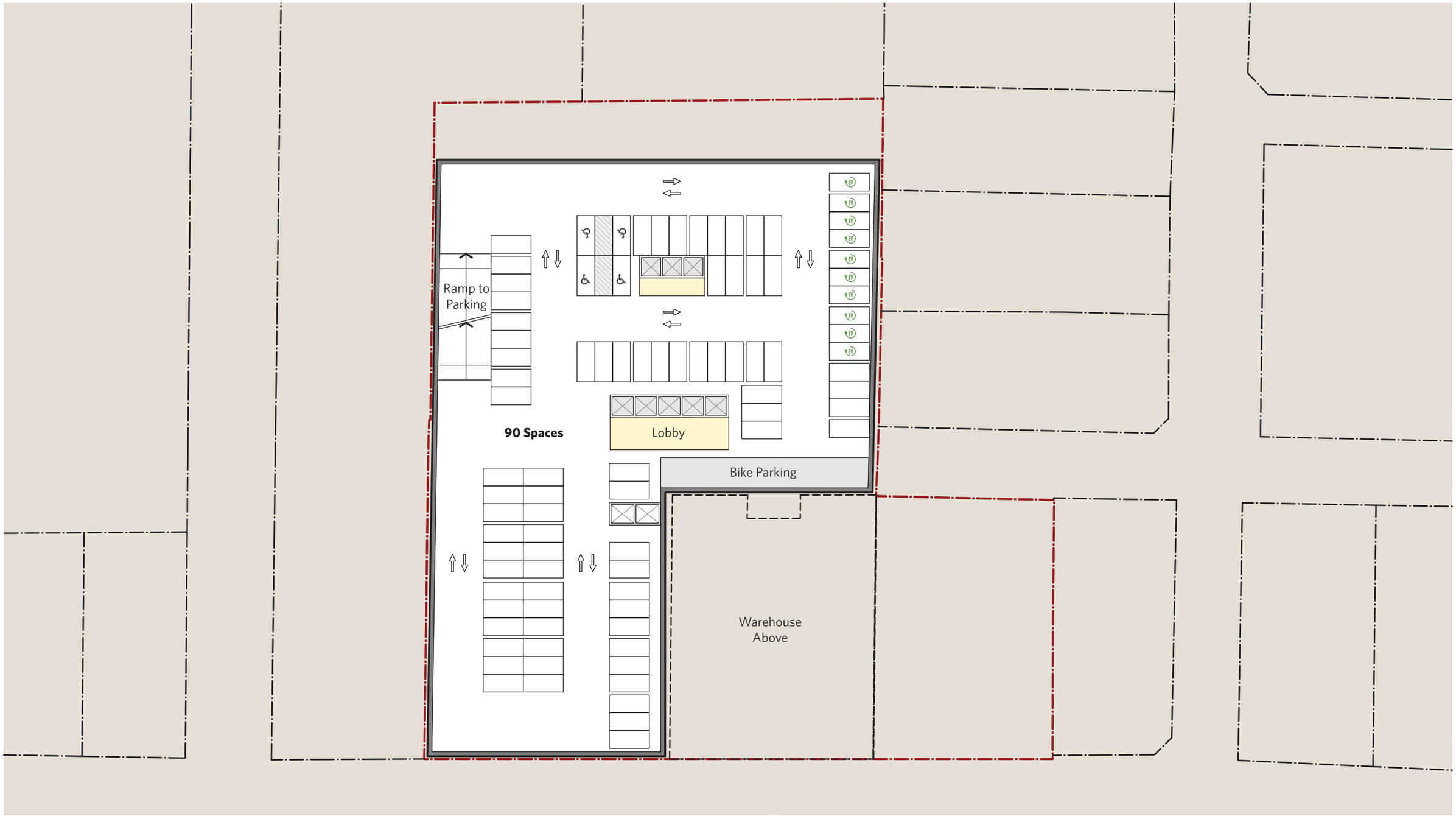
Basement 3



1:500 @ A3

08 REFERENCE SCHEME

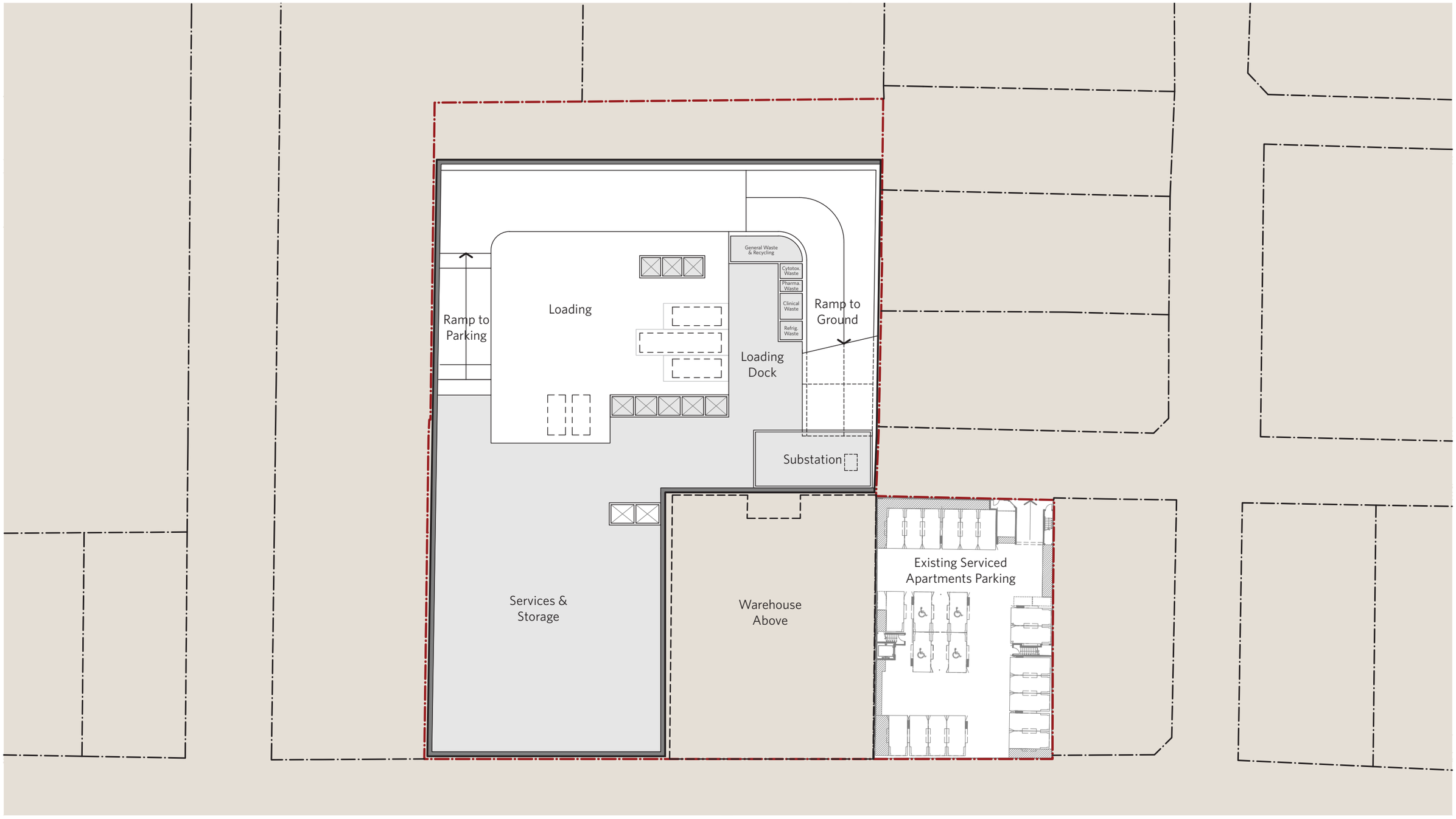
Basement 2



1:500 @ A3

08 REFERENCE SCHEME

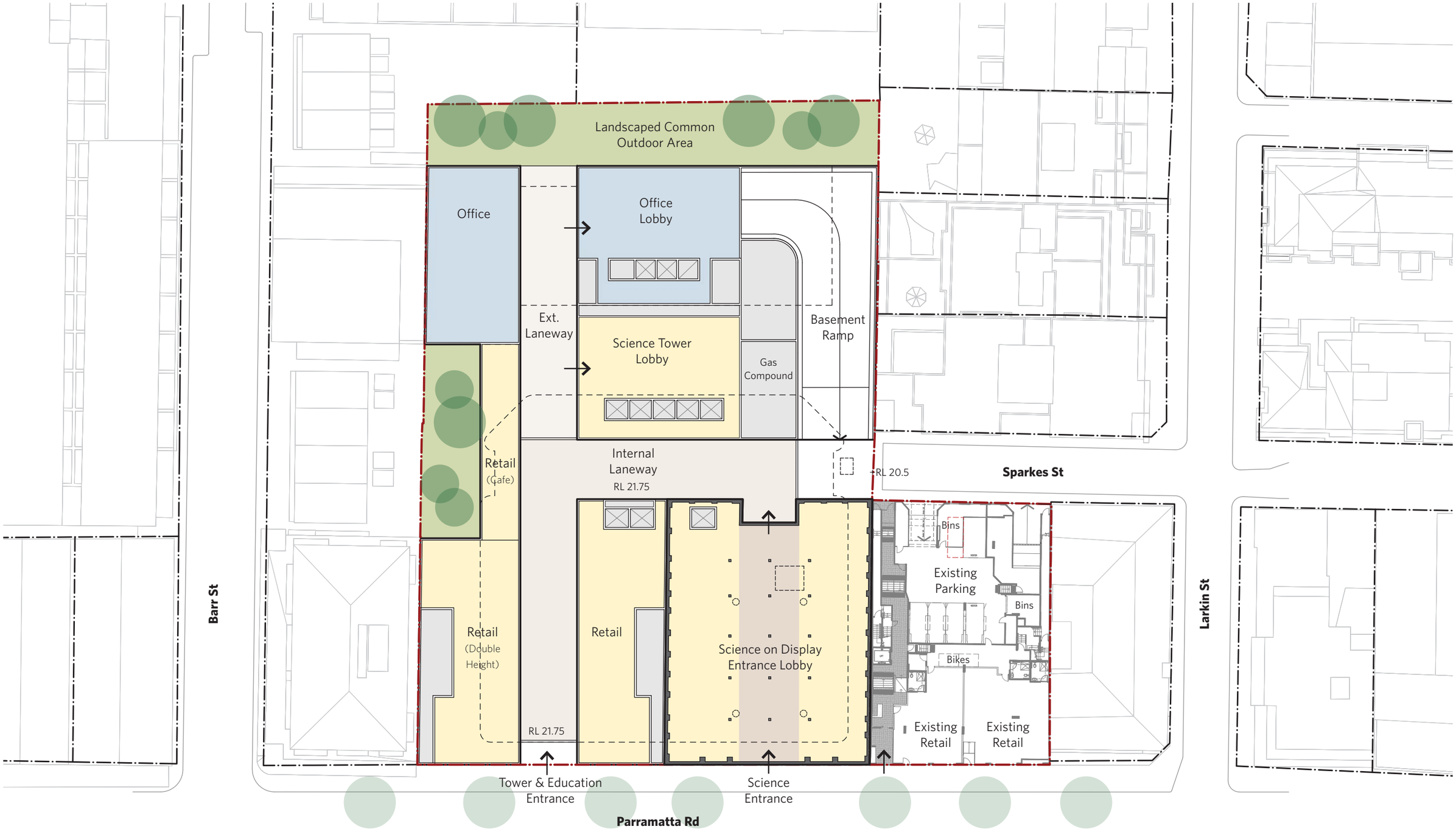
Basement 1



1:500 @ A3

08 REFERENCE SCHEME

Ground Level

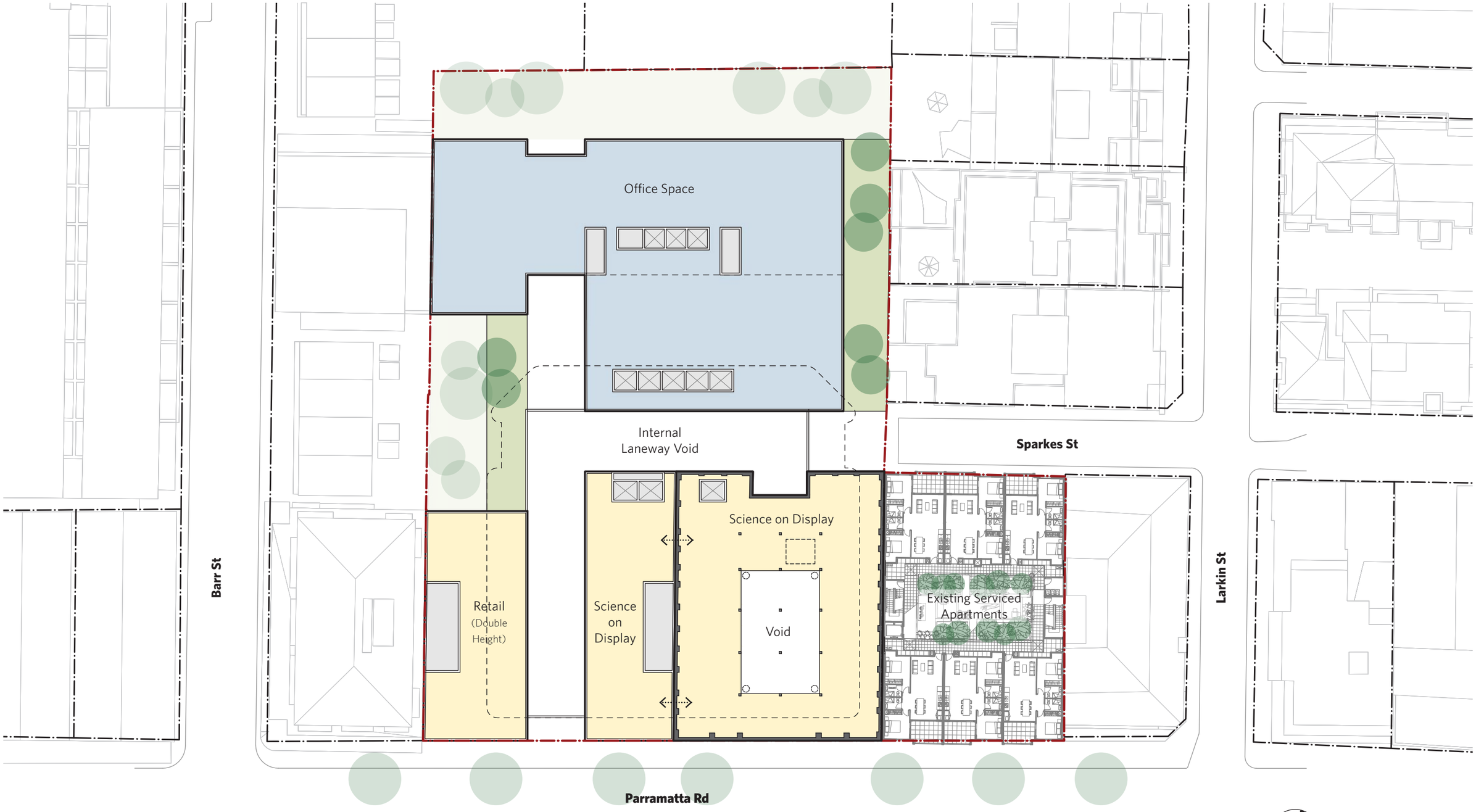


268

1:500 @ A3

08 REFERENCE SCHEME

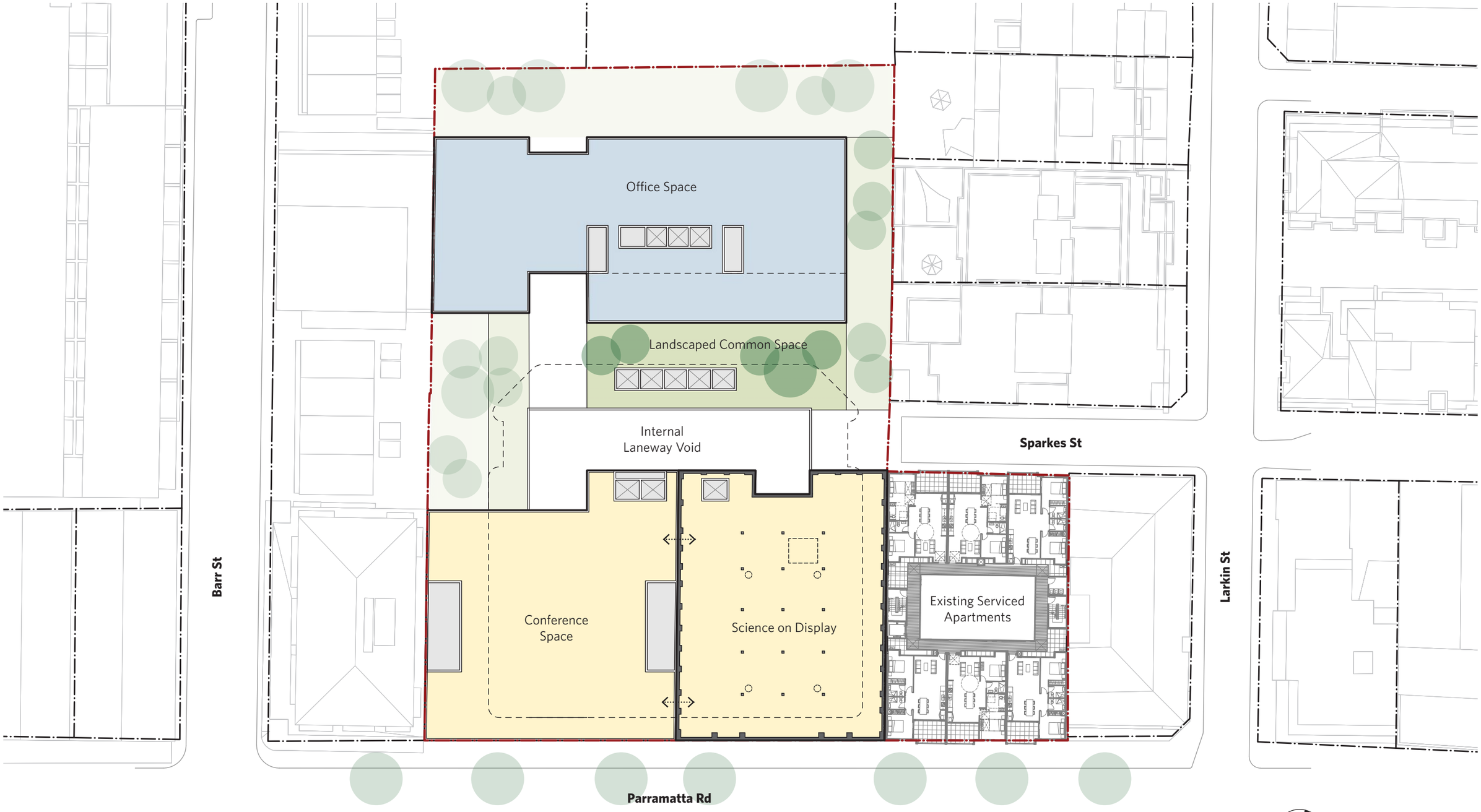
Level 1 Science Tower
Level 1 Office
Level 1 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

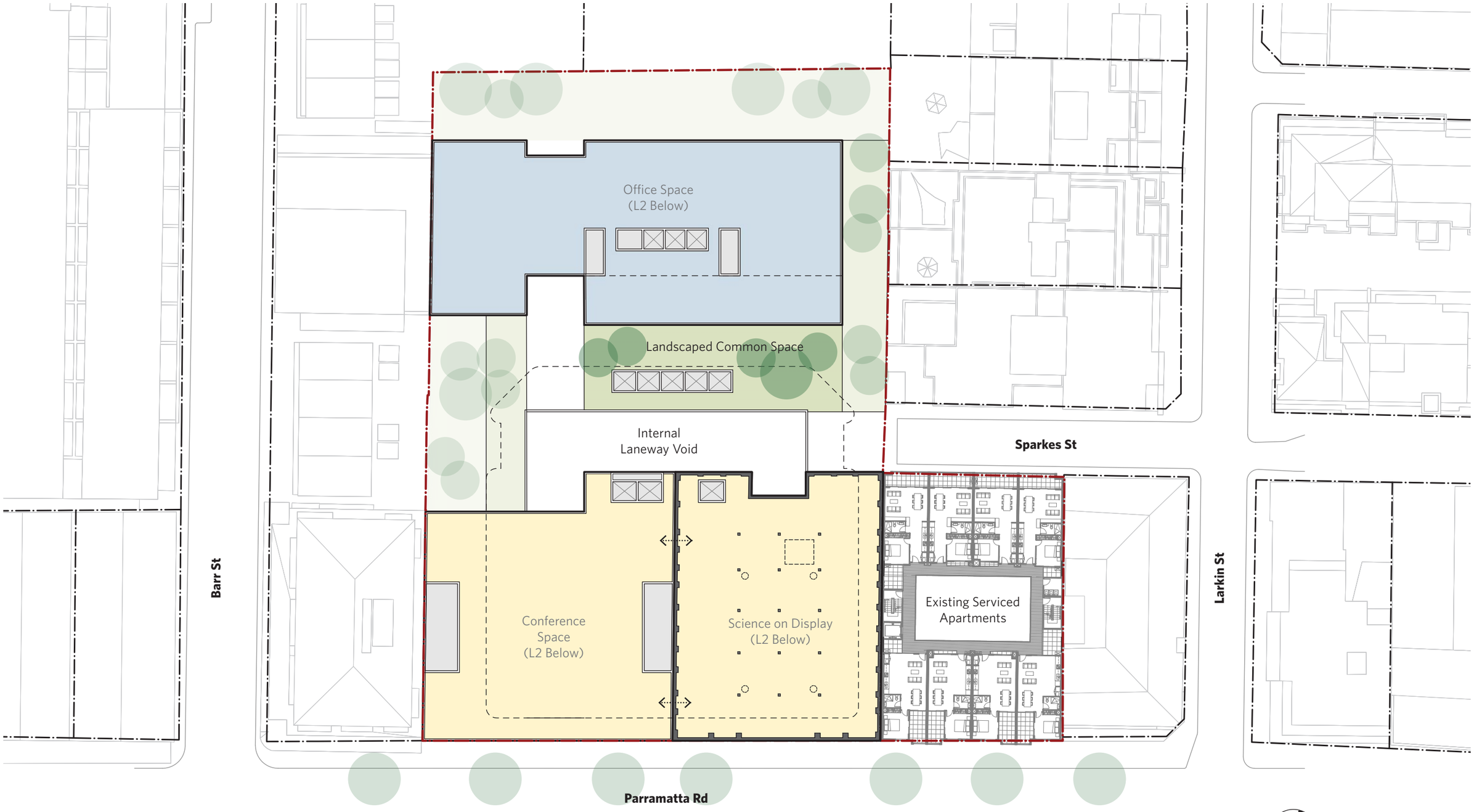
Level 2 Science Tower
Level 2 Office
Level 2 Serviced Apartments



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

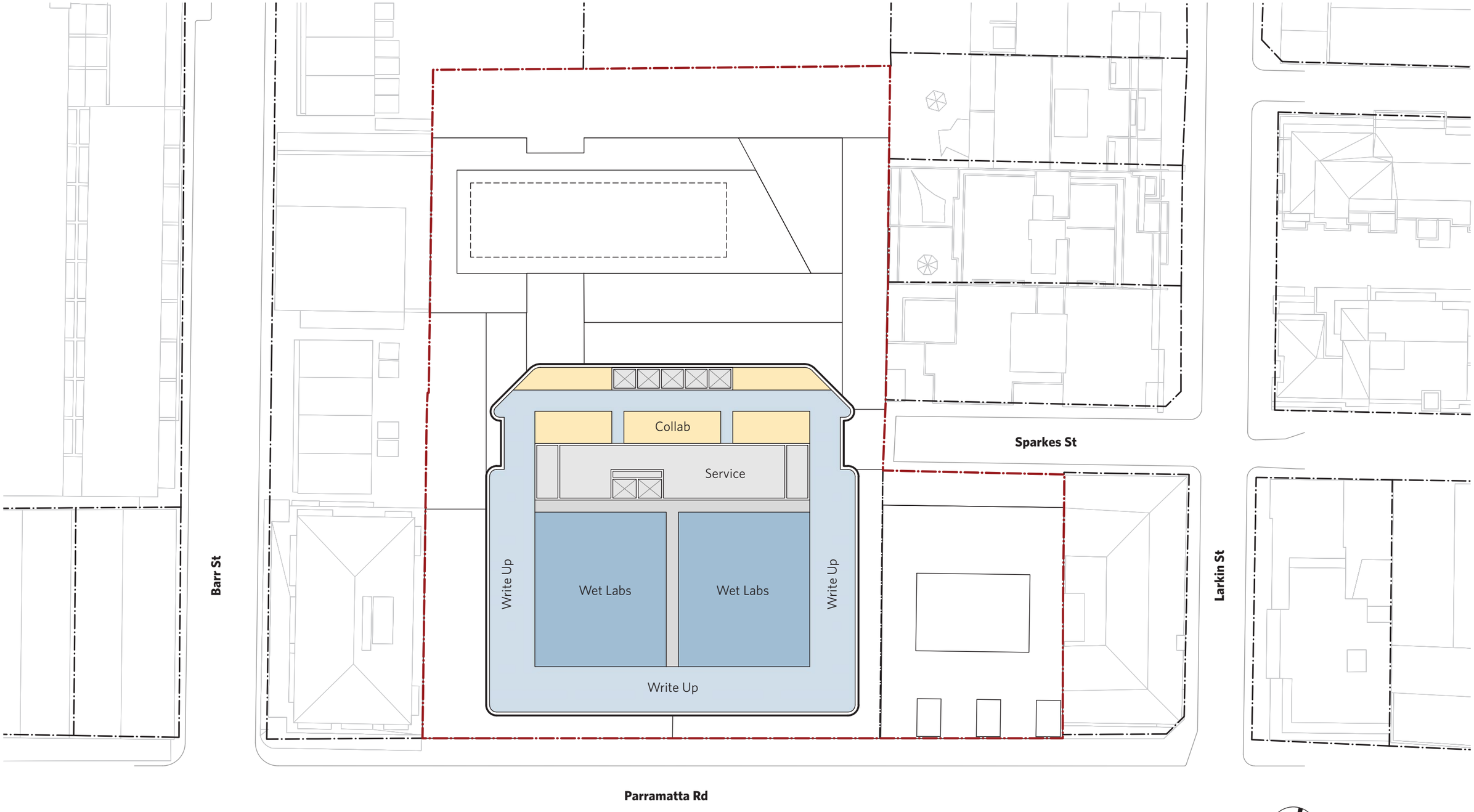
Level 6 Science Tower
Level 7 Office
Level 8 Serviced Apartments



1:500 @ A3

08 REFERENCE SCHEME

Levels 7-15 Science Tower



1:500 @ A3

08 REFERENCE SCHEME

Vertical Arrangement

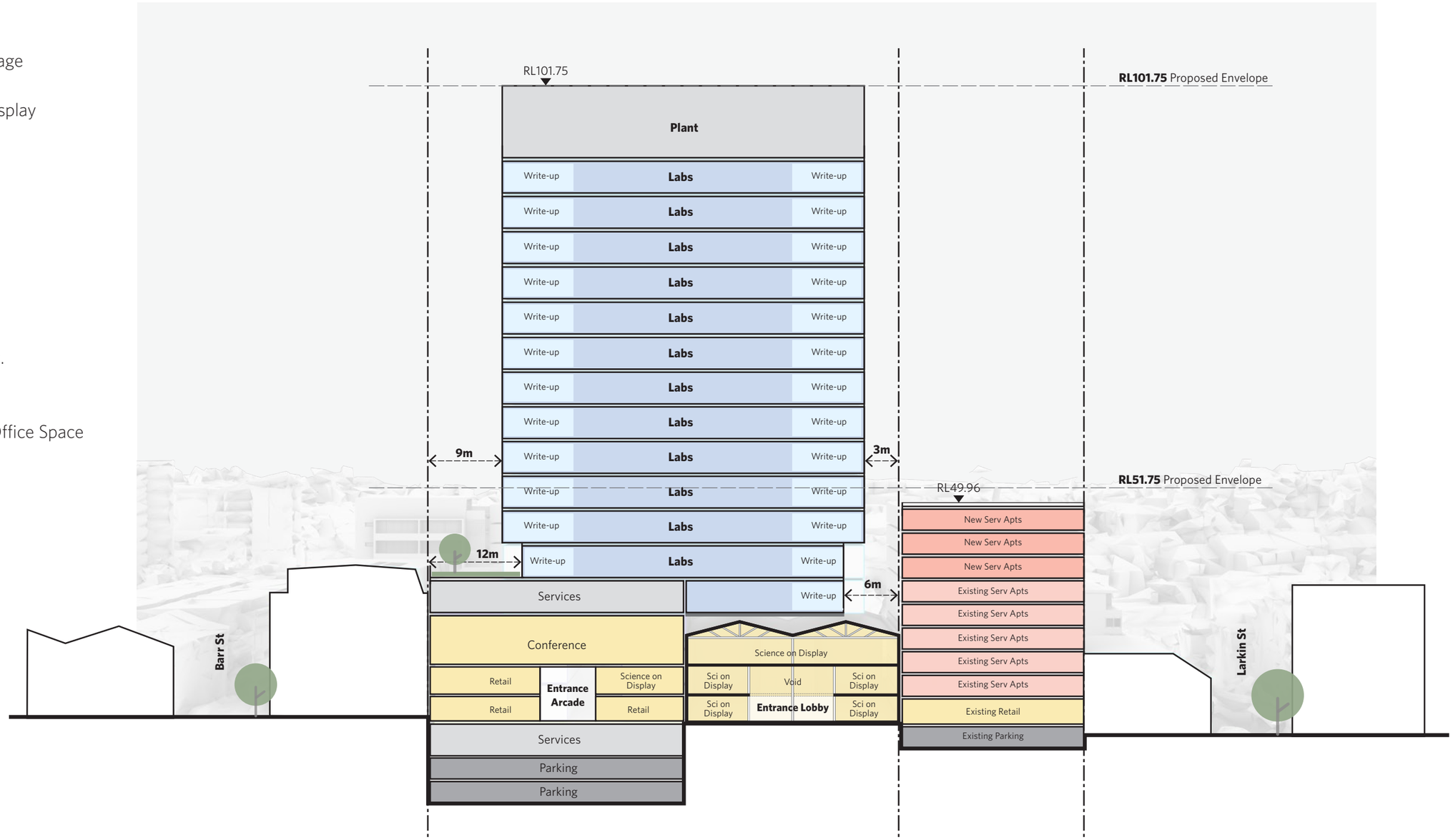
Exchange
Coffee
Food & Beverage
Breakout
Science on Display
Conference

Application
Labs

Service
Plant Spaces

Living
Serviced Apts.

Office
Life Science Office Space



08 REFERENCE SCHEME

Vertical Arrangement

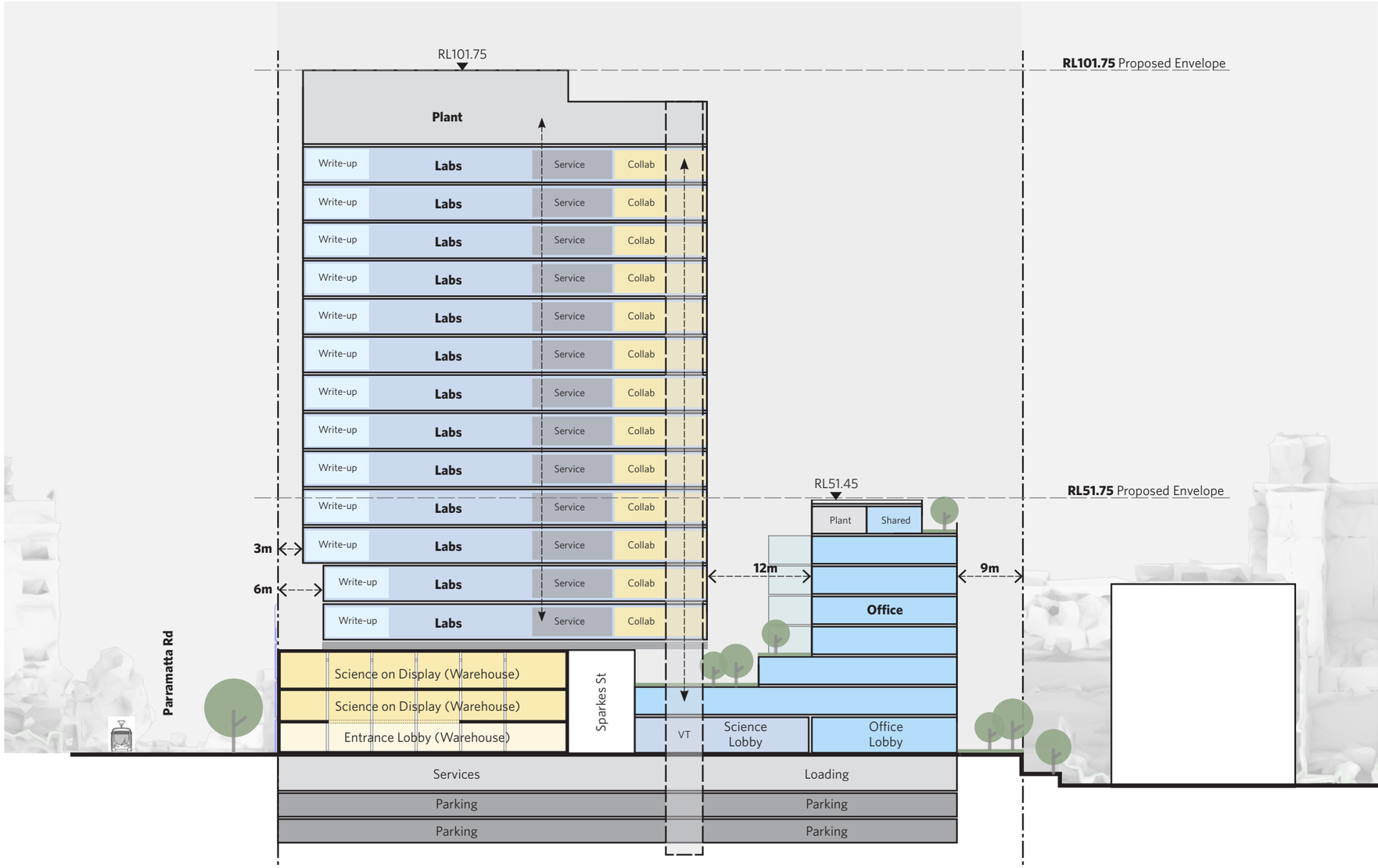
Exchange
Coffee
Food & Beverage
Breakout
Science on Display
Conference

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**



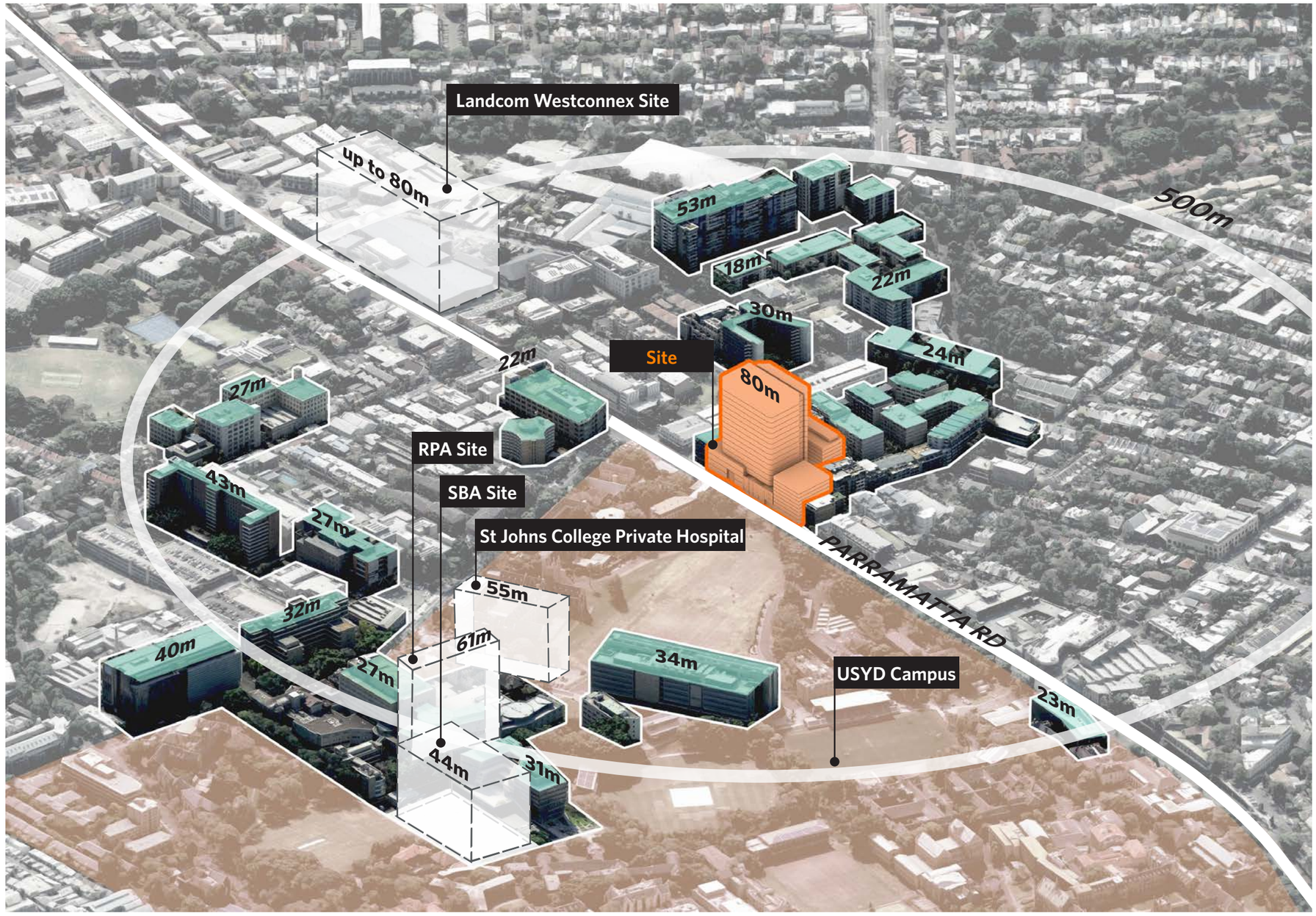
09

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

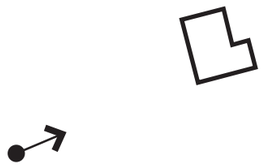
283



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

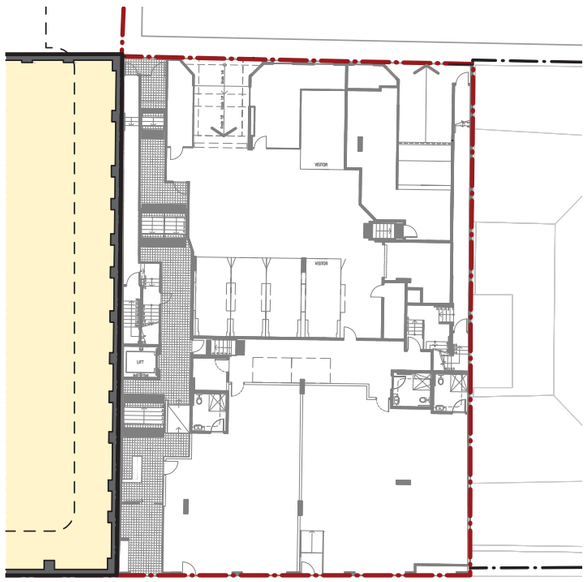
Lambert St Looking East

287

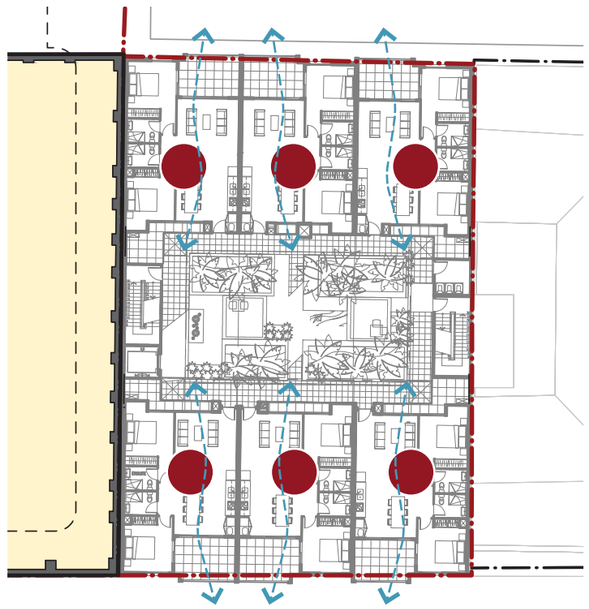


09 ADG COMPLIANCE

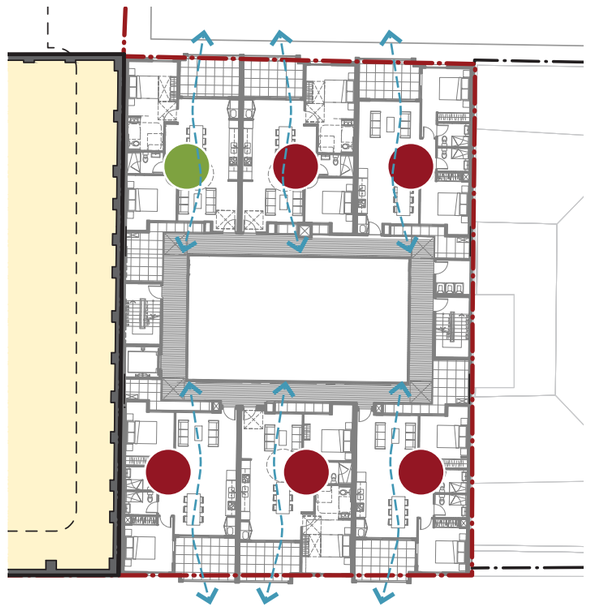
Existing Veriu Serviced Apartments



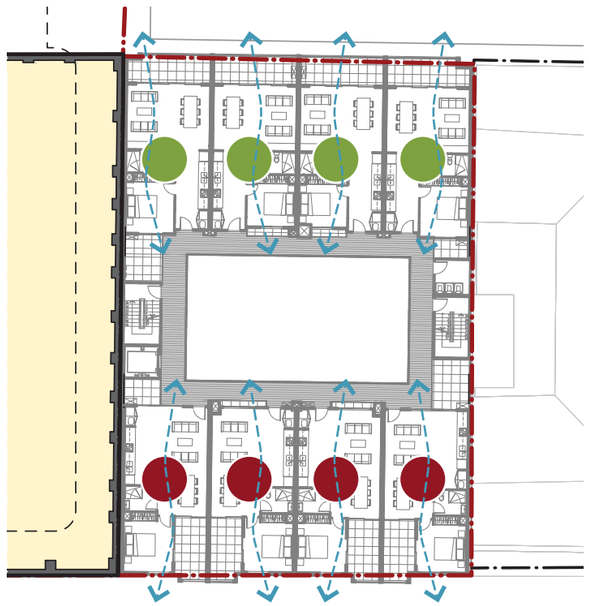
Existing Ground



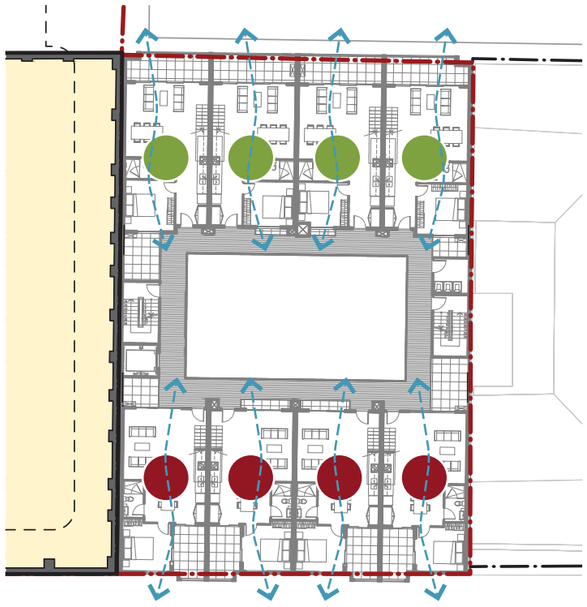
Existing Level 1



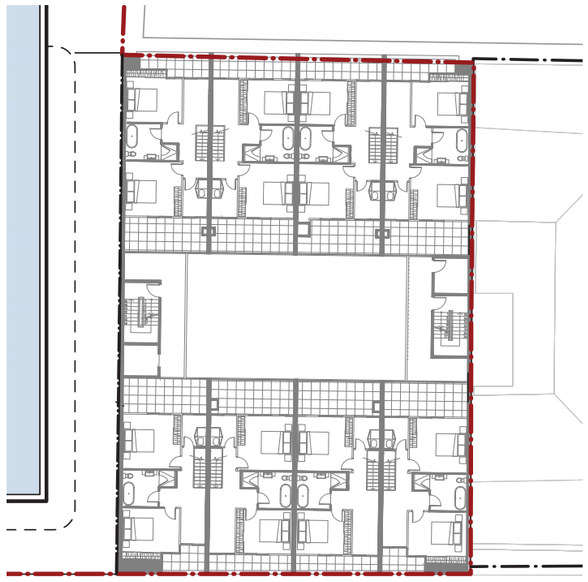
Existing Level 2



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

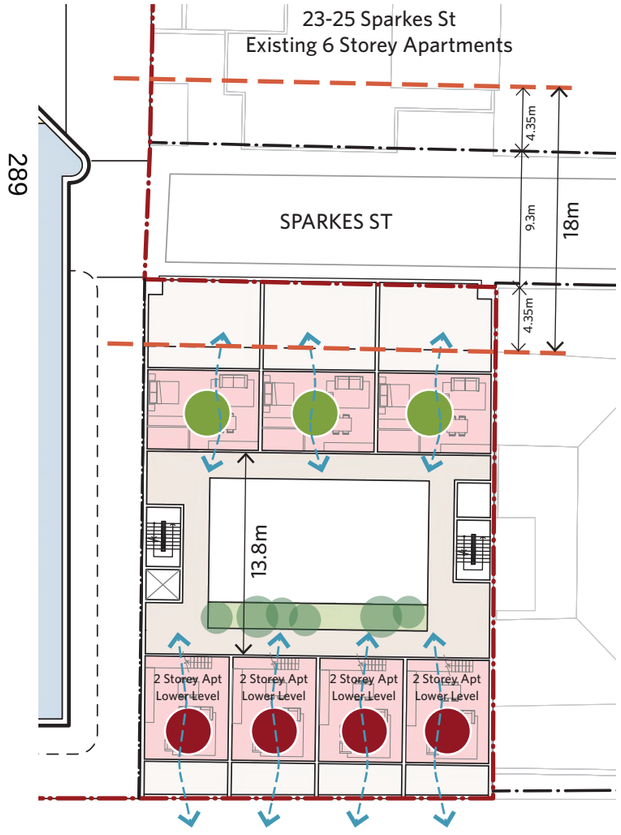
28 of 28 Apartments (100%)

09 ADG COMPLIANCE

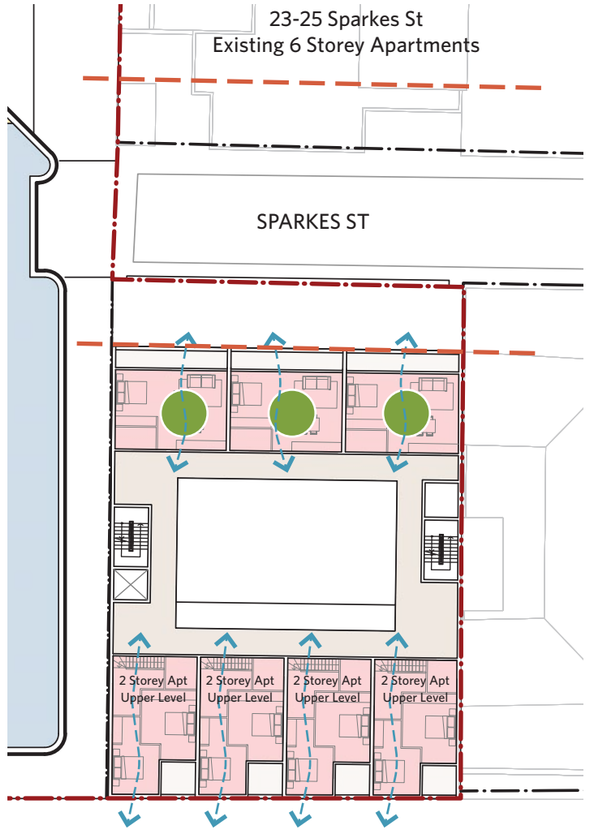
New Veriu Serviced Apartments Extension

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.

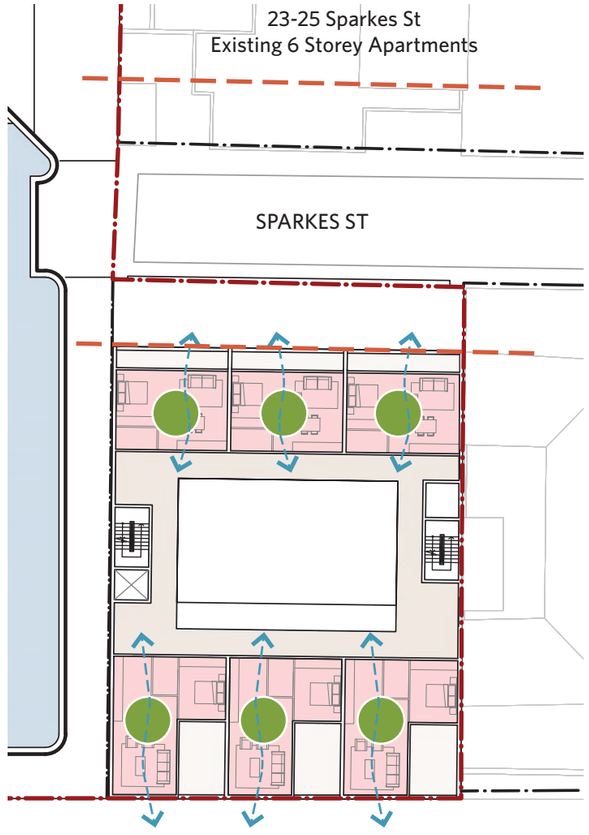
The upper level extension provides a 4.35m setback to the north boundary facilitating an 18m separation to any future development at 23-25 Sparkes St. Internal building separation across the atrium has been increased from the existing 11.4m to 13.8m at the upper level extension providing a wider aperture 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

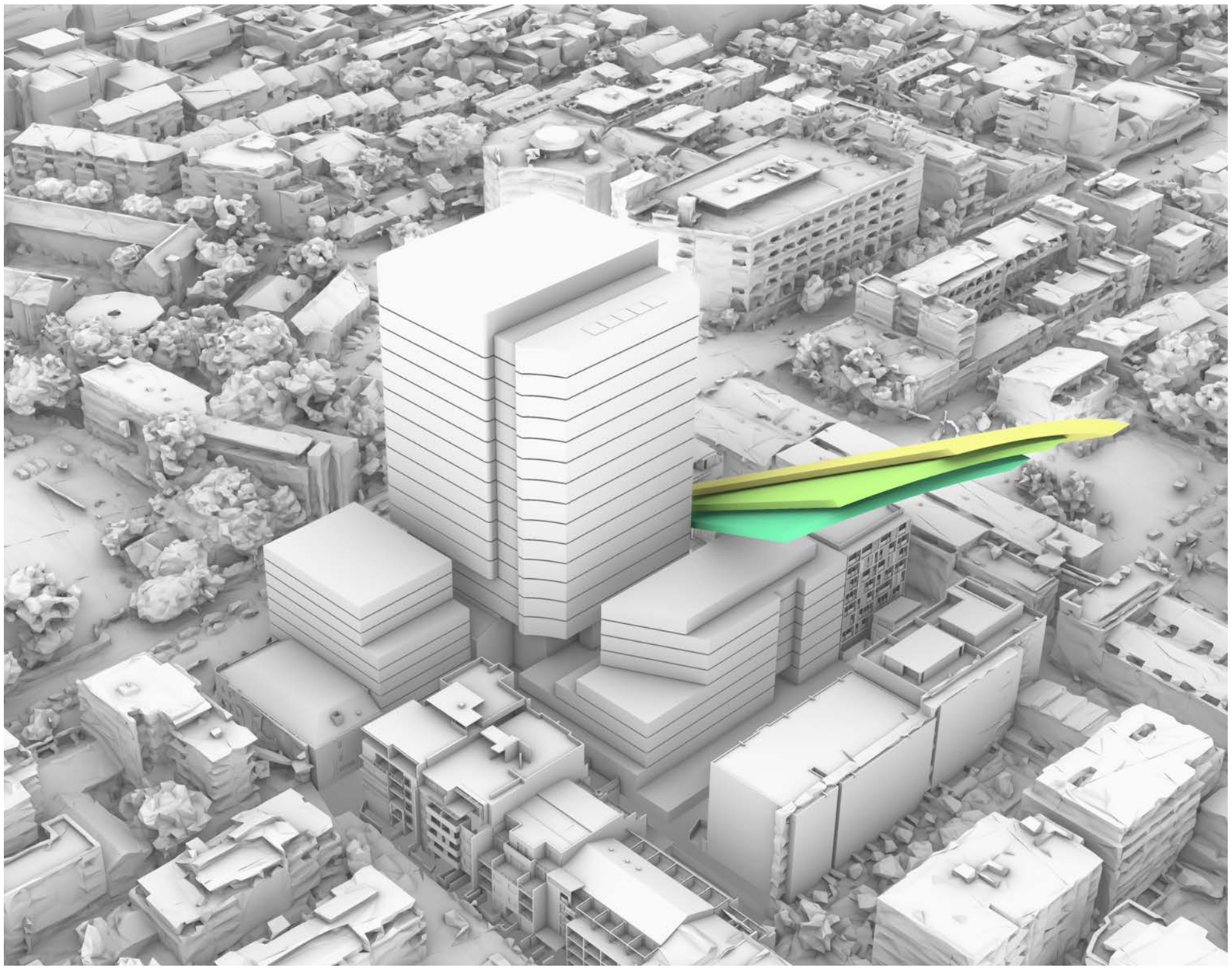
The sun access planes identified to inform the scheme have been overlaid with the proposed massing to review and confirm that they remain unimpeded, ensuring the required solar access to neighbouring

L4 Apartment
12:15-14:15

L3 Apartment
11:15-13:15

L2 Apartment
10:50-12:50





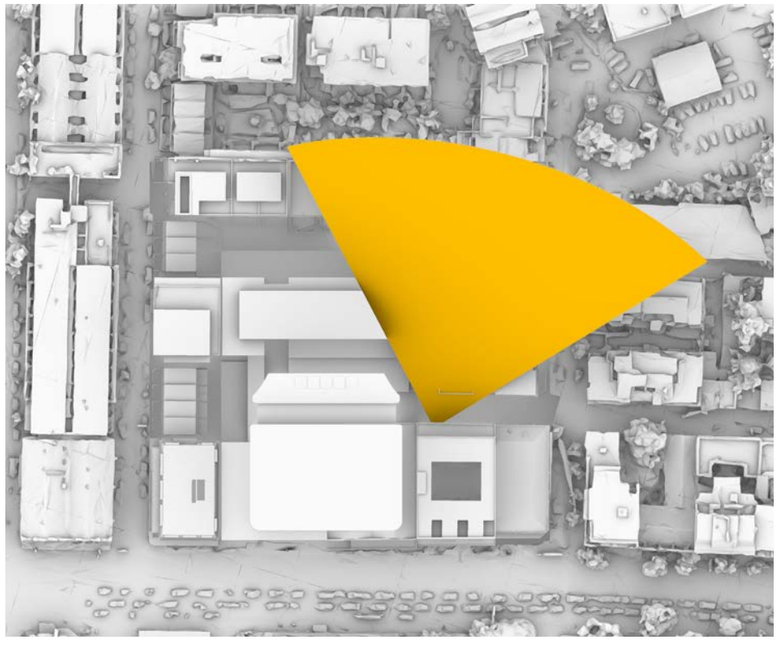
09 OVERSHADOWING IMPACT ASSESSMENT

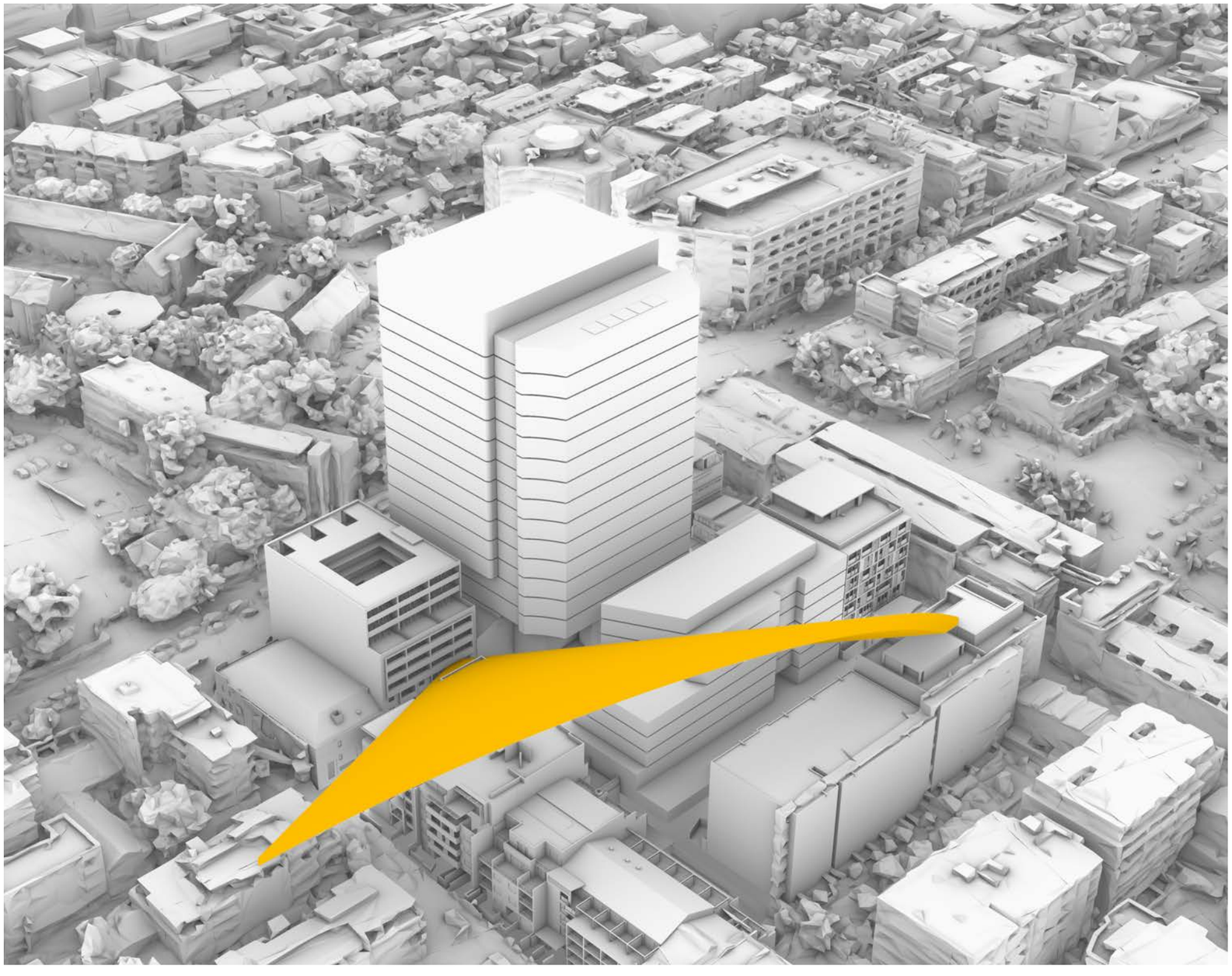
Protection of Neighbours Solar Access Planes

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



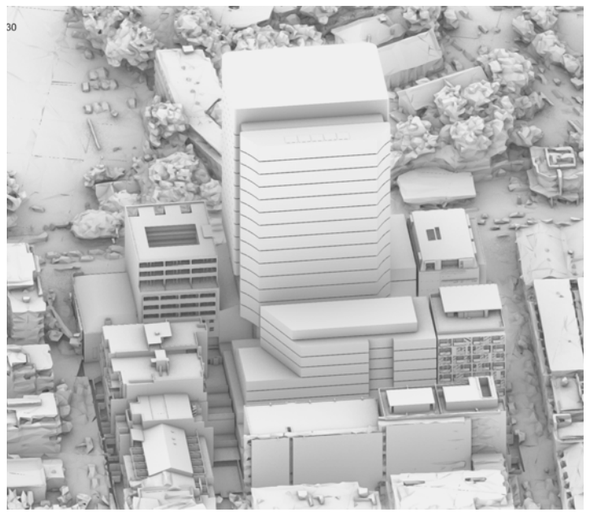
11am - June 21



11:30am - June 21



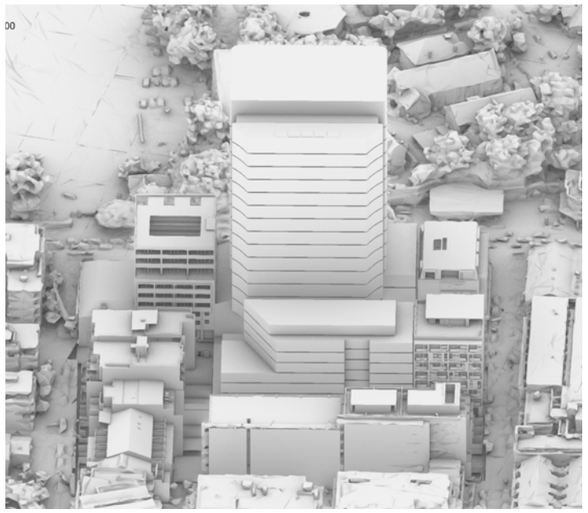
12:00pm - June 21



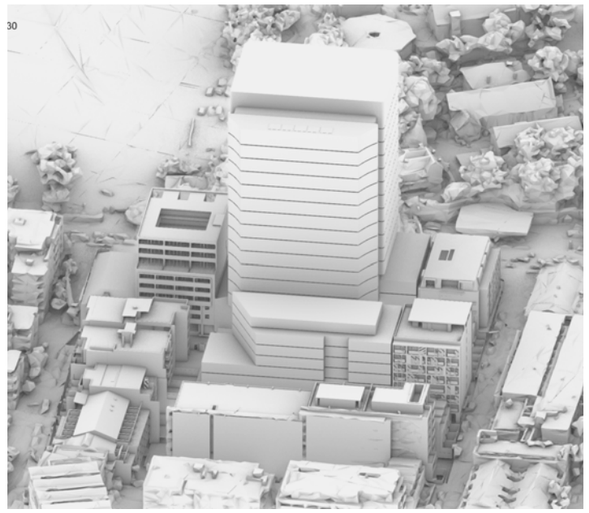
12:30pm - June 21

09 OVERSHADOWING IMPACT ASSESSMENT

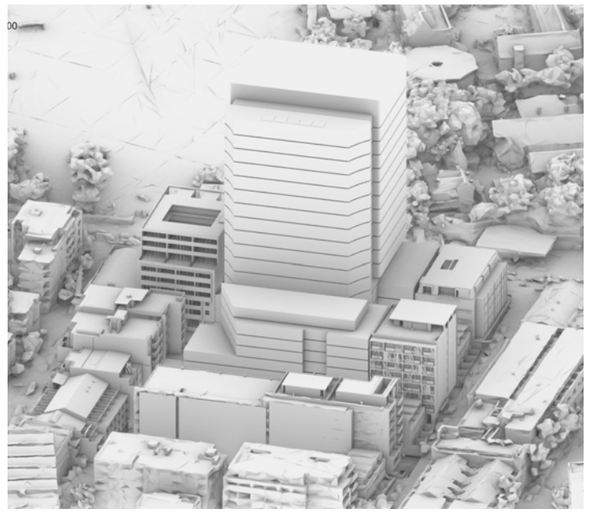
Views From Sun Analysis



1pm - June 21



1:30pm - June 21



2pm - June 21



2:30pm - June 21



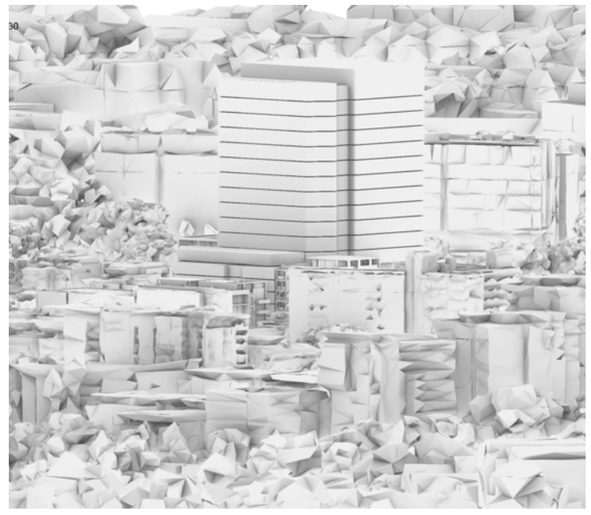
3pm - June 21



3:30pm - June 21



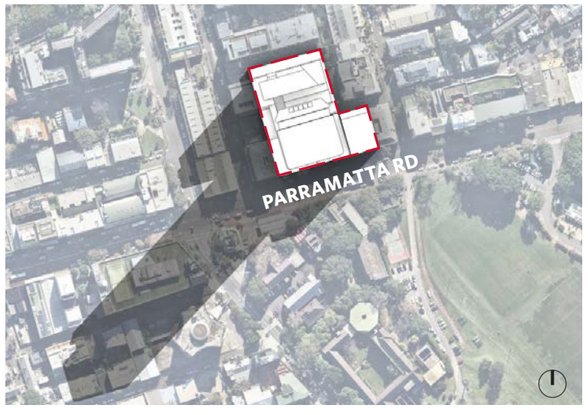
4pm - June 21



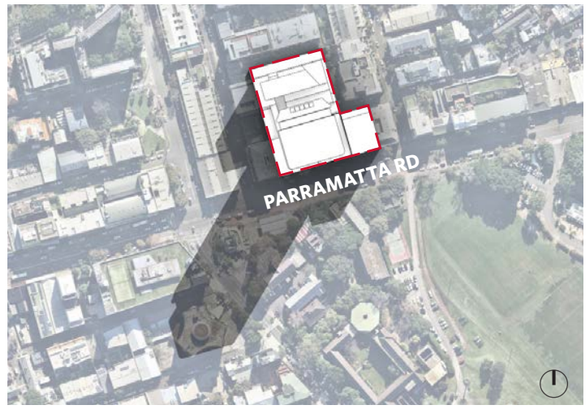
4:30pm - June 21

09 OVERSHADOWING IMPACT ASSESSMENT

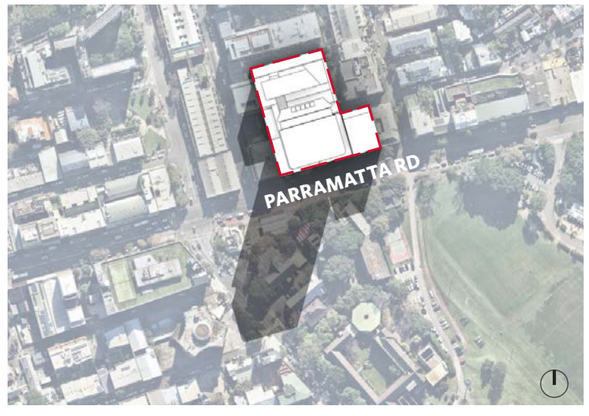
Shadow Diagrams



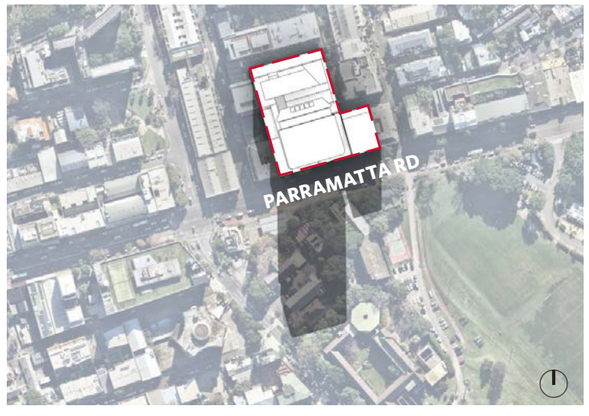
9am - June 21



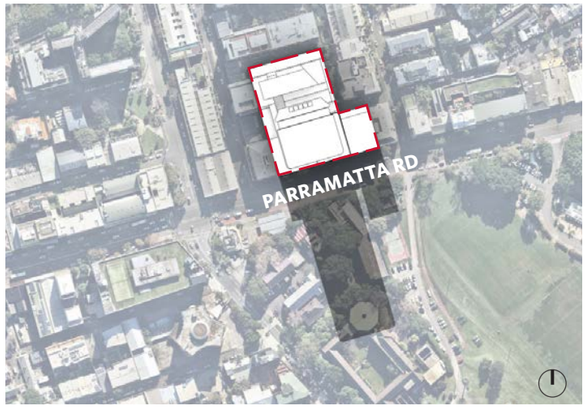
10am - June 21



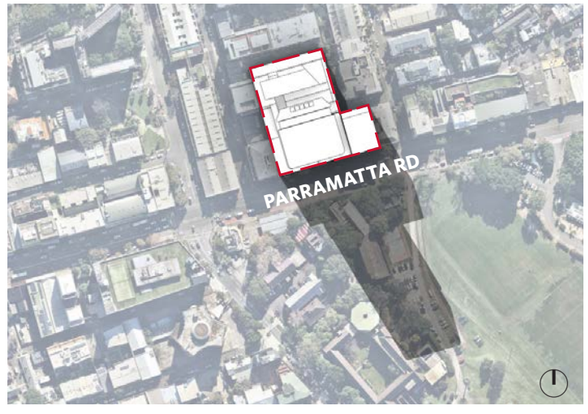
11am - June 21



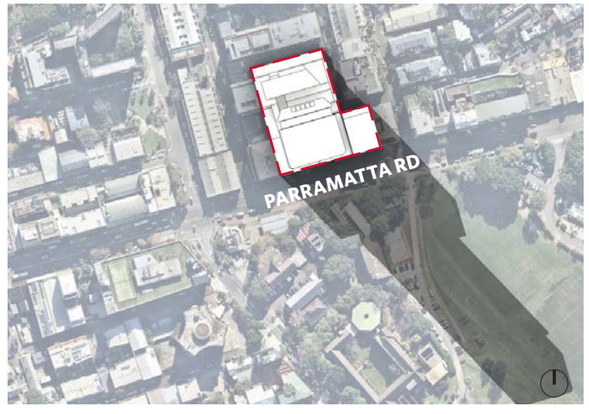
12pm - June 21



1pm - June 21



2pm - June 21



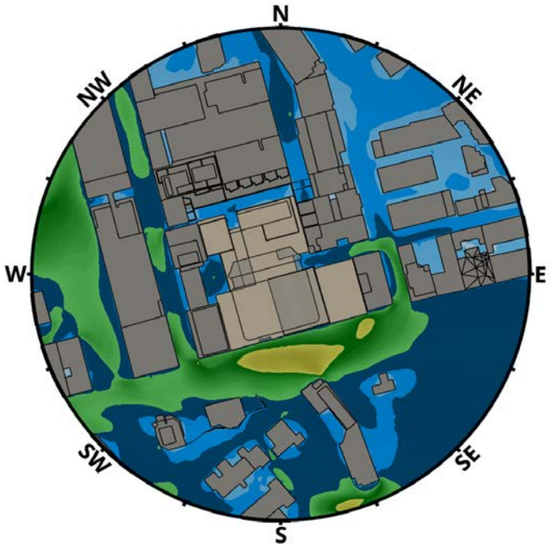
3pm - June 21

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)

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