

WATERLOO METRO QUARTER

OSD: CENTRAL PRECINCT

LANDSCAPE & PUBLIC DOMAIN REPORT

SSD-10439
29th MARCH 2021
APPENDIX JJ

WMQ-BLD2-ASP-LS-RPT-002

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ASPECT Studios



ASPECT Studios acknowledges the traditional owners of the land we work on and travel through and we pay our respects to elders past, present and emerging.

We acknowledge Country and pay our respects to the Gadigal people as the Traditional Custodians of the land in which the Waterloo development is situated.

We recognise their continued connection to Country and that this connection can be seen through stories of place and cultural practices such as art, songs, dances, storytelling and caring for the natural and cultural landscape of the area.

We acknowledge all the people, Indigenous and migrant, who contributed stories that we have incorporated into this document. We thank them for the knowledge of the broader Eora nation and the links of their stories to Waterloo.

Contents

00 Executive Summary

- 05 Introduction
- 06 The Site
- 07 Application Extent of Works
- 08 Background Documents

01 WMQ Landscape & Public Domain Vision

- 10 Precinct Masterplan
- 11 Culture and Placemaking Story

02 Central Precinct Design Strategies

- 13 Pedestrian Accessways
- 14 Access & Circulation
- 15 Deep Soil
- 16 Spatial Compliance
- 17 Tree Canopy Coverage
- 18 Public Art + Heritage Interpretation
- 20 Lighting Strategy

03 Public Domain Proposals

- 22 General Arrangement
- 23 Sections
- 24 Material Strategy
- 25 Hard Materials Palette
- 27 Planting Palette

04 Communal Terrace & Green Roof

- 30 Introduction
- 31 General Arrangements
- 32 L22 General Arrangement
- 33 L22 Section

05 WMQ Design Guidance

- 35 Compliance Table

Executive Summary

This Landscape & Public Domain design report has been prepared by ASPECT Studios to accompany a detailed State significant development (SSD) development application (DA) for the Central Precinct over station development (OSD) at the Waterloo Metro Quarter site.

This report has been prepared to address the relevant conditions of the concept SSD DA (SSD 9393) and the Secretary's Environmental Assessment Requirements (SEARs) issued for the detailed SSD DA (SSD 10439).

This report concludes that the proposed Central Precinct OSD is suitable and warrants approval.

Introduction

This report has been prepared to accompany a detailed State significant development (SSD) development application (DA) for the Central Precinct over station development (OSD) at the Waterloo Metro Quarter site. The detailed SSD DA is consistent with the concept approval (SSD 9393) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (DPIE) for assessment.

The detailed SSD DA seeks development consent for the design, construction and operation of:

- 24–storey residential building (Building 2) comprising approximately 126 market residential and 24 affordable housing apartments, to be delivered as a mixture of one-bedroom, two-bedroom and three-bedroom apartments
- ground level retail tenancies, community hub, precinct retail amenities and basement carpark entry
- level 1 and level 2 community facilities (as defined in the SLEP) intended to be operated as a childcare centre
- landscaping and private and communal open space at roof top levels to support the residential accommodation
- ew public open space including the delivery of the Church Square, including vehicle access to the basement car park via a shared way from Cope Street, expanded footpaths and public domain upgrades on Botany Road
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

— This report has been prepared in response to the requirements contained within the Secretary’s Environmental Assessment Requirements (SEARs) dated 9 April 2020 and issued for the detailed SSD DA. Specifically, this report has been prepared to respond to the SEARs requirements summarised below:

ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)	
4. Design Excellence and Built Form	
<i>demonstrate compliance with the endorsed Design and Amenity Guidelines, dated March 2020 or any subsequent endorsed revision of the guidelines.</i>	Refer to Design and Amenity Guidelines Compliance Table
5. Integration with Sydney Metro Station Infrastructure	
<i>show how the SSD will integrate with the CSSI infrastructure such as structural design, detailed architectural approach, access, wayfinding, public domain works and construction management.</i>	The public domain has been designed as a whole precinct with no visible boundaries between station and OSD works. The design allows for seamless movement between the station and other parts of the precinct in a safe and legible public domain.
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	
<i>public domain plans defining extent of works (if any proposed) landscape design statement and plans</i>	Refer to Package of SSDA Landscape Plans and schedules along with the Landscape and Public Domain Design Report.
9. Traffic, Parking and Access (Construction and Operation) In addition, the EIS must include the following:	
<i>details of measures to segregate hostile vehicles from public transport users and areas of people congregation.</i>	Hostile vehicle mitigation elements have been incorporated into the public domain to protect areas of mass congregation and critical station infrastructure. These elements include bollards, walls and planter boxes which have been designed to allow flow of pedestrians throughout the precinct and protection from hostile vehicles.
<i>demonstrate how pedestrian safety and amenity will be provided along Raglan Street, the shared laneway located between Raglan Street and Cope Street plaza will be designed to prioritise pedestrian movements, including any measures to protect pedestrians entering and exiting the building and retail outlets.</i>	Following a detailed safety risk review, areas of potential mass congregation and critical station infrastructure have been designed to prevent vehicular access. This includes the public domain outside the northern entry to the station on Raglan St, the shared laneway between Raglan St and Cope St Plaza, pedestrians using the shared driveway, Grit Lane, the southern station retail tenancies and Cope St Plaza.

The Site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated about 3.3 kilometres south of Sydney CBD and eight kilometres northeast of Sydney International Airport within the suburb of Waterloo.

The Waterloo Metro Quarter site comprises land to the west of Cope Street, east of Botany Road, south of Raglan Street and north of Wellington Street (refer to Figure 1). The heritage-listed Waterloo Congregational Church at 103–105 Botany Road is within this street block but does not form a part of the Waterloo Metro Quarter site boundaries.

The Waterloo Metro Quarter site is a rectangular shaped allotment with an overall site area of approximately 1.287 hectares.

The Waterloo Metro Quarter site comprises the following allotments and legal description at the date of this report. Following consolidation by Sydney Metro (the Principal) the land will be set out in deposited plan DP1257150.

- 1368 Raglan Street (Lot 4 DP 215751)
- 59 Botany Road (Lot 5 DP 215751)
- 65 Botany Road (Lot 1 DP 814205)
- 67 Botany Road (Lot 1 DP 228641)
- 124-128 Cope Street (Lot 2 DP 228641)
- 69-83 Botany Road (Lot 1, DP 1084919)
- 130-134 Cope Street (Lot 12 DP 399757)
- 136-144 Cope Street (Lots A-E DP 108312)
- 85 Botany Road (Lot 1 DP 27454)
- 87 Botany Road (Lot 2 DP 27454)
- 89-91 Botany Road (Lot 1 DP 996765)
- 93-101 Botany Road (Lot 1 DP 433969 and Lot 1 DP 738891)
- 119 Botany Road (Lot 1 DP 205942 and Lot 1 DP 436831)
- 156-160 Cope Street (Lot 31 DP 805384)
- 107-117A Botany Road (Lot 32 DP 805384 and Lot A DP 408116)
- 170-174 Cope Street (Lot 2 DP 205942).

The detailed SSD DA applies to the Central Precinct of the Waterloo Metro Quarter site. The site has an area of approximately 2460sqm. The subject site comprises the following allotments and legal description at the date of this report

- 130–134 Cope Street (Lot 12 DP 399757) (Part)
- 136–144 Cope Street (Lots A-E DP 108312) (Part)
- 85 Botany Road (Lot 1 DP 27454)
- 87 Botany Road (Lot 2 DP 27454)
- 89–91 Botany Road (Lot 1 DP 996765)
- 93–101 Botany Road (Lot 1 DP 433969 and Lot 1 DP 738891) (Part).

The site previously included three to five storey commercial, light industrial and shop top housing buildings. All previous structures except for an office building at the corner of Botany Road and Wellington Street have been demolished to facilitate construction of the new Sydney Metro Waterloo station. As such the existing site is predominately vacant and being used as a construction site.

Construction of the Sydney metro is currently underway on site in accordance with critical State significant infrastructure approval (CSSI 7400).



Figure 1 - Aerial image of the site Source: Urbis

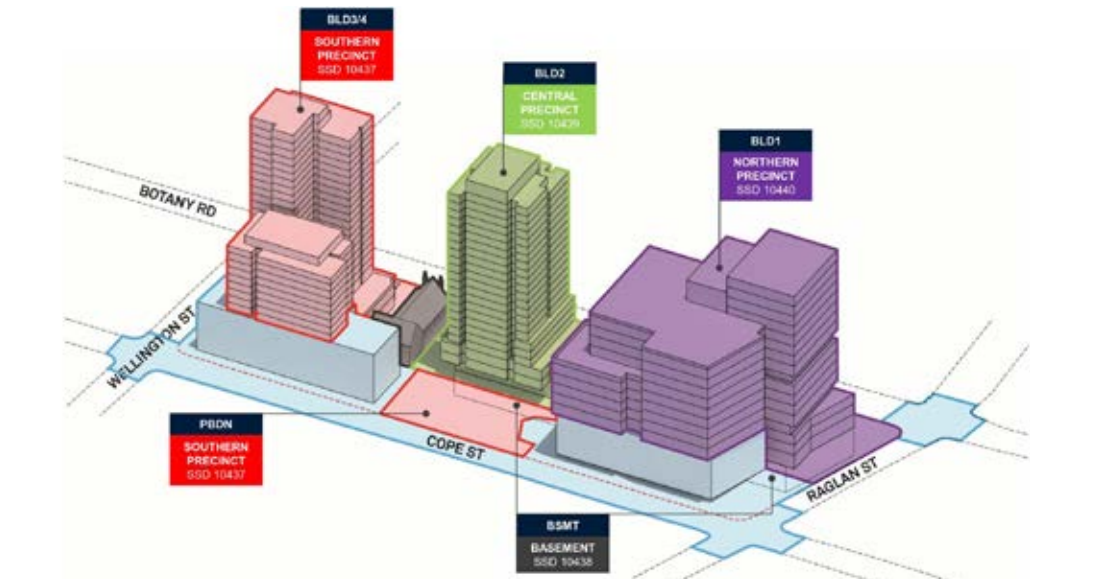
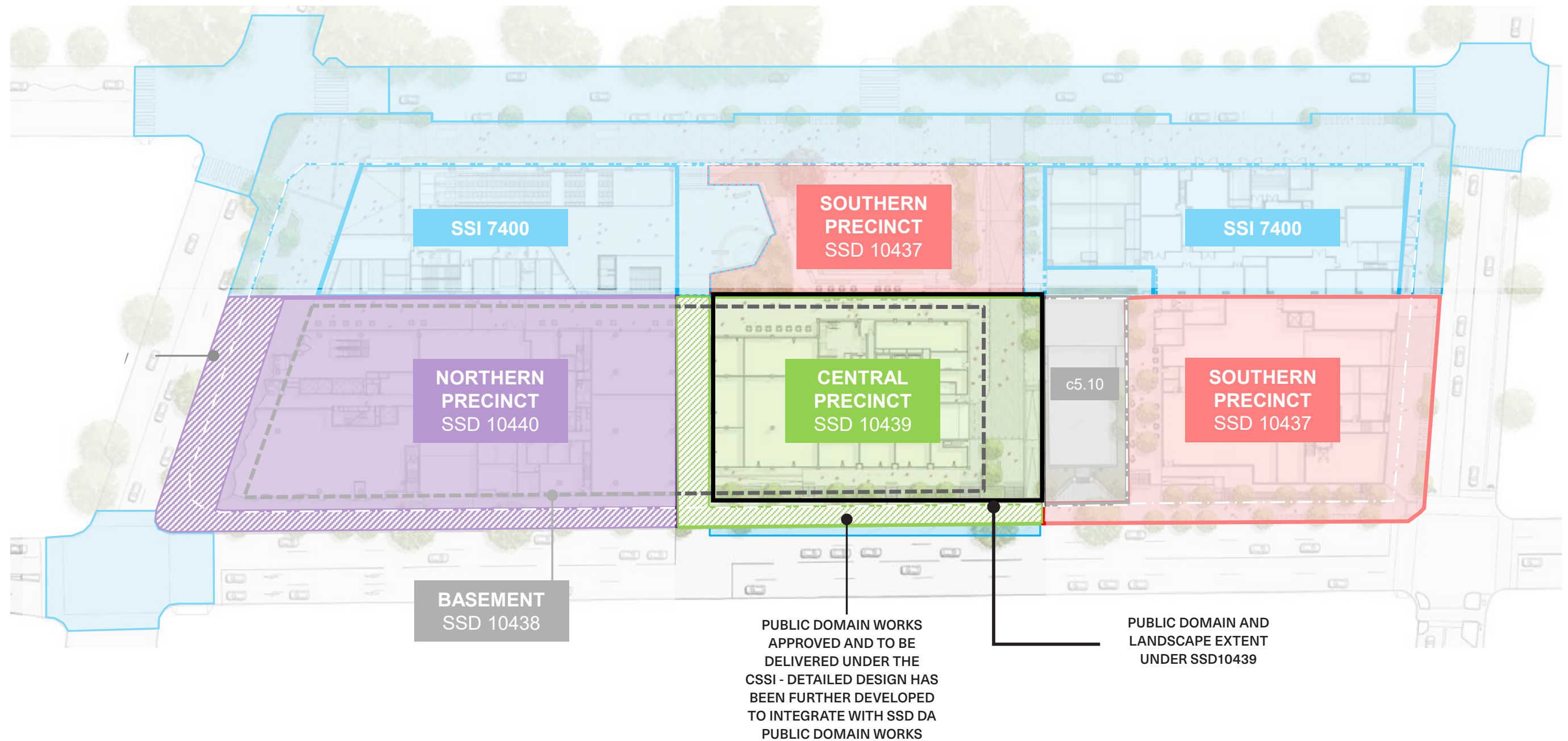


Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified Source: HASSELL

Application Extent of Works

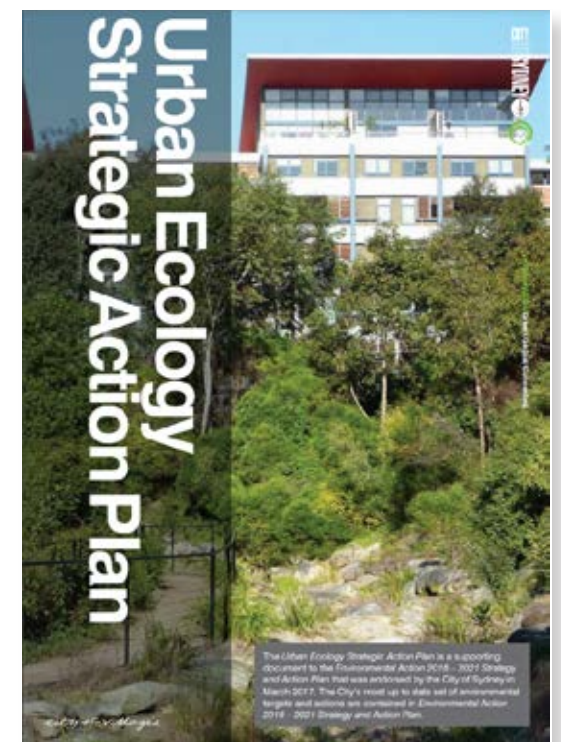
Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified Source: Waterloo Developer Pty Ltd



Background Documents & Research

Consideration has been given to the following strategy documents:

- WMQ Design & Amenity Guidelines
- City Of Sydney Public Domain Guidelines
- City Of Sydney Cycle Network Strategy
- City Of Sydney Street Tree Masterplan
- City Of Sydney Urban Forest Strategy Canopy
- City Of Sydney Urban Ecology Strategic Action Plan





**Waterloo
Metro Quarter
Landscape &
Public Domain
Vision**

Precinct Masterplan

Waterloo Metro Quarter will be a dynamic precinct within the broader surrounds of Waterloo comprised of public spaces including a neighborhood square (Cope Street Plaza), laneways (Ragan Walk, Grit Lane and Church Square), a courtyard (Church Yard) and surrounding streetscapes with generous footpaths and planting areas.

Raglan Street — Provision of generous circulation space around Metro and building entries. Creation of comfortable microclimate with shade trees and planting to cool street frontage. Permeable paving over deep soil. Predominantly native understorey planting provides opportunity for education through urban foraging.

Wellington Street — Extension of understory planting in verge from western side of Botany Rd green connector to Alexandria Park. Weeping Lilly Pilly street trees, native understory planting and bike parking integrated near cycle path - separated bike path proposed on road.

Cope Street — Provision of generous circulation space around Metro and building entries. Incorporates parking/taxi/kiss 'n ride with widened verge. Creation of comfortable microclimate with shade trees and planting to cool street frontage. New street trees are Corymbia eximia (Yellow Bloodwood) with native understory

planting. Integration metro security elements and WSUD. Bike parking and benches located to provide amenity near Waterloo Place.

Botany Road — Provision of generous footpath widths along Botany Rd with new Lophostemon confertus street trees and native understory planting that creates amenity and separation from the busy vehicular street. Double row of trees provided in areas with 10M setback.

Cope Street Plaza — Will be named through a competition open to the community and will provide a meeting place/neighborhood square/communal gathering area that showcases cultural artworks and stories. Located at footpath level, the square is subtly separated from the surrounding circulation zones and outdoor dining areas, creating a protected place for community use. Active building uses are edges to the square, making this an attractive space to be during day and evening. A small

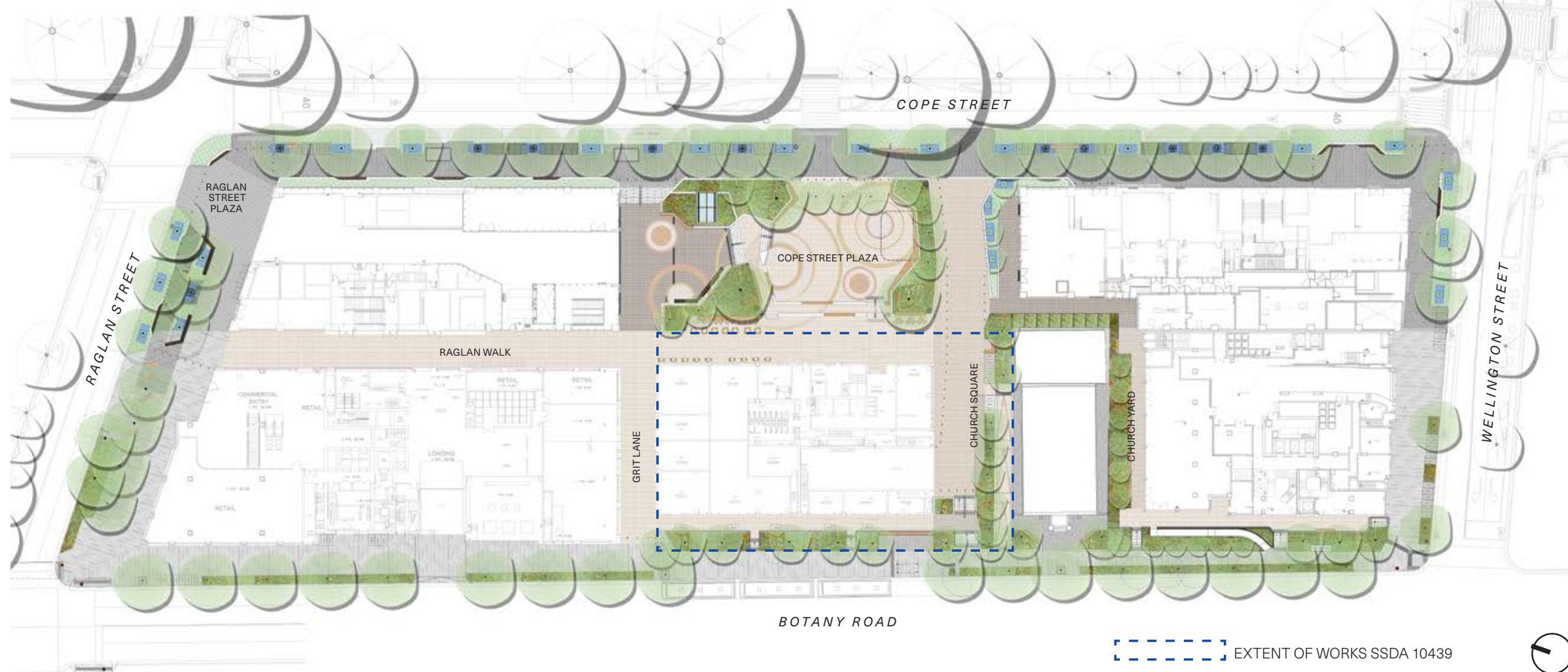
pavilion could provide a permanent place for markets/ busking/gathering linked to the original trade route walking trail now known as Botany Rd.

Raglan Walk — An important north south connecting laneway activated by adjacent building lobby, retail tenancies as well as Metro retail and bike storage.

Grit Lane — Will be used as a connector between the Metro southern entrance and Botany Rd bus stop. Activated by retail tenancies both sides.

Church Square — provides both pedestrian access across the precinct and vehicular access to the basement. Allows church facade to be exposed and contribute to character of the place.

Church Yard — A protected courtyard framed by the Church and the facade of the student accommodation building. Allows activities to flow out from the Church and Maker Space.



Culture & Placemaking Story

The public domain has been designed with an underlying narrative of responding to the long and layered history of the place. Responses to culture will be expressed through the design of the ground plane, planting, artworks, seating and embedded stories.

The Place Story developed for the project includes the following statement of the essence of the place:

THE WATERLOO ISD IS A PLACE OF 'UNCONVENTIONAL POTENTIAL' AN OPPORTUNITY TO BRING DIVERSE MINDSETS TOGETHER, CELEBRATE DIFFERENCE, AND EXPLORE A NEW ECONOMIC TOMORROW.

Ongoing collaborations will generate a meaningful sense of ownership and belonging, whilst unlocking community potential. It will be a place where convenience meets affordability, easily accessible within minutes from the CBD.

The public domain and landscape design has incorporated the four overarching Place Pillars identified through the work by Murawin and Brickfields that is detailed in the Place Story as per the extract below:

The Place Pillars describe the unique attributes that the Waterloo ISD can 'own' - defined by their evolving stories. These Pillars are drawn from an understanding that starts with 'the First Story, first'.

The Waterloo-Redfern area is culturally and historically significant for the Aboriginal people of Sydney, New South Wales and the country. These, and the contemporary narratives that follow, provides a foundation for the place story we are writing today.

To articulate how we will deliver each Pillar of the proposition to the community, the Pillars are described in terms of:

Experiential attributes - capturing character and emotional dimensions

Community benefits - the attraction or benefit provided to the community

Proof points - representations of our Place Pillars to the community

The following overview summarises the key features and proof points that will enable the delivery of the Place Pillars within the Central Precinct (SSD10440).

<div>RESILIENT</div> <div>Diverse, accessible opportunities enable new cycles of prosperity through skills training, employment, entrepreneurship, health and wellbeing, spirituality and sustainability.</div>	<div>Community Benefits</div> <div><div>_Sustainability</div><div>_Employment</div><div>_Wellbeing</div></div> <div>Experiential Attributes</div> <div><div>_Seasonal</div><div>_Nurturing</div><div>_Spiritual</div></div>		<div>Place</div> <div><div>_Passive and responsive building design</div><div>_Natural and recycled materiality</div></div> <div>Programming</div> <div><div>_Employment and education programs</div><div>_Sustainability programs</div><div>_Childcare and learning centre</div></div>
<div>REAL</div> <div>A place of formative experiences, where difference is celebrated and you can be your unfiltered self.</div>	<div>Community Benefits</div> <div><div>_Learning from difference</div><div>_Belonging</div><div>_Transparency</div></div> <div>Experiential Attributes</div> <div><div>_Unassuming</div><div>_Honest</div><div>_Layered</div></div>		<div>Place</div> <div><div>_Robust and raw materiality</div><div>_Embedded cultural narratives in design response</div></div> <div>Programming</div> <div><div>_Retail affordability and diversity</div><div>_Independent retailers</div><div>_18/7 activated ground plane</div></div>
<div>RECIPROCITY</div> <div>Healing and exchange fostering cultural practice, creativity, social justice, inclusion and economic participation.</div>	<div>Community Benefits</div> <div><div>_Creative expression</div><div>_Authentic exchange</div><div>_Equity</div></div> <div>Experiential Attributes</div> <div><div>_Inclusive</div><div>_Diverse</div><div>_Co-curated</div></div>		<div>Place</div> <div><div>_Social spaces</div><div>_Design collaborations</div><div>_Celebration of Country</div></div> <div>Programming</div> <div><div>_Community-led and cultural activations</div></div>
<div>CONNECTION</div> <div>New levels of convenience unlocked by the Metro station providing accessibility to ATP and the CBD, making this an appealing destination for local professionals.</div>	<div>Community Benefits</div> <div><div>_Transport connectivity</div><div>_Onsite amenity</div><div>_Meaningful narratives</div></div> <div>Experiential Attributes</div> <div><div>_Seamless</div><div>_Convenient</div><div>_Relevant</div></div>		<div>Place</div> <div><div>_Strengthened connections to surrounding precincts</div><div>_Ground plane permeability</div></div> <div>Programming</div> <div><div>_Meaningful place naming</div><div>_Cultural retail offers</div><div>_Active laneways</div></div>

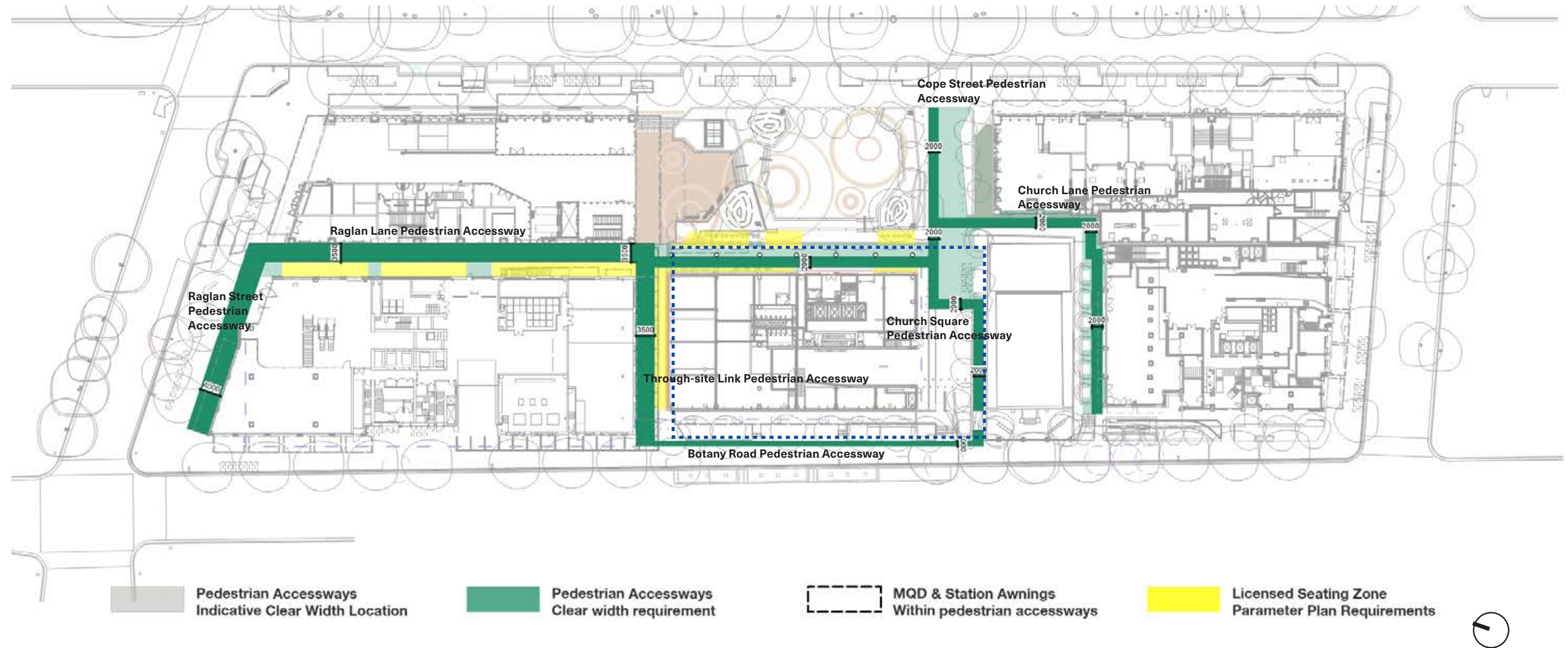
Waterloo Metro Quarter Design Strategies



Pedestrian Accessways

In line with Annexure A to Schedule C1 - Waterloo Design Parameter Plans, clear pedestrian access has been considered throughout the site to maintain a safe and accessible journey for pedestrians. Clear widths have been adhered to and licensed seating zones are highlighted in yellow.

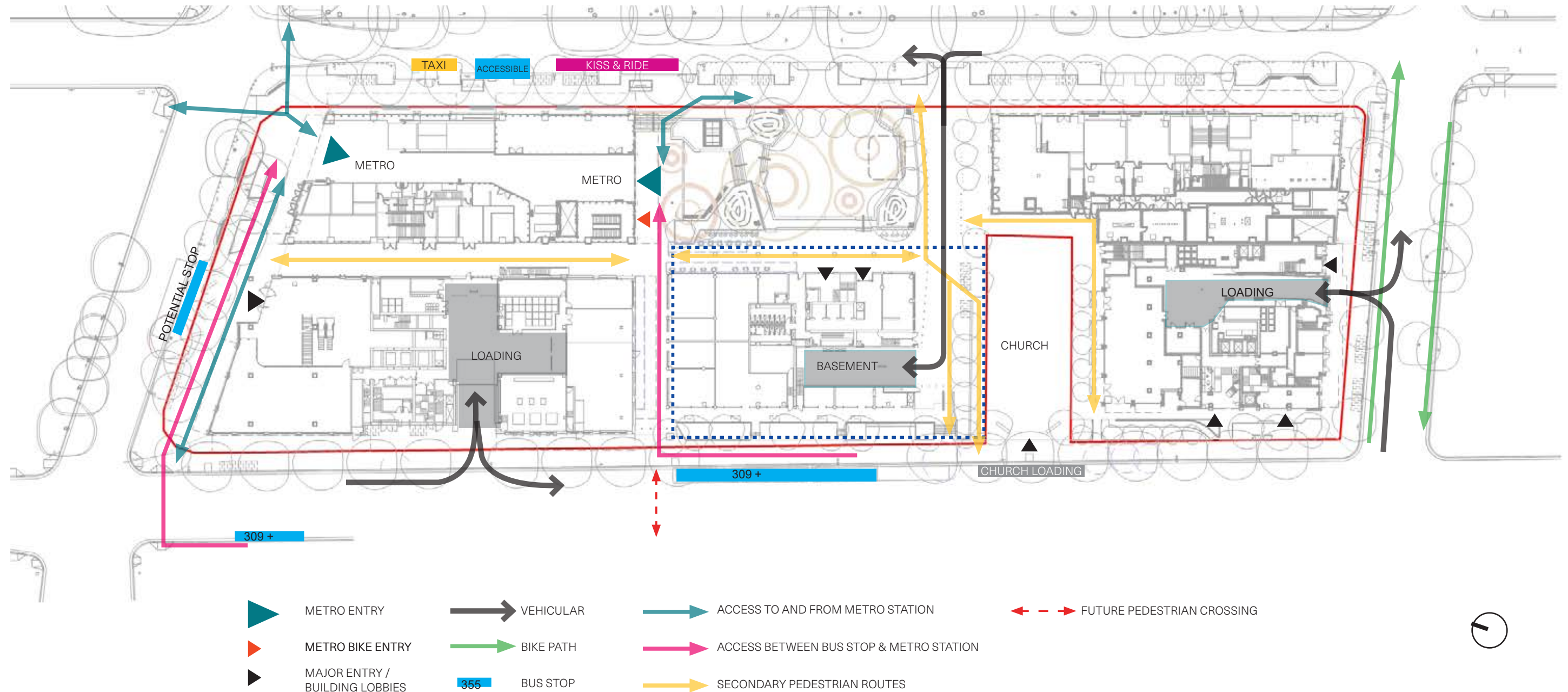
CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439



Access & Circulation

The station precinct establishes two new east-west pedestrian links from the bus stops on Botany Road to the station entry. Care has been taken with respect to providing safe paths of travel for people with a disability especially at the points at which the pedestrian paths of travel intersect respectively with the station entries.

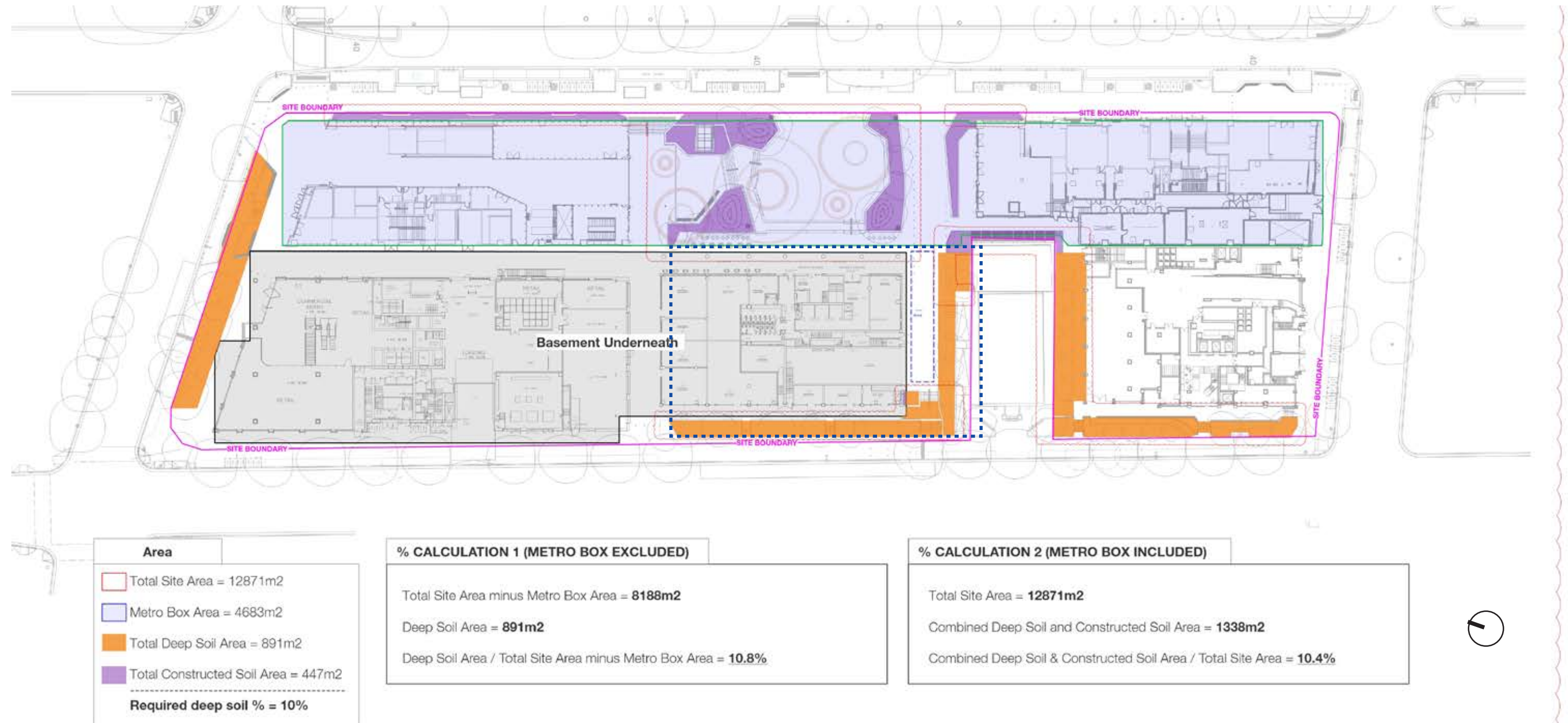
CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439



Deep Soil

The ADG minimum deep soil requirement is 7% and the City of Sydney minimum for mixed use / commercial developments is 10%. The proposals for Waterloo Metro Quarter basement have been designed to maximise deep soil area. Excluding the station box (in blue) the proposals achieve 10.8% deep soil coverage (in orange), exceeding the DCP targets and are therefore compliant with City of Sydney guidelines.

CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439

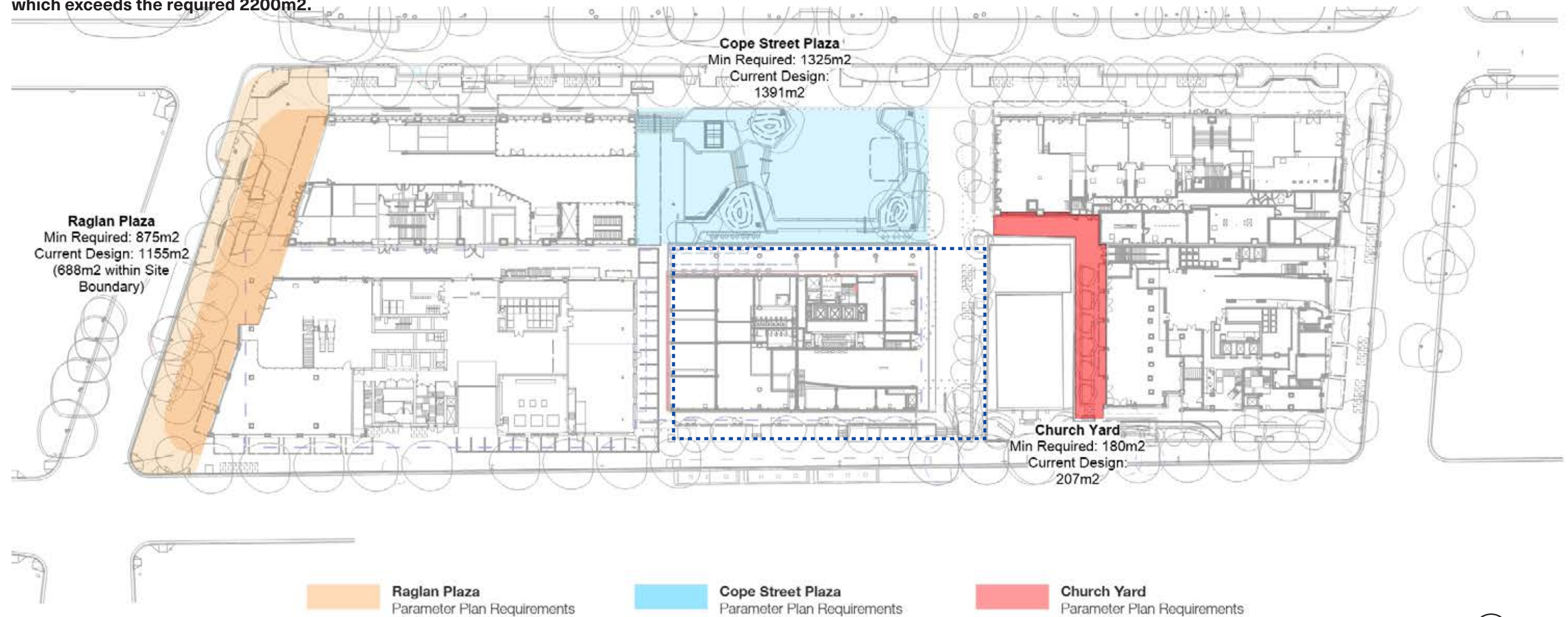


Spatial Compliance

As per the agreed WMQ Design Parameter Plans, Cope Street Plaza provides a minimum area of 1325m² of public open space. Raglan Street plaza provides 875m² of open space to the new station entrance and down to Botany Road.

The combined area of new public domain = 2680m² which exceeds the required 2200m².

 CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439



Tree Canopy Coverage

The WMQ Design & Amenity Guidelines 3E objective, highlights the important role tree planting plays to mitigate the impacts of urban heat island and their contribution to enhance biodiversity of the site.

The development must achieve the following minimum tree canopy cover targets:

50% STREET canopy cover (i.e. the combined area of all tree canopy contained within the road reserve including footpaths and pedestrian areas and measured from the property boundary to the centreline of the roads)

23% OVERALL canopy cover (i.e. the combined canopy area of all trees contained within the site and adjacent streets measured to the centre line of the roads)

In summary, the precinct wide proposals below demonstrate:

- **54.8%** - Street Tree Canopy Cover
- **12%** - Private Land Canopy Cover
- This equates to **25.7%** overall canopy coverage for the site.

The tree canopy coverage for streets and private land shown above exceeds the Design Amenity Guidelines Tree Canopy Coverage Criteria nominated for the project.

CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439



ID	SPECIES	MATURE HEIGHT	MATURE CANOPY DIAMETER
LC	Lophoslemon confertus	15m	10m
CE	Corymbia eximia	10m	10m
RP	Robinia pseudacacia 'Frisia'	9m	6m
WF	Waterhousea floribunda	15m	9m
HP	Harpulia pendula	9m	6m
LSp	Lagerstroemia indica x fauriei 'Blaze'	8m	5m
LI	Lagerstroemia indica 'Red'	8m	5m
Ap	Alseodaphne pinnatum	15m	10m

AREA	TOTAL AREA
Private	12808m ²
Street	6084m ²
Regent Street	608m ²
Cope Street	2158m ²
Wellington Street	748m ²
Botany Road	2392m ²
Total	18952m ²

TREE CANOPY ACHIEVED			
EXTENT	TYPE	AREA	%
GROUND LEVEL	Private	1557m ²	12%
	Street Total	3340m ²	54.8%
	Regent Street	345.0m ²	42.7%
	Cope Street	1512.0m ²	70.7%
	Wellington Street	295.0m ²	39.6%
	Botany Road	1081.0m ²	45.0%
	GF Total	4812m ²	25.7%

Public Art & Heritage Interpretation

Heritage Interpretation and Public Art strategies have been prepared for the whole site, refer to reports prepared by Urbis and Aileen Sage Architects respectively.

Through the process of developing the heritage interpretation and public art strategy, four main themes have been identified for interpretation in the project. Themes 1, 2 and 3 will be incorporated into briefs for public artworks that will be commissioned for the project. Please refer to the Public Art Strategy for more detail of this process. The fourth theme will become a brief for a heritage interpretation consultant to design heritage interpretation elements. Material found during the archeological investigation prior to excavation of the site can be used to inform the design for theme 4. Themes are discussed in more detail on the following page.

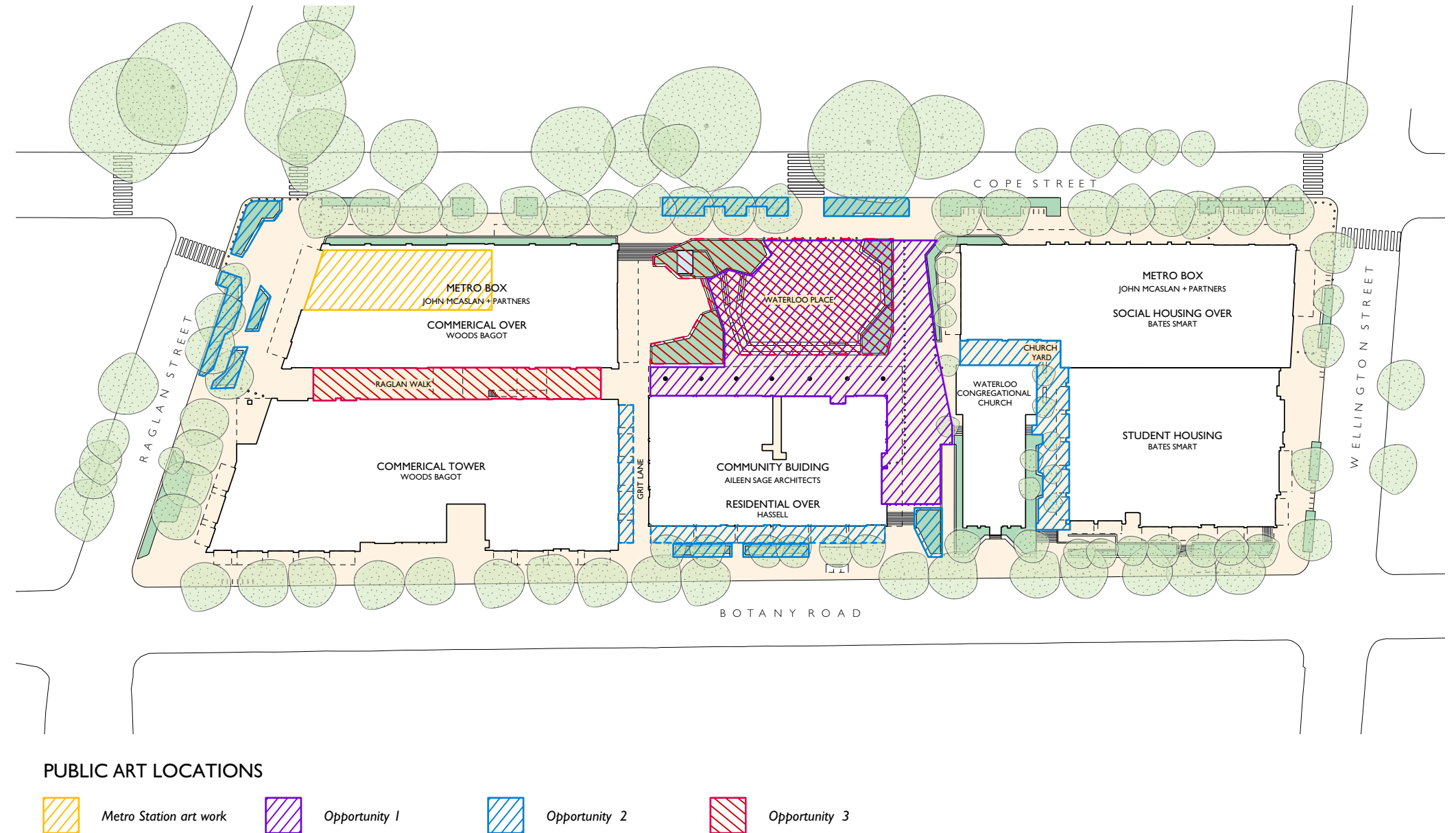


Diagram by Aileen Sage Architects

Public Art & Heritage Interpretation



Celebrating Country



Celebrating Community & Language



Celebrating Innovation & Knowledge



Development of Urban Landscape

Theme 1

Celebrating Country

This artwork will be a two dimensional design or pattern that will be translated into the brick or concrete unit paving of Waterloo Place and the shareway area between Building 2 and the Waterloo Congregational Church. The work will be highly graphic and abstract, clearly demarcating these important civic zones and creating a strong visual character and marker of these public domain areas when viewed from a distance and from above, looking down from the residential, community and commercial buildings of the precinct and surrounds.

The work will acknowledge and celebrate the essential nature of the land that Waterloo sits on, above and within Aboriginal land. Land that has provided stories, skills, designs and cultural practices. Weaving patterns (from woven bags, baskets, and mats) will be developed by the artist, as well as interpretations of kinship stories or systems as patterns and designs.

Theme 2

Celebrating Community & Language

This commission will be in the local Sydney language as well as selected migrant languages including English, Mandarin, Arabic, and could include some European languages such as Italian, Greek, French and Russian and any other key languages considered important in responding to particular immigrant groups with strong relationships, historical and contemporary, with the area. It will work with poetry and storytelling to embed text within the site as illuminated, etched or integrated elements in key strategic places, speaking to identity, culture and community.

It will acknowledge the history of Aboriginal activism in the Waterloo /Redfern /Eveleigh area, the birthplace of Australia's civil rights movement and its continuing significance for the Aboriginal community, emerging communities with each new wave of migration, acknowledging also the stories of food production, industry, craftspeople and makers that at various times have contributed to the character of this area.

The locations of the work will be carefully considered and judiciously placed. The exact locations being determined in collaboration with the curators and the precinct design team during the Detailed Design Stage. These locations may include:

Theme 3

Celebrating Innovation & Knowledge

For this opportunity it is proposed that a series of sculptural elements either integrated with the landscape or suspended above would be commissioned extending from Raglan Walk through to Waterloo Place.

The work will celebrate the area's Aboriginal history and future with a focus on innovation, incorporating in particular ideas and practices celebrating Indigenous knowledge of the skies. Recognising a deep knowledge and understanding of the interconnection between our planet and the broader universe. Honouring the sky above us that unites us under the same blanket of stars.

The work will celebrate the (sometimes difficult) journeys migrants took from the northern hemisphere to the southern and the unifying use of stars as a way of finding place. Honouring the stories of the southern constellations and the ongoing research and innovations that continue to build on this ancient knowledge.

The work would commission a collaborative multidisciplinary team including artists working alongside an astronomer and tech innovation specialists to create an innovative and dynamic work which may include elements of dynamic digital programming and/ or illuminated elements that could be programmed to respond to particular site conditions /activities / astrological /seasonal /environmental conditions particular to the site

Theme 4

Development of the Urban Landscape

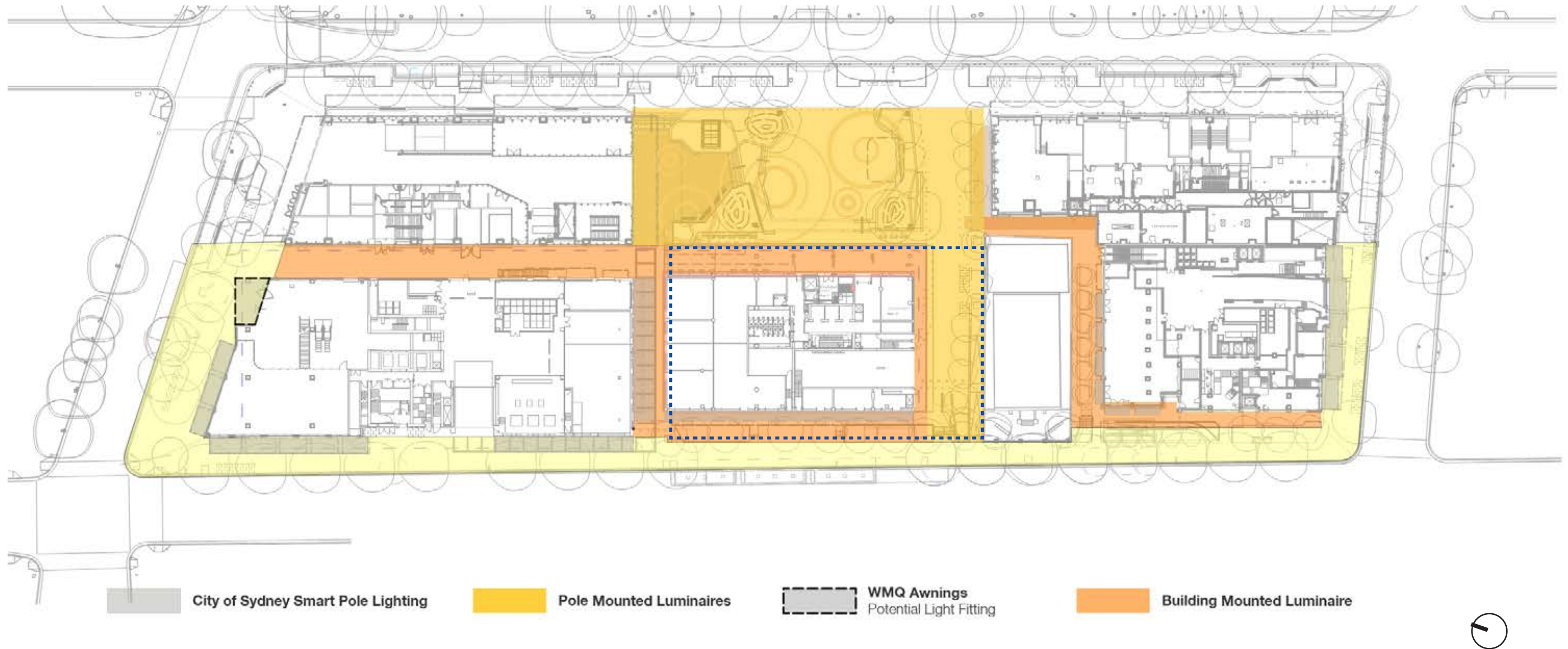
The overall development of the site from its original state as wetlands, Aboriginal evidence, early land grants, mills and market gardens, through to early residential subdivisions, light industrial and commercial uses before modern development.

Lighting Strategy

Lighting across the site to be designed to achieve a balance of safety and ambience, utilising a combination of pole mounted, building mounted, and feature lighting.



 CENTRAL PRECINCT
EXTENT OF WORKS SSDA 10439



Central Precinct Public Domain



General Arrangement: Central Precinct

Introduction

The public domain around Building 2 provides clear and accessible pedestrian routes between Botany Road, Cope Street Plaza and the southern metro station entrance. Access to the community building and childcare entrance is located under the colonade in front of the plaza.

Outdoor dining and licensed seating areas are positioned to maximise activity overlooking the plaza. Tree planting is provided in deep soil in either permeable paving or raised planters along the Botany Rd frontage.

Pedestrian routes to and from the bus stop have been considered in the location of raised planters and seating elements. The raised garden beds closest to the bus stop are raised 450mm to provide an informal seating edge for patrons.

Grit Lane (already approved under CSSI) has been developed to integrate with the wider public domain proposals. This lane will be a well used connector between the Metro southern entrance and Botany Rd bus stop and is activated by retail tenancies on both sides.

Church Square is a generous shared zone for pedestrians and vehicles that connects to Cope Street Plaza and Church Yard. Access for vehicles entering and exiting the basement is off Cope Street. The Square features a generous planted buffer along side the church with new tree planting in deep soil, seating opportunities and a singular paved surface.

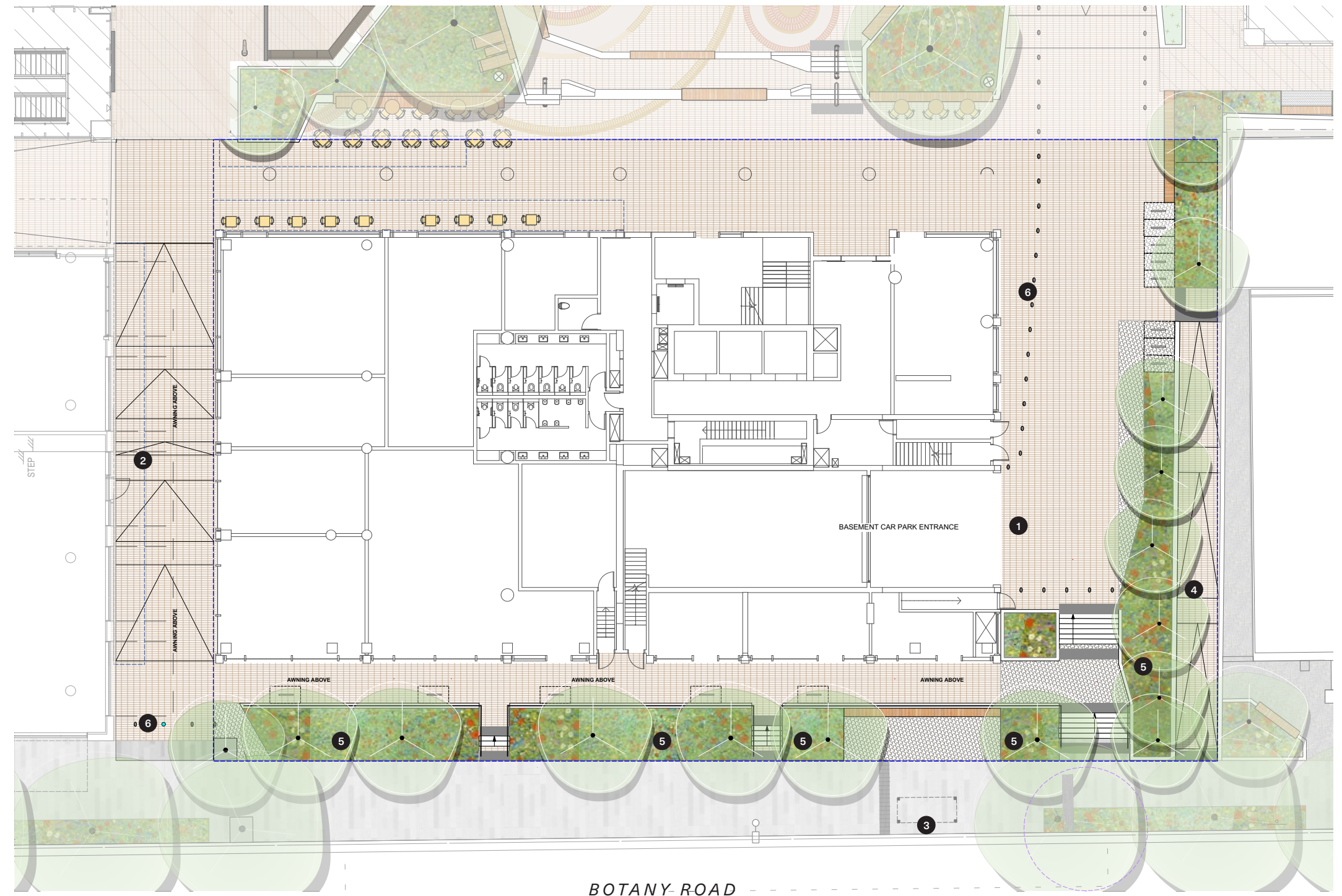
KEY MAP



KEY

1	Driveway entrance / exit
2	Grit Lane (min 6m wide)
3	Botany Road Bus Stop
4	DDA Access Ramp
5	Buffer Planting and Street Trees
6	HVM Rated Bollard - pedestrian protection
---	Central Precinct Boundary
---	WMQ Site Boundary

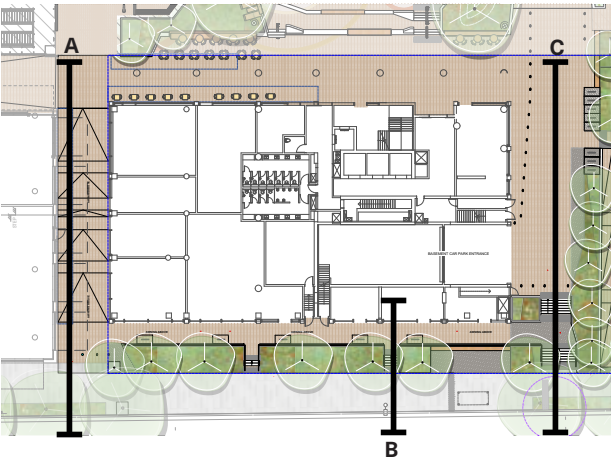
CENTRAL PRECINCT | LANDSCAPE PLAN



BOTANY ROAD

Section 3 / Central Precinct Public Domain

LOCATION PLAN |



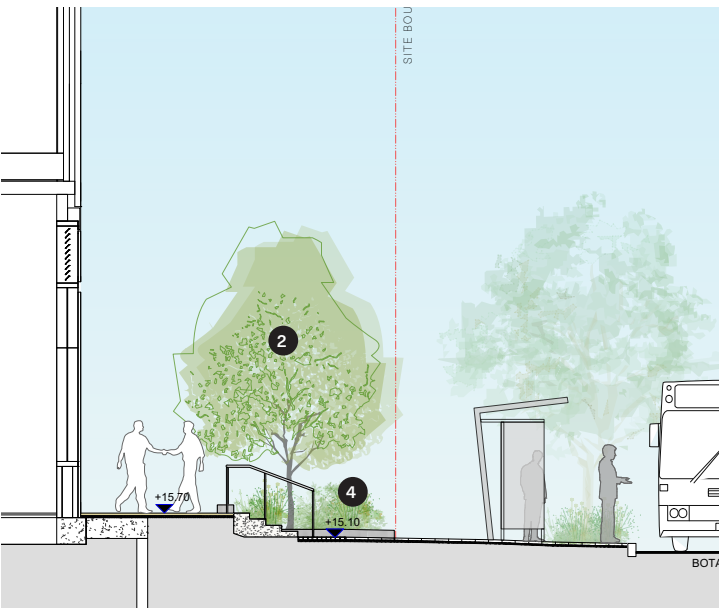
KEY

1	Proposed verge planting
2	Proposed Street Trees
3	Waterloo Congregational Church
4	Buffer planting and Street Trees
5	Awning
6	Proposed trees
7	Bus Stop Bench Seating
-----	OSD Site Boundary

SECTION A | GRIT LANE



SECTION B | BOTANY ROAD



SECTION C | CHURCH SQUARE



Public Domain Material Strategy

Introduction

The materials throughout draw inspiration from the character of the surrounding neighborhoods of Redfern and Waterloo. Drawing on the robustness and timelessness of concrete and brick, the landscape spaces utilises these materials with a preference for warm tones and variation in formats to create a fine-grained response to ground plane materials.

For public domain areas that fall outside the Waterloo Metro Quarter site boundary, the City of Sydney 'Village Centre Activity Strip' approved palette of materials will be used. This includes concrete unit paver's in charcoal colour. Refer to material palette on following page.

The pedestrian route from Botany Road, through Grit Lane to the South Metro Station entrance is already approved under CSSI.

Ground Floor

KEY

Brick Paving
(Pedestrian grade)

Permeable Paving

Brick Paving -
Shareway
(Vehicular grade)

Botany Road
Pedestrian Way
Concrete Paving

Central Precinct
Boundary

Area approved
under CSSI

WMQ Site
Boundary

ASPECT Studios

WATERLOO METRO QUARTER
CENTRAL PRECINCT LANDSCAPE REPORT

Public Domain Material Palette

Paving and Surface Finishes



Warm Brick Paving Pedestrian Grade



Interlocking concrete unit paver



Eco Tri Hex Permeable Paver



CoS Concrete Unit Paver



Terrabond Tree Pit

Fixtures & Furniture



Seating including backrests and handrails



Stainless steel rated bollard



City of Sydney Bike Rack

Planting Strategy: Central Precinct

Introduction

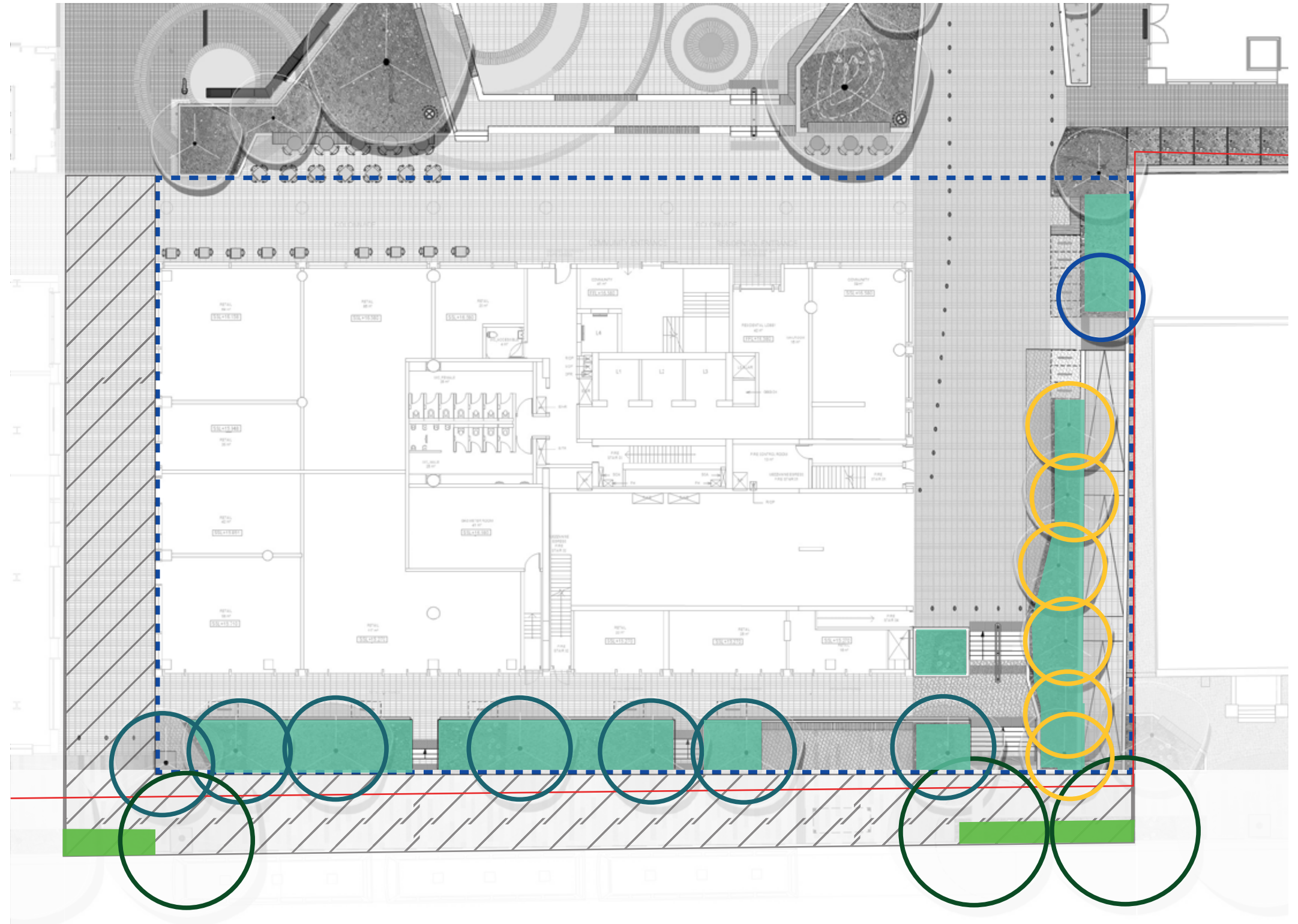
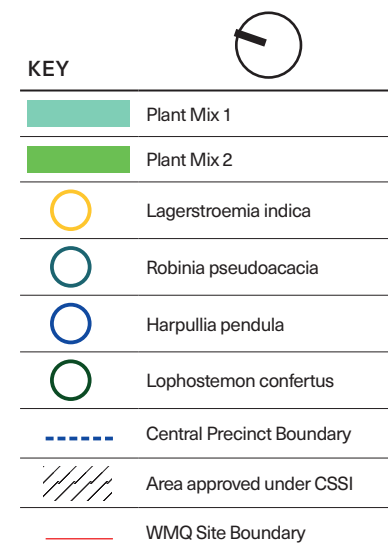
Planting typology within the precinct varies between the landscape spaces. It is intended that most planting at ground level of the project, including the planting on Botany Road public domain, is comprised of native plant species selected for edible/usable properties. This planting would be maintained by an indigenous owned landscape maintenance firm who will run educational tours as well as maintain the planting.

Tree and understorey planting throughout the site will provide a rich diversity of endemic species.

The palette has been developed to create urban ecologies which may provide habitat or food sources for native birds, bees and insects.

Refer to planting palette on the following pages for more information.

Ground Floor



Planting Palette: Central Precinct

Trees			
Botanical Name	Common Name	Pot Size	Origin
Lophostemon confertus	Brush Box	400Ltr	Native
Harpullia pendula	Tulipwood	400Ltr	Native
Robinia pseudoacacia	Black Locust	400Ltr	Native
Lagerstroemia indica	Crepe Myrtle	400Ltr	Native



Harpullia pendula



Robinia pseudoacacia



Lagerstroemia indica



Lophostemon confertus

Plant Mix 1 - Public Domain Understorey			
Botanical Name	Common Name	Pot Size	Origin
Billardia scandens	Apple Berry	200mm	Native
Atriplex nummularia	Saltbush	400mm	Native
Lomandra longifolia	Basket Grass	200mm	Native
Westringia fruticosa 'Zena'	Dwarf Coastal Rosemary	200mm	Native
Anigozanthos manglesii	Kangaroo Paw	140mm	Native
Themada australis	Tussock Grass	140mm	Native
Carpobrotus glaucescens	Pigface	140mm	Native
Dichelachne crinita	Plume Grass	200mm	Native
Dianella revoluta	Blueberry Lily	140mm	Native
Actinotus helianthi	Flannel Flower	140mm	Native



Lomandra longifolia



Themada australis



Atriplex nummularia



Billardia scandens



Westringia fruticosa



Anigozanthos manglesii



Carpobrotus glaucescens



Dianella caerulea

Plant Mix 2 - Raised Planter Understorey			
Botanical Name	Common Name	Pot Size	Origin
Dichelachne crinita	Plume Grass	200mm	Native
Dianella revoluta	Blueberry Lily	140mm	Native
Atriplex nummularia	Saltbush	400mm	Native
Lomandra longifolia	Basket Grass	200mm	Native
Westringia fruticosa 'Zena'	Coastal Rosemary	200mm	Native
Actinotus helianthi	Flannel Flower	140mm	Native
Pteridium esculentum	Bracken Fern	200mm	Native
Dianella caerulea	Blueberry Lily	200mm	Native



Actinotus helianthi



Dianella revoluta



Dichelachne crinita



Pteridium esculentum

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Location

Section 4

Communal Terraces & Green Roof



Introduction

Introduction

Green roofs are proposed on all new buildings in the precinct. These include communal terraces, inaccessible green roofs and private roof terraces.

All roof terraces will be designed with regards to a site wide set of design principles outlined below, then applied to the needs of each building.

Building 2 comprises of roof terrace planting to the eastern facade on Level 1, a communal terrace to Level 22 and 2 private penthouse gardens.



PROVIDE SPACES THAT ALLOW FOR OUTDOOR DINING, OUTDOOR WORKING AND SMALL COMMUNAL GATHERINGS.



MAXIMISE LOW WATER USE NATIVE PLANT SPECIES - AT LEAST 70%



CHOOSE PLANT SPECIES THAT PROVIDE A CONTRIBUTION TO BIODIVERSITY.



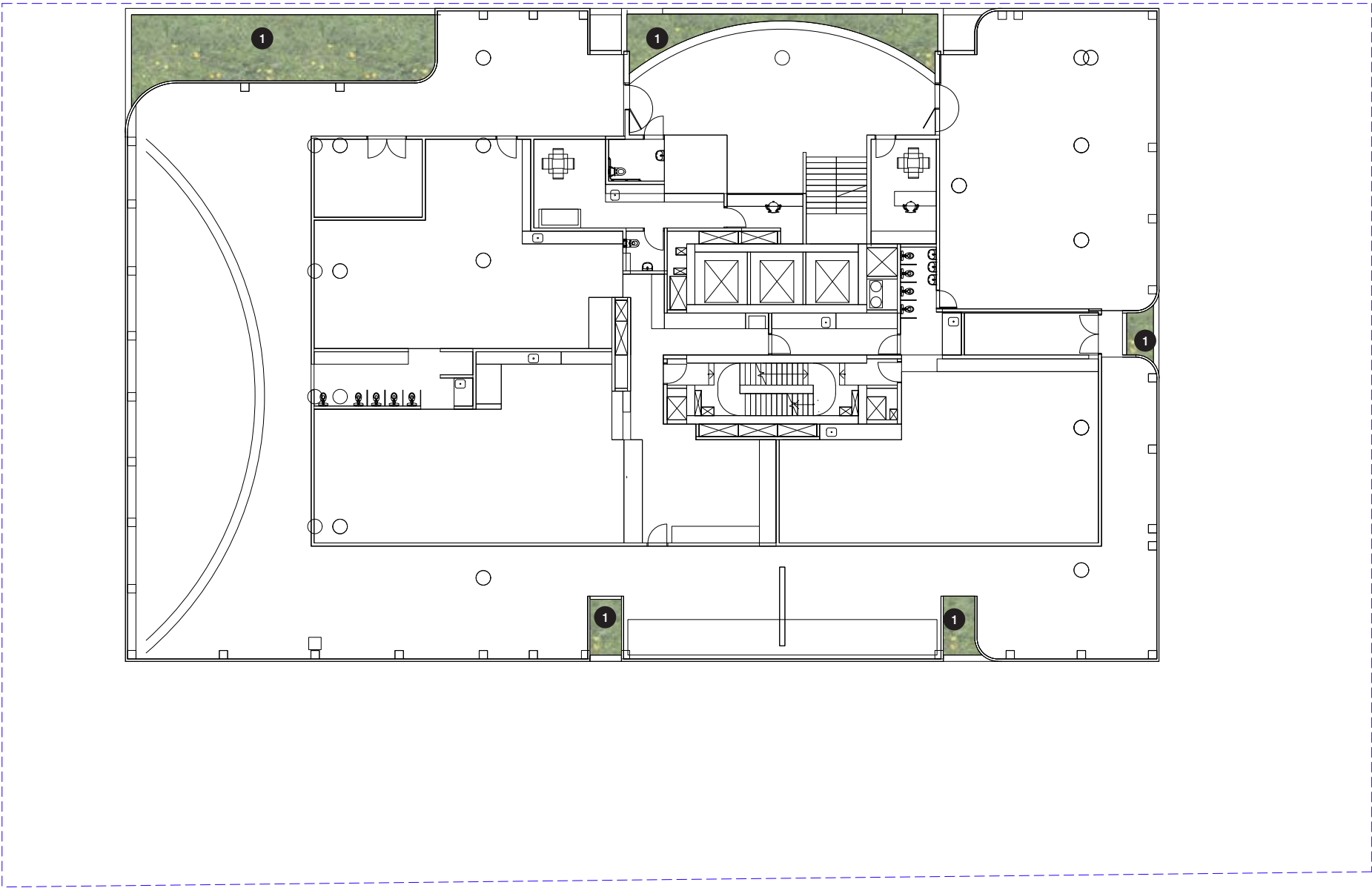
CREATE AREAS FOR RESIDENTS OR TENANTS TO GROW EDIBLE PLANT SPECIES.

Level 01

To provide a greener outlook from adjoining windows a series of small low maintenance, inaccessible green roof planters are proposed for the eastern facade at Level 1.

This habitat area will be a mix of low ground covers and grasses that can thrive in challenging urban conditions and with minimal soil volume.

Refer to planting palette on page 35.



KEY	
<div><div>1</div></div>	Green Roof Planter Box
<div><div></div></div>	Central Precinct Boundary

Level 22

Introduction

Building 2 includes a communal roof terrace for the residential tenants and two private gardens for the penthouse apartments.

Communal Terrace

The communal terrace will provide opportunities for tenants to grow edibles and gather in small groups.

A range of activities can occur within the communal courtyard - a barbeque and long tables allow for group outdoor entertaining and a raised deck provides space for a fragrant kitchen garden to pick herbs from.

When alone, there are numerous pockets to find peace and quiet with a book, or a coffee. Sitting amongst planting, the landscape creates a delightful counterpoint for inner city living.

Private Penthouse Gardens

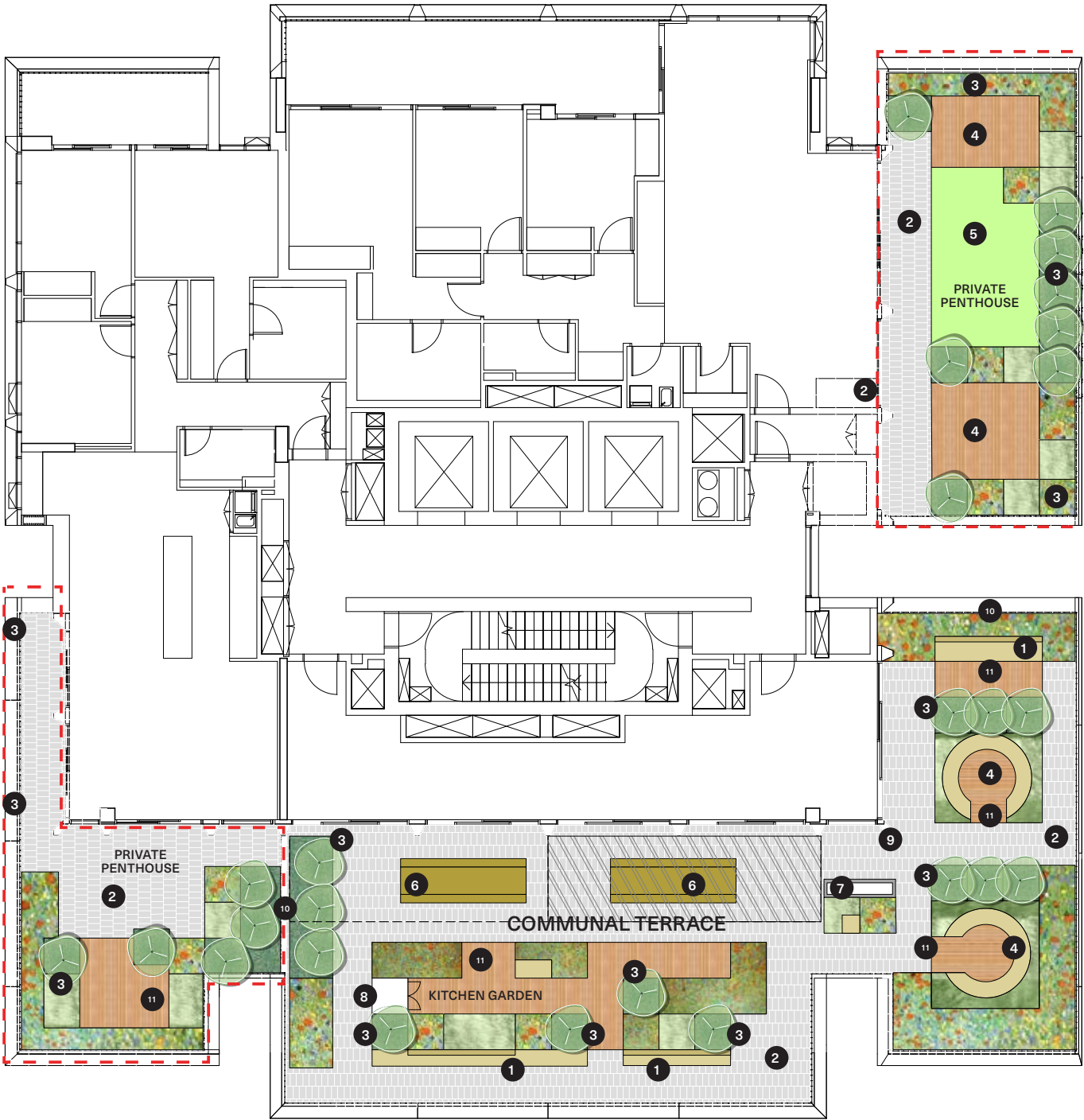
The penthouse gardens afford a variety of landscape spaces, both open and intimate, affording residents the opportunity to connect directly to the outdoors while also creating privacy buffers from the communal terrace.

Intimate outdoor rooms with ample paved areas and decking form a natural extension of the interior spaces for outdoor dining or relaxation.

Generous garden spaces and small tree plantings (max 3m height) with a mix of native, exotic and flowering species provide scale, colour and year round interest. Refer to planting palette on page 35.

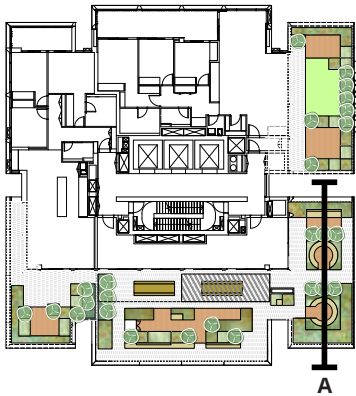
KEY	
1	Long bench with backrest
2	Paving on pedestals
3	1m Raised tree planter
4	Group seating in the round
5	Lawn area
6	Communal Tables
7	BBQ Area
8	Garden Storage Box
9	Canopy / Shade Structure - Refer to Hassell drawings for further detail
10	Privacy Screen Wall - Refer to Hassell drawings for further detail
11	Timber Deck - Installed flush

LEVEL 22 | LANDSCAPE PLAN



Level 22

LOCATION PLAN |



SECTION A |



KEY	
1	Long bench with backrest
2	Paving on pedestals
3	1m Raised tree planter
4	Group seating in the round
5	Lawn area
6	Communal Tables
7	BBQ Area
8	Garden Storage Box
9	Canopy / Shade Structure - Refer to Hassell drawings for further detail
10	Privacy Screen Wall - Refer to Hassell drawings for further detail
11	Timber Deck - Installed flush

Roof Terrace Materials

Hardscape and Finishes

The material palette for the communal roof terrace comprises warm tone concrete paver's set on pedestals and raised edge planters.

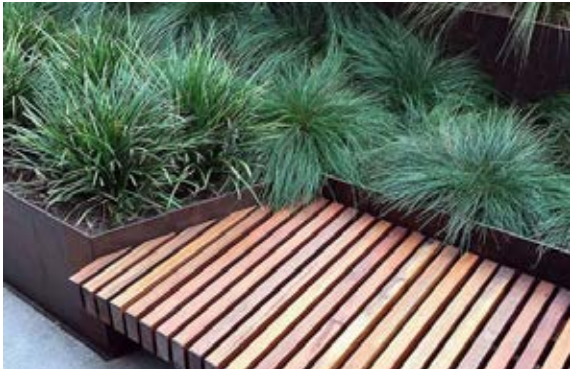
Where seating is integrated into the planter, a timber bench and backrest will provide a comfortable and low maintenance seat at a range of scales.



Warm concrete paver's on pedestals compliment the architectural material palette



Raised planters at various heights provide interest and sufficient depth for a variety of planting types



Integrated timber seating



Shade structures and canopy (to architects design)

Roof Terrace Planting Palette

Planting across the roof terraces include a range of native species with a focus on flowering and bird attracting shrubs and small trees and shade tolerant species.

Fragrant herbs will be planted for use on terraces where allotment style planters are provided.

Small sized tree species are the most appropriate tree type for podium landscapes, as they can accommodate the weight limitations of the structural slab.

The design will provide sufficient soil volume to all small trees and shrubs on the podium, to ensure they are able to grow at an adequate rate and will be healthy specimens.

Roof Terrace & Green Roof Planting Palette			
Botanical Name	Common Name	Pot Size	Origin
Leptospermum laevigatum	Coastal Tea Tree	400mm	Native
Pandorea pandorana	Wonga wonga vine	140mm	Native
Pteridium esculentum	Bracken Fern	200mm	Native
Banksia serrata	Saw Tooth Banksia	200mm	Native
Banksia ericfolia	Lantern Banksia	140mm	Native
Acacia longifolia	Golden Wattle	140mm	Native
Pennisetum alopecuroides	Fountain Grass	140mm	Native
Dianella caerulea	Blueberry Lily	200mm	Native
Viola hederacea	Common Violet	140mm	Native
Austrodanthonia setacea	Wallaby Grass	140mm	Native
Eragrostis brownii	Browns Lovegrass	200mm	Native
Ficinia nodosa	Club rush	140mm	Native
Salvia rosmarinus	Rosemary	140mm	Exotic
Salvia officinalis	Sage	140mm	Exotic
Mentha spicata	Garden mint	140mm	Exotic
Origanum vulgare	Oregano	140mm	Exotic



Leptospermum laevigatum



Pandorea pandorana



Pteridium esculentum



Banksia serrata



Banksia ericfolia



Acacia longifolia



Pennisetum alopecuroides



Dianella caerulea



Salvia rosmarinus



Salvia officinalis



Mentha



Origanum vulgare

Central Precinct Design Guidance Compliance



Design Amenity Guidelines Compliance

PART 3C - PUBLIC DOMAIN					
3C.01	Objective	Provide publicly accessible plazas adjacent to the station entries that connect the Metro Quarter to the surrounding streets and neighbourhood	Compliant	Refer Spatial Compliance diagram	
3C.02	Objective	Create a high quality, integrated, permeable and multifunctional public domain that caters for movement, recreation and social interaction	Compliant	Refer to Precinct Masterplan Diagram - page 10	
3C.03	Objective	Provide good levels of solar access and amenity to the public domain	Compliant	Refer to Solar Access Diagrams in Urban Design Report prepared by HASSELL	
3C.04	Objective	The design of the public domain is consistent with Crime Prevention Through Environmental Design principles	Compliant	Refer to Access & Circulation diagram - page14 and Lighting Strategy diagram - page 20	
3C.05	Objective	Balance all forms of movement through creating a public domain which facilitates transport interchange	Compliant	Refer to Access & Circulation diagram - page 14	
3C.DC1	Criteria	Provide 2,200m2 of publicly accessible open space within the precinct comprising the Cope Street Plaza and the Raglan Street Plaza. Space beneath cantilevered buildings can be included in the calculation of publicly accessible open space	Compliant	The proposals provide 2690m2 of publicly accessible space. Refer to Spatial Compliance diagram - page 16	
3C.DC3	Criteria	Design of the Cope Street Plaza space underneath any building overhang is to incorporate wind mitigation	Compliant	Refer to Wind Studies by RWDI	
3C.DC5	Criteria	The public domain and landscaping design should meet the requirements of City of Sydney Urban Forest Strategy 2013 (adopted February 2013)	Compliant	Refer to Planting Palette - page 27	
3C.DC7	Criteria	Publicly accessible areas are to be designed to allow access as required by DDA requirements with consideration of use for people of all abilities	Compliant	Refer to landscape plans and DDA report by Morris Goding	
3C.DC10	Criteria	Public domain lighting in areas under Council's control shall be in accordance with City of Sydney's Sydney Lights Code (March 2015)	Compliant	Refer to Lighting diagram - page 20	
3C.DC11	Criteria	Lighting provided to the plazas and publicly accessible spaces within the development should comply with AS4282-1997	Compliant	Refer to Lighting diagram - page 20	
3C.DG.01	Guidance	The Cope Street plaza is to include: - An open, paved area that supports a range of informal passive recreation activities	Compliant	Refer to SSDA10437 Southern Precinct Landscape Report for Cope Street Plaza design	
3C.DG.02	Guidance	The Raglan Street plaza is to include: - A vibrant pedestrian focused public space that engages with the existing local character and fine grain of the retail strip opposite	Compliant	Refer to SSDA10440 Northern Precinct for Raglan Street Plaza design	
PART 3D - STREETS, LANES AND FOOTPATHS					
3D.01	Guidance	Provide high quality materials and finishes in the public domain that respond to the character of the local area	Compliant	Refer to Public Domain Material palette - page 25	
3D.02	Guidance	Expand the public domain by considering the boundary interface with the Waterloo Congregational Church	Compliant	Refer to SSDA10437 Southern Precinct Landscape Design Report	
3D.03	Guidance	Create visual interest and reflect the character of the area through the selected materials for the public domain	Compliant	Refer to Public Domain Material palette - page 25	
3D.DC1	Criteria	Provide a through-site pedestrian link from Cope Street to Botany Road that provides a clear, safe, direct and convenient connection from the metro station to the bus interchange	Compliant	Refer to SSDA10437 Southern Precinct Landscape Design Report	
3D.DC2	Criteria	The through-site link should Have a minimum width of 6m and have a clear height of at least 6m	Compliant	Refer to Pedestrian Accessways diagram - page 13	
3D.DC2	Criteria	The through-site link should align with breaks between buildings so that views are extended and there are less sense of enclosure	Compliant	Refer to Pedestrian Accessways diagram - page 13	
3D.DC2	Criteria	The through-site link should be clearly distinguished from vehicle access ways	Compliant	Refer to Pedestrian Accessways diagram - page 13	
3D.DC2	Criteria	The through-site link should include materials and finishes such as paving materials, tree planting and furniture generally consistent with adjoining streets and public spaces and be graffiti and vandalism resistant	Compliant	Refer to Public Domain Material palette - page 25	
3D.DC10	Criteria	Respond to and complement the City of Sydney's public domain requirements for works on Council land	Compliant	Refer to Public Domain Material palette - page 25	
3D.DC12	Criteria	Street furniture is to be consistent with the Sydney Streets Design Code	Compliant	Refer to Public Domain Material palette - page 25	
3D.DC14	Criteria	Where feasible, incorporate water sensitive urban design techniques such as landscaped swales to improve the quality of groundwater and water entering the waterways and tree bays	Compliant	OSD Tank and water filtration proposed	
3D.DG.01	Guidance	The through-site link should be direct and accessible to all, have a clear line of sight between public places and be open to the sky as much as is practicable	Compliant	Refer to Pedestrian Accessways diagram - page 13	
3D.DG.01	Guidance	The through-site link should assist in guiding people along the link while enabling long sightlines	Compliant	Refer to Pedestrian Accessways diagram - page 13	
		Different paving materials or patterns can be used to denote significant spaces of the public domain such as the publicly accessible plazas			

Section 5 / Design Guidance Compliance

3D DG 03	Guidance	Street furniture should be co-located with trees where possible to avoid clutter and create focus points for community activity	Compliant	Refer to General Arrangement - page 22
3D DG 04	Guidance	Consultation should be undertaken with the Waterloo Congregational Church to investigate opportunities to integrate the curtilage of the church with the public domain and landscape design	Compliant	Consultation has commenced and is ongoing
PART 3E - TREE CANOPY COVER				
3E O1	Objective	Mitigate the impacts of urban heat island effect through the provision of tree planting and soft surface areas	Compliant	Refer to Tree Canopy diagram - page 17
3E O2	Objective	Enhance the biodiversity of the site through providing a range of native species and opportunities for urban habitat	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC1	Criteria	New street tree planting must be consistent with the City of Sydney's Street Tree Master Plan 2011 (updated 2015), Park Tree Management Plans and the Landscape Code	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC2	Criteria	The development must achieve the following minimum tree canopy cover targets 23% overall canopy cover (i.e. the combined canopy area of all trees contained within the site and adjacent streets measured to the centre line of the roads)	Compliant	The proposals achieve a tree canopy cover of 25.7% inside the WMQ boundary. Refer to Tree Canopy diagram - page 17
3E DC2	Criteria	The development must achieve the following minimum tree canopy cover targets 50% street canopy cover (i.e. the combined area of all tree canopy contained within the road reserve including footpaths and pedestrian areas and measured from the property boundary to the centreline of the adjoining roads)	Compliant	The proposals achieve a street tree canopy cover of 55% Refer to Tree Canopy diagram - page 17
3E DC3	Criteria	A secondary alignment of trees are to be provided set further back from Botany Road in front of the central podium near the bus stop	Compliant	Refer to Tree Canopy diagram - page 17
3E DC4	Criteria	New habitat features including trees, shrub and ground cover vegetation, waterbodies, rockeries and green roofs and walls are to be included, wherever possible	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC5	Criteria	Landscaping is to comprise a mix of locally indigenous tree, shrub and groundcover species as outlined in City's Landscape Code. Where this is not possible, it is preferred that plants native to Australia are used	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC6	Criteria	Shrubs are densely planted and trees are to be well spaced, as outlined in the City's Landscape Code	Compliant	Refer to GF Plans & Planting Palette - page 27
3E DC7	Criteria	Awnings and canopies are to be located and designed to maximise tree canopy	Compliant	Refer to GF Plans
3E DC8	Criteria	Tree planting details are to specify horizontal clearance to awnings and buildings and tree spacing	Compliant	Refer to sections
3E DC9	Criteria	Centreline of new trees along Botany Road should be a minimum of 1m back from the front of the kerb and up to 1.5m from the front of the kerb subject to services investigations	Compliant	Refer to Tree Canopy diagram - page 17
3E DG1	Guidance	Consult with City of Sydney and obtain their agreement for any tree planting within Council owned land	Compliant	Consultation has commenced and is ongoing
PART 3F - TREE PLANTING SPECIFICATIONS				
3F O1	Objective	To create a safe welcoming and healthy place to live, high quality public spaces, and a sustainable and adaptable urban environment	Compliant	Refer to Planting Palette & Schedule - page 27
3F O2	Objective	Provide a resilient, healthy and diverse urban forest	Compliant	Refer to Planting Palette & Schedule - page 27
3F O3	Objective	Provide an integrated long-term strategy that promotes trees as critical infrastructure and assets	Compliant	Refer to Tree Canopy diagram - page 17
3F O4	Objective	Retain and protect existing trees and canopy cover	Non-compliant	Existing trees removed or increased canopy cover to be achieved
3F DC1	Criteria	Any existing trees proposed to be retained are to be assessed and then protected as per the requirements outlined in the Australian Standard 4970 – Protection of Trees on Development Sites	Compliant	No trees retained
3F DC2	Criteria	Overhead power lines and communication cables are to be under-grounded within all streets adjacent to the Metro Quarter to remove the current conflict between overhead cabling and the existing and proposed trees	Compliant	
3F DC3	Criteria	If existing trees occur within the planned under grounding routes then the routes shall be modified to avoid incursions into the tree(s) calculated Tree Protection Zones, as defined under Australian Standard 4970 – Protection of Trees on Development Sites. Where this cannot be reasonably accommodated, alternative methods of construction must be used such as under-boring, directional drilling or non-destructive trenching to install the cabling without impact to the trees' health or stability	Compliant	All existing trees to be removed - new trees to be coordinated with new electrical cables
3F DC4	Criteria	All new trees shall be installed in accordance with new tree planting requirements contained in Appendix A	Compliant	Details to be provided in future Public Domain Plan submission
3F DC5	Criteria	Where trees are planted within a potentially constrained soil environment (on-structure), appropriate soil volumes are to be provided to ensure maximisation of tree canopy spread and height	Compliant	Refer Deep Soil Diagram - page 15
3F DC6	Criteria	Consult with the City of Sydney in relation to tree planting in the public domain, comprising the public footpaths around the Metro Quarter	Compliant	Consultation has commenced and is ongoing
3F DC7	Criteria	All new street tree planting shall be a minimum of 200L container sizes with this increased to 400L for the key feature trees being preferred. Sizes of >800L should be considered where suitable and quality advanced stock is available	Compliant	Refer to Planting Palette & Schedule - page 27

Section 5 / Design Guidance Compliance

3F.DC7.	Criteria	All trees shall be grown to the minimum standards of AS2303 – 2015 Tree Stock For Landscape Use with certification provided by the supplying nurseries. Trees shall be true to type and the species and cultivars specified	Compliant	Details to be provided in future Public Domain Plan submission
3F.DC7.	Criteria	Tree planting ideally should be undertaken in either autumn or winter. This will greatly increase the success of the planting and reduce the establishment maintenance burdens	Compliant	Details to be provided in future Public Domain Plan submission
3F.DC7.	Criteria	Surrounding pavements and tree grates shall allow for proper expansion of the trees base over time	Compliant	Details to be provided in future Public Domain Plan submission
3F.DC7.	Criteria	Trees shall be planted a minimum of 675mm from the back of adjoining kerbs. Distances greater than are 1000mm preferred	Compliant	Details to be provided in future Public Domain Plan submission
3F.DC7.	Criteria	Trees shall be transported, lifted and planted in a manner that limits any possibility of physical damage	Compliant	Details to be provided in future Public Domain Plan submission
3F.DC7.	Criteria	Trees shall be regularly maintained for a minimum of 12 months from the date of planting to ensure adequate establishment maintenance. This is to include pest and disease monitoring and control, watering and timely replacement if required	Compliant	Details to be provided in future Public Domain Plan submission
PART 3G - WIND				
3G.O1.	Objective	Mitigate potential wind impacts and ensure adequate levels of comfort are achieved in the public domain for intended activities	Compliant	Refer to Wind Studies by RWDI
PART 3I - STREET ACTIVATION				
3I.DC5.	Criteria	Provide wider footpaths along Botany Road adjacent to the bus stops that accommodate pedestrians and encourage retail activation	Compliant	Refer to GF Plans and Pedestrian Accessways diagram - page 14
PART 3N - PEDESTRIAN AND CYCLE NETWORK				
3N.O1.	Objective	Prioritise walking and cycling trips in and around the Metro Quarter over vehicles	Compliant	Refer to Access & Circulation diagram - page 14
3N.O2.	Objective	Manage potential conflict between cyclists and pedestrians through the design of the public domain and locations of bike parking	Compliant	Refer to Access & Circulation diagram - page 14
3N.O3.	Objective	Provide a pedestrian network that aligns with key pedestrian desire lines and is integrated with the active frontages	Compliant	Refer to Access & Circulation diagram - page 14
3N.DC1.	Criteria	Provide generous footpath widths that can accommodate the forecast pedestrian flows from the metro station	Compliant	Refer to GF Plans and Pedestrian Accessways diagram - page 13

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