



WATERLOO METRO QUARTER OVER STATION DEVELOPMENT

Environmental Impact Statement

Appendix X – Waterloo Metro Quarter Design and Amenity Guidelines FINAL March 2020

**SSD-10437 Southern Precinct SSD-10438
Basement Car Park SSD-10439 Central
Precinct SSD-10440 Northern Precinct
SSD-10441 Amending Concept DA**

Detailed State Significant Development
Development Application

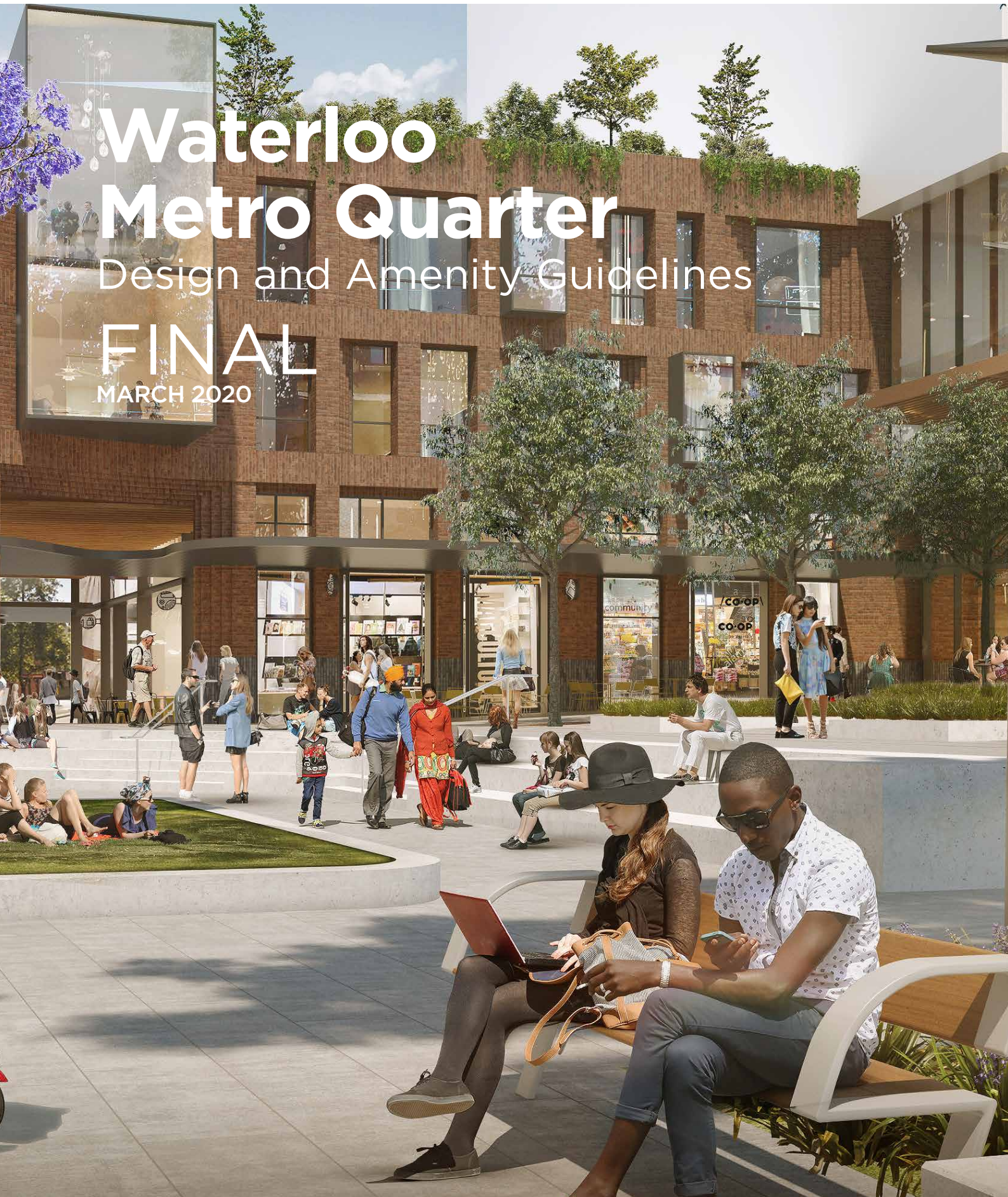
Prepared for **Waterloo Developer Pty Ltd**

30 September 2020

Waterloo Metro Quarter

Design and Amenity Guidelines

FINAL
MARCH 2020







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Introduction

Foreword

The Waterloo Metro Quarter (“Metro Quarter”) project will deliver a high quality development integrating the metro station with new retail, commercial, community and residential uses including social and affordable housing. The development will provide new areas of public domain, pedestrian connections, greater options for active transport and space for cultural and community facilities.

The new metro and development opportunity provides a catalyst for the Government’s urban renewal program for the Metro Quarter and the Waterloo Estate. The Metro Quarter will provide a high standard customer experience with safe and seamless interchange with other transport modes and an activated station precinct with a range of retail services. The development will act as a gateway to the broader Waterloo Estate with services and facilities that will complement the renewal of social housing and provide a diversity of housing types and tenures.

The Guideline aims to create a vibrant, mixed use centre that serves as the gateway to Waterloo with high quality public domain and built form that is distinctive and responds to the local character, place and context. The Waterloo Design and Amenity Guidelines (“the Guideline”) are intended to support integrated development with Waterloo Station, referred to as integrated station development.

Whilst Waterloo Station has been approved under Critical State Infrastructure Application No. CSSI 15-7400 (“CSSI Approval”), the Guideline is intended to provide a precinct approach to support detailed design of the development and address the interface with the station. The public domain elements will be delivered across both the CSSI Approval and the State Significant Development application for the Metro Quarter (SSD-9393). This Guideline provides a holistic approach to the precinct and demonstrates the desired design outcomes.





About this guideline

What is the Waterloo Design Guideline?

The Metro Quarter was investigated by the NSW Government as a State Significant Precinct for urban renewal. *State Environmental Planning Policy Amendment (Waterloo Metro Quarter) 2019* (“the SEPP”) was published on September 2019 and amended the planning controls in *Sydney Local Environmental Plan 2012*.

The SEPP established the strategic planning context and statutory development controls for the Metro Quarter. Under these provisions, any future development applications for residential uses must consider any guidelines made by the Planning Secretary in relation to the design and quality of the Metro Quarter. The Waterloo Design and Amenity Guideline (“the Guideline”) fulfils this requirement.

Aims of the Guideline

The Guideline outlines the desired design and place outcomes for the Metro Quarter and includes objectives and design criteria for the built form, public domain, amenity, movement, connectivity and interfaces between the station and over station development. It will help to achieve the design quality outcomes for the Metro Quarter.

The Guideline is intended to:

- Deliver better quality design for buildings that respond appropriately to the character of the area and surrounding built form
- Improve liveability by addressing apartment amenity and issues such as solar access, natural ventilation and noise
- Improve the quality of the public domain by increasing tree canopy cover and mitigating potential wind impacts from tower buildings
- Deliver improved sustainability through improved energy efficiency and water sensitive urban design
- Improve the relationship of buildings to the public domain including streets, lanes and plazas.

Relationship to other applications

The approval for Sydney Metro City & Southwest (CSSI 15-7400) includes construction of station elements such as concourses, platforms, lobbies, lifts, escalators, retail spaces within stations and public domain works adjacent to station entries and related to transport interchange (e.g. bus stops). While this design guideline does not apply to elements covered by that approval, it addresses how over station development should be integrated with the station design.

A concept Development Application (SSD-9393) establishes building envelopes for the future development of the land above and adjacent to the metro station. It includes detailed technical reports and impact assessment for the proposal. This guideline supplements the concept DA and provides further guidance on the desired design, and amenity outcomes for the Metro Quarter.

In the subsequent detailed design stage, further development applications will be prepared and must have regard to the Guideline and the building envelopes approved under SSD-9393. A Design Review Panel will provide independent advice to Sydney Metro on the detailed design of the public domain and built form associated with the development and its integration with the station (CSSI Approval) and ensure that design excellence is achieved by the proposals.

How to use this guideline

Who is the Guideline for?

The Guideline includes design and amenity controls to guide the future development of the Metro Quarter. The Guideline has been prepared specifically for the future development of the site and will influence the design of future detailed DAs and facilitate their assessment. This includes their interface with Waterloo Station which has an existing approval with supporting design guidelines in place.

The Guideline is intended to:

- Be a tool for developers, planners, urban designers, architects, landscape architects, builders and other professionals when designing the Metro Quarter and preparing development applications
- Assist planning professionals in local and state government in the assessment of development proposals
- Inform the community on what is required to achieve good design at the Metro Quarter.

How to use the Guideline

The Guideline includes the following:

- Objectives that describe the desired design outcomes
- Design criteria that provide measurable requirements for how an objective can be achieved
- Design guidance that provides advice on how the objectives and design criteria can be achieved through appropriate design responses, or in cases where design criteria can not be met.

Development applications need to demonstrate how the objectives and design criteria are met. If it is not possible to satisfy the design criteria, applications must demonstrate how the objective has been achieved.

Structure of the Guideline

The Guideline addresses the design of the public domain and built form at a site and building scale. It includes the following parts:

Part 1 - Strategic context and background

This part describes Sydney Metro's vision and the design objectives for the Sydney Metro City & Southwest. It summarises the key design drivers and urban design strategies that were developed as part of the Chatswood to Sydenham Design Guidelines and informed the design of the station. It is noted that these sit under a separate approval (CSI 15-7400)

Part 2 - Site overview

This part describes the site and its surrounding context and the opportunities and constraints to future development.

Part 3 - Design guideline

This part outlines the vision and design approach for the Metro Quarter and includes objectives and criteria that guide the design of the public domain, ground plane and built form.

Part 4 - Appendices

This part includes technical information and supporting documents.

Part 1 Strategic Context

Sydney Metro's vision is transforming Sydney with a new world class metro. The objectives for Sydney Metro provide a framework for the design of the Metro Quarter.

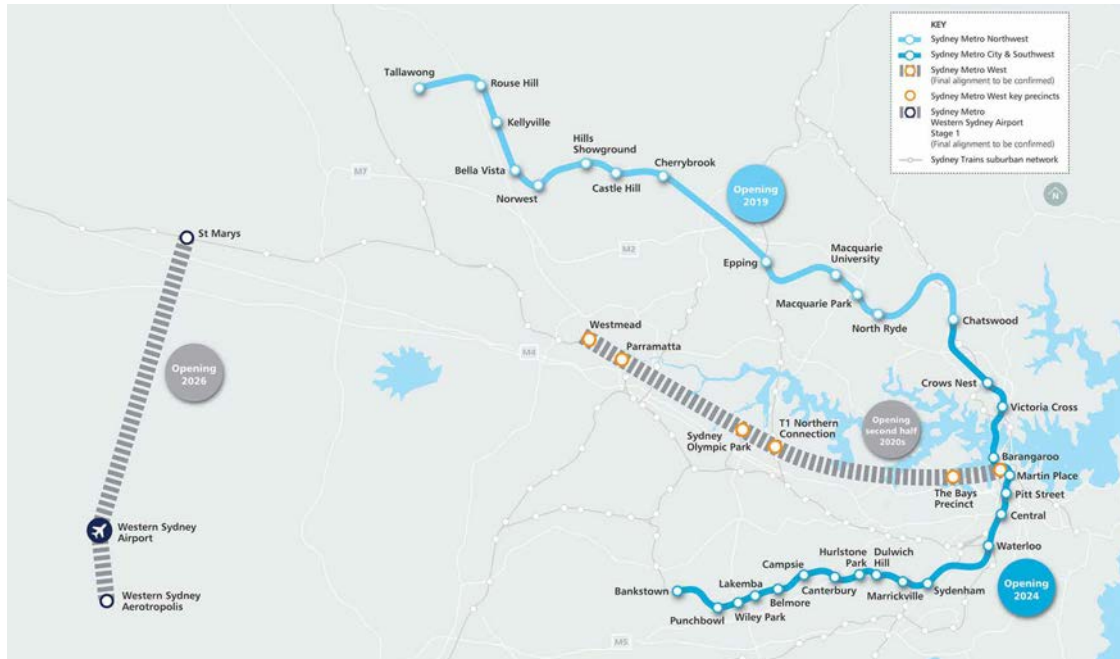


Figure 1 – Sydney Metro project

1A Sydney Metro City & Southwest

The design objectives for the Sydney Metro City & Southwest are:

Ensuring an easy customer experience

Sydney Metro places the customer first. Stations are welcoming and intuitive with simple, uncluttered spaces that ensure a comfortable, enjoyable and safe experience for a diverse range of customers.

Being part of a fully integrated transport system

Sydney Metro is a transit-oriented project that prioritises clear and legible connections with other public and active transport modes within the wider metropolitan travel network that intersect with this new spine.

Being a catalyst for positive change

Sydney Metro is a landmark opportunity to regenerate and invigorate the city with new stations and associated development that engage with their precincts, raise the urban quality and enhance the overall experience of the city.

Being responsive to distinct contexts and communities

Sydney Metro's identity is stronger for the unique conditions of centres and communities through which it passes. This local character is to be embraced through internationally benchmarked high quality station architecture and public domain that is well integrated with the valuable inherited urban fabric of existing places.

Delivering an enduring and sustainable legacy for Sydney

Sydney Metro is a positive legacy for future generations. A high standard of design across the corridor, stations and station precincts, that sets a new benchmark, is vital to ensuring longevity of the Metro system, its enduring contribution to civic life and an ability to adapt to a changing city over time.

1B Chatswood to Sydenham Design Guidelines

The Chatswood to Sydenham Design Guidelines, which form part of the CSSI Approval for Sydney Metro City & Southwest, establish objectives for the project and specific design drivers and strategies for Waterloo Station and its interface with the surrounding locality. These key design drivers and urban design strategies inform the design of the Waterloo Metro Quarter.

Key design drivers

- Contribute to the sense of place and public domain
- Create a new transport focus in Waterloo
- Integrate the station with local improvement plans
- Make a positive contribution to the regeneration of this new urban community

1C Urban design strategies

Enhancing east-west permeability for walking and cycling

Raglan and Henderson streets will be the key connector between the new metro station, Australian Technology Park and Waterloo Estate. Through site links will enhance pedestrian connectivity and activity around the station.

Interchange facilities close to station entry

The location of bus stops on Botany Road will be reviewed to maximise connectivity. Convenient and safe access will be provided for bicycles, taxis and private vehicle drop off from Cope Street.

Public domain defined and activated

Space will be provided for customers to transfer between transport modes. The pedestrian environment of major streets will be upgraded and new laneway connections will be delivered between Cope Street and Botany Road.

Support renewal around the station

New buildings and publicly accessible spaces will contribute positively to the surrounding context and be integrated with the existing heritage buildings and provide a high standard of environmental amenity.

Part 2 Site Overview



Figure 2 – Site location for proposed Waterloo Metro Quarter development (red) and Waterloo Estate (blue)

2A Site description

The Metro Quarter is bounded by Botany Road, Wellington, Cope and Raglan streets. The site forms the areas within the rail corridor which are above and adjacent to the approved Waterloo metro station.

The site boundary excludes the heritage listed Waterloo Congregational Church at No. 103 Botany Road. The total area of the site is 1.91 hectares and has a developable area of 1.28 hectares.

It is approximately 220 metres in length with street frontages of 64 metres to Raglan Street and 62 metres to Wellington Street. The site has a fall of about 2 metres from north to south.

2B Statutory planning controls

The site has been through a State Significant Precinct process, which resulted in amendments to the planning controls in Sydney Local Environmental Plan 2012 (“LEP 2012”) including:

- Maximum building heights for the three towers, which are limited to RL 116.9 metres (29 storeys), RL 104.2 metres (25 storeys) and RL 96.9 metres (23 storeys)
- Maximum floor space ratio of 6:1
- At least 12,000m² square metres of non-residential and non-transport related uses to be provided within the building podiums
- At least 2,000m² of community facilities and 2,200m² of publicly accessible open space to be provided within the site
- At least 5% of the residential floor area to be dedicated as affordable housing
- Future development to consider guidelines made by the Planning Secretary in relation to the design and amenity of the Metro Quarter.

2C Surrounding context

Significant features of the site and the surrounding context include:

1. A network of parks within 800 metres of the site and opportunity to connect to the City of Sydney's liveable green network along Raglan and Wellington Streets
2. Limited amount of urban tree canopy cover within and adjacent to the site resulting in a lack of shade and amenity for pedestrians
3. The Alexandria Heritage Conservation Area (HCA) located to the west, which mostly comprises terrace houses. Nearby heritage items include historic pubs and hotels and a former bank building along Botany Road
4. Waterloo Congregational Church is located mid-block along Botany Road. The church, establishes parameters for the scale, setbacks and street wall height of the podium
5. A walking and cycling network through Waterloo that connects Central Sydney to Green Square. The main movement barriers are Botany Road and the Eveleigh rail corridor
6. There are existing and planned separated regional cyclepaths on Wellington Street and George Street
7. The lack of street trees and active shopfronts along Botany Road results in limited visual interest and poor amenity for pedestrians
8. High pedestrian activity is anticipated between the site and Alexandria Park, Australian Technology Park (ATP), Redfern Village and Waterloo Estate once the metro station opens
9. Flooding constraints on Cope Street and Wellington Street that affect the design of ground level retail and basement entries
10. Wind impacts from the west and south that need to be ameliorated in the building design to ensure adequate comfort for pedestrians and to outdoor seating areas
11. A rail corridor passing under the site protected in accordance with State Environmental Planning Policy (Infrastructure) 2007
12. The Waterloo Estate is planned to undergo significant renewal

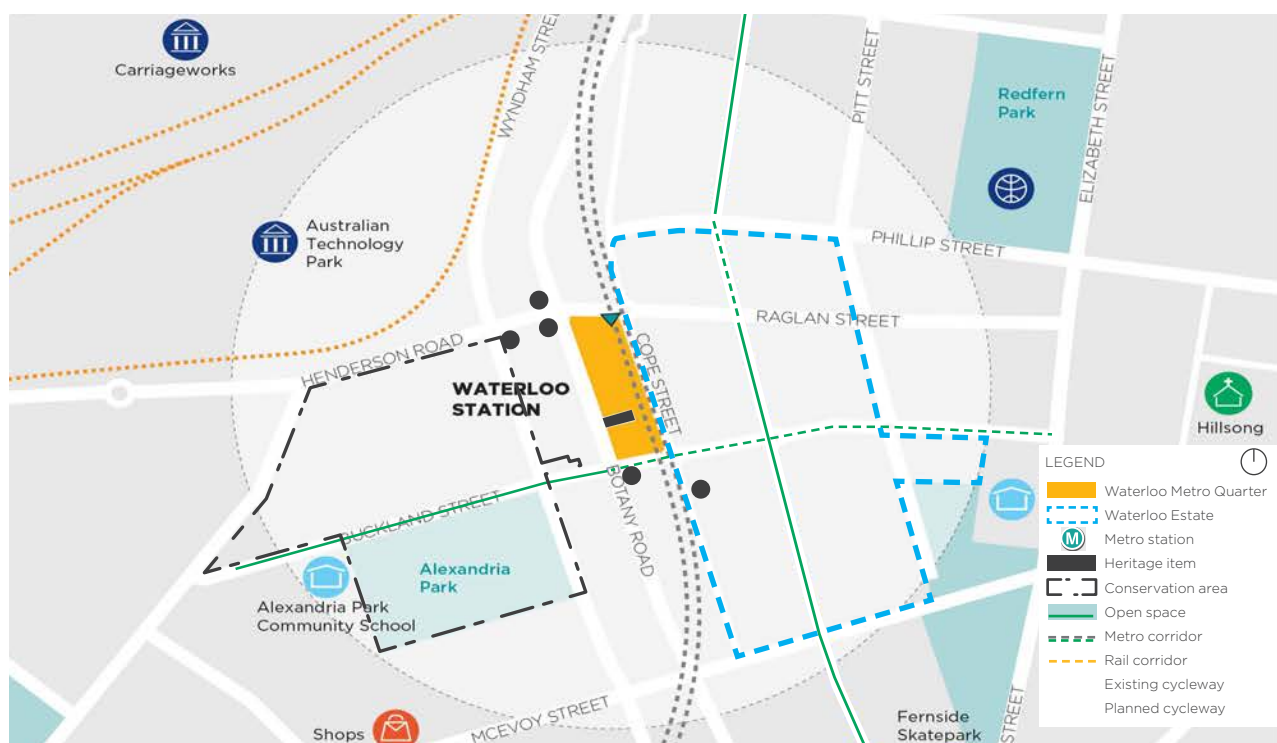


Figure 3 - Locality map

2D Waterloo metro station

CSSI approval

Construction of the metro station has been approved under CSSI 15-7400 (CSSI Approval). The approval includes demolition of existing buildings on site, excavation for the station structures and construction of station elements such as concourses, platforms, lobbies, lifts, escalators, retail spaces and public domain improvements associated with the station (including public domain works to support bus interchange) and space provisioning for constructing the OSD.

The conditions of the CSSI Approval require a Station Design and Precinct Plan and an Interchange Access Plan to be prepared. These will be developed having regard to the interface with the development which is the subject of this Guideline.

Metro station design

Waterloo Station is a cut and cover station. It comprises two station boxes at either end of Cope Street which are separated by a central plaza. The northern station box contains the entry to the station and can be accessed from Raglan Street and the central plaza. The station entry is raised to the Probably Maximum Flood (“PMF”) level to protect it against flooding.

The street level of the station entry includes an ‘unpaid’ area that can be accessed from both Raglan Street and the central plaza. The southern station box mostly contains plant, equipment and the traction power supply system.

The station entries will create a distinctive arrival experience and respond to expected commuter pedestrian flows. The station has generous setbacks from Raglan Street to provide sufficient capacity on the footpaths for commuters walking between the station and major employment areas (e.g. Australian Technology Park). The second door to the station entry provides convenient access for customers interchanging between the metro and bus services on Botany Road. The southern door of the station faces onto a publicly accessible plaza and provides the opportunity to create a different arrival experience which could be more community focused compared to the Raglan Street entry.

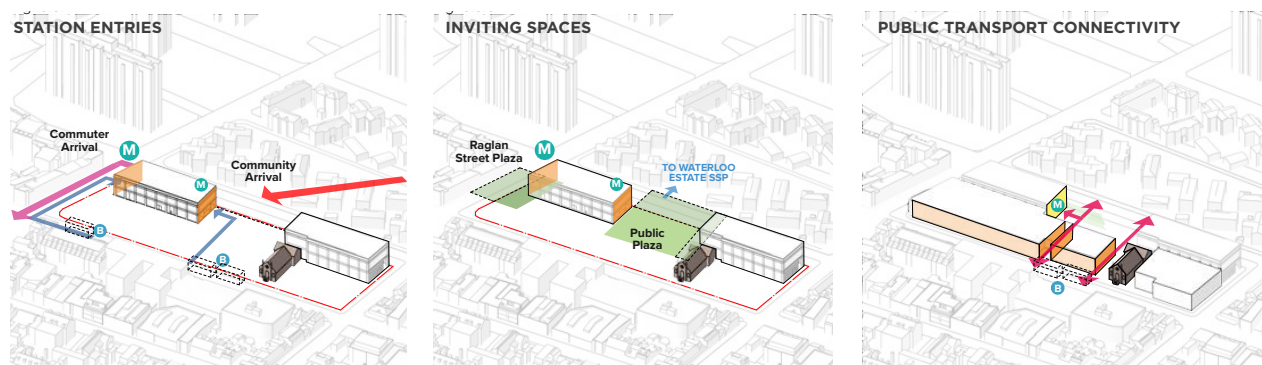


Figure 4 – Key elements of Waterloo Station and its relationship to the surrounding locality

Source: Waterloo Metro Quarter - Urban Design & Public Domain Study, Turner and Turf

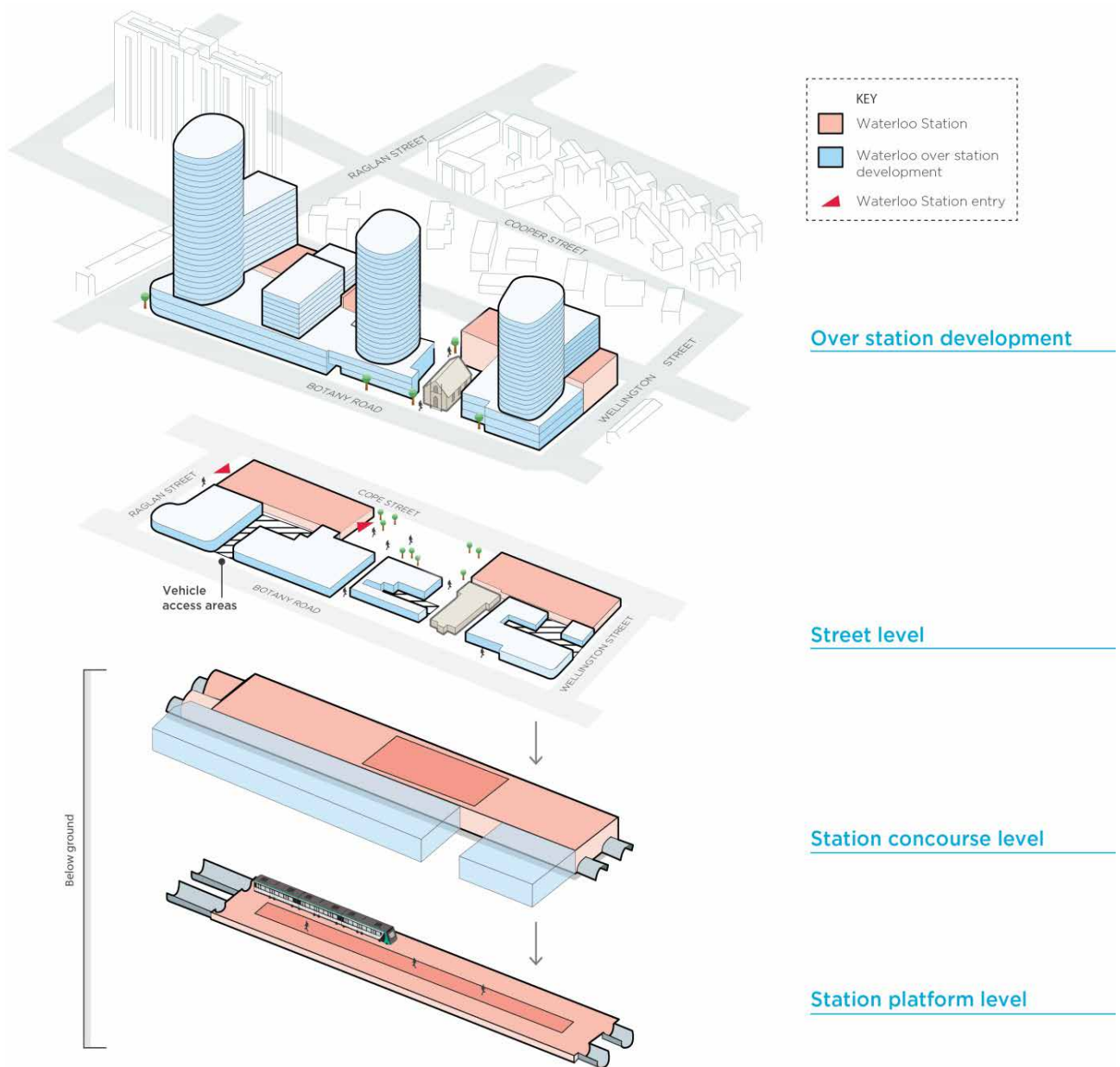
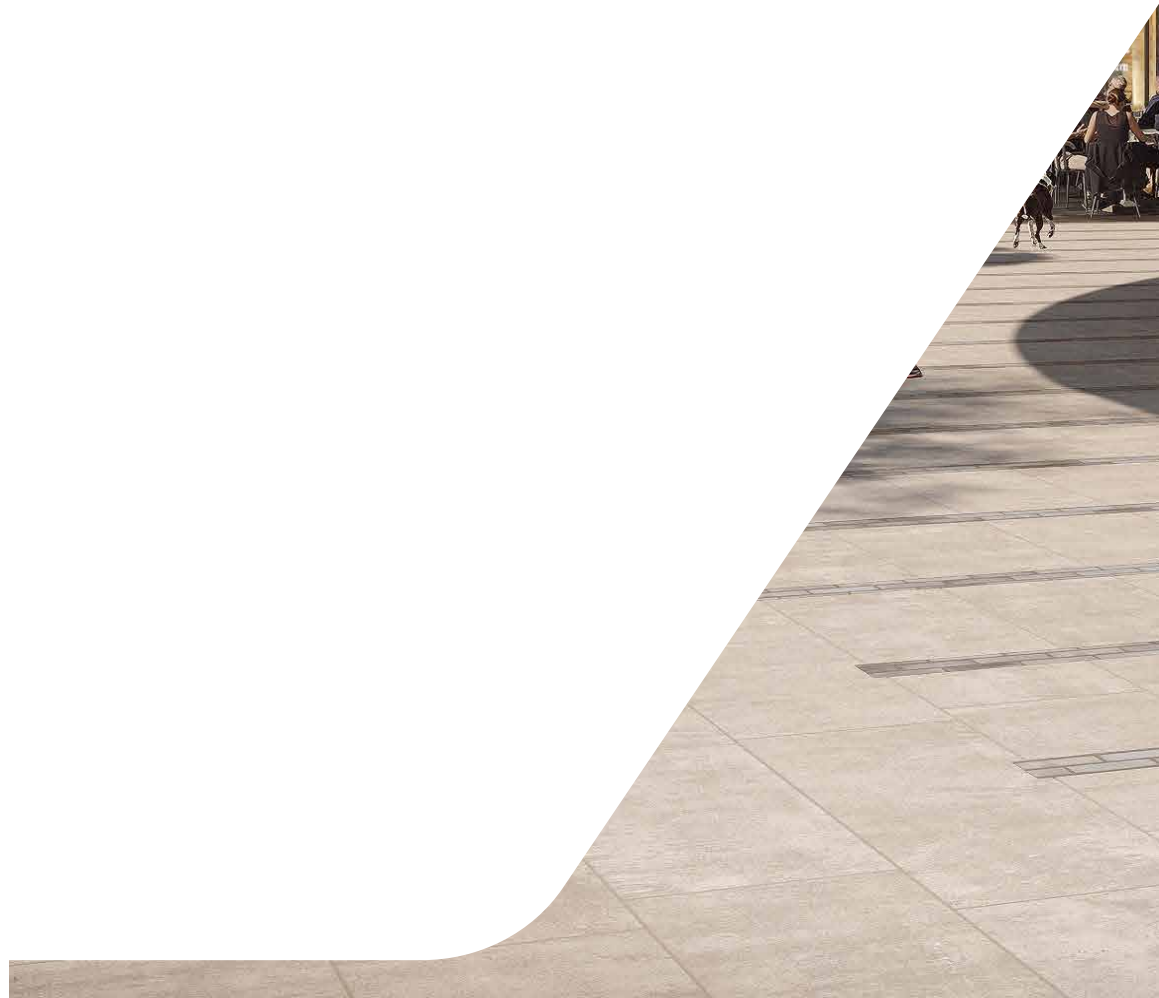


Figure 5 – Relationship between the metro station and over station development (indicative built form shown)

Part 3 Design Guideline





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3A Desired outcomes

The design objectives for the Metro Quarter have been informed by the Waterloo State Significant Precinct vision and objectives. The design objectives are to:

- Support the NSW Government's planning strategies and objectives including the *Greater Sydney Region Plan (2018)* and the *Eastern City District Plan (2018)*
- Enable the development of a mixed use precinct at the site which caters to a range of different uses and works to create a fully integrated station precinct at Waterloo
- Support a range of spaces that would cater for the social and economic needs of the local Waterloo community
- Enhance the community's experience and the urban amenity through the development of an integrated design concept that ensures delivery of a quality public domain area with strong connections to the site's surroundings
- Create an urban environment that drives high usage of the Sydney Metro network responding directly to the principle of transit oriented development
- Enable a building form which maintains excellent solar access to public open spaces and nearby residential areas
- Provide a harmonious relationship between the proposed development of the Metro Quarter and its surrounding heritage context
- Achieve design excellence in the final integrated station development
- Enable a new transport interchange that prioritises public and active transport
- Establish new publicly accessible open space in the form of plazas that would provide access to the station entries, connect the Metro Quarter with surrounding streets and functions as spaces for passive recreation and social interaction
- Embrace sustainability initiatives including lower levels of on-site car parking, stormwater re-use and water sensitive design and measures intended to improve the environmental performance of buildings
- Support the provision of affordable and social housing and ensure the social housing will be tenure blind (i.e. visually indiscernible from the market and affordable housing).

3B Design approach

The following design principles have been adopted for the Metro Quarter to respond to the opportunities and constraints of the site and the surrounding urban context:

- Development **integrated** with the station and public domain that delivers an active transport hub with seamless interchange, pedestrian priority and accessibility. Complementary interfaces between the station and development will be high performing and achieve activation ready functionality.
- **Inclusive** integrated station development and public domain that provides accessible amenity, services and open space, shared democratic spaces for both the commuter and community, and creates places for social interaction and activities for all.
- **Connected** integrated station development and public domain that is legible, safe and walkable day and night, acts as a gateway and community marker. The integrated station development stitches places into the surrounding context and has social connectedness and shared spaces.
- **Diverse** mix and layering of uses and employment with extended hours, fine grain and active street edges. Adaptable mixes of dwelling types and living choices are provided and are architecturally distinctive with variance.
- **Local** reflection of the proud community character and diversity in response to place and context. Local retail, business and services are fostered and embed the arts and local cultures.
- **Liveable** community that creates micro-neighbourhoods and vertical villages, public and community facilities, access to food sources and everyday needs. The integrated station development is contextual, resilient, uses with green infrastructure and high quality materials and finishes.
- **Culture** is respected in the integrated station development and public domain design by seeking endorsement and permission to use Aboriginal Creation and local stories that have been identified through the design phase.

3C Public domain

Objectives:

1. Provide publicly accessible plazas adjacent to the station entries that connect the Metro Quarter to the surrounding streets and neighbourhood
2. Create a high quality, integrated, permeable and multifunctional public domain that caters for movement, recreation and social interaction
3. Provide good levels of solar access and amenity to the public domain
4. The design of the public domain is consistent with Crime Prevention Through Environmental Design principles
5. Balance all forms of movement through creating a public domain which facilitates transport interchange
5. The public domain and landscaping design should meet the requirements of City of Sydney *Urban Forest Strategy 2013* (adopted February 2013)
6. The Cope Street plaza, Raglan Street plaza and through-site links are to be publicly accessible 24 hours a day
7. Publicly accessible areas are to be designed to allow access as required by DDA requirements with consideration of use for people of all abilities
8. Awnings are provided along all street frontages for wind and weather protection (except on the southern side of the central podium where a 10 metres setback is required to the Waterloo Congregational Church)

Design criteria:

1. 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
2. Design of all buildings which overhand Cope Street Plaza are to include treatment to the soffit to provide interest and reduce visual bulk
3. Design of the Cope Street Plaza space underneath any building overhang is to incorporate wind mitigation
4. At least 50 percent of the area of the Cope Street plaza receives at least two hours sunlight between 9am and 3pm on 21 June
9. Awnings located above Council footpaths are to be designed in accordance with Section 3.2.4 of Sydney DCP 2012
10. Public domain lighting in areas under Council's control shall be in accordance with City of Sydney's *Sydney Lights Code* (March 2015)
11. Lighting provided to the plazas and publicly accessible spaces within the development should comply with AS4282-1997.



Figure 6 – Public domain plan

Design guidance:**1.** The Cope Street plaza is to include:

- An open, paved area that supports a range of informal passive recreation activities
- A transition between the level of Cope Street and the finished level of the metro station entry and responds to the site flooding constraints
- Soft landscaping, tree planting, areas for sitting and seating and active frontages along the western edge
- Provides a central activity hub that is flexible to respond to a wide range of development options that could be considered for the Waterloo Estate

2. 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
- An urban setting for social and retail experiences, including with space for the community to meet, pause and engage
- Connections to the existing neighbourhoods with new pedestrian crossings on Cope Street and Raglan Street
- Generous footpath widths to accommodate movement and circulation of pedestrians, opportunities for street furniture and tree planting
- Tree planting to delineate areas for pedestrian movement, social interaction and active frontages along the plaza edge.



Figure 7 – Artist impressions of Cope Street plaza (top) and Raglan Street plaza (bottom)

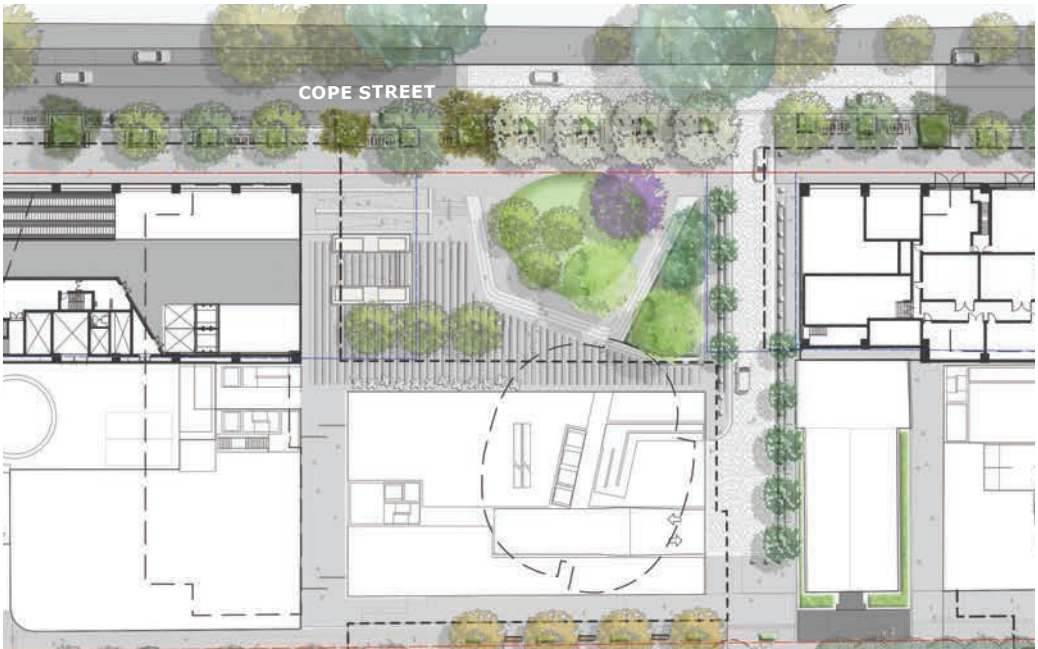


Figure 8 - Indicative design for Cope Street plaza and public domain
Source: Waterloo Metro Quarter - Urban Design and Public Domain Study, Turner and Turf

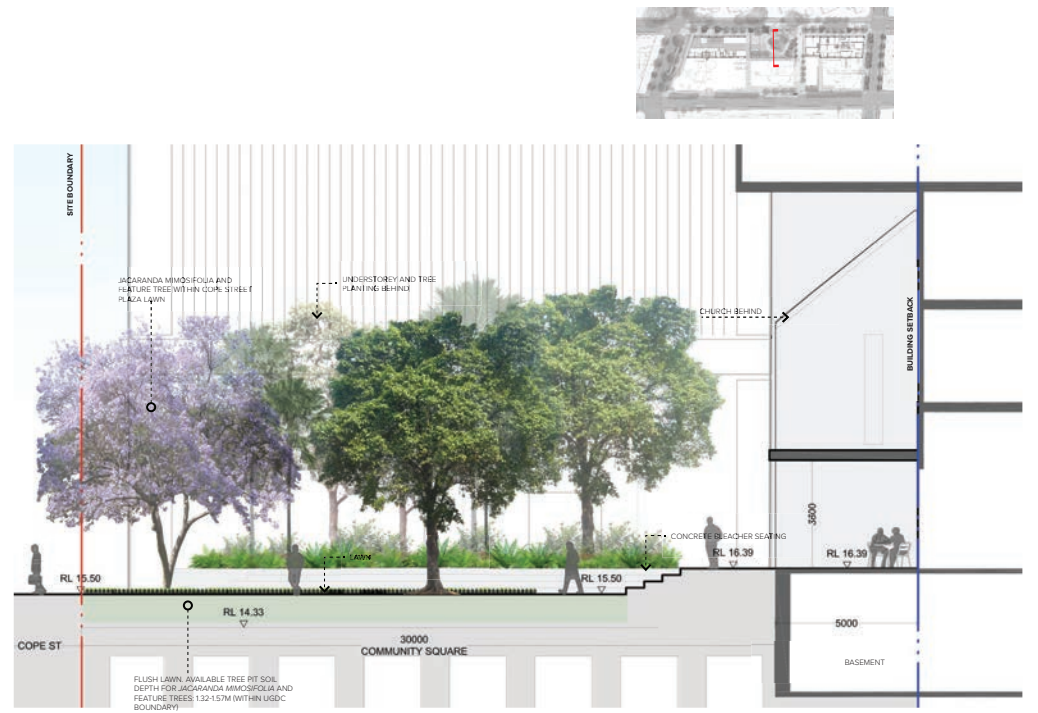


Figure 9 - Section showing indicative design Cope Street plaza and public domain
Source: Waterloo Metro Quarter - Urban Design and Public Domain Study, Turner and Turf

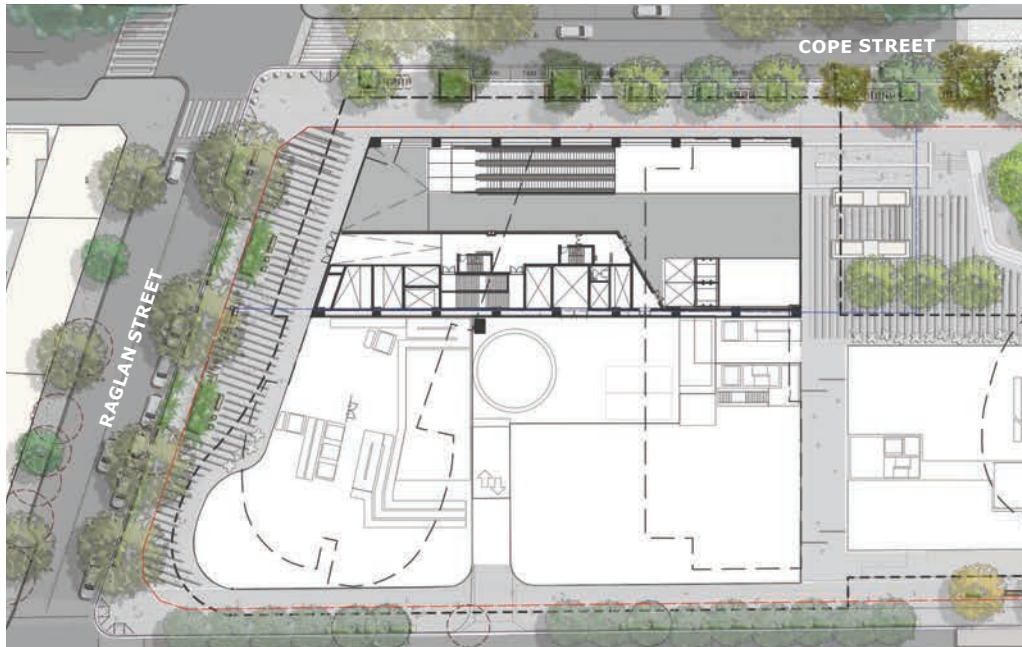


Figure 10 - Indicative design for Raglan Street plaza and public domain

Source: Waterloo Metro Quarter - Urban Design and Public Domain Study, Turner and Turf

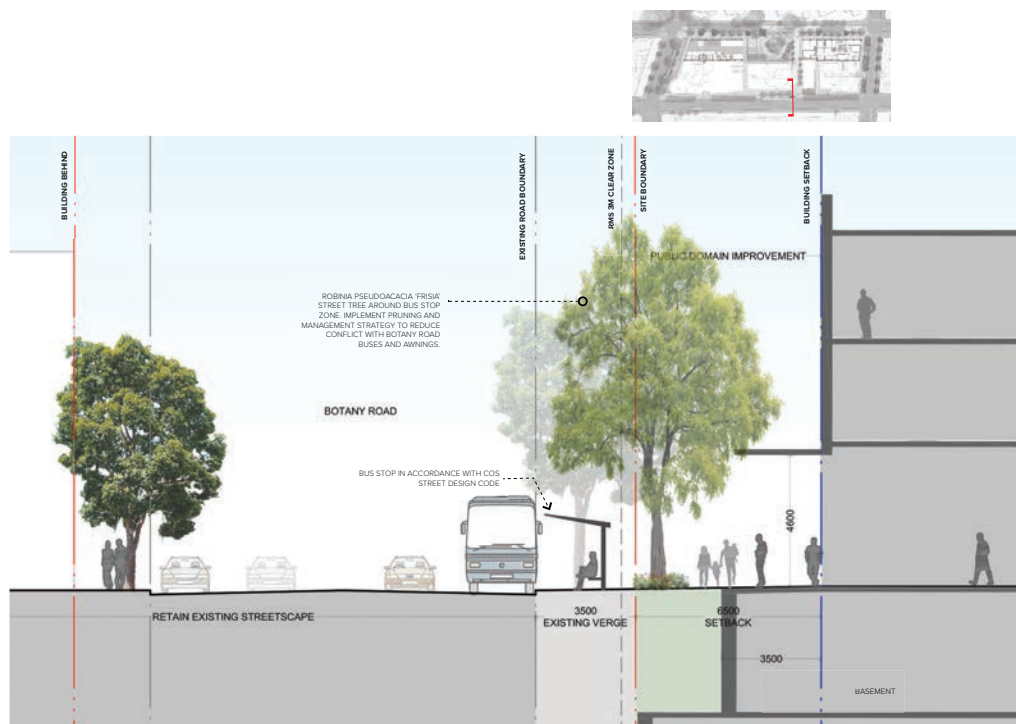


Figure 11 - Section showing Botany Road and basement parking setback

Source: Waterloo Metro Quarter - Urban Design and Public Domain Study, Turner and Turf

3D Streets, lanes and footpaths

Objectives:

1. Provide high quality materials and finishes in the public domain that respond to the character of the local area
2. Expand the public domain by considering the boundary interface with the Waterloo Congregational Church
3. Create visual interest and reflect the character of the area through the selected materials for the public domain
4. Material selection is to include consideration of the mass and/or sound insulation or absorption properties
5. Construct footpaths in accordance with the Sydney Streets Design Code. Design footpaths so that pedestrians, regardless of mobility impairments, are able to move comfortably and safely
6. Provide a new laneway along the southern edge of the Cope Street Plaza that:
 - Prioritises pedestrian movement but also provides access to bicycle parking and resident car parking
 - Uses brick paving or other materials that integrate with the public domain and differentiate it from public roads

Design criteria:

1. 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
2. The through-site link should:
 - Have a minimum width of 6m and have a clear height of at least 6m
 - Align with breaks between buildings so that views are extended and there are is less sense of enclosure
 - Be clearly distinguished from vehicle access ways
 - 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
 - Be clear of obstructions or structures, such as service vents etc
 - Be fully accessible 24 hours a day
 - Be at ground level and lined with active uses
 - Be open at each end
3. Provide wide footpaths and a 5m minimum building setback on the southern side of Raglan Street between the metro station and the Botany Road intersection in accordance with Figures 13 and 14
4. Provide adequate footpath widths and building setbacks between 2.5m and 6.5m along Botany Road in the vicinity of the bus interchange to provide capacity for pedestrians in accordance with Figures 17 and 18
5. Construct footpaths in accordance with the Sydney Streets Design Code. Design footpaths so that pedestrians, regardless of mobility impairments, are able to move comfortably and safely
6. Provide a new laneway along the southern edge of the Cope Street Plaza that:
 - Prioritises pedestrian movement but also provides access to bicycle parking and resident car parking
 - Uses brick paving or other materials that integrate with the public domain and differentiate it from public roads
7. The new laneway prioritises walking and cycling and is designed to accommodate a low volume of car vehicles and low traffic speed - 10kph
8. Development adjacent to the lane is to:
 - Include active uses at ground level to encourage pedestrian activity
 - Include lighting appropriate to the scale of the lane
 - Enhance pedestrian access and activity
 - Avoid projections over the lane which overshadow the lane, obstruct a view or vista or impede pedestrian activity at ground level
 - Ensure access rights of the public and other owners of property abutting the lane
 - Provide access for service vehicles as necessary and design to avoid or minimise any conflict with pedestrian and cyclist functions
9. The buildings are setback from the property boundary in accordance with Figures 12 to 18. Note, the dimensions of the existing public footpaths are indicative only
10. Respond to and complement the City of Sydney's public domain requirements for works on Council land
11. Consultation is to be undertaken with the City of Sydney for any works in, under or over the public footpaths. Consideration should be given to advice from the City of Sydney for any works contiguous with public footpaths

12. Street furniture is to be consistent with the Sydney Streets Design Code
13. Integrate new and relocated utilities underground within the street reservation, with services located underground and in a manner that facilitates tree planting
14. 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
15. In designing that portion of the cycleway adjacent to the site, consider its relationship with the design (if available) of the regional cycleway on Wellington Street from Botany Road to George Street, including how it would integrate with these other elements.

Design guidance:

1. 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
 - Assist in guiding people along the link while enabling long sightlines
2. Different paving materials or patterns can be used to denote significant spaces of the public domain such as the publicly accessible plazas
3. Street furniture should be co-located with trees where possible to avoid clutter and create focus points for community activity
4. 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.

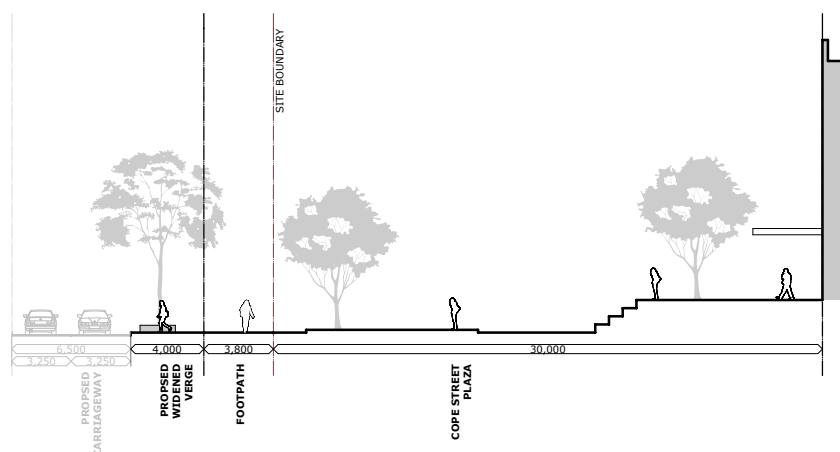


Figure 12 – Section G-G Cope Street Plaza

Source: Turner Studio

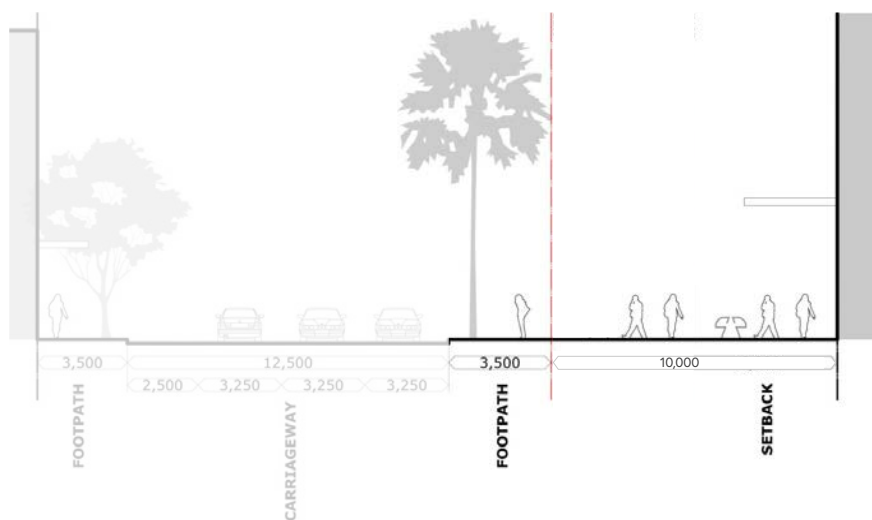


Figure 13 – Section A-A Raglan Street

Source: Turner Studio

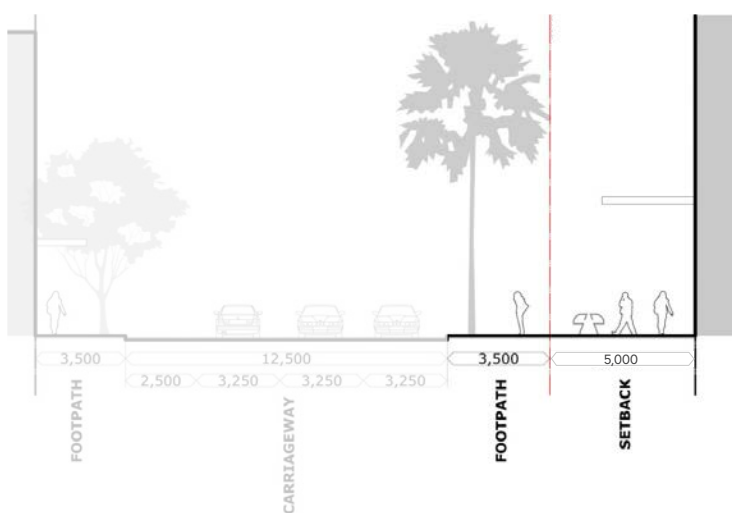
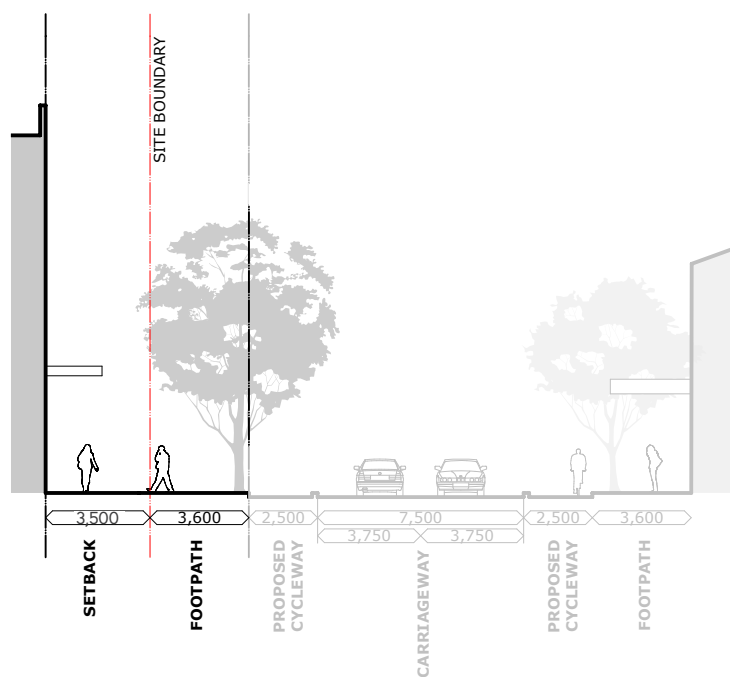


Figure 14 – Section B-B Raglan Street

Source: Turner Studio



Note: proposed cycleways are subject to confirmation as part of the CSSI approval

Figure 15 – Section C-C Wellington Street

Source: Turner Studio

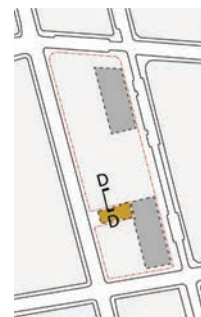
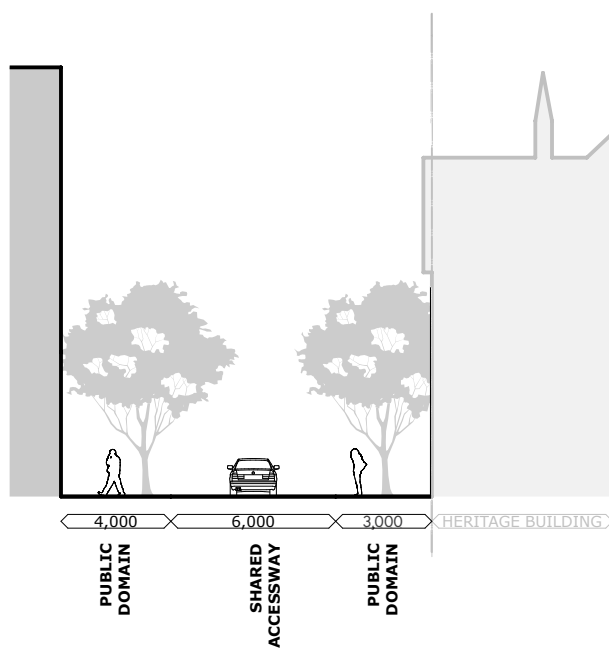


Figure 16 – Section D-D Shared Street

Source: Turner Studio

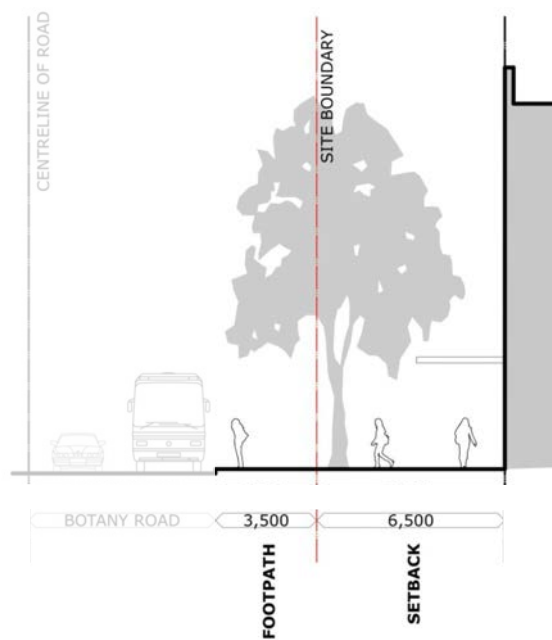


Figure 17 – Section E-E Botany Road

Source: Turner Studio

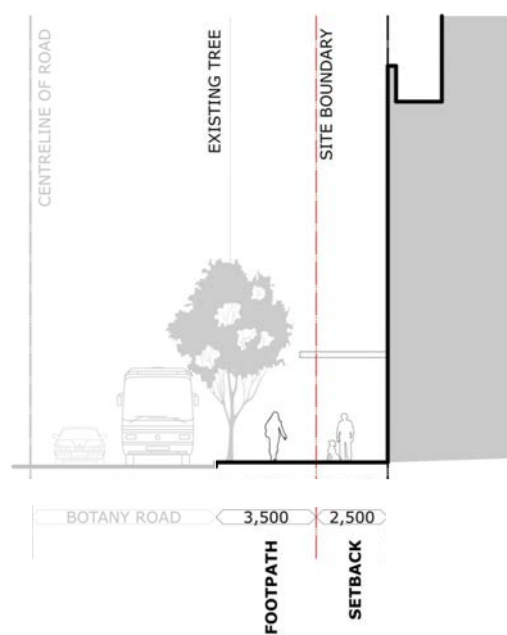


Figure 18 – Section F-F Botany Road

Source: Turner Studio



3E Tree canopy cover

Objectives:

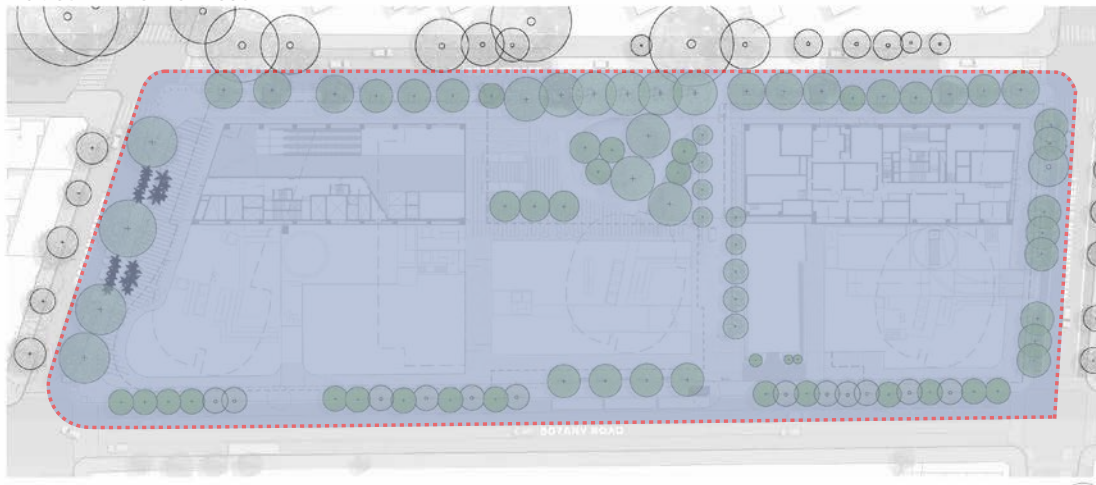
1. Mitigate the impacts of urban heat island effect through the provision of tree planting and soft surface areas
2. Enhance the biodiversity of the site through providing a range of native species and opportunities for urban habitat

Design criteria:

1. 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
2. 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)
 - **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)
3. 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
4. New habitat features including trees, shrub and ground cover vegetation, waterbodies, rockeries and green roofs and walls are to be included, wherever possible
5. 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
6. Shrubs are densely planted and trees are to be well spaced, as outlined in the City's Landscape Code
7. Awnings and canopies are to be located and designed to maximise tree canopy
8. Tree planting details are to specify horizontal clearance to awnings and buildings and tree spacing
9. 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

Design guidance:

1. Consult with City of Sydney and obtain their agreement for any tree planting within Council owned land.

23% OVERALL CANOPY COVER

Total site area: 18,952m²

Total canopy cover: ~4,359m² (i.e. 23%)

50% STREET CANOPY COVER

Total street area: 6,084m²

Total canopy cover: ~3,042m² (i.e. 50%)

Figure 19 – Indicative tree canopy planting strategy

Source: Turner Studio

3F Tree planting specifications

Objectives:

1. To create a safe welcoming and healthy place to live, high quality public spaces, and a sustainable and adaptable urban environment
2. Provide a resilient, healthy and diverse urban forest
3. Provide an integrated long-term strategy that promotes trees as critical infrastructure and assets
4. Retain and protect existing trees and canopy cover.

Design criteria:

1. 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*
2. 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
3. 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
4. All new trees shall be installed in accordance with new tree planting requirements contained in Appendix A
5. 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
6. Consult with the City of Sydney in relation to tree planting in the public domain, comprising the public footpaths around the Metro Quarter
7. The following design criteria apply for tree planting around the Metro Quarter:
 - 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
 - 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
 - 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
 - Surrounding pavements and tree grates shall allow for proper expansion of the trees base over time
 - Trees shall be planted a minimum of 675mm from the back of adjoining kerbs. Distances greater than are 1000mm preferred
 - Trees shall be transported, lifted and planted in a manner that limits any possibility of physical damage
 - 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.

3G Wind

Objectives:

1. Mitigate potential wind impacts and ensure adequate levels of comfort are achieved in the public domain for intended activities
2. Ensure the wind environment created by the development does not result in uncomfortable or unsafe wind conditions on publicly accessible open space.

Design guidance:

1. Wind impacts should be managed through built form massing, where possibly, rather than relying solely on mitigation measures such as awnings and planting.

Design criteria:

1. Mitigate wind impacts on the public domain and achieve the following targets:
 - At least 50% of the publicly accessible open space meets the wind comfort standard for sitting. Outdoor dining and casual seating areas should correspond with these areas
 - Waiting areas at bus stops and pedestrian crossings is to meet the wind comfort standard for standing
 - Development must not exceed the wind safety standard of 24m/s (gust - 0.1% exceedance).

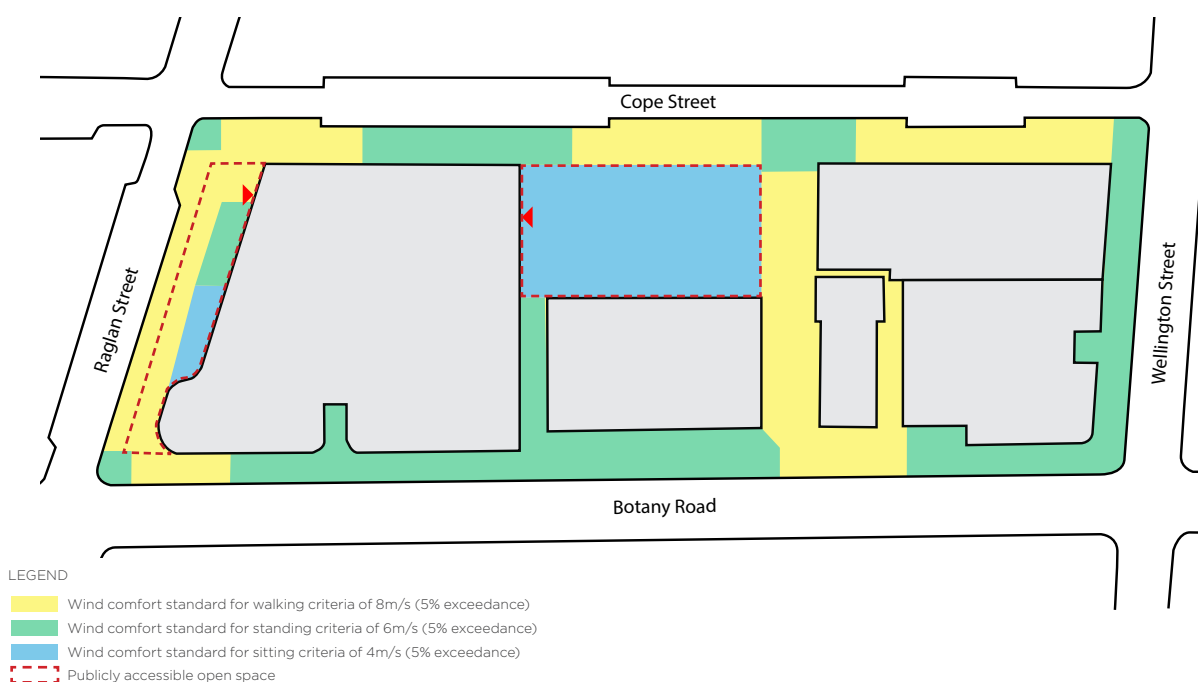


Figure 20 - Wind comfort and safety targets (ground level)

3H Building uses

Objectives:

1. Provide a diverse range of businesses and community activities that support a vibrant day and night-time economy and activate the public domain
2. Provide a mixed use precinct with residential, retail, commercial and community uses, and where appropriate, entertainment uses
3. Manage potential noise conflicts so that appropriate levels of residential amenity and non-residential activity are achieved

Design criteria:

1. Provide 70 social housing dwellings and 5% of the residential floor space as affordable housing
2. The social housing and affordable housing is to be not readily distinguishable from the market housing
3. Provide a minimum of 2,000m² of floor space for community facilities in accordance with LEP 2012
4. The community facilities can be located within the podium and should have an identity, connection and presence to Cope Street Plaza
5. The entrance to the community facilities should be easily identifiable and accessible from the plaza
6. A Noise Management Plan is required to ensure compatibility of late night premises uses and residential uses. The plan must provide a framework for setting noise limits for each noise-generating use within the development to ensure that sensitive receivers maintain acoustic amenity

Design guidance:

1. The tenancy mix has complementary uses, affordable convenience and diverse retail experiences and supports the Metro station as a destination and gateway to surrounding neighbourhoods
2. Local community focussed businesses and activities are encouraged to support the creation of a sense of place and activation of the surrounding public domain and publicly accessible areas
3. Day and night time activity is supported by local shops, hospitality, entertainment and cultural venues
4. Late night retail, entertainment and live music venues that improve night time safety and surveillance within the area are encouraged
5. Schedule 3 of Sydney Development Control Plan 2012 ("DCP 2012") provides specific guidance and information for late-night trading, including the maximum trading hours for a business based on its type and location

3I Street activation

Objectives:

1. Maximise active frontages through the ground plane and provide for a high quality pedestrian experience
2. Locate uses at ground level that activate the public domain and provide a convenient experience for metro customers and local community
3. Respond to site flooding constraints and ensure flood protection measures do not impact activation
4. Activation of through-site links and laneway

Design criteria:

1. Provide fine grain activation at ground level along all street frontages including Botany Road
2. Provide fine grain retail surrounding the Cope Street Plaza and along through site links
3. Provide frequent building entries that face and open towards the street
4. Building and ground floor entries are to be located and spaced to maximise street level activation
5. Provide wider footpaths along Botany Road adjacent to the bus stops that accommodate pedestrians and encourage retail activation

Design guidance:

1. Active frontages are to be designed with the ground floor level at the same level as the footpath, where possible
2. In flood affected areas, the design response will need to manage the potential impact of flooding on street level activation with design responses to manage the potential impacts of flooding on street level activation, such as staggered and stepped shop fronts, internal level change instead of external level changes
3. New development should avoid expansive inactivated retail frontages that are visible at the ground level
4. Minimise the extent of grilles, vents, mechanical plant and other operational and security measures in area that front onto the public domain
5. Locate high activity areas and seating overlooking the public domain, incorporating large doors and windows and minimise the use of security grilles in shopfront design
6. Incorporate large extents of transparent glass shopfronts along Botany Road that create the perception of indoor activity

3J Podium and street wall

Objectives:

1. Minimise the visual bulk, scale and unbroken length of the podium
2. The form, scale, massing and articulation responds to the local context
3. Respect the Waterloo Congregational Church and enhance the setting for the heritage item

Design criteria:

1. Articulate the podiums as a separate element from the towers above and use accessways or building cut-outs to break up the overall length of the podium
2. Materials and finishes are to be used in the podium that respond to the local character and the surrounding built environment with articulation that expresses a fine vertical grain
3. The height, proportion, scale and architectural articulation of the Botany Road podium must consider the proportion, scale and architecture of the Church
4. The following setbacks apply to the podium to increase the church's visual presence within the streetscape:
 - A minimum of 10 metres from the Botany Road street alignment on either side of the church
 - A minimum of 6.5 metres from the northern face of the church at ground level
 - A minimum of 4 metres from the southern face of the church at ground level
 - A minimum of 10 metres from northern face of the church at the tower level
 - A minimum of 14 metres from the southern face of the church at the tower level
 - A minimum of 3 metres at the tower level from the street wall on Wellington Street

5. Encourage active uses at the southern setback of the church and opportunities for Church users to meet
6. Promote safe access and passive surveillance in and around the setback areas between the Metro Quarter and the Church consistent with crime prevention through environmental design (CPTED) principles

Design guidance:

1. The design of the podium respects the heritage significance of the church:
 - The height of the podium on either side of the church aligns with the height of the church pinnacles
 - The podium setback from Botany Road aligns on either side with the front face of the church
 - Setbacks are provided from the sides of the church to reveal it as a freestanding building
2. Pedestrian movement around the church could be improved by, for example, removing the boundary fence, integrating the landscape treatment and public domain. This is subject to further consultation and obtaining approval from the church



Figure 21 – Podium and Street Wall - Engaging Waterloo Congregational Church

Source: Waterloo Metro Quarter - Urban Design & Public Domain Study, Turner and Turf

3K Built form above the podium

Objectives:

1. Provide architectural diversity in the built form above the podium
2. Provide slender tower forms and reduce the visual bulk through articulation of the facades
3. Minimise overshadowing impacts on Alexandria Park and the wider public domain

Design criteria:

1. The three tower buildings must not be identical in appearance and architectural diversity is encouraged through the design excellence process
2. The residential towers must have a maximum floorplate size of 900m² (gross building area)
3. The built form of the towers, including any articulation, must be in accordance with any building envelopes approved by SSD-9393
4. Design of residential mid-rise buildings and towers will need to be in accordance with the *NSW Apartment Design Guide*
5. Wind mitigation is to be achieved through building form with reliance on devices such as impermeable canopies, awnings, pergolas and trees as secondary measures
6. Identify opportunities to improve solar access to Alexandria Park through redistribution of floorspace and building bulk and scale between the hours of 9am and 10am in midwinter (21 June) when compared to the shadow cast by the indicative scheme lodged with the Response to Submissions

Design guidance:

1. Articulate the facade of the towers so they present as multiple forms with vertical expression and incorporate elements of relief to reduce the visual bulk and scale
2. The podium and towers above should read as separate and distinct elements with their own architectural expression, articulation and materials strategy
3. Differentiate the architectural expression of the towers from the building podium using design measures such as different architectural forms, setbacks, materials, articulation
4. The form of the towers should respond to the wind conditions and could be either curvilinear or rectilinear subject to appropriate mitigation of wind impacts on the public domain
5. Wind mitigation devices such as impermeable canopies, awnings, pergolas and trees are incorporated where there is potential for significant wind downwash from buildings and where required to achieve the relevant wind comfort and/or safety criteria

3L Residential amenity

Objectives:

1. Minimise the potential noise impacts primarily along the western edge of the site
2. Minimise the wind impacts across the site
3. Provide natural ventilation and solar amenity for residents of the apartment buildings
4. Provide sufficient areas for communal and private open space

Design criteria:

1. Noise amenity to be confirmed against the following requirements:
 - Clause 3.6 of the *Development Near Rail Corridors and Busy Road - Interim Guideline for Noise Criteria* for all uses including windows closed and
 - Clause 4.2.3.11 of *Sydney DCP 2012* for windows and doors open
2. Refer to part 4J of the *NSW Apartment Design Guide* and clause 3.8 of *Development Near Rail Corridors and Busy Road - Interim Guidelines* for general guidance on how to reduce the impact of noise, noting that these measures may not be sufficient to meet the required noise criteria
3. Residential apartments are to fully comply with the requirements of the *NSW Apartment Design Guide* for natural ventilation, solar amenity, communal open space and private open space
4. The design must consider potential wind impacts and incorporate appropriate mitigation measures to provide amenity and comfort

Design guidance:

1. Materials with mass, sound insulation and/or absorption properties can be used to address or mitigate environmental impacts such as noise
2. Appropriate noise mitigation measures could include:
 - Orientating buildings to reduce the length of frontages facing Botany Road with no single aspect apartments facing the street
 - Balconies that are re-entrant to the building facade
 - Operable windows located off protected balconies instead of the external facade
 - Bedroom windows facing east, north or south to minimise noise impacts from Botany Road to the west
 - Acoustic baffles and use of materials with high sound insulation and/or absorption properties
3. Communal open space and roof top gardens can be provided above the podium
4. Meet the minimum private open space requirements under the *NSW Apartment Design Guide*
5. Encourage communal open space areas to include gardens for local food production and community interaction

3M Solar access and amenity

Objectives:

1. Ensure solar access to the public domain on the site including Cope Street plaza and Raglan Street plaza
2. Minimise overshadowing on Alexandria Park and the wider public domain

Design criteria:

1. Development does not result in any additional overshadowing of Alexandria Park after 10am on 21 June
2. No more than 30% of Alexandria Park excluding the oval (as shown in Figure 21) is overshadowed by the development as measured at any time after 9am on 21 June

3. Proposed apartments in a development and neighbouring developments must achieve a minimum of 2 hours direct sunlight between 9am and 3pm on 21 June onto at least 1m² of living room windows and a minimum 50% of the required minimum area of private open space area

Note: This applies to at least 70% of the apartments in a development in accordance with the NSW Apartment Design Guide

4. New development does not create any additional overshadowing onto a neighbouring dwelling where that dwelling currently receives less than 2 hours direct sunlight to habitable rooms and 50% of the private open space between 9am and 3pm on 21 June



Figure 22 – Solar access to Alexandria Park

Source: Turner Studio

3N Pedestrian and cycle network

Objectives:

1. Prioritise walking and cycling trips in and around the Metro Quarter over vehicles
2. Manage potential conflict between cyclists and pedestrians through the design of the public domain and locations of bike parking
3. Provide a pedestrian network that aligns with key pedestrian desire lines and is integrated with the active frontages

Design criteria:

1. Provide generous footpath widths that can accommodate the forecast pedestrian flows from the metro station
2. Provide marked pedestrian crossings at the Raglan Street and Cope Street intersection and at the Wellington Street and Cope Street intersection in accordance with the Interchange Access Plan
3. Provide on-site bicycle parking for residents at a minimum rate of 1 space per dwelling and 1 visitor space per 10 dwellings
4. Provide bike parking spaces within the precinct for Metro customers in accordance the CSSI Approval

Design guidance:

1. End of trip facilities are encouraged in the bicycle storage areas for the commercial uses
2. A safe path of travel is provided from bike parking areas to entry/exit points and is to be marked
3. Access to bike parking areas should be:
 - A minimum of 1.8m wide to allow a pedestrian and a person on a bike to pass each other and may be shared with vehicles within buildings and at entries to buildings)
 - Accessible via a ramp
 - Clearly identified by signage
 - Accessible via appropriate security or intercom systems

30 Carparking and access

Objectives:

1. Prioritise walking, cycling and public transport above private car use
2. Provide safe, convenient and legible movement for the public
3. Provide convenient access between different transport modes
4. Encourage public transport use and minimise the amount of car parking provided within the development

Design criteria:

1. The maximum number of residential carparking spaces is in accordance with the Category A rate for residential flat buildings under the *City of Sydney LEP 2012* as follows:
 - 0.1 spaces for each studio dwelling
 - 0.3 spaces for each 1 bedroom dwelling
 - 0.7 spaces for each 2 bedroom dwelling
 - 1 space for each 3 or more bedroom dwelling
2. Design basement car parking including depth and setback from property boundaries to ensure adequate soil volume and depth for street tree planting
3. Vehicular access to the site should be located and designed to minimise potential conflicts with metro customers and pedestrians and disruption to the active frontages
4. Car share parking spaces are to be provided in addition to the maximum number of car parking spaces permitted in the development and be in accordance with the following rates:
 - 1 per 50 car spaces provided for residential development (i.e. Category A rate)
 - 1 per 30 car spaces provided for office premises, business premises or retail premises (i.e. Category D rate)

Design guidance:

1. Comply with the car parking rates and residential cap specified in the consent to SSD-9393
2. The design of the basement car parking should consider adaptability for other uses in the future, for example, late night entertainment venues. Provision for larger floor ceiling heights, mechanical ventilation etc may need to be considered to increase the flexibility of basement car parking for alternative uses
3. Car share parking spaces should be:
 - Publicly accessible 24 hours a day seven days a week
 - Located together
 - Located near and with access from a public road and integrated with the streetscape through appropriate landscaping where the space is external
 - Clearly designated by signs as being for car share scheme use
4. Car share parking spaces located on private land should be retained as common property by the Owners Corporation of the site and not to be sold or leased to an individual owner or occupier at any time

3P Service vehicles and waste collection

Objectives:

1. Ensure that demand for transport generated by development is managed in a sustainable manner
2. Locate servicing and loading within buildings where access is immediately adjacent to the street to minimise potential conflicts with pedestrians and cyclists

Design criteria:

1. Service vehicles and garbage trucks must access and egress the site in a forward direction. Mechanical turntables can be provided in the loading areas
2. Separate parking spaces are to be provided for service vehicles and are not to be shared with parking provided for any other purpose
3. Waste collection and loading are to be in accordance with the City of Sydney's *Guidelines for Waste Management in New Developments*
4. Waste collection and loading areas are to be accommodated wholly within the development in the following order of preference:
 - In the building's basement
 - At grade within the building in a dedicated collection or loading bay
 - At grade and off street within a safe vehicular circulation system where in all cases vehicles will enter and exit the premises in a forward direction
5. The waste collection and loading points are to be designed to:
 - Allow waste collection and loading operations to occur on a level surface away from vehicle ramps
 - Provide sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all ducts, pipes and other services

Design guidance:

1. Vehicle access for collection and loading should provide for the following:
 - 9.25m Council garbage truck and a small rigid delivery vehicle
 - Minimum vertical clearance of 4.0 metres clear of all ducts, pipes and other services, depending on the gradient of the access and the type of collection vehicle
 - Collection vehicles to be able to enter and exit the premises in a forward direction. Where a vehicle turntable is necessary to meet this requirement, it is to have a capacity of 30 tonnes
 - Maximum grades of 1:20 for the first 6m from the street, then a maximum of 1:8 with a transition of 1:12 for 4m at the lower end
 - A minimum driveway width of 3.6m
 - A minimum turning circle radius of 10.5m
2. Where vehicle access is via a ramp, design requirements for the gradient, surface treatment and curved sections are critical and must be analysed at an early stage in the design process
3. Separate parking spaces for service vehicles are to be provided and are not to be shared with parking provided for any other purpose
4. Service vehicle parking spaces including spaces for bike couriers are to be:
 - Located near vehicle entry points and near lifts
 - Clearly designated and signposted for service vehicles only
 - Screened from the street where possible; and
 - Located completely within the boundary of the site, clear of parked vehicles and clear of through traffic
5. Parking spaces for service vehicles are not to be used for other purpose such as storage of goods and equipment

3Q Integration with the metro station

Objectives:

1. Integrate the design of the development with the metro station

Design criteria:

1. OSD structural elements, building grids, column loadings, building infrastructure and services to coordinate/interface with the metro station
2. Coordinate OSD future lift cores, access, parking and building services with the metro station
3. The station and over station development must have functional autonomy and be designed to ensure that:
 - All building services required for the OSD's use, operation and maintenance are located entirely within the OSD and must not pass through the station unless specifically required by relevant authorities
 - All pathways required for emergency egress and access for the station are located within the station and independent of the development
 - All pathways required for maintenance access of the station are located within the station are independent of the development with the exception of shared loading docks
 - The utility services for the station must not pass through the OSD
4. Provide adequate clearance zones to ensure that the location of air intakes and exhaust outlets, including cooling tower discharges, eliminates the potential for cross contamination of air flows for exhaust and smoke discharge (in event of fire)

Design guidance:

1. Uses and activities should be integrated and services coordinated between the OSD and the metro station wherever possible
2. Back of house operations and services should be consolidated wherever possible while maintaining any required separation between OSD, the metro station and the station's operations
3. OSD entry lobbies are not expected to be located within the station. However, the detailed design may be amended to incorporate these elements

3R Sustainability

Objectives:

1. Create an integrated sustainable infrastructure network incorporating transport facilities, public domain, water systems and vegetation
2. New development encourages sustainable water use practices
3. Reduce energy consumption, emissions and urban heat island effect and improve air quality and the absorption of carbon

Design criteria:

1. Comply with the performance targets specified in development consent SSD-9393
2. Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways

Design guidance:

1. Reduce energy consumption and carbon emissions using measures that are:
 - Affordable for all in the community
 - Achieve low or zero carbon
 - Efficient in consumption
 - Resilient in supply and network security
 - Flexible and adaptable
2. Maximise opportunities for the installation of solar photovoltaic systems aiming to meet 5% of the forecast electricity consumption of the Metro Quarter
3. Rainwater and/or stormwater harvesting tanks to meet BASIX requirements can be used to irrigate public open spaces
4. Green roofs and/or green walls provide amenity, improve microclimate conditions and create comfortable spaces for recreation
5. Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways
6. WSUD measures could include gross pollutant traps, passive irrigation measures, bio-retention areas and rainwater harvesting
7. Consider enabling, or not precluding, future energy technologies and initiatives
8. Energy efficient and low carbon measures could include:
 - Heat pumps to achieve the required hot water demand
 - Provision of mixed mode HVAC for commercial and retail areas
9. Water efficiency measures could include:
 - Water efficient fixtures and fittings
 - Using drought-tolerant, low water use vegetation in gardens and green roofs to reduce irrigation water use.

3S Stormwater and flooding

Objectives:

1. Improve water quality and reduce stormwater runoff
2. Manage flooding impacts and provide design responses that are integrated with the public domain and ensure street activation

Design criteria:

1. Provide a total on-site detention volume of approximately 480m³. On-site detention should be situated above the 100 year ARI flood level to facilitate discharge into potentially fully charged stormwater pipes
2. The development should implement measures to achieve the following water quality targets:
 - Reduction of baseline annual pollutant load for litter and vegetation larger than 5mm by 90%
 - Reduction of baseline annual pollutant load for total suspended solids by 85%
 - Reduction of baseline annual pollutant load for total phosphorous by 65%
 - Reduction of baseline annual pollutant load for total nitrogen by 45%
3. The building floor levels are to be generally consistent with the flood planning levels below:
 - Residential habitable rooms: 100 year ARI flood level + 0.5m of the PMF (whichever is the higher)
 - Residential non-habitable rooms: 100 year ARI flood level
 - Retail floor levels: 100 year ARI flood level with stepped up zone inside property for shelter in place evacuation for emergency response
 - Below ground car parking: 100 year ARI flood level + 0.5m of the PMF (whichever is the higher)
 - Areas contiguous with the metro station (including station entrances) are to be compliant with the CSSI approval

Design guidance:

1. Where retail uses are raised above footpath levels to address flooding impacts, appropriate transitions are to be provided between the shopfront and the footpath to ensure street activation and appropriate public domain treatment
2. Innovative design solutions may be considered for flood mitigation purposes, such as split level shops with entry threshold and less sensitive activities at the same level as the public domain (i.e. within flood affected area) and more sensitive uses and equipment raised above the flood level

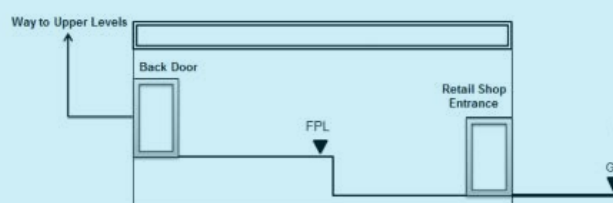


Figure 23 – Possible flood mitigation design

3T Waste management

Objectives:

1. Ensure that each dwelling has adequate space to manage waste and recycling
2. Ensure that buildings provide appropriate facilities to manage waste and maximise recovery of resources
3. Ensure that residential amenity is not impacted by waste systems and collection

Design criteria:

1. Comply with the City of Sydney's *Guidelines for Waste Management in New Developments*
2. Provide space inside each dwelling for separate storage of at least two days' volume of general waste, recyclables and compostable material
3. Provide a centralised waste and storage area(s) near the collection point with capacity to store all waste and recycling likely to be generated in the building(s) in the period between normal collection times
4. Provide a separate space (attached to the waste and storage area) for the storage and recycling of bulky waste, textile waste and problem waste for collection
5. If a chute system is used, a dual chute system (i.e. one chute for waste and one for recycling) is to be provided for buildings with more than nine storeys
6. A chute room is required on each habitable floor that has a chute system. The chute room is to be designed in accordance with the City of Sydney's *Guidelines for Waste Management in New Developments*

Design guidance:

1. Minimise noise from the operation of the waste and recycling management system to residential units by locating chutes away from habitable rooms and provide acoustic insulation to the waste service facilities or residential units, where necessary
2. The waste handling, storage and collection systems for residential and non-residential waste are to be separate and self-contained with separate keys and locking systems
3. Provide easy access from the central waste and recycling storage area to the nominated collection point
4. Noise and odour from the non-residential waste and recycling management system must not impact on the other occupants within the development
5. The design and management of the waste management system is to physically and actively discourage non-residential tenants from using residential waste and recycling systems
6. The design of the waste management should discourage waste generation and encourage recycling.

3U Culture

Objectives:

1. Reflect Waterloo's distinct culture in a design approach that respects and celebrates the area's significant heritage and contemporary cultural values
2. Express Aboriginal cultural heritage values and narratives and integrate culture with the design of the built form, landscape and public art
3. Embrace and respond to Transport for NSW's *Reconciliation Action Plan 2019-2021*

Design criteria:

1. Develop measures in response to Transport for NSW's *Reconciliation Action Plan 2019-2021* to improve employment, empowerment and economic development opportunities for Aboriginal and Torres Strait Islander peoples
2. Participation of Aboriginal artists, designers and landscapers is encouraged as part of the creative development of place-making and built form to incorporate and reflect Aboriginal cultural values

Design guidance:

1. Integrated and innovated design that showcase contemporary interpretations of traditional forms and narratives is encouraged
2. Consider providing cultural programs as part of the development including Aboriginal cultural programs
3. Develop programs should engage and link the various communities within the Metro Quarter through ongoing and temporary activities that enliven and interpret the location
4. Design processes should respect the tangible heritage items within and surrounding the Metro Quarter and heritage interpretation processes should make accessible intangible heritage values and histories of the area

3V Public art

Objectives:

1. Integrate public art in the urban environment to offer unique experiences and bring a diverse and changing community together
2. Build an authentic sense of place through activating the site and enabling the creative voices of the local community and its artists to be embedded in the design
3. Create opportunities to celebrate Aboriginal culture and voices within the context of the wider cultural narratives of Waterloo

Design criteria:

1. The *Sydney Metro Public Art Strategy* will be used to deliver public art for the station
2. Deliver public art that is coordinated with the design and considers opportunities to:
 - Connect and orientate the Metro Quarter to its neighbouring villages, supporting pedestrian movement and experience
 - Support an active street life, public access and personal safety
 - Integrate public art with the planning and delivery of landscaping and way finding
 - Provide art works within the station entrance that are publicly visible and enhance the entry experience
 - Deliver public art in locations that correspond with high movement corridors, sight lines, key entry and activation areas
 - Allow artists to respond to the site and be embedded into the early stages of the design process
3. Any artworks proposed on Council owned land will require consultation and approval from the City of Sydney

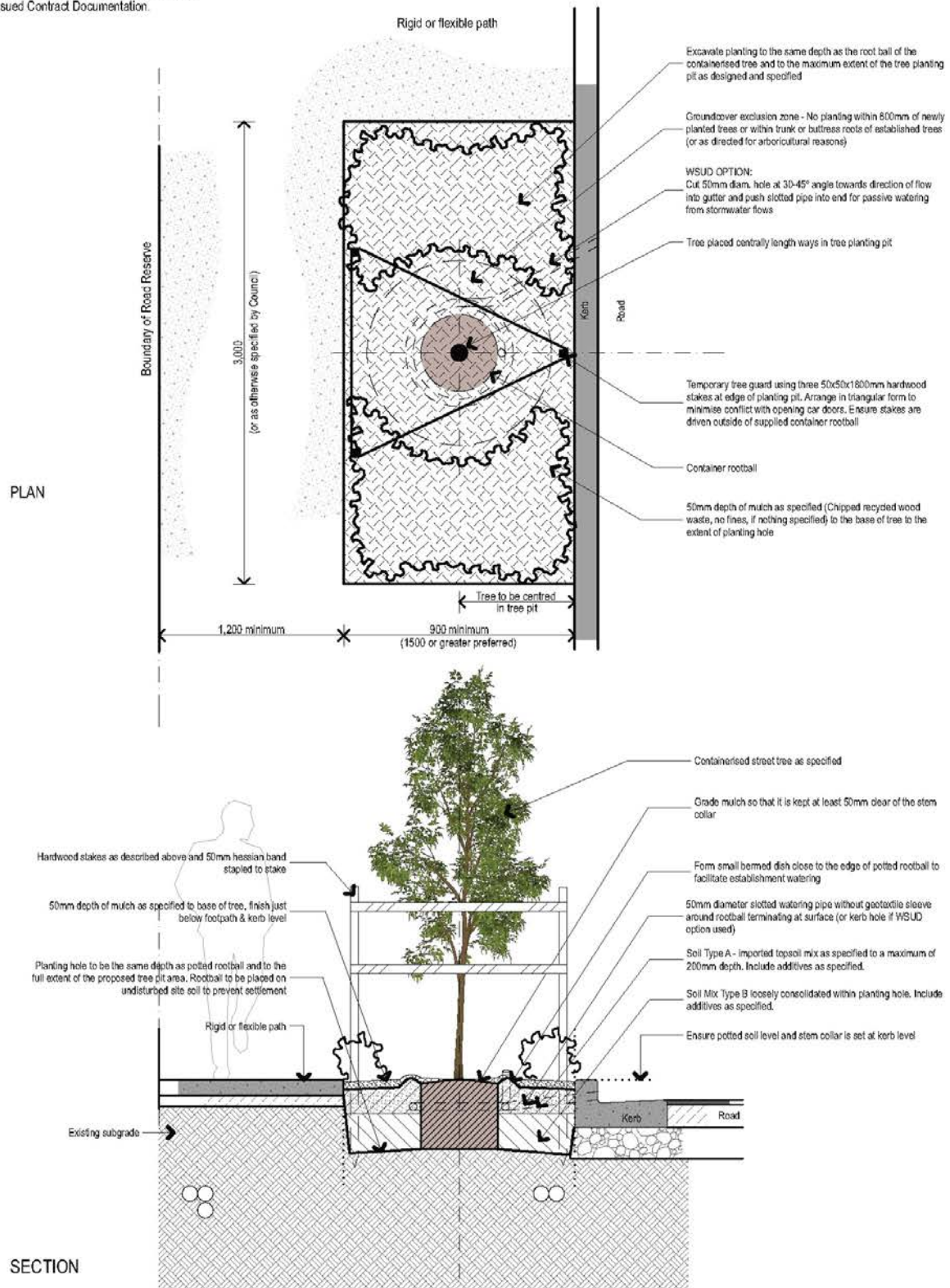
Design guidance:

1. Develop artworks and programs that are aligned with the curatorial themes, support connection to place and community and provide opportunities to:
 - Respond to Waterloo's unique character and stories, including the Aboriginal stories of the place and the area's contribution to a contemporary city
 - Enhance social connections and the community's experience of the public domain
 - Invite community participation to deliver works that connect the Metro Quarter to the community
 - Explore a variety of art typologies, including permanent, ephemeral, performance, integrated and embedded artworks, and cultural activities and programs
 - Respond to the staging of development across the precinct, acting as an anchor for social cohesion across a changing community

Appendices

Appendix A - Tree planting details

NOTE 1:
All details are to be read in conjunction with
any site specific DA conditions or Council
issued Contract Documentation.



Scale 1: 25 @ A3 0 500 1000mm

City of Sydney

TYPE 4 - TREE PLANTING IN FULLY PAVED VERGE WITHIN STREET GARDEN

All details are to be read in conjunction with any site specific DA conditions or Council issued Contract Documentation.

a. Size of tree pit may vary depending on depth of surface roots or trunk flare of mature trees.

- b. Paving construction may be altered to accommodate tree roots at the direction of Council.
- c. Tree pit surface to be installed level with surrounding paving, leaving surface roots exposed where necessary.



City of Sydney

TYPE 6 - TREE PLANTING WITH POROUS PAVING SURROUND

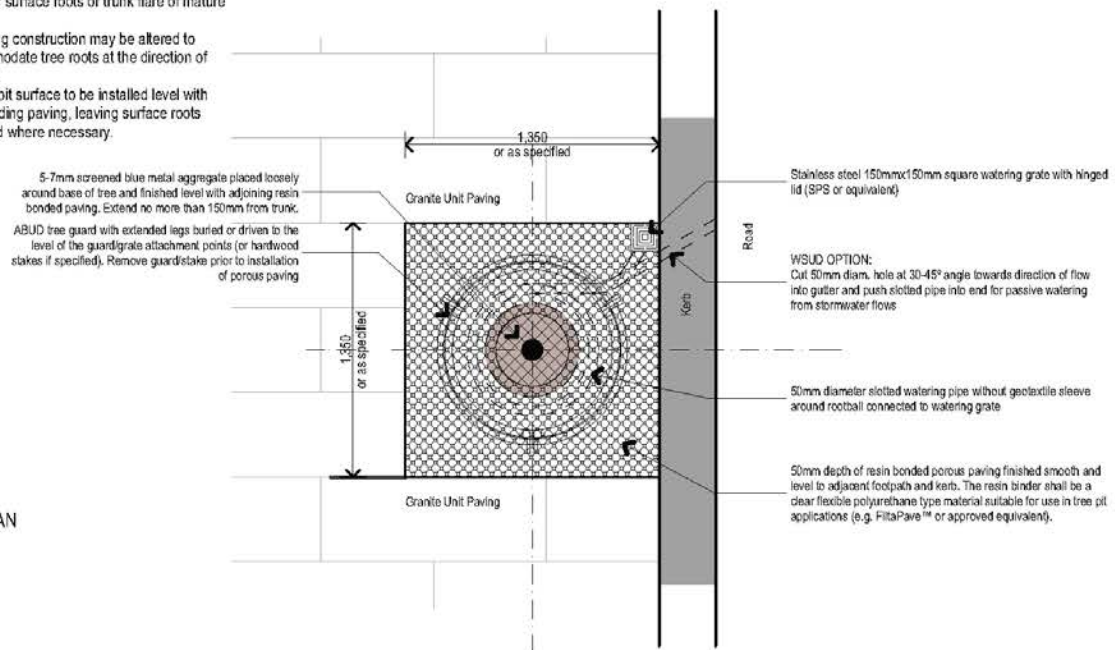
NOTE 1:

All details are to be read in conjunction with any site specific DA conditions or Council issued Contract Documentation.

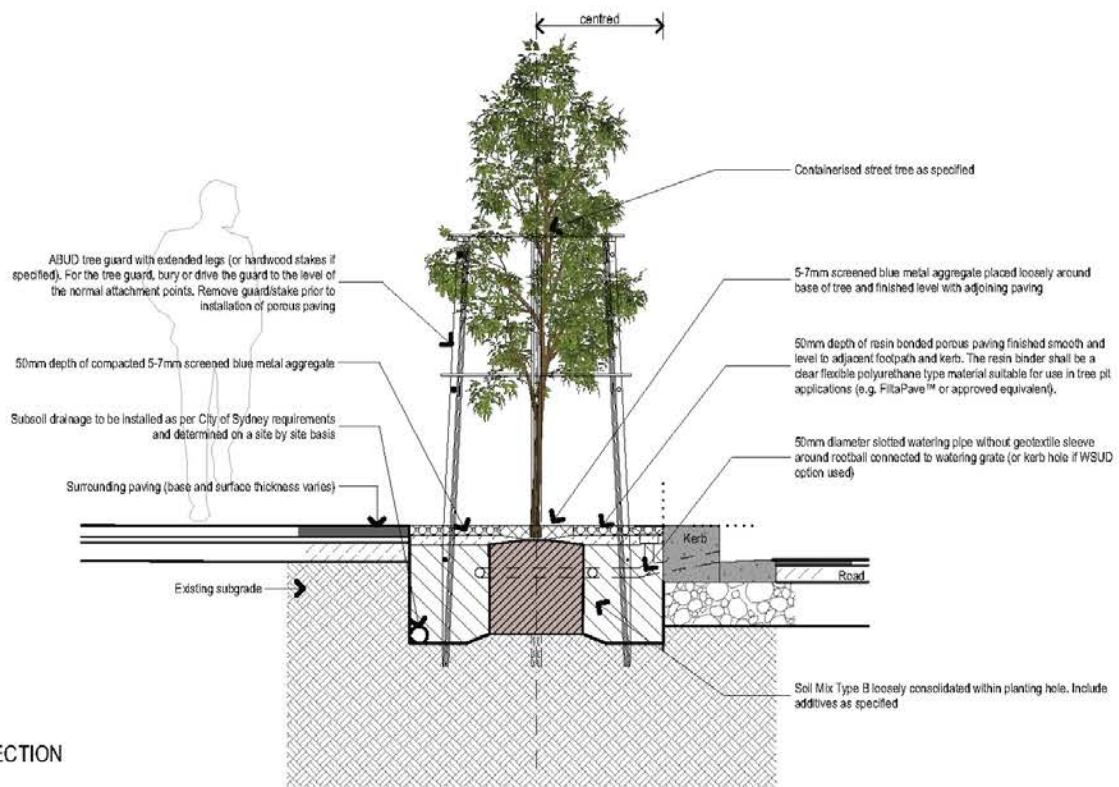
NOTE 2: Existing Trees

- Size of tree pit may vary depending on depth of surface roots or trunk flare of mature trees.
- Paving construction may be altered to accommodate tree roots at the direction of Council.
- Tree pit surface to be installed level with surrounding paving, leaving surface roots exposed where necessary.

PLAN



SECTION

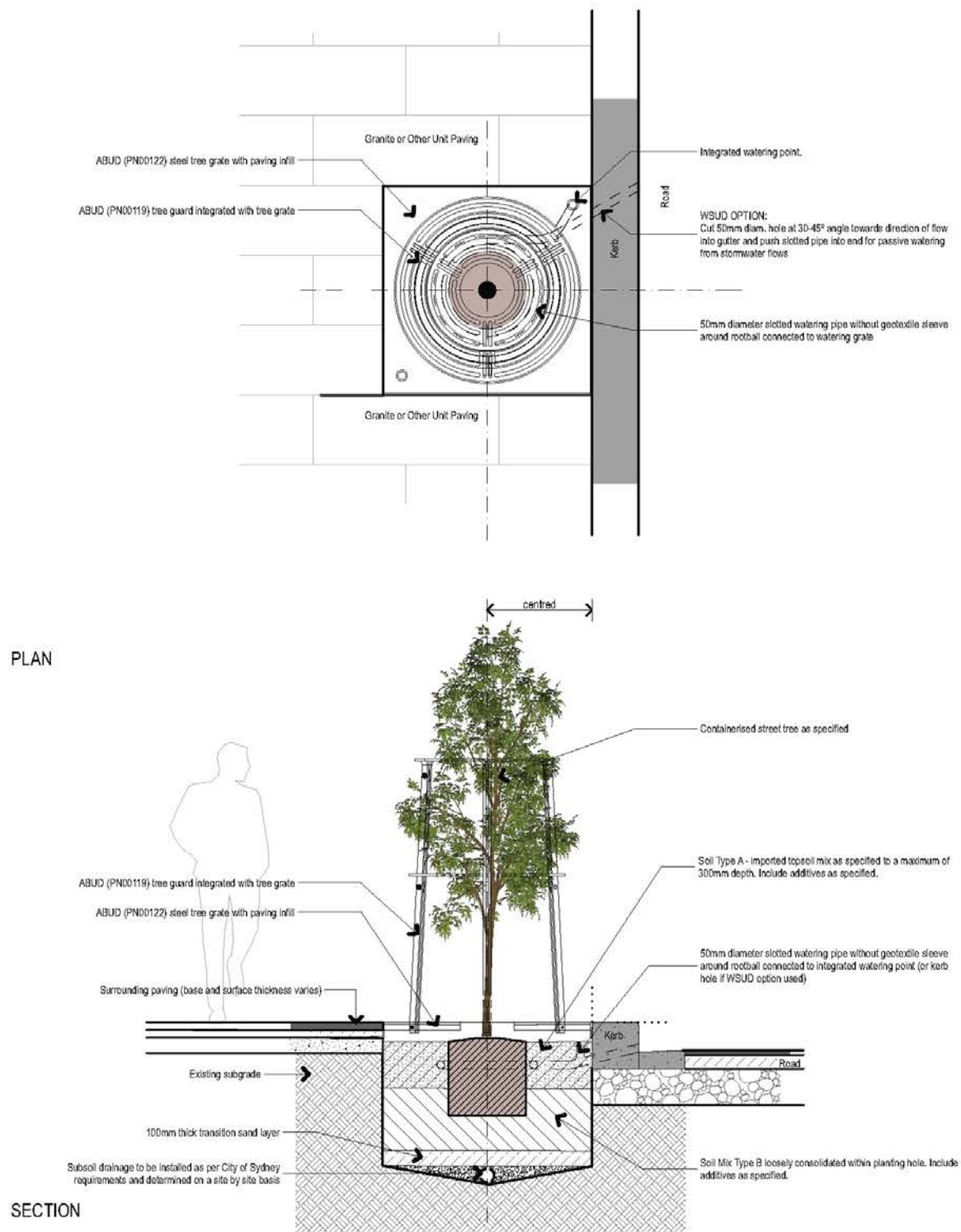


Scale 1: 25 @ A3 0 500 1000mm

City of Sydney

TYPE 7 - TREE PLANTING IN CBD OR OTHER SPECIFIED LOCATIONS - POROUS PAVING

NOTE 1:
All details are to be read in conjunction with any site specific DA conditions or Council issued Contract Documentation.

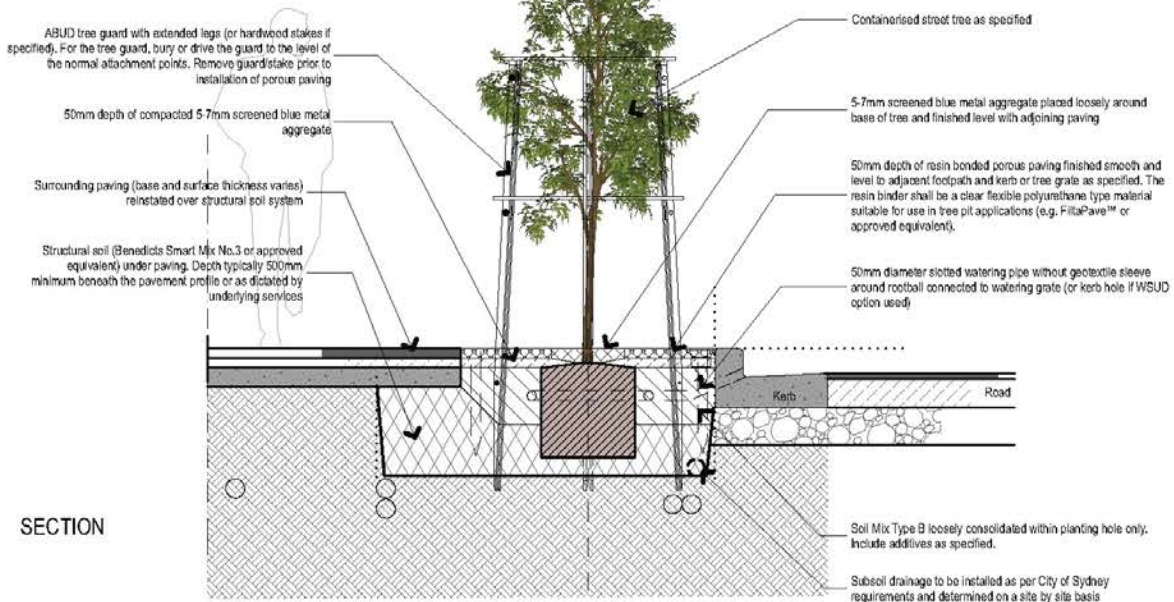
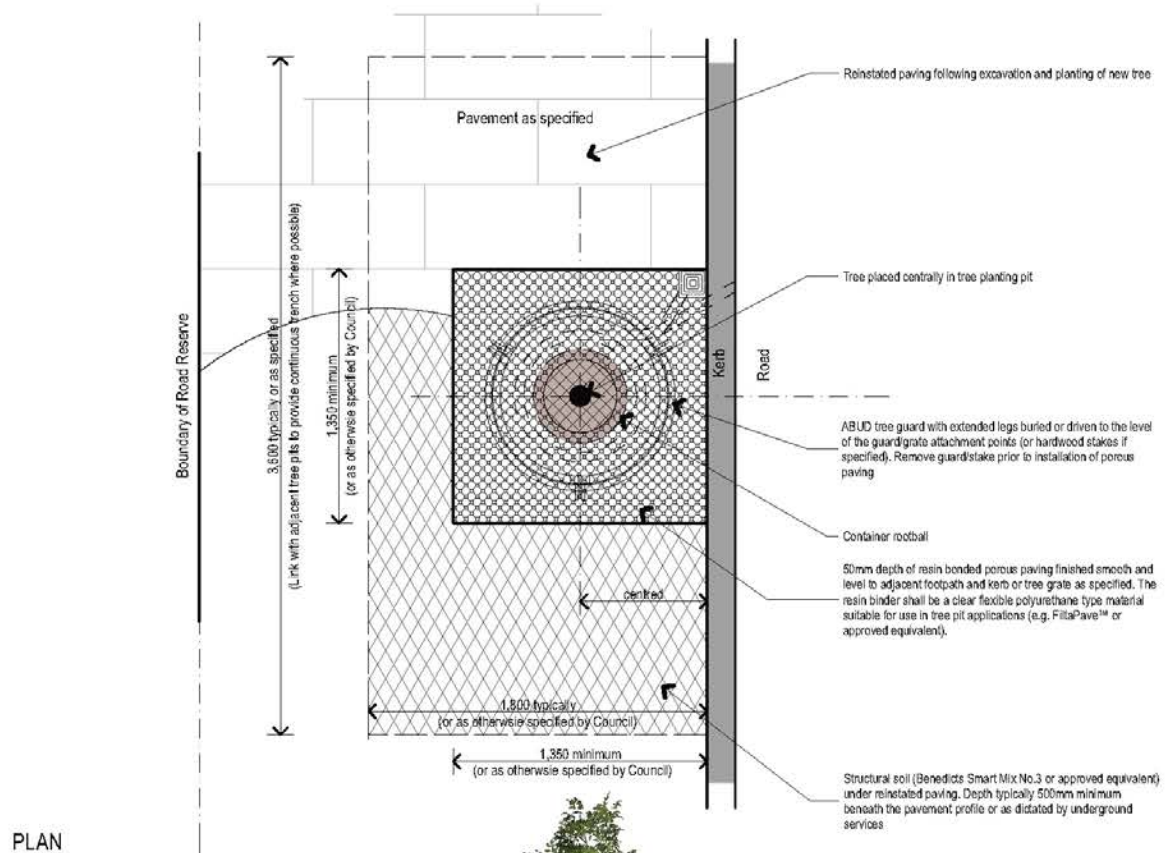


Scale 1: 25 @ A3 0 500 1000mm

City of Sydney

TYPE 8 - TREE PLANTING IN CBD OR OTHER SPECIFIED LOCATIONS - TREE GRATE

NOTE 1:
All details are to be read in conjunction with
any site specific DA conditions or Council
issued Contract Documentation.

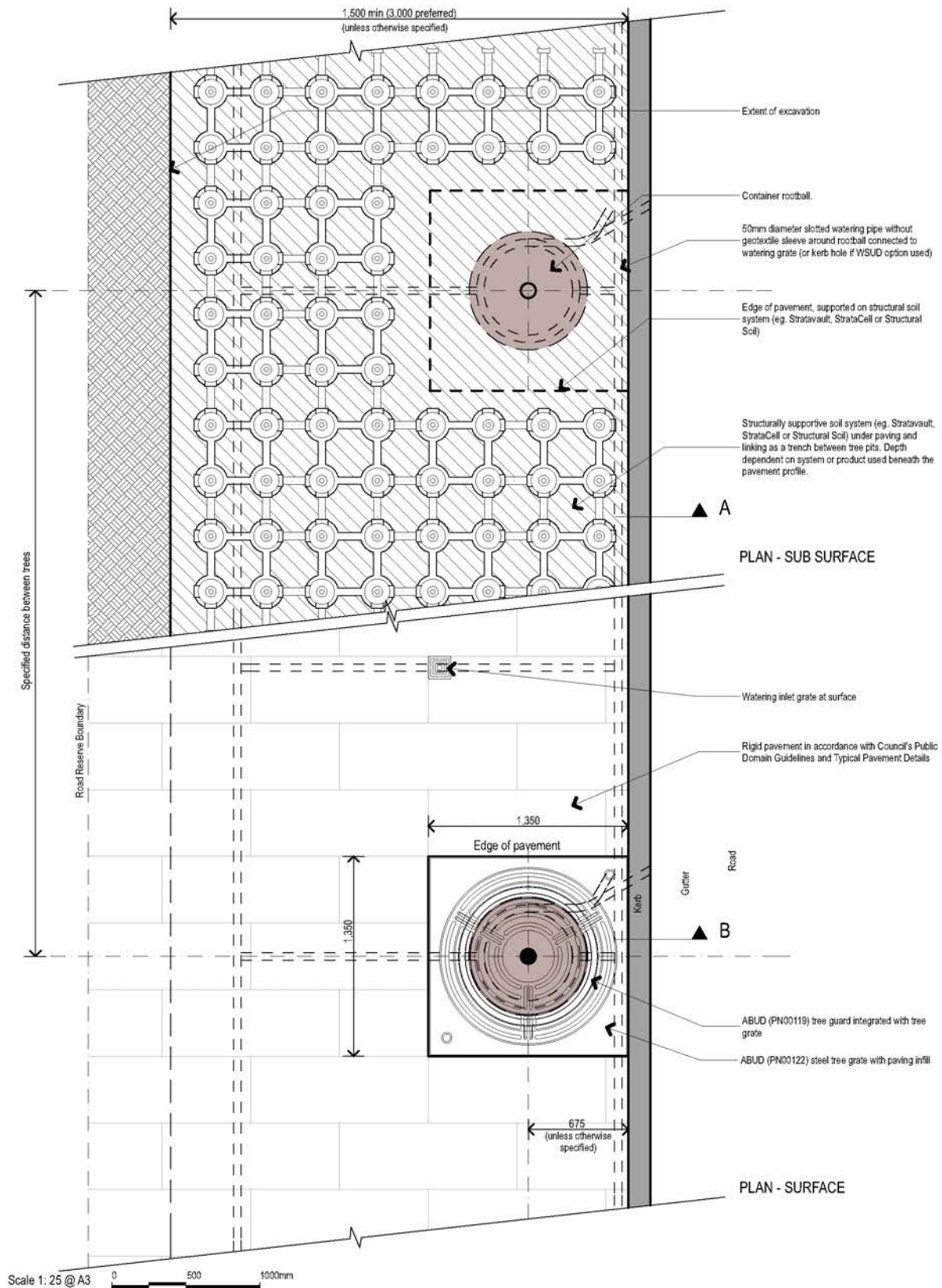


Scale 1: 25 @ A3 0 500 1000mm

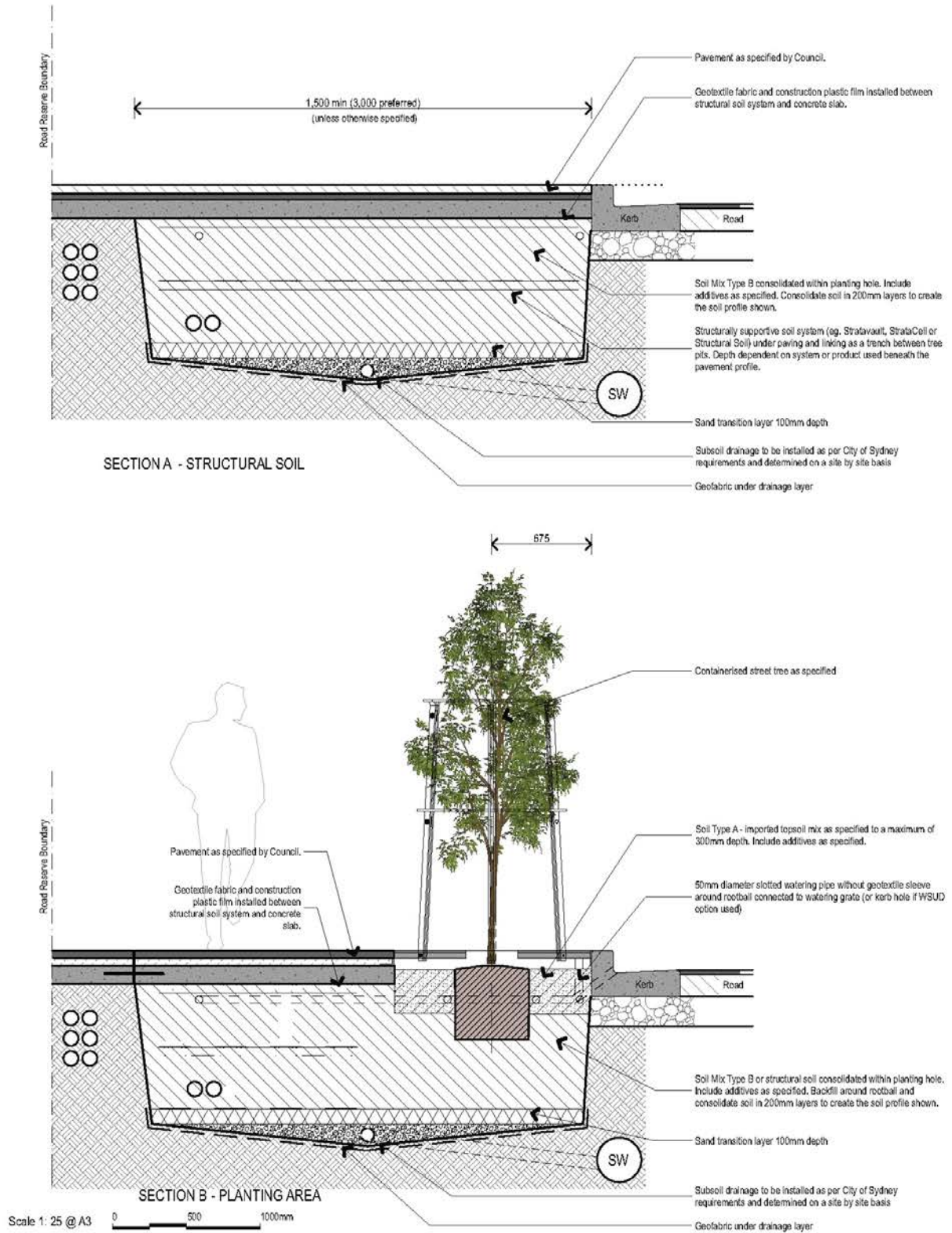
City of Sydney

TYPE 9 - TREE PLANTING IN FULLY PAVED VERGE WITH EXPANDED SOIL VOLUME

NOTE 1:
All details are to be read in conjunction with
any site specific DA conditions or Council
issued Contract Documentation.



NOTE 1:
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issued Contract Documentation.



City of Sydney

TYPE 10B - INDICATIVE TREE PLANTING WITH STRUCTURAL SUPPORT & CONTINUOUS TRENCH [SECTIONS]

