

# WATERLOO METRO QUARTER

## OSD Basement Car Park

### Detailed State Significant Development Application

### SSD-10438

### Appendix F - Architectural Design Report

30 September 2020

WMQ-BMNT-WBG-AR-RPT-001

Rev D

**FOR APPROVAL**

Revision History

Rev	Date	Status	Checked	Approved
A	20/07/20	For Review	PM	CY
B	23/07/20	For Review	PM	CY
C	29/07/20	For Approval	PM	CY
D	25/09/20	For Approval	PM	CY

View of the tower from Raglan St- Artist's impression only





## Acknowledgement of Country

Woods Bagot wishes to acknowledge the Gadigal people of the Eora nation, the Traditional Owners and Custodians of the land on which this development will stand. We pay respect to Elders past and present, and to the future leaders of our community. Our acknowledgment of Country, its Traditional Owners and their sovereign lands is expressed with a deep reverence for the importance of these protocols, as we tread gently in the footsteps of our ancestors paving the way for a better future for all our people.

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# 00.1 Glossary and abbreviations

Reference	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
ADG	Apartment Design Guide
AEP	Annual exceedance probability
AHD	Australian height datum
AQIA	Air Quality Impact Assessment
BC Act	Biodiversity Conservation Act 2016
BCA	Building Code of Australia
BC Reg	Biodiversity Conservation Regulation 2017
BDAR	Biodiversity Development Assessment Report
CEEC	critically endangered ecological community
CIV	capital investment value
CMP	Construction Management Plan
Concept DA	A concept DA is a staged application often referred to as a 'Stage 1' DA. The subject application constitutes a detailed subsequent stage application to an approved concept DA (SSD 9393) lodged under section 4.22 of the EP&A Act.
Council	City of Sydney Council
CPTED	Crime Prevention Through Environmental Design
CSSI approval	critical State significant infrastructure approval
CTMP	Construction Traffic Management Plan
DA	development application
DPIE	NSW Department of Planning, Industry and Environment
DRP	Design Review Panel
EOTF	End of Trip Facility
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	NSW Environment Protection Authority
EPA Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	ecologically sustainable design
GANSW	NSW Government Architect's Office
GFA	gross floor area

Reference	Description
HIA	Heritage Impact Assessment
IAP	Interchange Access Plan
LGA	Local Government Area
NCC	National Construction Code
OSD	over station development
PIR	Preferred Infrastructure Report
PMF	Probable maximum flood
POM	Plan of Management
PSI	Preliminary Site Investigation
RMS	Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SEPP 55	State Environmental Planning Policy No 55—Remediation of Land
SEPP 65	State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2009
SREP	
Sydney Harbour	State Regional Environmental Plan (Sydney Harbour Catchment) 2005
SSD	State significant development
SSD DA	State significant development application
SLEP	Sydney Local Environmental Plan 2012
Transport for NSW	Transport for New South Wales
TIA	Traffic Impact Assessment
The proposal	The proposed development which is the subject of the detailed SSD DA
The site	The site which is the subject of the detailed SSD DA
VIA	Visual Impact Assessment
WMQ	Waterloo Metro Quarter
WMP	Waste Management Plan
WSUD	water sensitive urban design





View of the tower from Raglan St. Artistic impression only



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## 00.2 Executive Summary

This planning report has been prepared by Woods Bagot to accompany a detailed State significant development (SSD) development application (DA) for the Basement 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 10438) as well as the objectives and design criteria within the Waterloo Metro Quarter Design and Amenity Guidelines.

This report concludes that the proposed Basement OSD with the amendments described in the following chapters are adequate and warrant approval under the current planning provisions

00.3 Introduction

This report has been prepared to accompany a detailed State significant development (SSD) development application (DA) for the Basement 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.

It is acknowledged that the Basement is an integral operational component associated with the Northern and Central Precinct OSD, however in line with current development applications and SSD-10440 a separate and distinct report is prepared for the Northern Precinct.

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:

Basement SSD-10438

- 2-storey shared basement and associated excavation
- ground level structure
- under ground OSD tank
- carparking for the commercial Building 1, residential Building 2, social housing Building 4, Waterloo Congregational Church and Sydney Metro
- service vehicle spaces
- commercial end-of-trip and bicycle storage facilities
- retail end-of-trip and bacycle storage facilities
- residential storage facilities
- shared plant and services.

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 in Table 1

Table 1 SEARs requirement for Basement SSD-10438

Item	Description of requirement	Section reference
2	Consistency with the Concept Approval  demonstrate the proposal is consistent with the Concept Approval and provide details of consistency with any modification(s) to the concept approval if sought concurrently.	02, Table 2
3	Land Use and Gross Floor Area  include plans that identify the extent of the basement that will be used for commercial parking, residential parking, visitor parking, bicycle parking and motorcycle as well as any other uses proposed to be accommodated in the basement area of the development.  include GFA plans that identify on plan any use within the basement levels that will contribute toward the overall GFA of the development.  address the site specific SLEP 2012 provisions (under Part 6 and Division 5) in relation to land use mix and floor space requirements.	02.2, 02.4
4	Design Excellence and Built Form  demonstrate compliance with the endorsed Design and Amenity Guidelines, dated March 2020 or any subsequent endorsed revision of the guidelines.	A.1

Item	Description of requirement	Section reference
5	Integration with Sydney Metro Station Infrastructure  identify the extent of the proposal that is State Significant Development (SSD) and how this relates to the approved Critical State Significant Infrastructure (CSSI) applications and any modifications to the CSSI.  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.	01.5
	Plans and Documentations  site title diagrams and survey plan, showing existing levels, location and height of existing and adjacent structures/buildings  site analysis plan  schedule of proposed gross floor area per land use  building envelopes showing the relationship with proposed and existing buildings in the locality	01.3  01.6 02.4 N/A



This report has also been prepared in response to the following conditions of consent issued for the concept SSD DA (SSD 9393) for the OSD as summarised in the Table 2

Table 2 Conditions of Concept Approval

Item	Description of requirement	Section reference
<b>Car Parking and Bicycle Parking</b>		
B8	<p>Future development applications shall reduce total car parking provision to reduce private car ownership and promote use of active and public transport. Future development applications must demonstrate compliance wit:</p> <p>(a) the maximum number of car spaces to be provided for all residential accommodation within the development is limited to 170 spaces, including residents' spaces and residential car share spaces but excluding visitor spaces and service vehicle spaces.</p> <p>(b) the allocation of residential car parking spaces up to the maximum of 170 spaces must not exceed the following maximum rates:</p> <p>(i) 0.1 space per studio dwelling</p> <p>(ii) 0.3 parking spaces per 1 bedroom dwelling</p> <p>(iii) 0.7 parking spaces per 2 bedroom dwelling</p> <p>(iv) 1 parking space per 3 bedroom or more dwelling</p> <p>(v) residential car share parking rate of 1 space per 50 residential car parking spaces provided</p> <p>(c) non-residential car parking to be provided in accordance with the following:</p> <p>(i) a maximum of 1 space for 435 m<sup>2</sup> of GFA for any commercial use</p> <p>(ii) a maximum of 2 spaces for use of the Waterloo Congregational Church</p> <p>(iii) non-residential car share parking at rate of 1 space per 30 non-residential car parking spaces</p>	02.2, Refer to Traffic Report

Item	Description of requirement	Section reference
B10	Bicycle parking and end-of-trip facilities for the OSD shall be in accordance with the rates specified within the Sydney DCP 2012 for the final land use mix in the future development application.	02.3





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# 01

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## Project Overview

# 01.1 Sydney Metro

Sydney Metro is Australia’s biggest public transport project. Services started in May 2019 in the city’s North West with a train every four minutes in the peak. A new standalone railway, this 21st century network will revolutionise the way Sydney travels.

There are four core components:

### Sydney Metro Northwest

This project is now complete and passenger services commenced in May 2019 between Rouse Hill and Chatswood, with a metro train every four minutes in the peak. The project was delivered on time and \$1 billion under budget.

### Sydney Metro City & Southwest

Sydney Metro City & Southwest project includes a new 30km metro line extending metro rail from the end of Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro City & Southwest will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition, it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

### Sydney Metro West

Sydney Metro West is a new underground railway connecting Greater Parramatta and the Sydney CBD. This once-in-a-century infrastructure investment will transform Sydney for generations to come, doubling rail capacity between these two areas, linking new communities to rail services and supporting employment growth and housing supply between the two CBDs.

The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.

The NSW Government is assessing an optional station at Pyrmont and further planning is underway to determine the location of a new metro station in the Sydney CBD.

### Sydney Metro Greater West

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City’s growth for generations to come, connecting communities and travellers with the rest of Sydney’s public transport system with a fast, safe and easy metro service.

The Australian and NSW governments are equal partners in the delivery of this new railway.

The Sydney Metro project is illustrated in Figure 1

### Sydney Metro CSSI Approval (SSI 7400)

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a critical State significant infrastructure (CSSI) project (reference SSI 7400) (CSSI approval). The terms of the CSSI approval includes all works required to construct the Sydney Metro Waterloo Station. The CSSI approval also includes the construction of below and above ground works within the metro station structure for appropriate integration with the OSD.

With regards to CSSI related works, any changes to the ‘metro station box’ envelope and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the concept SSD DA or detailed SSD DA for the OSD.

Except to the extent described in the EIS or Preferred Infrastructure Report (PIR) submitted with the CSSI application, any OSD buildings and uses do not form part of the CSSI approval and will be subject to the relevant assessment pathway prescribed by the EP&A Act.

The delineation between the approved Sydney Metro works, generally described as within the two ‘metro station boxes’ and surrounding public domain works, and the OSD elements are illustrated in Figure 2.

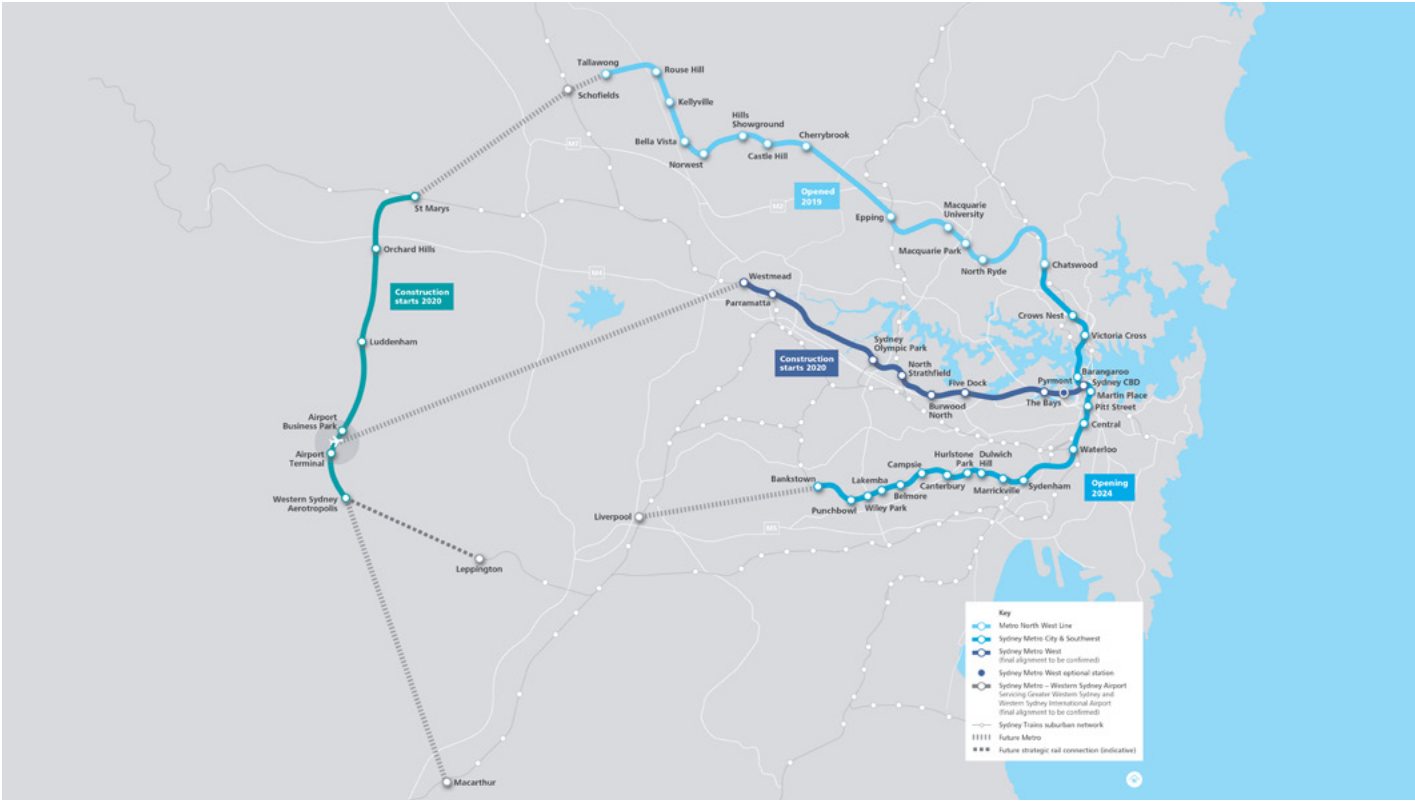


Figure 1 Sydney Metro alignment map  
Source: Sydney Metro

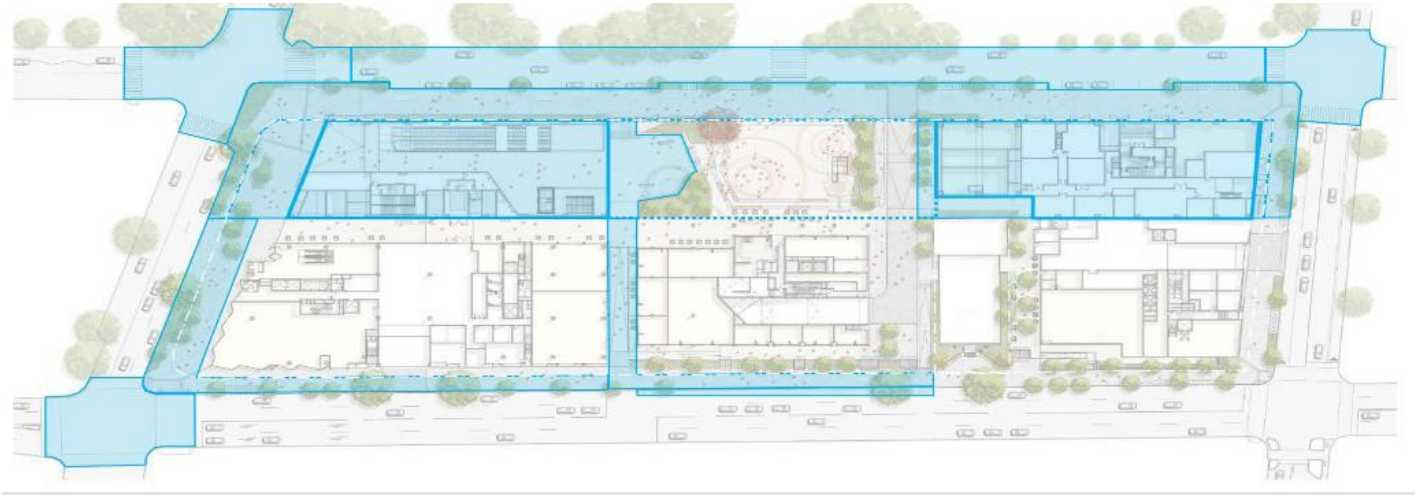


Figure 2 CSSI Approval scope of works  
Source: WL Developer Pty Ltd



## 01.2 Waterloo Metro Quarter

Waterloo Metro Quarter (WMQ) is an integrated station development (ISD), identified as a State Significant Precinct as part of the new Sydney Metro City & Southwest project.

Sydney Metro and Infrastructure NSW are invested with the opportunity of making the Waterloo ISD a crucial place of convergence for a diverse and changing community by integrating it with the existing social fabric. Their vision is for a place that strengthens Waterloo's existing character, celebrates the area's indigenous and multicultural history, increases community cohesion, supports a diverse community with a range of social and human services, provides diverse housing choices and encourages active transport options.

Whilst the WMQ is a single integrated development, the planning approvals for the Metro Station works and the Over Station Developments (OSD) are separated by the pathways defined under the EP&A Act.

### Concept Approval (SSD 9393)

As per the requirements of clause 7.20 of the Sydney Local Environmental Plan 2012 (SLEP), as the OSD exceeds a height of 25 metres above ground level (among other triggers), development consent is first required to be issued in a concept DA (formerly known as Stage 1 DA).

Development consent was granted on 10 December 2019 for the concept SSD DA (SSD 9393) for the Waterloo Metro Quarter OSD including:

- a maximum building envelope for podium, mid-rise and tower buildings
- a maximum gross floor area of 68,750sqm, excluding station floor space
- conceptual land use for non-residential and residential floor space
- minimum 12,000sqm of non-residential gross floor area including a minimum of 2,000sqm of community facilities
- minimum 5% residential gross floor area as affordable housing dwellings
- 70 social housing dwellings
- basement car parking, motorcycle parking, bicycle parking, and service vehicle spaces.



Figure 3 Aerial view of the development - Artist's impression only



# 01.3 The Site

The WMQ 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 4). 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 WMQ site is a rectangular shaped allotment with an overall site area of approximately 1.287 hectares.

The WMQ 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 boundaries of the overall site are identified at Figure 4, and the subject site of the detailed SSD DA is identified at Figure 5 and Figure 6. The site is reasonably flat with a slight fall to the south.

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).

The detailed SSD DA applies to the Basement (the site) of the Waterloo Metro Quarter site. The site has an area of approximately 5,700sqm. The subject site comprises the following allotments and legal description at the date of this report.

- 1368 Raglan Street (Lot 4 DP 215751) (Part)
- 59 Botany Road (Lot 5 DP 215751) (Part)
- 65 Botany Road (Lot 1 DP 814205) (Part)
- 67 Botany Road (Lot 1 DP 228641) (Part)
- 124–128 Cope Street (Lot 2 DP 228641) (Part)
- 69–83 Botany Road (Lot 1, DP 1084919)
- 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).



Figure 4 Aerial image of the site  
Source: Urbis



# 01.4 Basement

The detailed SSD DA for the Basement seeks development consent for the shared basement facility located under the Northern Precinct and Central Precinct, consistent with the parameters of the concept approval.

Separate SSD DAs have been prepared and will be submitted for the Southern Precinct and Central Precinct proposed across the Waterloo Metro Quarter site.

A concurrent amending concept SSD DA has been prepared and submitted to the DPIE which proposed to make modifications to the approved building envelopes at the northern precinct and central building. This amending concept SSD DA does not impact the proposed development within the southern precinct.

## Proposed development

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

- 2-storey shared basement and associated excavation
- ground level structure
- under ground OSD tank
- carparking for the commercial Building 1, residential Building 2, social housing Building 4, Waterloo Congregational Church and Sydney Metro
- service vehicle spaces
- commercial end-of-trip and bicycle storage facilities
- retail end-of-trip and bacycle storage facilities
- residential storage facilities
- shared plant and services.

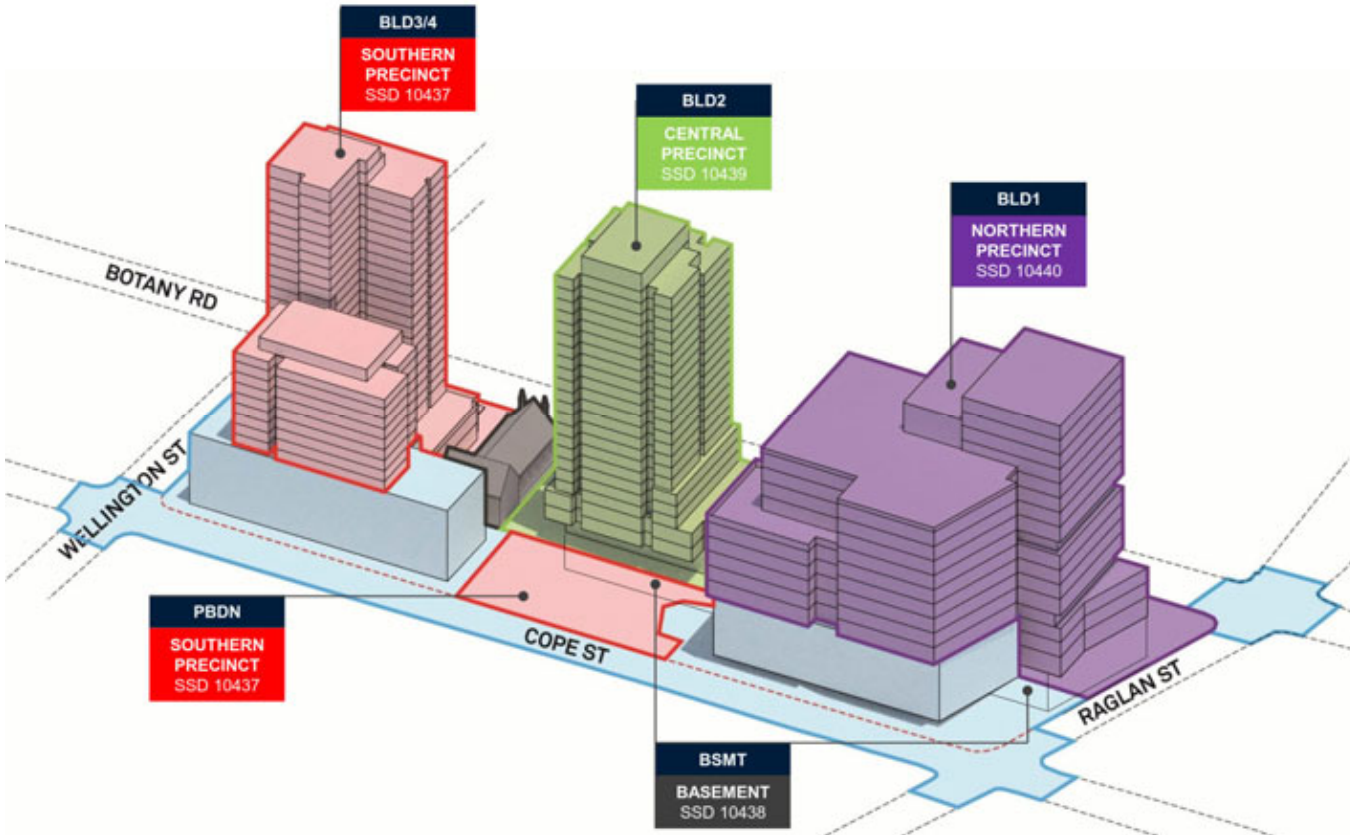


Figure 5 Waterloo Metro Quarter site, with sub-precincts identified  
Source: HASSELL

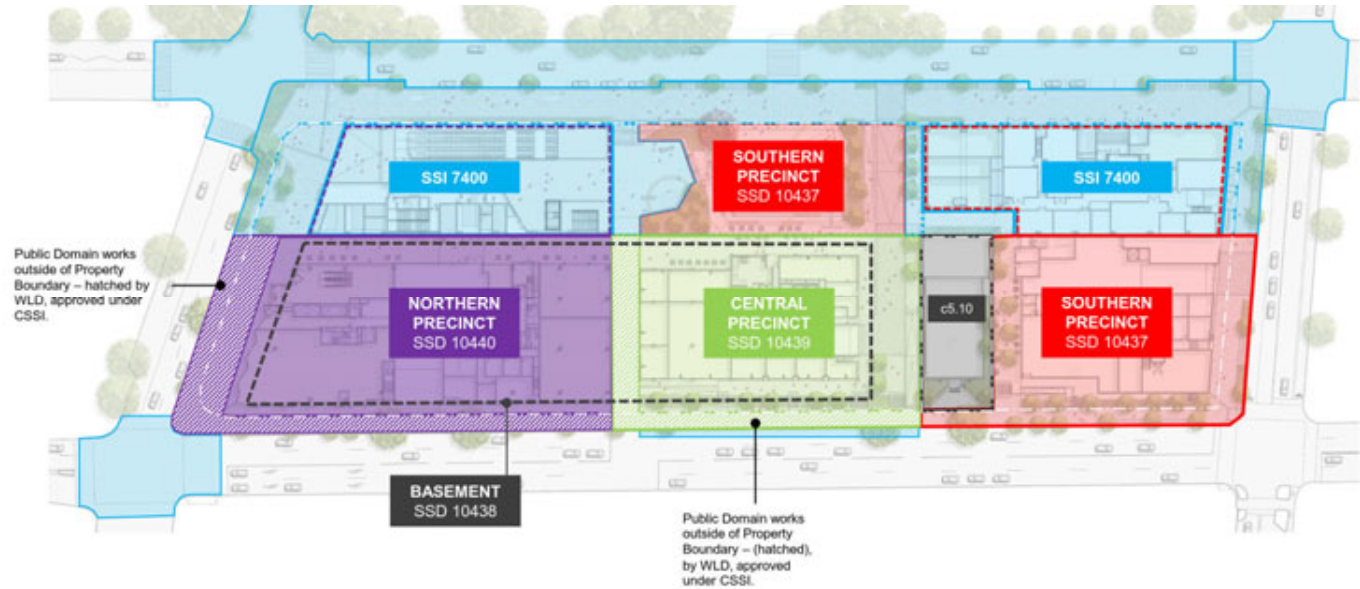


Figure 6 Waterloo Metro Quarter site, with sub-precincts identified  
Source: Waterloo Developer Pyt Ltd



# 01.5 Metro Station Integration

There is no physical integration between the metro station box and the basement. As better explained in the Structural Engineers' Report (Appendix P) the proposed construction methodology for the metro station box relies on the provision of buttress walls to the basement, however these two buildings remain structurally separated.

There are however operational and functional components of the basement that service the metro station.

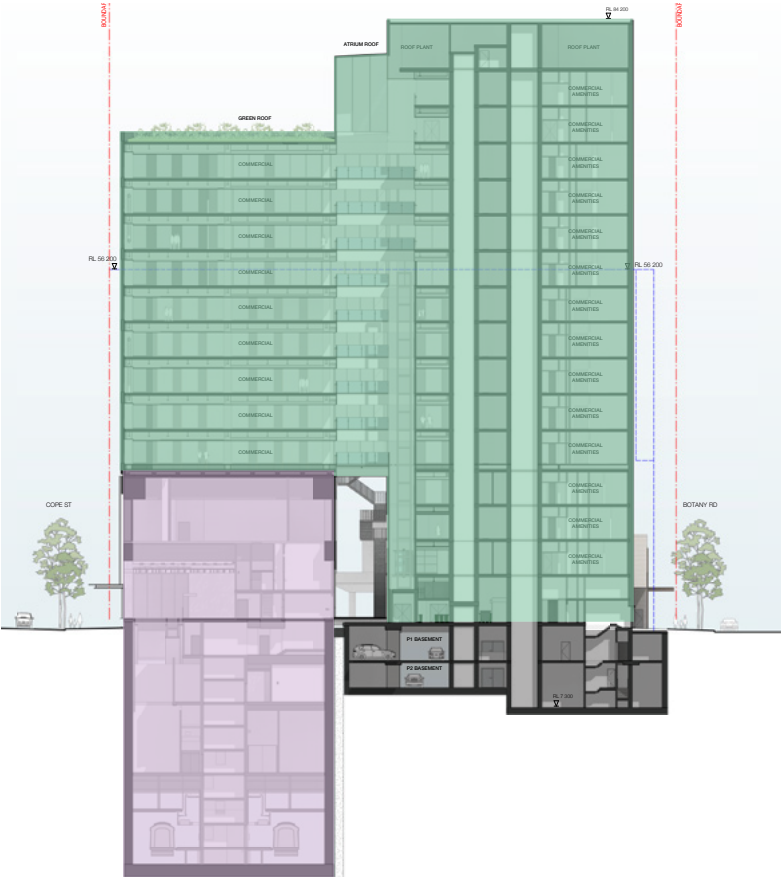
Below ground the basement car park abuts the western wall of the metro station box but is structurally separated by a secant pile wall. Retaining buttresses aligned on a east-west direction provide lateral support to the station box for out-of-balance lateral earth pressure load in the event the basement carpark is demolished in the future. Refer Appendix P Structural Report.

Parking provisions, access and circulation, services provisions and storage have been coordinated around the buttresses as well as with the structural requirements for both Northern and Central Precincts.

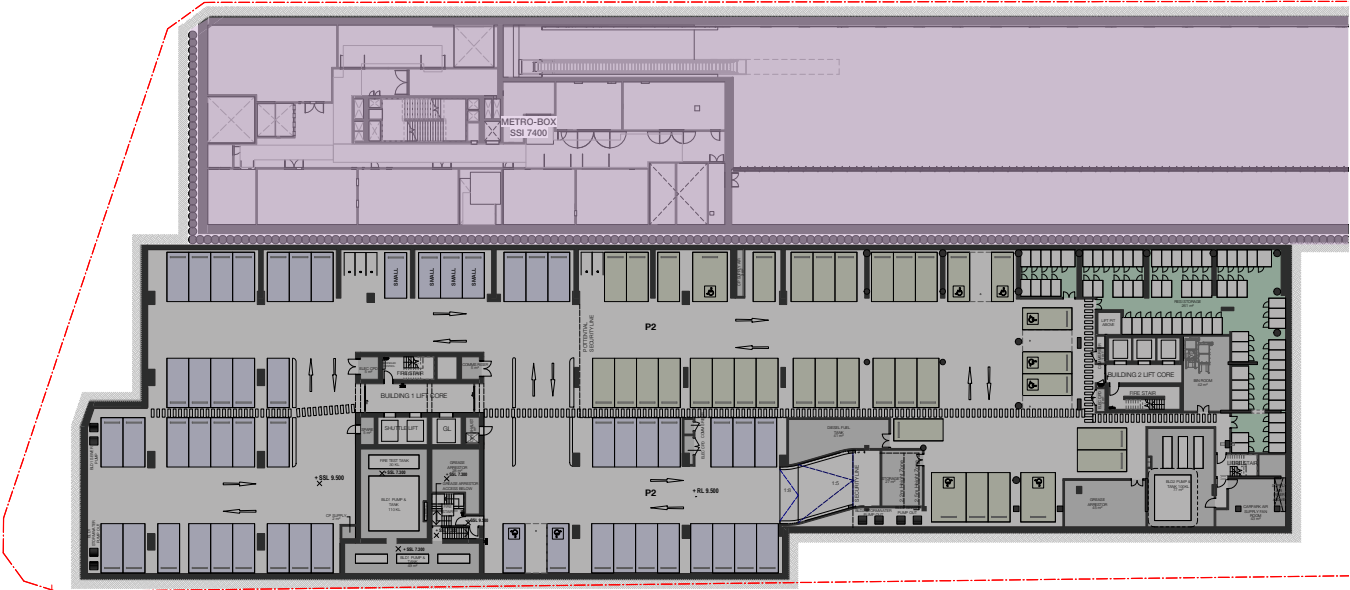
There is no access between the two buildings and only minor services connections (power supply for the Metro retail premises), effectively delivering a fully independent basement from the metro box.

From a functional and operational point of view, in order to address the service and maintenance provisions for the metro station, two parking bays have been designated for exclusive use by Metro Operators and are located in level 1 of the basement (P1). Furthermore, a shared loading dock for use by Metro deliveries by vehicles up to MRV is located on the ground level of building 1 (SSD 10440).

Access for Metro employees and contractors using the designated Metro parking bays in P1 is via the Building 1 goods lift and through the loading dock on ground level.



Cross Section



Basement P2 Plan

- Metro Station (under CSSI approval)
- OSD Northern Precinct (SSD-10440)
- Basement (SSD-10438)

Figure 7 CSSI & OSD relationship

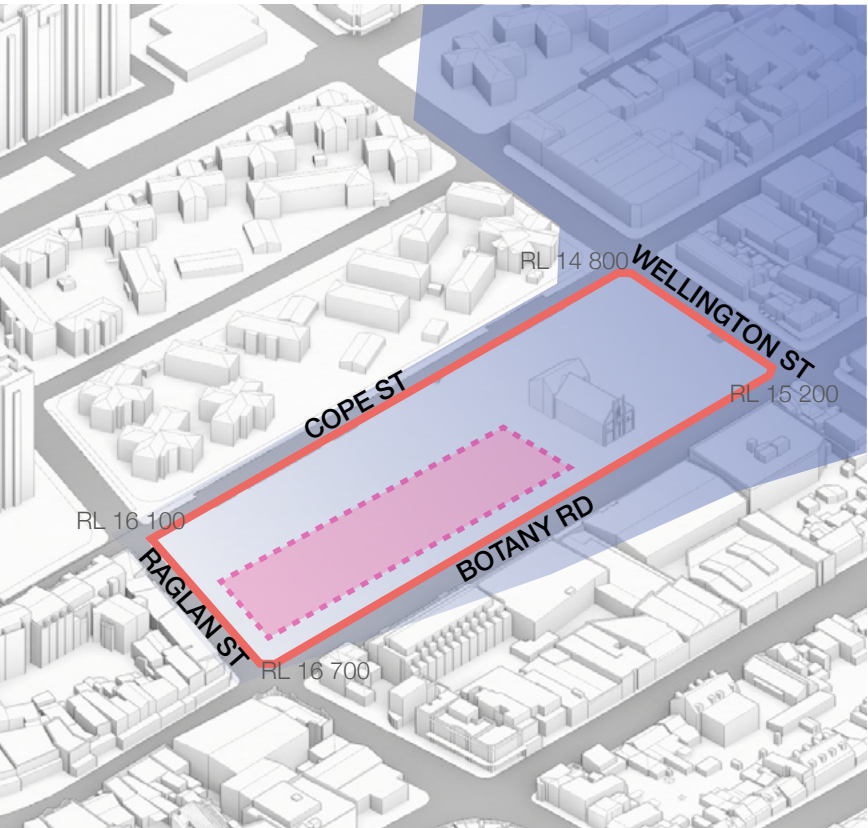




View from Raglan St - Artist's impression only



01.6 Site Analysis



- Basement
- Waterloo Metro Quarter
- Flood Plane

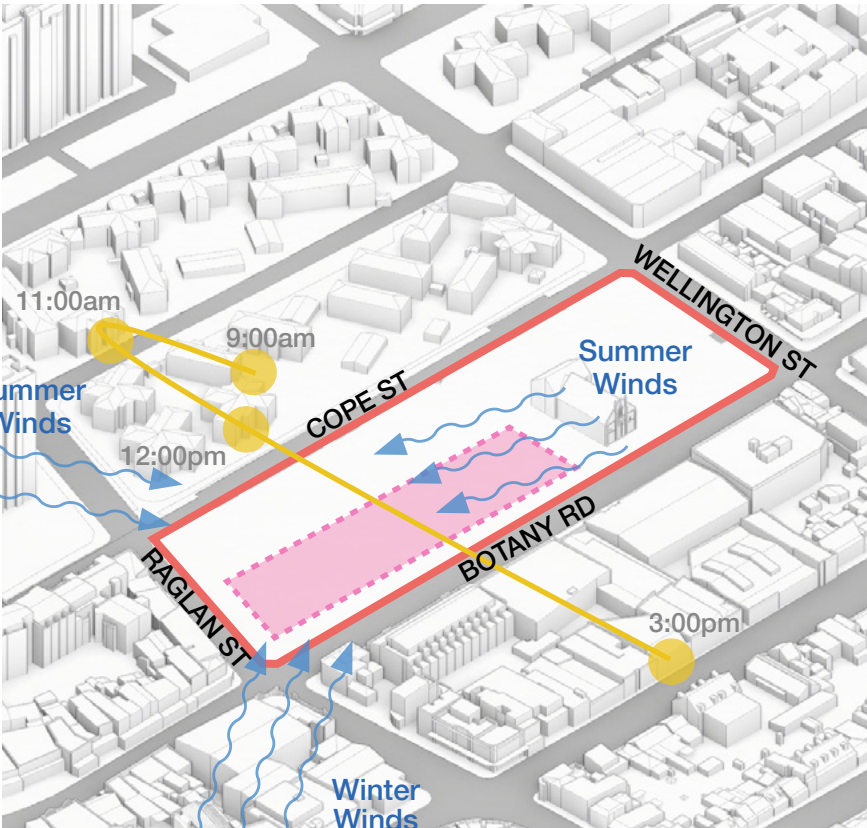
Topography & Flooding

The site falls approximately 0.8m towards the south with a high point on the northern edge along Raglan St

The cross-fall on a east-west direction is of approximately 0.1m falling towards Botany Road

The Probable Maximum Flood level (PMF) across the site grades down from north to south along the edge of Botany Rd.

Accurate flood level modelling in consideration of 100 year events, probable maximum flood levels (PMF) and annual exceedance probability (AEP), helped determine the finished ground floor levels for the Northern and Central Precincts. Coordination with the relevant consultant allowed for adequate protection of access points to the basement. Refer Appendix O Stormwater and Flooding Report.

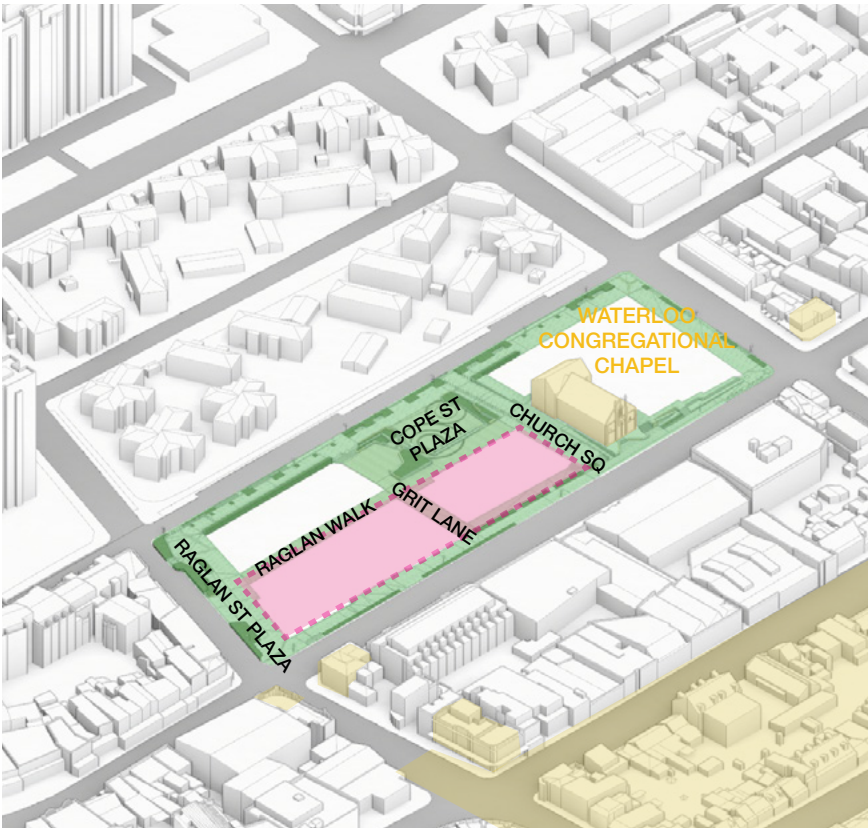


- Basement
- Waterloo Metro Quarter

Wind & Solar Access

The precinct site is oriented along north-south axis and the Northern Precinct is situated at the north end of the precinct which enjoys abundant solar exposure due to lowrise surroundings to the north.

The prevailing winds come from south and north-east during summer and north-west during winter. While the southerly winds are well protected by the neighbouring development within the precinct, the north-easterly and north-westerly winds will not affect the basement. Refer to the Pedestrian Wind Environment Study Report, Appendix LL forming part of the Northern Precinct SSD 10440

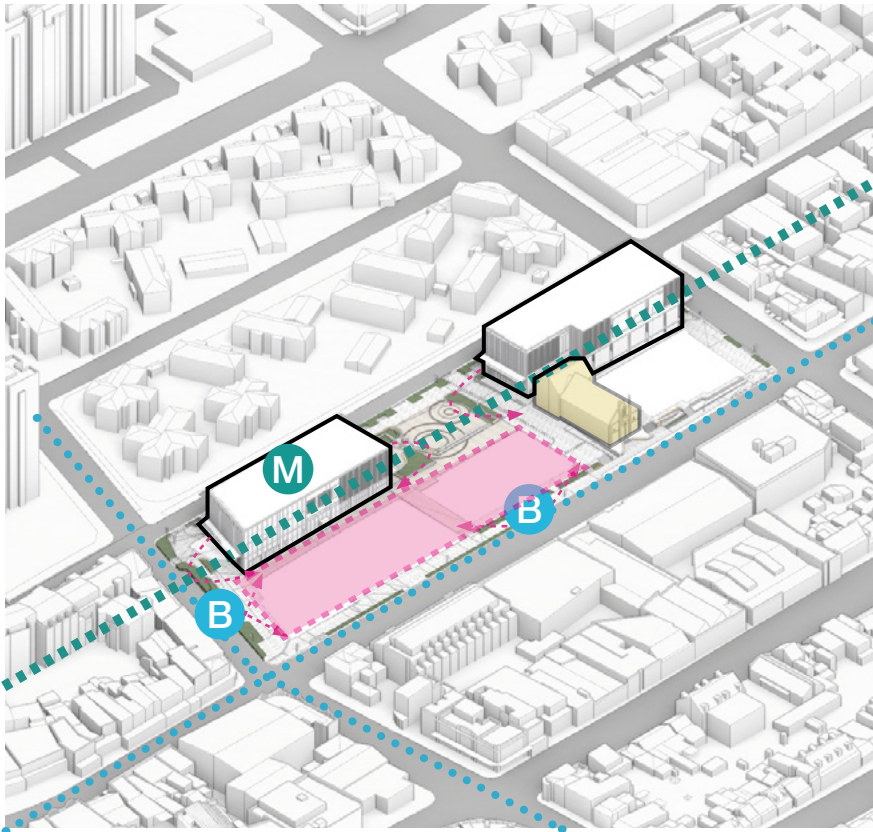


- Heritage area
- Basement
- Public Domain

Public Domain & Heritage

The two key proposed public domains within the site are Cope St Plaza and Raglan Plaza. Both plazas are linked by Raglan Walk, a crucial pedestrian connection on the north-south axis and running in between the ground floor of the Commercial Tower and the Metro Station box.

The basement is adequately set back from Raglan Street to the north and Botany Road to the west allowing for deep soil planting in line with the design requirements for the Public Domain. Excavation and construction of the basement will not have an impact on surrounding heritage buildings, including the Waterloo Congregational Church, as the southern most edge of the basement is located approximately 15m further south. Refer Appendix H Heritage Impact Statement.



## Public Transport

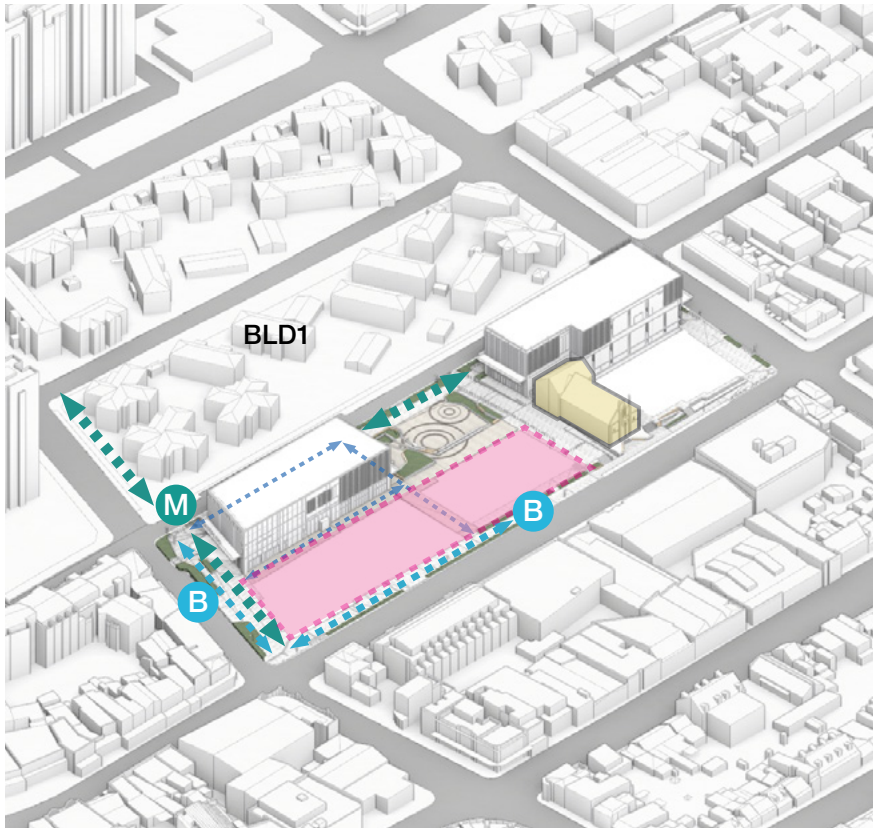
The site is ideally located adjacent to the Metro station entry allowing convenient connection to CBD and other parts of the city.

Also the bus stop on Botany Rd offers access to the suburban bus network.

There is also a plan for a new bust stop on Raglan St.

The basement does not provide for public parking.

Refer Appendix I Transport, Traffic and Parking Impact Assessment

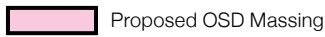
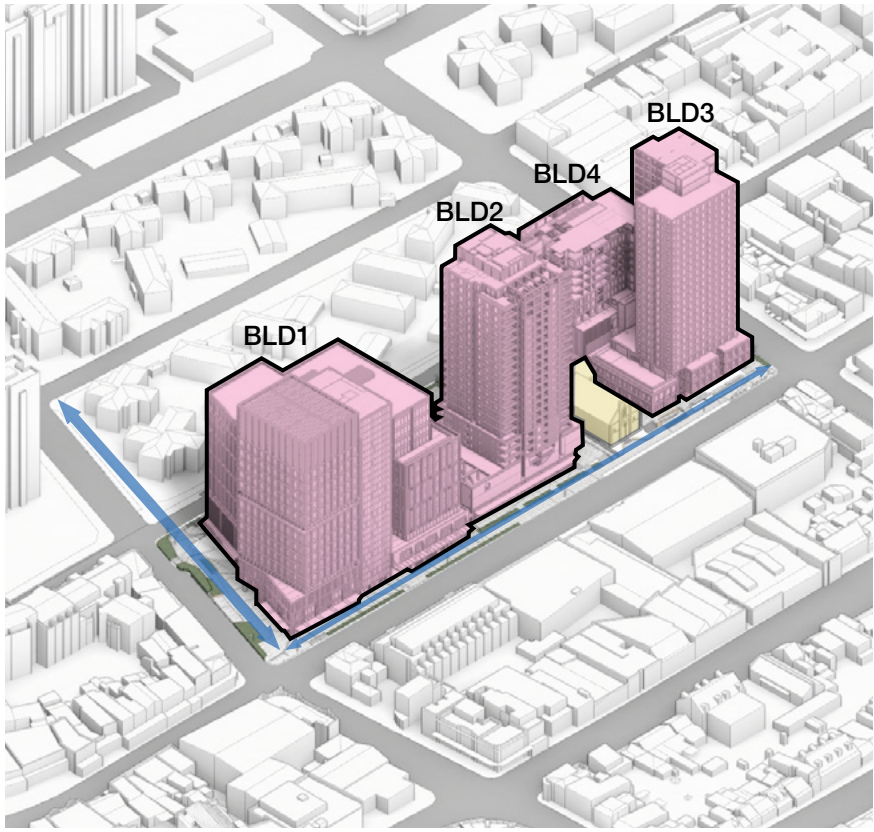


## Building 1 & Pedestrian Volume

With the construction of the metro station the site is expected to experience a significant increase in the level of pedestrian traffic, especially around the metro entry on Raglan St and along Cope St Plaza

Raglan Walk and Grit Lane are also identified as being subject to moderate increase in foot traffic as they provide a link to the major public spaces within the site and connecting the bus stop on Botany Road with the northern entry to the station.

Refer Appendix I Transport, Traffic and Parking Impact Assessment



## Precinct Development

The site is occupied by four separate buildings creating a diverse mixed-use precinct centred around Waterloo Metro Station.

The site is expected to benefit from the synergy of density and quality of the neighbouring development (Waterloo Estate) creating a new urban hub for the area delivering a diverse range of opportunities and amenities.

The basement car park and associated service areas support the operation of the Northern, Central and Southern Precincts as well as Metro operations.





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# 02

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## Basement Design

# 02.1 Basement Access

The Basement is integral part of the Northern and Central Precinct.

Spanning from Raglan Street at the north to Church Square to the south the basement is located under both the commercial and residential towers.

Its primary function is car parking, but also accommodates service vehicle bays, the commercial EOT, retail EOT, essential building services, residential storage and waste management areas.

Underground the basement directly abuts the western wall of the metro station box but is structurally separated. There are no services connections nor access between the two buildings. From a functional and operational point of view however, in order to address the service and maintenance provisions for the metro station and shared loading dock, two parking bays have been designated for exclusive use by Metro Operators and are located on level 1 of the basement.

## ① Basement Driveway Access

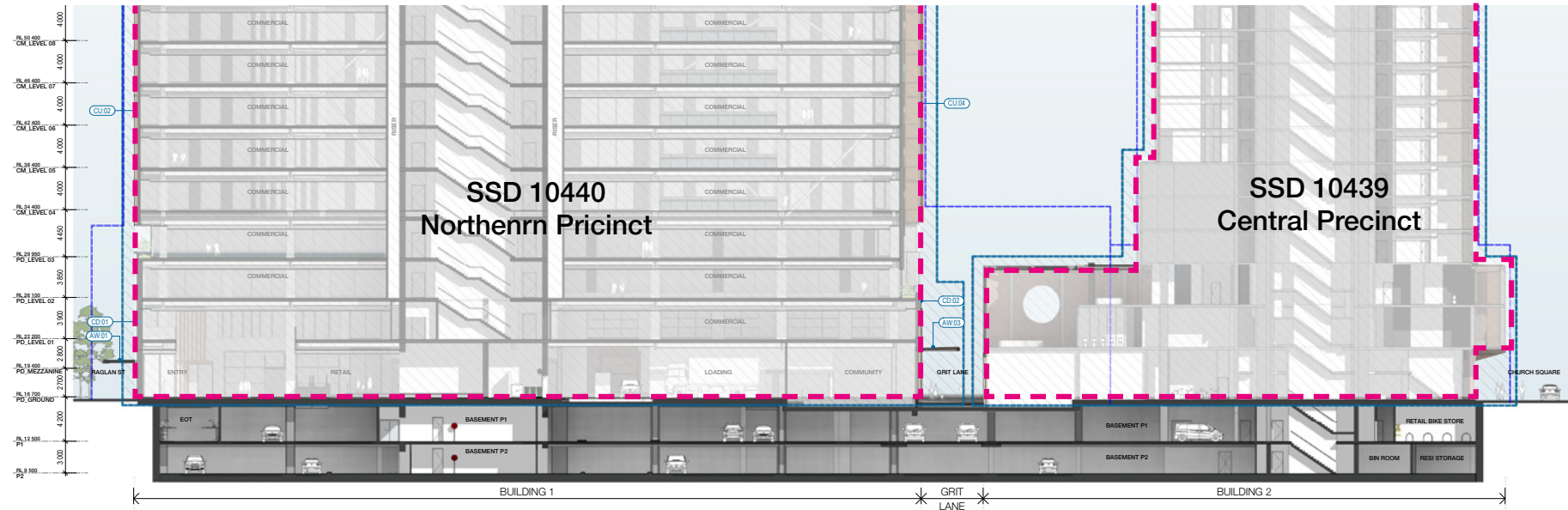
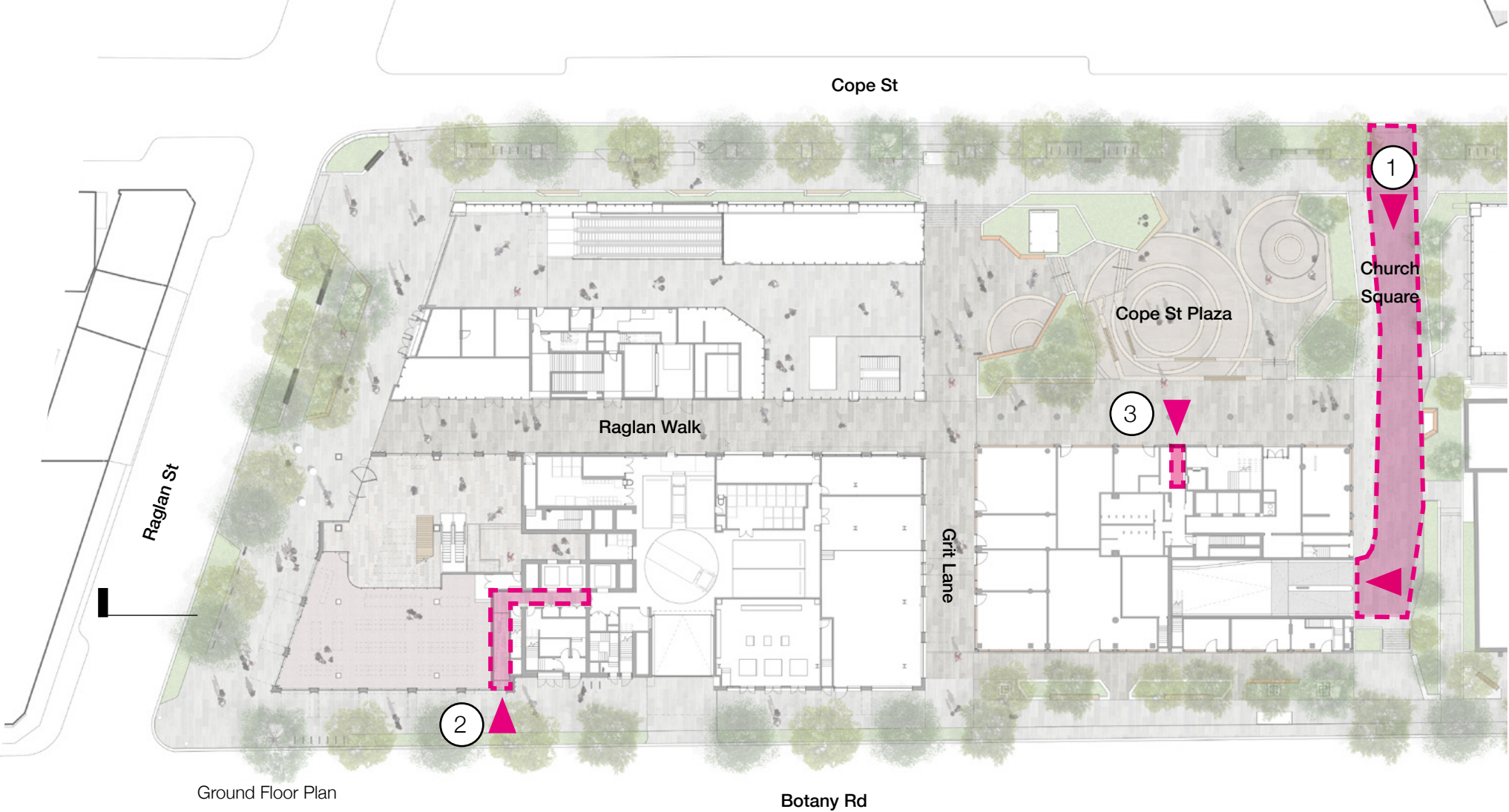
Vehicles access the basement via a shared driveway from Cope Street that leads up to Church Square and down a designated car park access ramp

## ② Commercial End of Trip Facility Entry

Commercial EOTF and bicycle parking are located on level 1 of the basement (P1) directly underneath the Northern Precinct. Riders can access the EOT via a dedicated entry from Botany Road and use two shuttle lifts located on the ground level.

## ③ Retail End of Trip Facility Entry

Retail EOTF are located on level 1 of the basement (P1) directly underneath the Central Precinct. These can be accessed from the shuttle lift in the Central Precinct.





# 02.2 Basement Design

The basement consists of two subterranean levels with the eastern edge abutting the metro box. The footprint and layout of perimeter walls respond to deep soil requirements on the ground plane above.

Designed with minimal structural transfers the columns line up with the tower structures above. Long span parking bays ensure efficient parking layout. Greater detail on the construction and excavation methodologies are provided in Appendix P Structural Report and Appendix QQ Geotechnical Report. We also note the structural and civil engineers will provide expert consultant advice on the waterproofing strategy, especially with regards to the interface with metro box.

Car parking allocation is shared with several users within the precinct, including commercial, residential, car share, social housing, church and metro. Please refer to the detailed table below.

Car Parking

Basement 1		
	Affordable Housing	11
	Affordable Housing - DDA	1
	Car Wash	1
	Care Share	4
	Childcare	1
	Church	2
	Commercial	10
	Commercial - Small	1
	Metro	2
	Residential	18
	Service	5
	Social Housing	6
	Social Housing - DDA	2
	Visitor - DDA	2
	P1: 66	66
Basement 2		
	Commercial	46
	Commercial - DDA	2
	Commercial - Small	4
	Residential	29
	Residential DDA	8
	P2: 89	89
	Grand total: 155	155

Motorcycle Parking

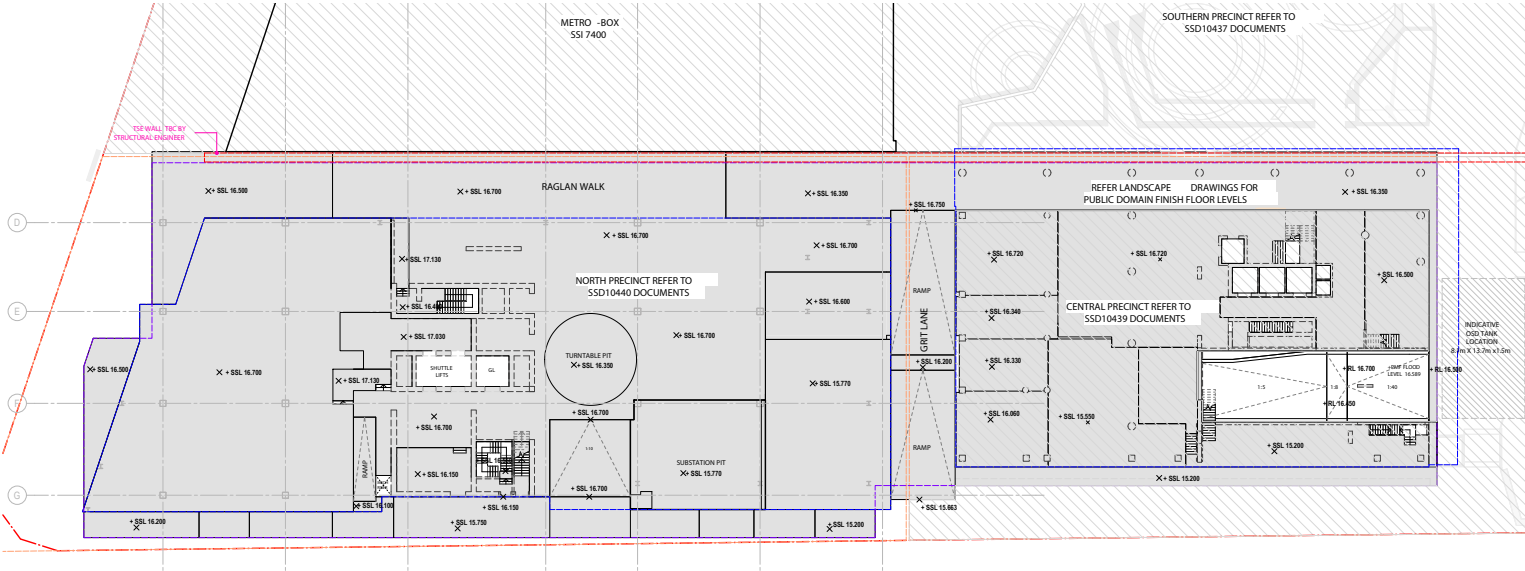
Basement 1		
	Motorbike - Commercial	3
	Motorbike - Resi	5
	P1: 8	8
Basement 2		
	Motorbike - Resi	2
	P2: 5	5
	Grand total: 13	13

Bicycle Parking

LEVEL	COMMERCIAL (END OF TRIP)	RESIDENTIAL (LOCKER)	RETAIL & CHILDCARE
P1	-	236	65
P2	-		14

Residential Storage Allocation

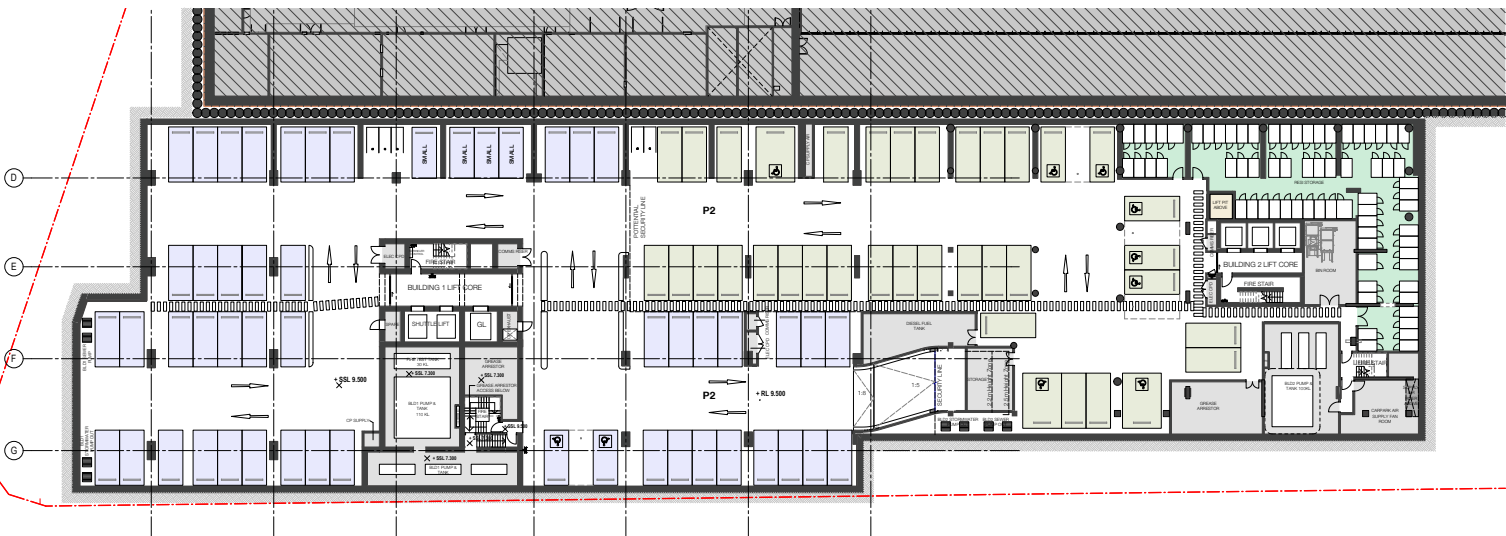
Basement 1		
	Storage	78
	P1: 78	
Basement 2		
	P2	
	Storage	72
	P2: 72	
	Grand total: 150	



Ground RL 15500



Basement 1 RL 12500



Basement 2 RL 9500

Basement Plans



# 02.3 End of Trip Facility

Commercial End of Trip facilities and Bicycle parking are located in Basement 1 directly underneath Building 1. Riders can access the EOT via a dedicated entry from Botany Road and use two shuttle lifts located on the ground level to get to the basement.

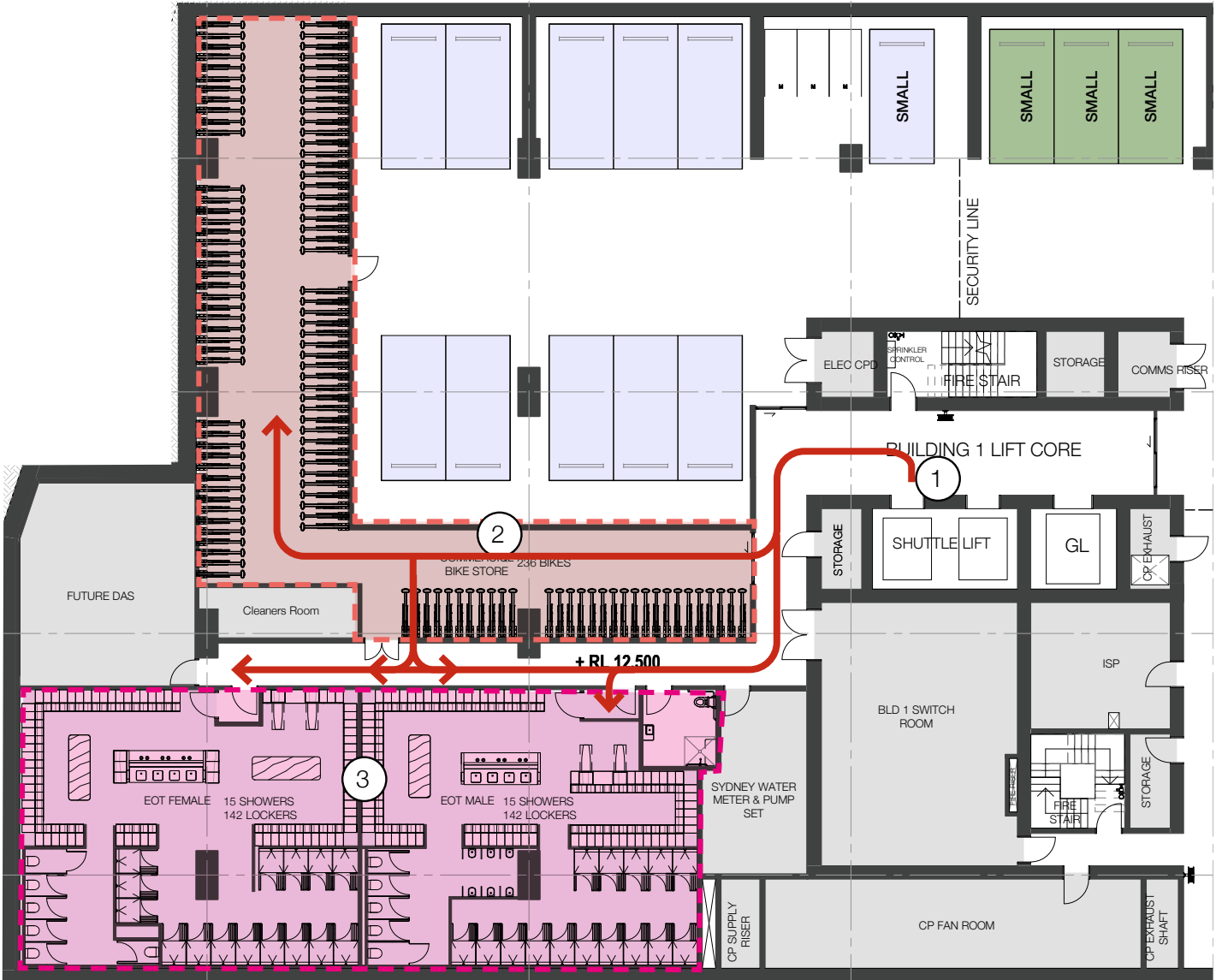
Bike parking, lockers, showers and amenities are provided for a 1:10 occupancy

Retail EOT is located under building 2 and can be accessed via residential lift core.

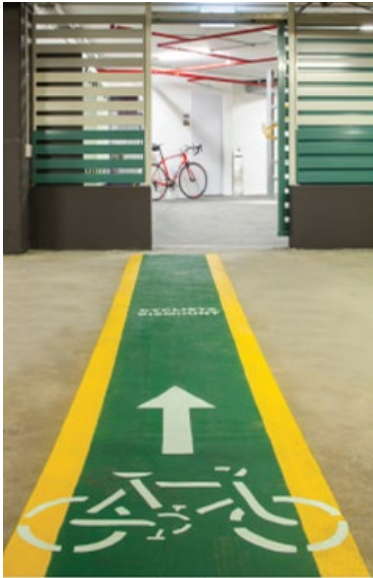
## Commercial EOTF

- 236 COMMERCIAL BIKE PARKING
- 30 SHOWERS
- 284 LOCKERS

- Commercial EOT
- ① EOT LIFTS
  - ② COMMERCIAL BICYCLE STORE
  - ③ EOT FACILITIES



Plan of Commercial End-of-trip Facility



Precedent images

Retail EOTF and Bicycle parking are located in Basement 1 directly underneath Building 2. These are equally split between male and female, and serve retailers across the precinct.

Riders can access the EOTF via a dedicated entry from Cope Street Plaza and use the shuttle lift located on the ground level to get to the basement.

## Retail EOTF

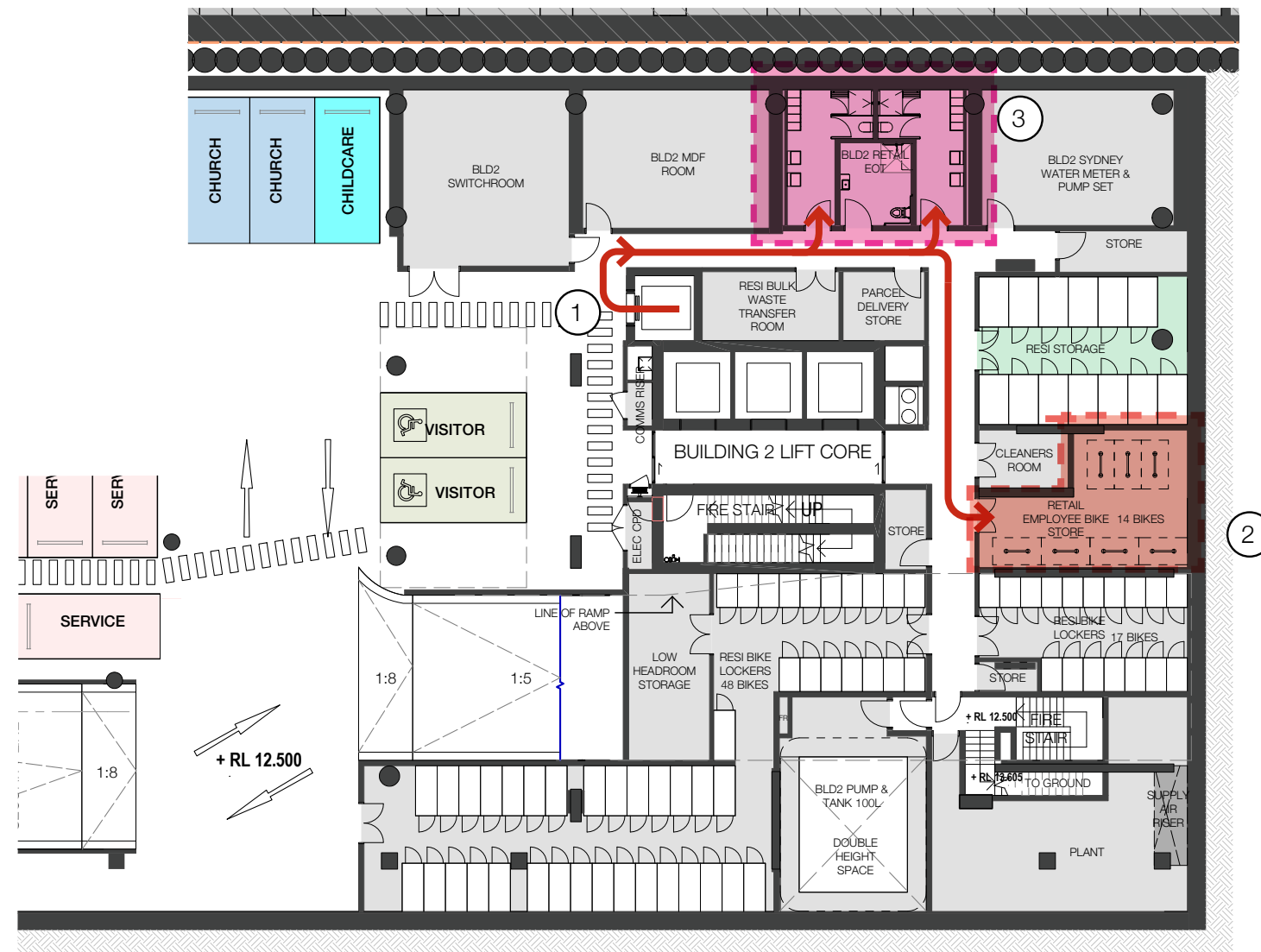
## 14 BIKE PARKING

## 2 SHOWERS

16 LOCKERS



- ① SHUTTLE LIFT
- ② RETAIL BICYCLE STORE
- ③ EOT FACILITIES



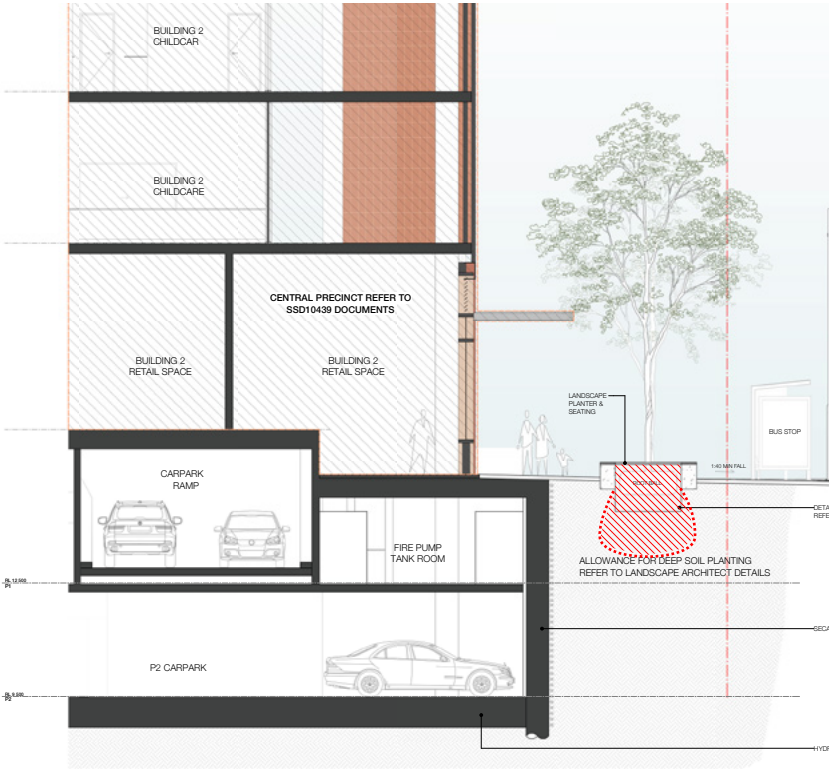
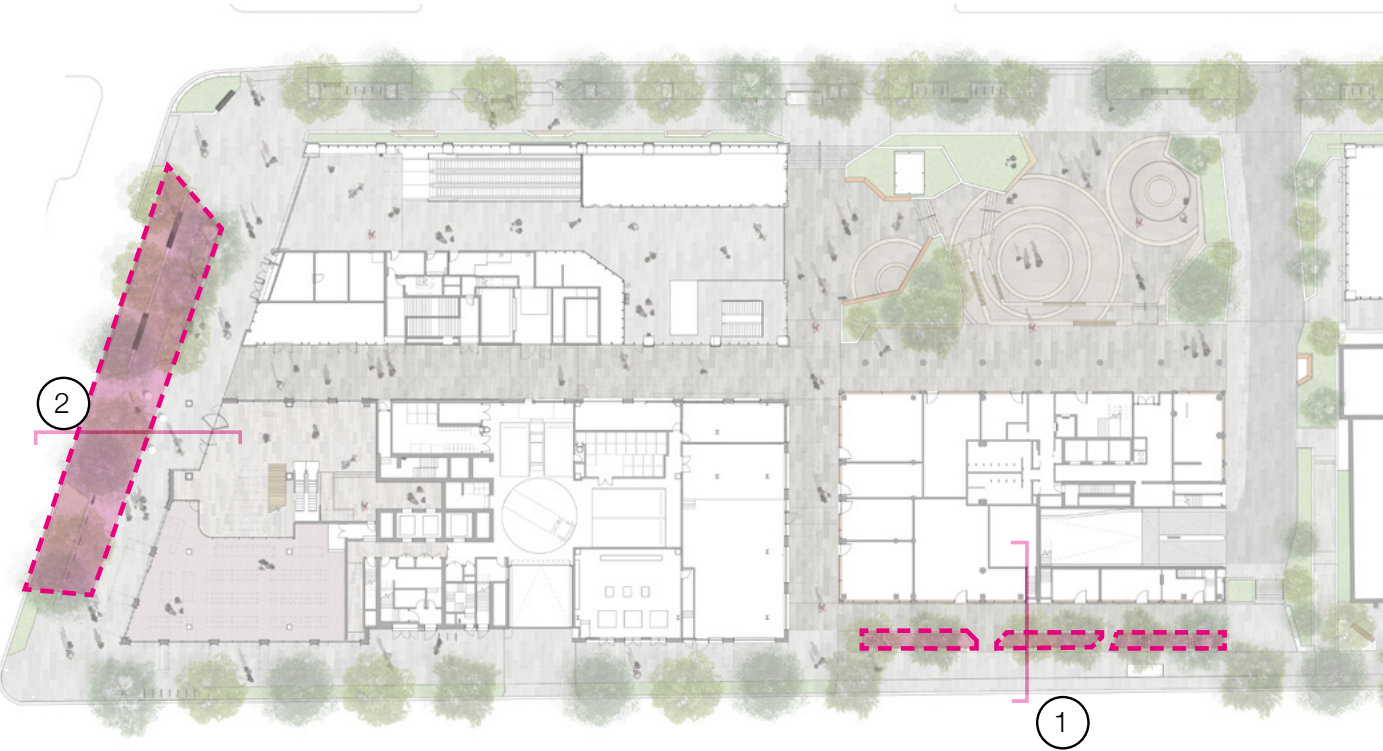
### Plan of Retail End-of-trip Facility



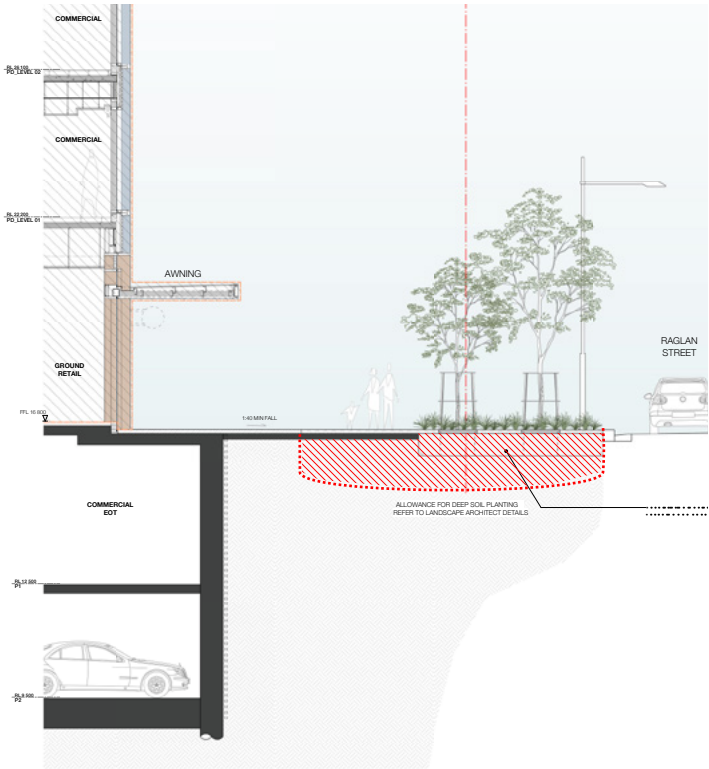
# 02.4 Deep Soil Zones

The basement is adequately set back from Raglan Street to the north and Botany Road to the west allowing for deep soil planting and ground water replenishment in line with the design requirements for the Public Domain.

Reference is made to the deep soil planting details by Aspect Studios and their Landscape Design Report Appendix KK forming part of the Northern Precinct SSD 10440.



1 Botany Road



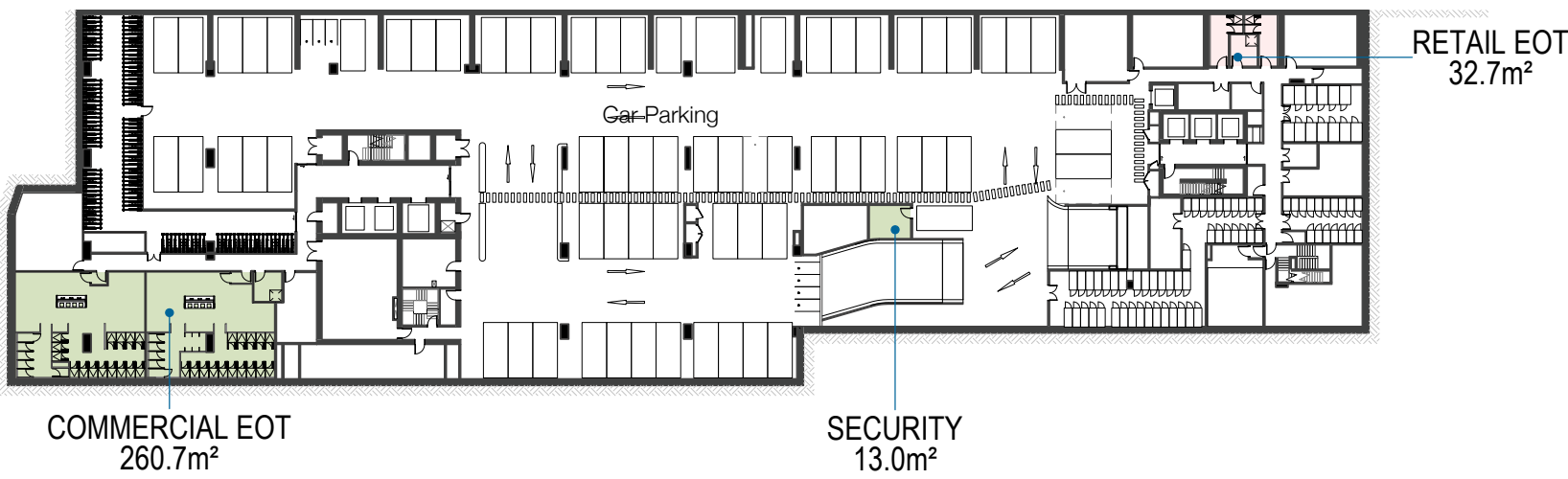
2 Raglan Street

# 02.5 Area Schedule

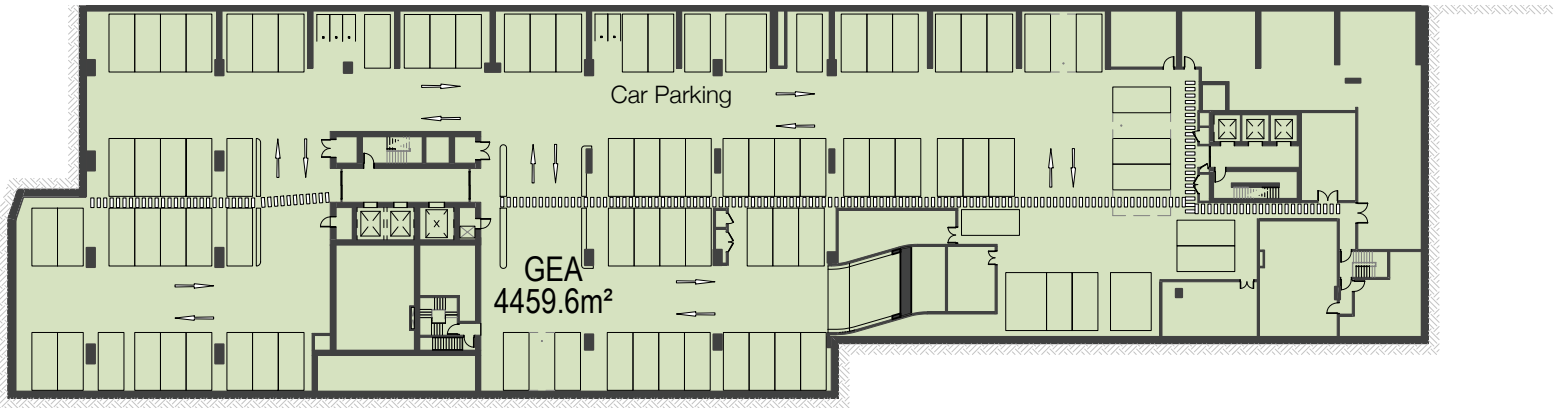
\*GFA is measured in accordance with SLEP 2012 definition

## Basement GFA

Commercial EOT	260.7 m <sup>2</sup>
Security	13.0 m <sup>2</sup>
Retail EOT	32.7 m <sup>2</sup>
<b>TOTAL</b>	<b>306.4 m<sup>2</sup></b>



Area Plan - Basement P1



Area Plan - Basement P2





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# A.1

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## Appendix 1 Response to Design & Amenity Guidelines



A.1.0 Response to Design and Amenity Guidelines

This Appendix to the Architectural Design Report for the Northern Precinct and Basement aims at providing a clearly tabulated response to the Design Criteria listed under Part 3 of the Waterloo Metro Quarter Design & Amenity Guidelines, March 2020.

Table 3 WMQ Design & Amenity Guidelines, Part 3 applicable Design Criteria

Item	Description of requirement	Response / Comment
3N	<p>Pedestrian and cycle network</p> <p>Objectives:</p> <p>1. Prioritise walking and cycling trips in and around the Metro Quarter over vehicles</p> <p>2. Manage potential conflict between cyclists and pedestrians through the design of the public domain and locations of bike parking</p> <p>3. Provide a pedestrian network that aligns with key pedestrian desire lines and is integrated with the active frontages</p> <p>Design criteria:</p> <p>1. Provide generous footpath widths that can accommodate the forecast pedestrian flows from the metro station</p> <p>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</p> <p>3. Provide on-site bicycle parking for residents at a minimum rate of 1 space per dwelling and 1 visitor space per 10 dwellings</p> <p>4. Provide bike parking spaces within the precinct for Metro customers in accordance the CSSI Approval</p>	<p>Reference made to the Landscape Design Report by Aspect as well as to the pedestrian modelling report.</p> <p>Yes Refer to Landscape Design Report by Aspect</p> <p>N/A Refer to Landscape Design Report by Aspect</p> <p>Yes Refer to Section 02.2, Refer Central Precinct DA</p> <p>N/A</p>
3O	<p>Car parking and access</p> <p>Objectives:</p> <p>1. Prioritise walking, cycling and public transport above private car use</p> <p>2. Provide safe, convenient and legible movement for the public</p> <p>3. Provide convenient access between different transport modes</p> <p>4. Encourage public transport use and minimise the amount of car parking provided within the development</p> <p>Design criteria:</p> <p>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</p> <p>2. Design basement car parking including depth and setback form property boundaries to ensure adequate soil volume and depth for street tree planting</p> <p>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</p>	<p>Refer also Traffic Engineering report by PTC.</p> <p>The Basement provides car parking for several users, however mainly for the commercial and residential towers. Please refer car parking table in Basement plans.</p> <p>Perimetral setbacks to the north and south west of the plan allow for deep soil planting over.</p> <p>Yes Refer to Section 02.2, Central Precinct DA and Traffic Report</p> <p>Yes Refer to Landscape Design Report</p> <p>Yes The entrance to car park is access on the south side of Cope St Plaza removed from main pedestrian movement of the Metro Customers. Refer to Section 02.1 and Traffic Report</p>

	<p>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:</p> <ul style="list-style-type: none"><li>• 1 per 50 car spaces provided for residential development (i.e. Category A rate)</li><li>• 1 per 30 car spaces provided for office premises, business premises or retail premises (i.e. Category D rate)</li></ul>	Yes Refer to Section 02.2 and Traffic Report
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ASIA

**Beijing**  
Level 5, Building 15,  
Taikoo Li Sanlitun North,  
No.11 Sanlitun Road  
Chaoyang Beijing,  
China 100027  
T +86 10 6419 8555

**Hong Kong**  
Level 22, The Centrium,  
60 Wyndham Street,  
Central Hong Kong  
T +852 2526 6308

**Shanghai**  
Plaza 336, 9F,  
336 Middle Xizang Road  
Huangpu District  
Shanghai, China 200001  
T +86 21 6023 1968

SOUTHEAST ASIA

**Singapore**  
38 Bukit Pasoh Road,  
Singapore 089852  
T +65 6800 0900

AUSTRALIA & NEW ZEALAND

**Adelaide**  
Level 14, 11 Waymouth Street,  
Adelaide SA 5001, Australia  
GPO Box 338  
Adelaide SA 5001, Australia  
T +618 8113 5900

**Brisbane**  
Level 3, 262 Adelaide Street  
Brisbane Qld 4001, Australia  
GPO Box 7842  
Brisbane Qld 4001, Australia  
T +617 3308 2900

**Christchurch**  
Level 2, 299 Durham Street,  
Christchurch  
New Zealand 8013  
PO Box 972, Christchurch  
New Zealand 8140  
T +64 3 963 4340

**Melbourne**  
Mezzanine,  
498 Little Collins Street,  
Melbourne, Vic 3000, Australia  
PO Box 16206  
Collins Street West  
Vic 8007, Australia  
T +613 8646 6600

**Perth**  
The Palace,  
108 St Georges Terrace,  
Perth WA 6000, Australia  
GPO Box 2797  
Perth WA 6001  
Australia  
T +618 9322 0500

**Sydney**  
Level 2,  
60 Carrington Street,  
Sydney NSW 2000, Australia  
PO Box N19  
Grosvenor Place  
Sydney NSW 1220  
Australia  
T +612 9249 2500

EUROPE

**London**  
75 Riding House Street,  
London W1W 7EJ  
United Kingdom  
T +4420 7637 6880

MIDDLE EAST

**Abu Dhabi**  
Suite 1413, Makeen Tower,  
Corner 9th & 10th Street  
Abu Dhabi, UAE  
PO Box 110710  
Abu Dhabi, UAE  
T +9712 657 3450

**Dubai**  
Level 3, Suite 313  
Dubai Emarat Atrium  
Sheikh Zayed Road  
Dubai, UAE  
PO Box 58041  
Dubai, UAE  
T +971 4 404 1600

NORTH AMERICA

**Los Angeles**  
Bradbury Building  
304 South Broadway,  
Studio 212  
Los Angeles, CA 90013, USA  
T +1 213 766 0445

**New York**  
30 Broad Street, 7th Floor,  
New York, NY 10004, USA  
T +1 646 756 3300

**San Francisco**  
88 Kearny Street, Floor 19  
San Francisco CA  
94108 USA  
T +1 415 277 3000

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CONTACTS

**Domenic Alvaro**  
Director  
Domenic.Alvaro@woodsbagot.com  
T +61 2 9249 2511

**Pietro Meriggi**  
Senior Associate  
Pietro.Meriggi@woodsbagot.com  
T +61 2 9295 4015