WATERLOO METRO QUARTER OVER STATION DEVELOPMENT

Appendix M – Ecologically Sustainable Development Report and Sustainability Strategy

SSD-10438 Basement Car Park

Detailed State Significant Development
Development Application

Prepared for **Waterloo Developer Pty Ltd**

[30 September] 2020

Reference	Description
Applicable SSD Applications	SSD-10438 Basement Car Park
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1. Glossary and abbreviations

Reference	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
ADG	Apartment Design Guide
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
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

Reference	Description
ESD	ecologically sustainable design
GANSW	NSW Government Architect's Office
GFA	gross floor area
HIA	Heritage Impact Assessment
IAP	Interchange Access Plan
LGA	Local Government Area
NCC	National Construction Code
OSD	over station development
PIR	Preferred Infrastructure Report
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

Reference	Description
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

2. Executive summary

This report has been prepared by Cundall Johnston and Partners Pty Ltd (Cundall) to accompany a detailed State significant development (SSD) development application (DA) for the Basement Car Park 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).

This report concludes that the proposed Basement Car Park OSD is suitable and warrants approval subject to the implementation of the following mitigation measures.

- A sustainability framework, based on the One Planet Living principles and incorporating the requirements of the rating tools, will be implemented to deliver national best practice sustainability outcomes against a range of environmental and social issues. The framework categories are:
  - Zero Carbon Energy
  - Sustainable Water
  - Waste Minimisation
  - Materials and Supply Chain
  - Land and Nature
  - Travel and Transport
  - Sustainable Food
  - Climate Risk and Adaptation
  - Health and Wellbeing
  - Ethics and Equity
  - Community and Culture

- The basement will form part of the achievement of national best practice sustainability demonstrated through third party certification of the following rating tools for the buildings above the basement in the northern and central precincts:
  - 5 Star rating – Green Star Design and As-Built rating tool v1.3
  - 5.5 Star rating – NABERS Energy (Base Building) – Northern precinct
  - 4.5 Star rating – NABERS Water – Northern precinct
  - Gold rating – WELL Core – Northern precinct
  - BASIX Energy score of ≥30 – Central precinct
  - BASIX Water score of >40 – Central precinct

- The basement is also included within the whole Waterloo Metro Quarter site which will obtain the following site-wide certifications:
  - 6 star rating – Green Star Communities rating tool v1.1
  - One Planet Community – recognition by Bioregional Australia

The report should be read in conjunction with Appendix M – Ecologically Sustainable Development Report and Sustainability Strategy of the Northern Precinct (SSD-10440) and the Central Precinct (SSD-10439) Environmental Impact Statements.

3. Introduction

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

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

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

- 2-storey shared basement car park and associated excavation
- ground level structure
- 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 bicycle 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 below.

Item	Description of requirement	Section reference (this report)
8	**Ecologically Sustainable Development (ESD)** The EIS shall: • detail how ESD principles (as defined in clause 7(4) Schedule 2 of the EP&A Regulation 2000) will be incorporated in the design, construction and operation of the development • include a framework (or demonstrate consistency with an approved framework) for how the proposed development will reflect national best practice sustainable building principles to improve environmental performance, including energy and water efficient design and technology, use of renewable energy and best practice in waste management strategy.	7 9

	• demonstrate sufficient waste and recycling management facilities storage and holding areas for servicing.	Refer to EIS Appendix L – Operational Waste Management Plan

Table 1 - SEARs requirements

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 below.

Item	Description of requirement	Section reference (this report)
B18	Demonstrate how the principles of ecologically sustainable development have been incorporated into the design, construction and ongoing operation of the proposal. This shall include preparation of Environmentally Sustainable Strategies that incorporate low-carbon, high efficiency targets aimed at reducing emissions, optimising use of water, reducing waste and optimising carparking provision to maximise sustainability and minimise environmental impacts.	9
B19	The minimum performance targets for environmental performance are: (a) Precinct Overall (i) 6 star Green Star Communities Rating Tool (ii) Endorsed under One Planet Living framework (b) Commercial / Office Uses (i) 5 Star Green Star Design and As-Built Rating Tool (ii) 5.5 Star NABERS Energy (iii) 4.5 Star NABERS Water (iv) Gold certification: Shell and Core under WELL Building Standard (c) Residential Uses (i) 5 Star Green Star Design and As-Built Rating Tool (ii) More than BASIX 40 Water (iii) BASIX 30 Energy	8

Table 2 - Conditions of Concept Approval

This report has also been prepared to respond to the objectives and design criteria set out in Section 3R Sustainability of the Waterloo Metro Quarter Design and Amenity Guidelines dated March 2020 as summarised in the table below.

Item	Description of requirement	Section reference (this report)
Objective 1	Create an integrated sustainable infrastructure network incorporating transport facilities, public domain, water systems and vegetation	9
Objective 2	New development encourages sustainable water use practices	9
Objective 3	Reduce energy consumption, emissions and urban heat island effect and improve air quality and the absorption of carbon	9
Design Criteria 1	Comply with the performance targets specified in development consent SSD-9393	8
Design Criteria 2	Water sensitive urban design measures are incorporated to improve stormwater quality flowing into waterways	9

Table 3 – Sustainability Objectives and Design Criteria in Design and Amenity Guidelines

4. The site

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

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

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

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

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

The detailed SSD DA applies to the Basement Car Park (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).

The boundaries of the overall site are identified at Figure 1, and the subject site of the detailed SSD DA is identified at Figures 2 and 3. 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).

Figure 1 - Aerial image of the site
Source: Urbis

The area surrounding the site consists of commercial premises to the north, light industrial and mixed-use development to the south, residential development to the east and predominantly commercial and light industry uses to the west.

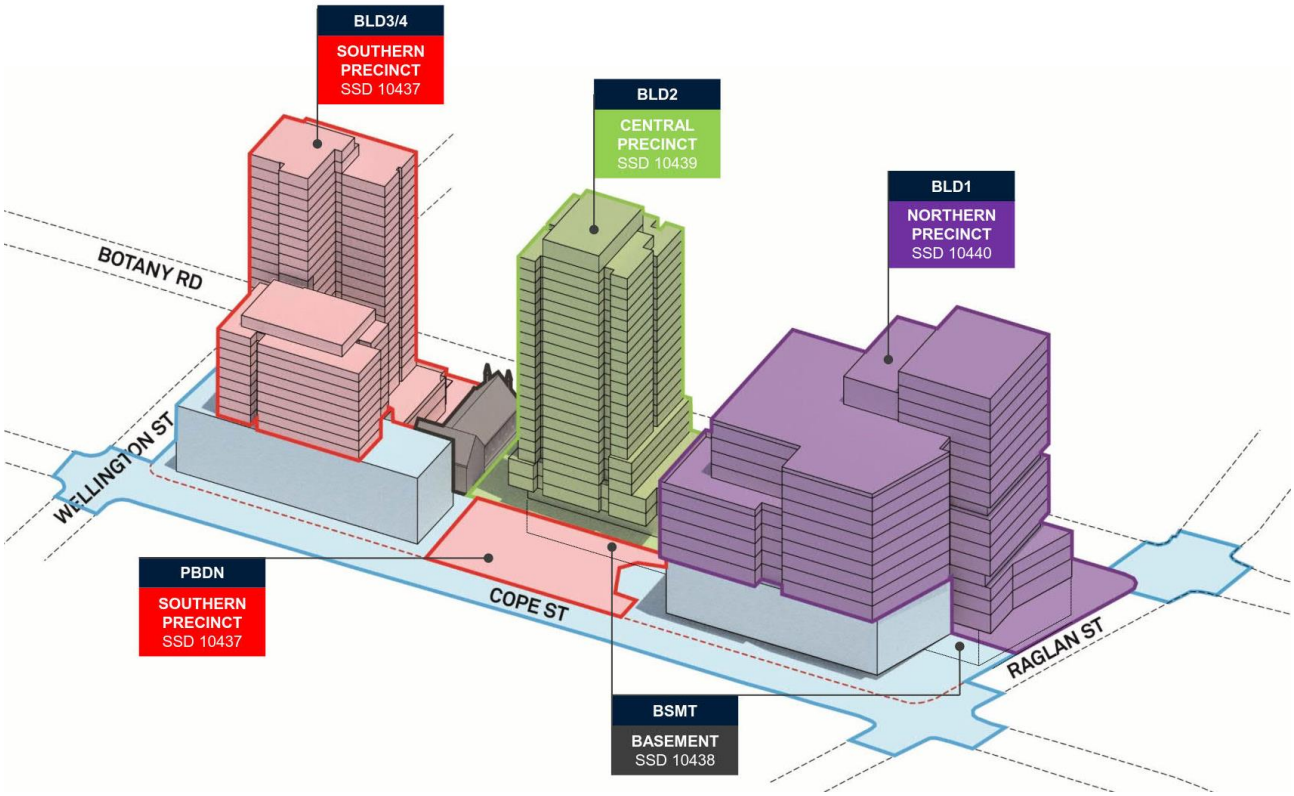

Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified
Source: HASSELL

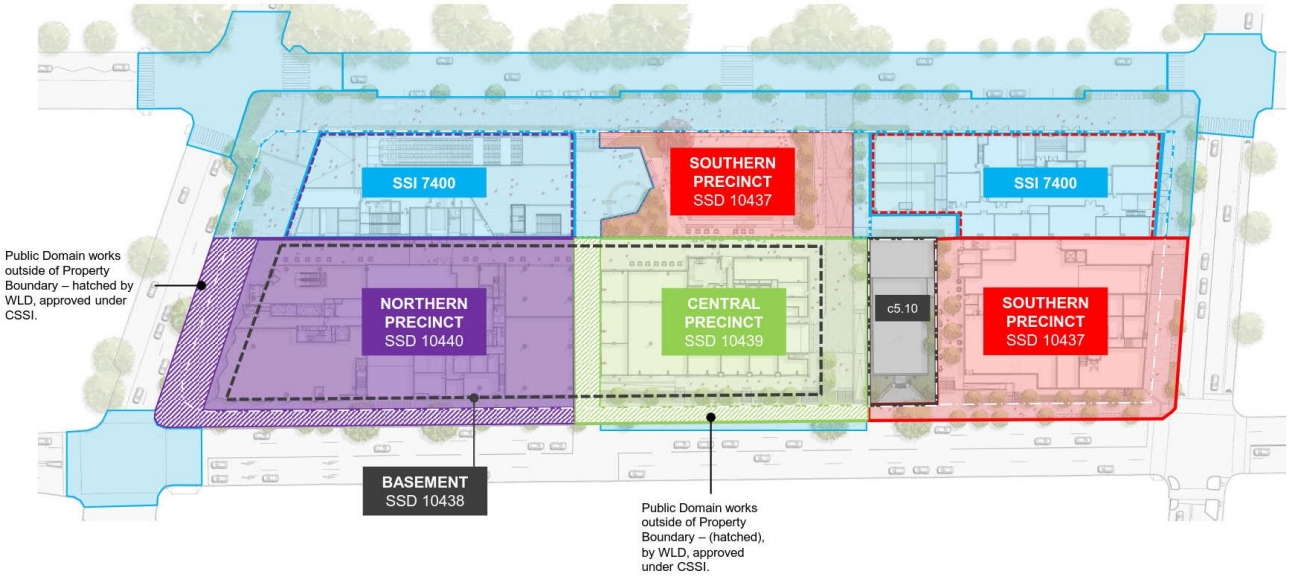

Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified
Source: Waterloo Developer Pty Ltd

5. Background

5.1 About 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:

5.1.1 Sydney Metro North West

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.

5.1.2 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.

5.1.3 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.

5.1.4 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 below.

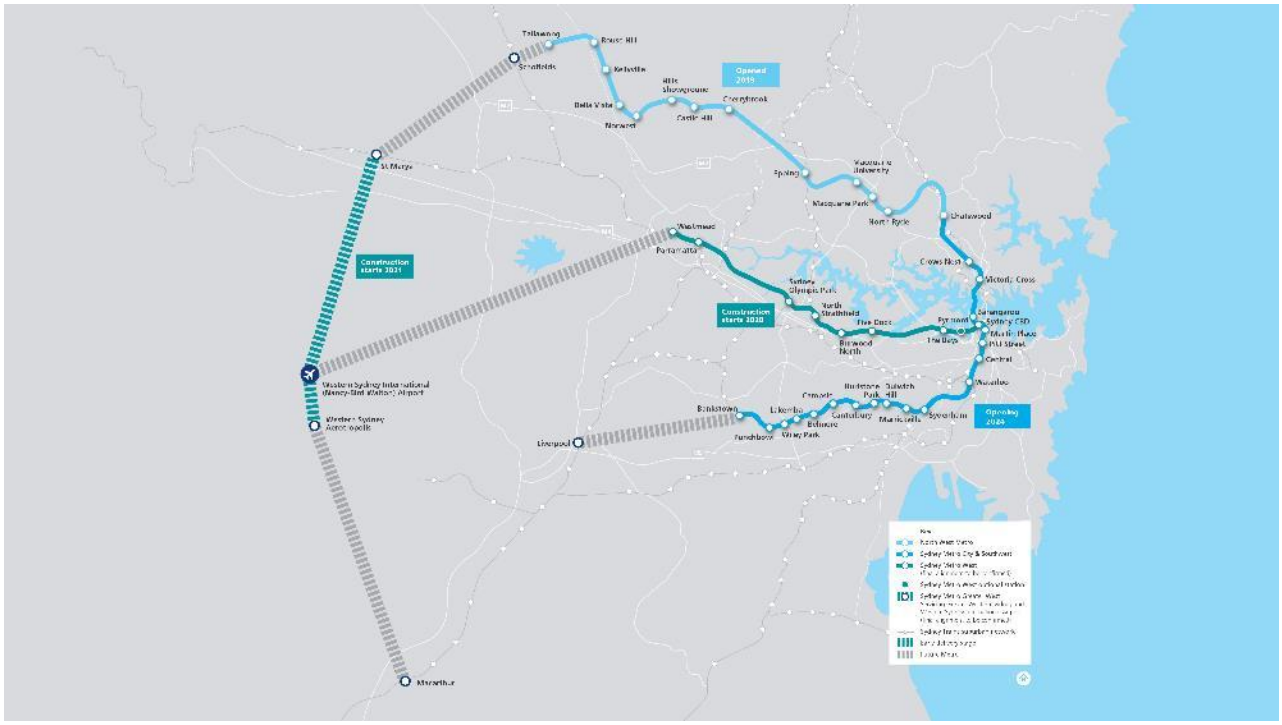

Figure 4 - Sydney Metro alignment map
Source: Sydney Metro

5.2 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 5.

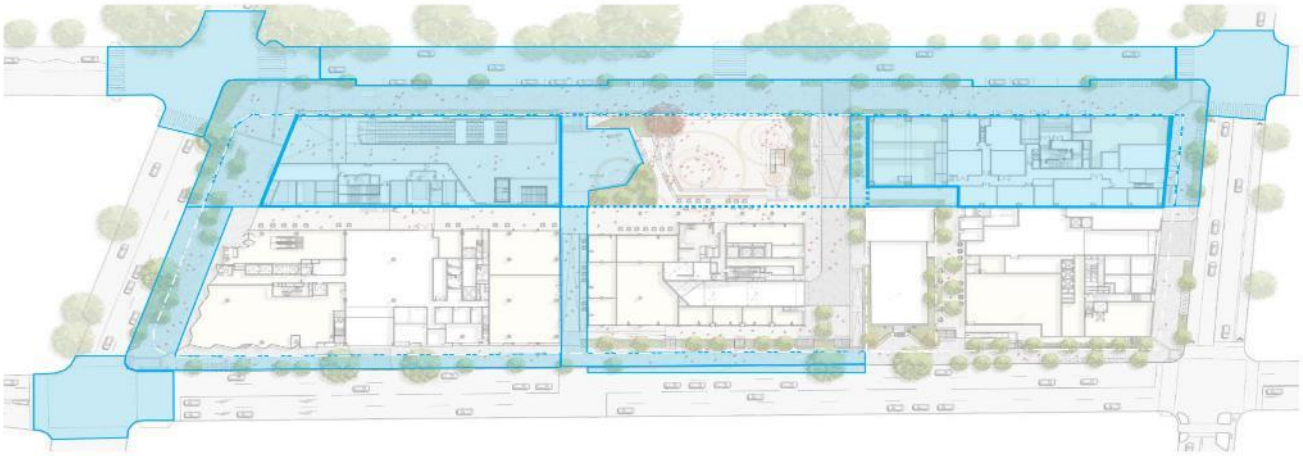

Figure 5 - CSSI Approval scope of works
Source: WL Developer Pty Ltd

5.3 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.

The detailed SSD DA seeks development consent for the OSD located within the Basement Car Park of the site, consistent with the parameters of this concept approval. Separate SSD DAs have been prepared and will be submitted for the Northern, Central and Southern precincts 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.

6. Proposed development

6.1 Waterloo Metro Quarter Development

The Waterloo Metro Quarter OSD comprises four separate buildings, a basement carpark and public domain works adjacent to the Waterloo Metro station.

Separate SSD DAs will be submitted concurrently for the design, construction and operation of each building in the precinct:

- Southern precinct SSD-10437,
- Basement Car Park SSD-10438,
- Central precinct SSD-10439, and
- Northern precinct-SSD-10440.

An overview of the Development is included below for context. This detailed SSD DA seeks development consent for the design, construction and operation of the Basement Car Park.

6.1.1 Southern Precinct

The Southern Precinct comprises:

- 25-storey residential building (Building 3) comprising student accommodation, to be delivered as a mixture of studio and twin apartments with approximate capacity of 474 students
- 9 storey residential building (Building 4) above the southern station box to accommodate 70 social housing dwellings
- ground level retail tenancies including Makerspace and gymnasium lobby, and loading facilities
- level 1 and level 2 gymnasium and student accommodation communal facilities
- landscaping and private and communal open space at podium and roof top levels to support the residential accommodation
- new public open space including the delivery of the Cope Street Plaza, including vehicle access to the site via a shared way from Cope Street, expanded footpaths on Botany and Wellington Streets and public domain upgrades
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

6.1.2 Basement Car Park – Subject DA

The Basement Car Park comprises:

- 2-storey shared basement car park and associated excavation comprising
- Ground level structure
- Carparking for the Commercial Building 1, Residential Building 2, social housing Building 4, Waterloo Congregational Church and Sydney Metro
- Service vehicle bays

- commercial end of trip and bicycle storage facilities
- Retail end of trip and bicycle storage facilities
- residential storage facilities
- shared plant and services.

6.1.3 Central Precinct

The Central Precinct comprises:

- 24-storey residential building (Building 2) comprising approximately 126 market residential and 24 affordable housing apartments, to be delivered as a mixture of 1 bedroom, 2 bedroom and 3 bedroom apartments
- Ground level retail tenancies, community hub, precinct retail amenities and basement car park entry
- level 1 and level 2 community facilities (as defined in the SLEP) intended to be operated as a childcare centre
- landscaping and private and communal open space at roof top levels to support the residential accommodation
- new public open space including the delivery of the Church Square, including vehicle access to the basement via a shared way from Cope Street, expanded footpaths and public domain upgrades on Botany Road
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

6.1.4 Northern Precinct

The Northern Precinct comprises:

- 17-storey commercial building (Building 1) comprising Commercial floor space, with an approximate capacity of 4000 workers
- ground level retail tenancies, loading dock facilities serving the northern and central precinct including Waterloo metro station
- landscaping and private open space at podium and roof top levels to support the commercial tenants
- new public open space including the delivery of the Raglan Street Plaza, Raglan Walk and expanded footpaths on Raglan Street and Botany Road and public domain upgrades
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged).

7. ESD Principles

7.1 Definition

Clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000, defines the principles of ecologically sustainable development as follows:

a) the precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

   (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

   (ii) an assessment of the risk-weighted consequences of various options,

b) inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

c) conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

d) improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:

   (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

   (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

   (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

7.2 Response

This project responds to the above ESD principles as follows. The sustainability initiatives are described in more detail in Section 9 and include design, construction and operational initiatives.

7.2.1 Precautionary Principle

The project will present no threat of serious or irreversible environmental damage. The project will deliver ecological restoration and habitat creation to improve the site, implement climate change adaptation principles, and apply industry best practice ESD initiatives and third party certification including Green Star Design and As-Built, Green Star Communities, NABERS Energy, NABERS Water, WELL Building Standard and One Planet Community.

An appropriate due diligence has been and will continue to be conducted along the development process to ensure the precautionary principle is satisfied. Due diligence includes conducting required studies to address all SEARs environmental requirements and all statutory provisions in all relevant planning instruments, including the Biodiversity Conservation Act 2016, relevant SEPPs and LEPs.

7.2.2 Inter-Generational Equity

The buildings above the basement will provide healthy internal and external environments for workers, residents and visitors today and in the future. Building 1 will achieve a WELL Core Gold rating representing best practice for health and wellbeing design of office buildings. The landscaping design, including green roofs and tree planting, will deliver benefit to current and future generations.

The use of fossil fuels has been minimised to allow the building to be powered by low carbon and/or renewable energy sources today and in the future to align with the NSW Government's goal of zero carbon emissions by 2050.

7.2.3 Conservation of Biological Diversity and Ecological Integrity

The site is of low ecological value and primarily contained existing buildings and paving which have been demolished to enable the construction of the new underground Sydney Metro station. An extensive landscaping strategy has been developed for the site above the basement which includes tree planting at street level and green roofs on the buildings.

The selection of planting will prioritise native species, selected based on sun exposure, shading and watering needs, to suit their position in the landscape and environmental attributes of that location. Tree and understorey planting throughout the site will provide a rich diversity of endemic species. The palette has been developed to create urban ecologies which may provide habitat or food sources for native birds, bees and insects. Refer to the Landscape Report for further details.

7.2.4 Improved Valuation, Pricing and Incentive Mechanisms

The design and operation of the building will reduce energy and water consumption and greenhouse gas emissions. Life Cycle Costing will be used during the design process to justify capital investment and reduce ongoing impacts.

Environmental goals have been established using industry recognised rating tools which are designed to deliver beneficial environmental and social outcomes during construction and operation.

8. Environmental Performance Targets

The Basement Car Park will form part of the achievement of national best practice sustainability demonstrated through third party certification of the following rating tools for the buildings above the basement in the northern and central precincts:

- 5 Star rating – Green Star Design and As-Built rating tool v1.3
- 5.5 Star rating – NABERS Energy (Base Building) – Northern precinct
- 4.5 Star rating – NABERS Water – Northern precinct
- Gold rating – WELL Core – Northern precinct
- BASIX Energy score of ≥30 – Central precinct
- BASIX Water score of >40 – Central precinct

The Basement Car Park is also included within the whole Waterloo Metro Quarter site which will obtain the following site-wide certifications:

- 6 Star rating – Green Star Communities rating tool v1.1
- One Planet Community – recognition by Bioregional Australia

Further details on the performance targets are given in Appendix M – Ecologically Sustainable Development Report and Sustainability Strategy of the Northern Precinct (SSD-10440) and the Central Precinct (SSD-10439) Environmental Impact Statements.

9. Sustainability Framework

A modified version of the standard One Planet Living categories has been adopted as the Sustainability Framework for the project. The framework will inform design, construction and operational stages of the project. An integrated design approach will be adopted for the incorporation of sustainability measures, with input from the sustainability consultant from early planning through to construction phases.

9.1 Framework Categories

The sustainability framework impact categories are:

Zero Carbon Energy

Sustainable Water

Waste Minimisation

Materials and Supply Chain

Land and Nature

Travel and Transport

Sustainable Food

Climate Risk and Adaptation

Health and Wellbeing

Ethics and Equity

Community and Culture

9.2 Framework Alignment

The Sustainability Framework aligns the various sustainability impacts identified in the following:

- Mirvac's This Changes Everything strategy
- John Holland's Approach to Sustainability
- UN Sustainable Development Goals
- Sustainable Sydney 2030 – Community Strategic Plan 2017-2021
- Concept SSD DA (SSD 9393) dated 10 December 2019
- Secretary's Environmental Assessment Requirements (SEARs) dated 9 April 2020
- Waterloo Metro Quarter Design and Amenity Guidelines – Section 3R sustainability
- Sydney Metro City and Southwest Sustainability Strategy 2017-2024 (June 2019 update)
- Green Star Design and As-Built rating tool
- Green Star Communities rating tool
- WELL Building Standard
- One Planet Community principles
- NABERS Energy and Water
- BASIX

The Sustainability Framework also aligns with the environmental and social impacts addressed under the various rating tools described in Section 8.

9.3 Framework Initiatives and Implementation

A broad range of initiatives are proposed in order to minimise consumption of resources, especially energy, water and waste, and ensure delivery of a sustainable development. These are described in the following sections and will be reviewed and refined during design development.

The initiatives will be consistent with national best practice and will contribute towards achieving the environmental performance targets described in Section 8.

The Basement Car Park directly contributes to the overall Framework, with a focus on health and wellbeing and carbon emissions reductions, in the following ways:

- Commercial End of Trip Facilities in excess of Development Control Plans
- Reduced car parking compared to maximum allowable
- 4 car share vehicles
- 9 electric car charging bays for the commercial office with the capability to expand the electric vehicle charging to 100% of all spaces in the car park.

For further details of the initiatives that apply to the Basement Car Park and the buildings above the basement please refer to the ESD Reports for the Northern Precinct (SSD-10440) and Central Precinct (SSD-10439).

10. Conclusion

The proposed development complies with the ecologically sustainable development requirements set out in the SEARs dated 9 April 2020.

The proposed development meets or exceeds the conditions of consent issued for the concept SSD DA (SSD 9393) for the OSD.

The Sustainability Framework and the environmental performance targets are consistent with, and in many cases go beyond, national best practice in sustainability for developments of a similar scale and nature.

The Basement Car Park will contribute to achieving the following third party certified performance targets for Building 1 (Northern Precinct):

- 5 Star rating – Green Star Design and As-Built rating tool v1.3
- 5.5 Star rating – NABERS Energy (Base Building)
- 4.5 Star rating – NABERS Water
- Gold rating – WELL Core (WELL Building Standard v2)

The Basement Car Park will contribute to achieving the following third party certified performance targets for Building 2 (Central Precinct):

- 5 Star rating – Green Star Design and As-Built rating tool v1.3
- BASIX Energy score of ≥30
- BASIX Water score of >40

The Basement Car Park is also included within the whole Waterloo Metro Quarter site which will obtain the following site-wide certifications:

- 6 star rating – Green Star Communities rating tool v1.1
- One Planet Community – recognition by BioRegional Australia

The Sustainability Framework, based on the One Planet Living principles and incorporating the requirements of the rating tools, includes objectives, goals/targets and a range of initiatives for each of the following categories:

- Zero Carbon Energy
- Sustainable Water
- Waste Minimisation
- Materials and Supply Chain
- Land and Nature
- Travel and Transport
- Sustainable Food
- Climate Risk and Adaptation
- Health and Wellbeing
- Ethics and Equity
- Community and Culture

The Basement Car Park directly contributes to the overall Framework, with a focus on health and wellbeing and carbon emissions reductions, in the following ways:

- Commercial End of Trip Facilities in excess of Development Control Plans
- Reduced car parking compared to maximum allowable
- 4 car share vehicles
- 9 electric car charging bays for the commercial office with the capability to expand the electric vehicle charging to 100% of spaces in the car park.