WATERLOO METRO QUARTER OVERSTATION DEVELOPMENT

Environmental Impact Statement
Appendix Q - Construction Environmental Management Plan

SSD-10441 Concept DA Modification

State Significant Development,
Development Application

Prepared for **WL Developer Pty Ltd**

30 September 2020

Reference	Description
Applicable SSD Applications	SSD-10441 Amending Concept DA
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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

Reference	Description
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

2. Executive summary

This report has been prepared by John Holland Group Pty Ltd to accompany a concept State significant development (SSD) development application (DA) for the Waterloo Metro Quarter over station development (OSD). This concept SSD DA is submitted as an 'amending DA', that modifies the previously approved concept SSD DA issued for the site (SSD 9393). The modifications contained within the amending DA relate to the northern precinct and central building only. No change is proposed to the original concept SSD DA as it relates to the southern precinct of the Waterloo Metro Quarter site.

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised throughout this report.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the amending concept SSD DA (SSD 10441).

This report concludes that the proposed amending concept DA for the Waterloo Metro Quarter OSD is suitable and warrants approval subject to the implementation of the following mitigation measures:

- Maintain Site Establishment Strategy
- Maintain Traffic and Pedestrian Management Strategy
- Maintain Construction Staging Strategy
- Maintain Material Handling Strategy
- Maintain Waste Management Strategy
- Maintain Noise and Vibration Strategy
- Maintain Air Quality Strategy
- Maintain Programme Management Strategy
- Maintain Stakeholder Management Strategy

Following implementation of the above mitigation measures, the remaining impacts are appropriate.

3. Introduction

This report has been prepared to accompany a concept SSD DA for the over station development (OSD) at the Waterloo Metro Quarter site. The concept DA seeks consent for an amended building envelope and description of development for the northern precinct and central building of the Waterloo Quarter site approved under SSD 9393. For clarity, this concept DA (formerly referred to as a 'Stage 1' DA) is made under Section 4.22 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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 concept DA seeks to modify the approved building envelope for the northern precinct (previously comprising 'Building A', 'Building B', 'Building C' and 'Building D' under SSD 9393) through:

- increasing the maximum building height for the southern portion of the building envelope from RL56.2 to RL72.60
- removing the 'tower component' of the northern precinct, reducing the overall height of the tower envelope from RL116.9 to RL90.40, to enable the redistribution of floor space to commercial office floor plates
- amending the description of development to refer to a mid-rise (approximately 17 storey) commercial office building, comprising approximately 34,125sqm of commercial office floor space within the northern portion of the site, rather than a third residential tower.

The concept DA seeks to modify the central building approved building envelope (previously comprising 'Building E' under SSD 9393) through:

- modifying the eastern extent of the podium envelope.

This proposal will not exceed the permissible building height for the site under the Sydney Local Environmental Plan 2012 (SLEP) or the maximum height approved under SSD 9393. Separate detailed SSD DA (s) will be lodged concurrently for the detailed design, construction and operation of the northern precinct and central building. No changes are proposed to the original concept DA as it relates to the southern precinct.

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)
2.	**Consistency with the Concept Approval**	
	The EIS shall: - 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.	All Sections
	- include a staging and delivery plan (or be consistent with an approved plan) for the coordinated delivery of public domain, car parking and other common facilities and any public benefits such as social and affordable housing.	9. Construction Staging
10.	**Noise and Vibration Impacts (Construction and Operation)**	
	The EIS shall: - include an assessment of construction noise and vibration impacts. The assessment must also outline proposed noise and vibration mitigation and monitoring procedures having particular regard for potential impacts to the adjoining heritage listed 'Waterloo Congregational Church' site.	12. Noise & Vibration Management and EIS - Appendix K – Noise and Vibration Assessment
	- provide a quantitative assessment of any noise and vibration generating sources and activities during operation and outline mitigation measures (if necessary) to ameliorate and manage impacts including impacts on the adjoining heritage listed 'Waterloo Congregational Church' site.	12. Noise & Vibration Management and EIS - Appendix K – Noise and Vibration Assessment
	- The noise and vibration impact assessment shall have regard to the recommendations of the Concept Acoustic Assessment Report, SLR consulting dated 9 November 2019.	12. Noise & Vibration Management and EIS - Appendix K – Noise and Vibration Assessment
11.	**Construction Impacts**	
	The EIS shall include a Construction Environmental Management Plan, developed in consultation with TfNSW and Council, providing: - an assessment of potential impacts of the construction on surrounding buildings and the public domain, including air	11. Waste Management & Recycling 9. Construction Staging 13. Air Quality Management

	quality and odour impacts, dust emissions, water quality, stormwater runoff, groundwater seepage, soil pollution and construction and demolition waste, and proposed measures to mitigate any impacts.	
	- assessment of the potential cumulative impacts (noise, vibration, traffic, air quality etc) of the proposed development with regards to the works being carried out on site as part of the Sydney Metro Chatswood to Sydenham approval (CSSI 7400) and other developments in proximity to the site during the construction phase.	15. Cumulative Impacts

Table 1 - SEARs Requirements

4. The site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated approximately 3.3 kilometres south of Sydney CBD and approximately 8 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 located 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 (the site) is a rectangular shaped allotment and 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 boundaries of the site the subject of the amending concept DA is identified at Figure 5.1. 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).

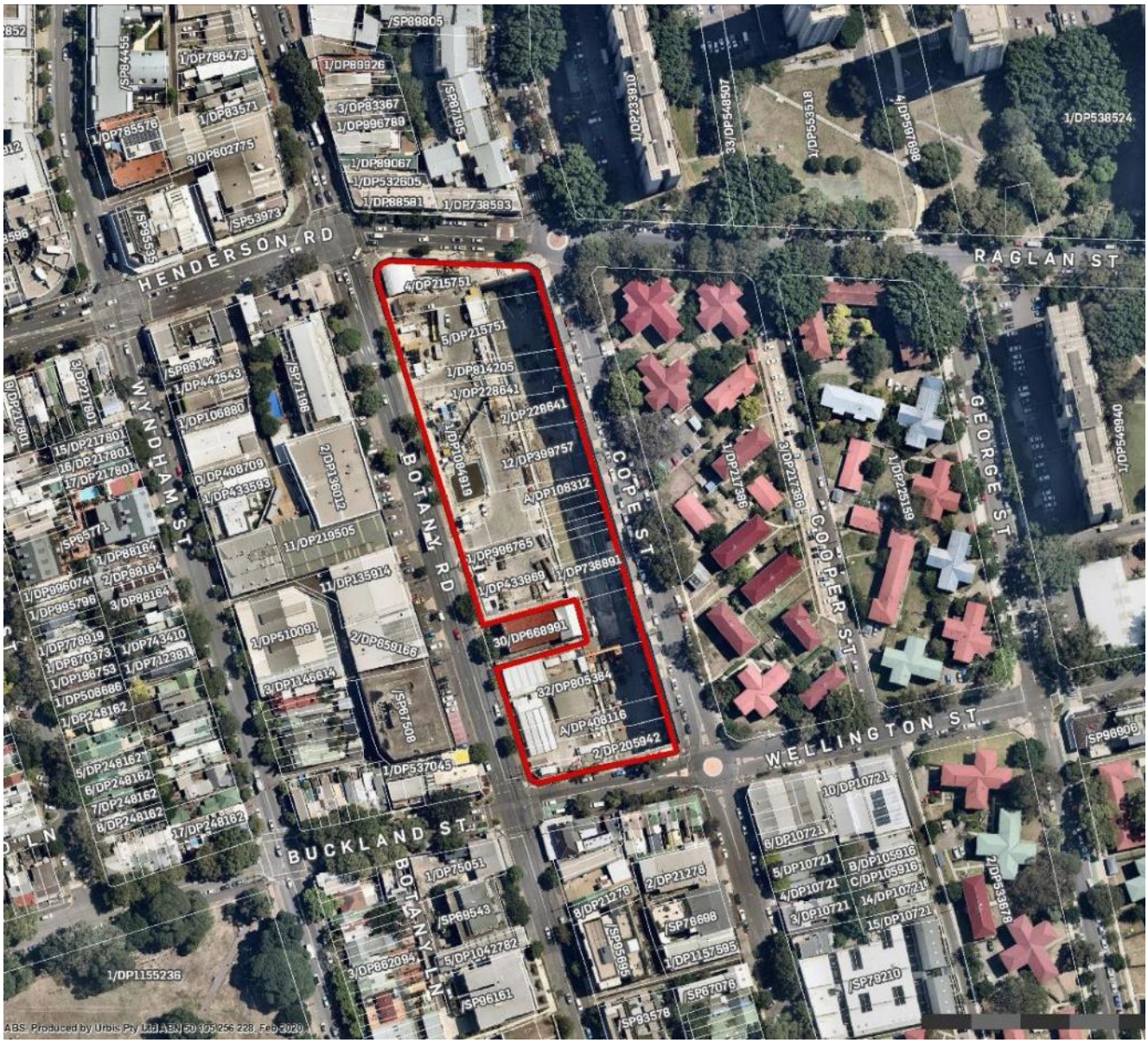

Figure 1 - Aerial of the site
Source: Urbis

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.

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 in Figure 2.

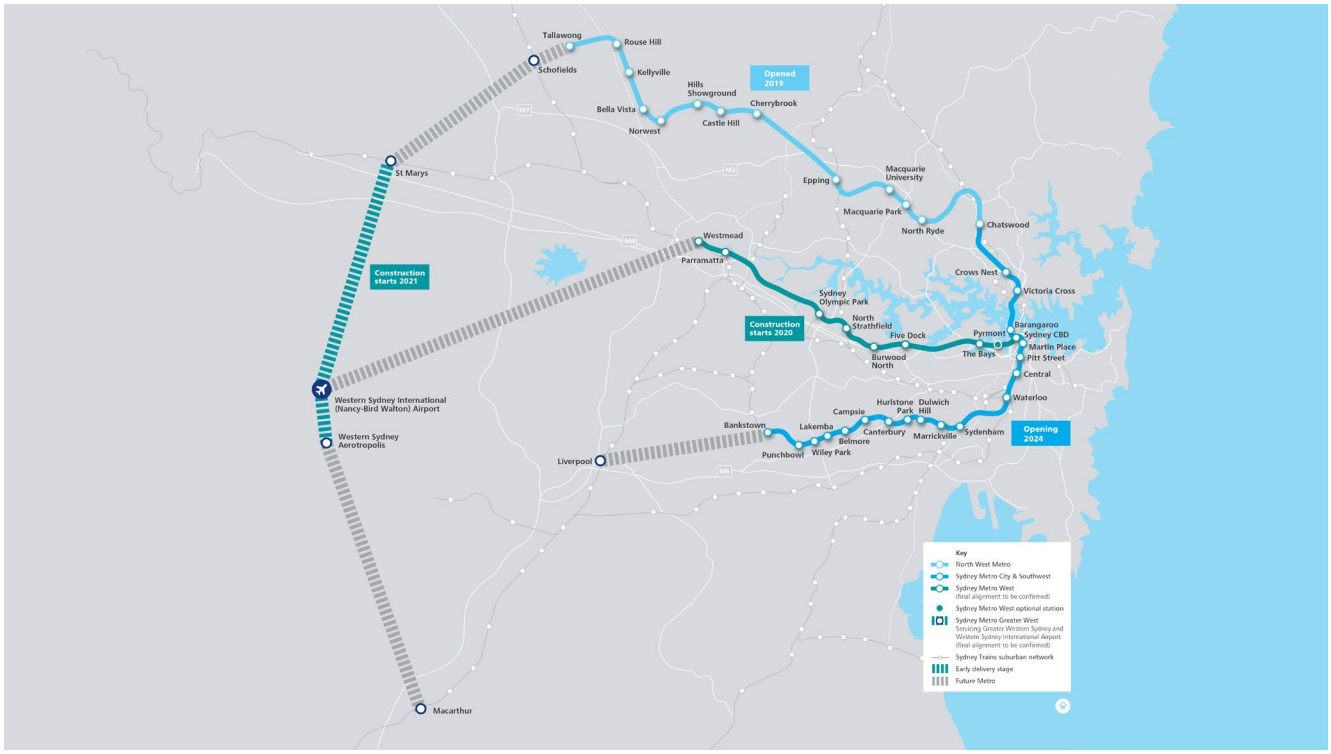

Figure 2 - Sydney Metro alignment map
Source: Sydney Metro

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 3.

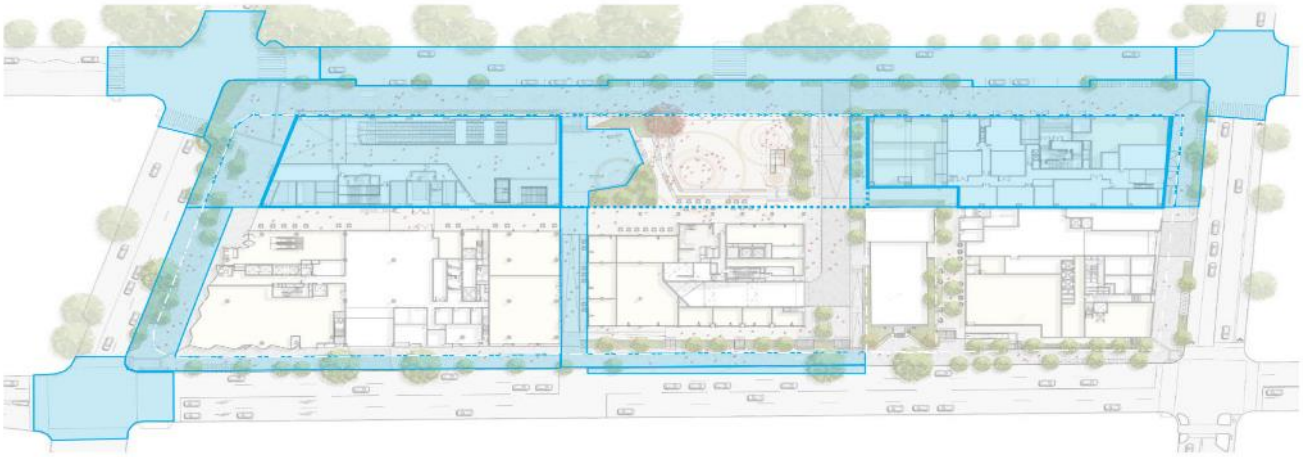

Figure 3 - CSSI Approval scope of works
Source: WL Developer Pty Ltd

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.

This concept DA has been prepared and submitted to the DPIE and proposes 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.

A concurrent detailed SSD DA will seek development consent for the OSD located within the southern precinct of the site, consistent with the parameters of the original concept approval. Separate SSD DAs have been prepared and will be submitted for the northern precinct, central building, and basement proposed across the Waterloo Metro Quarter site consistent with the amending concept DA.

6. Proposed development

The amending concept DA seeks consent for an amended building envelope and description of development for the northern precinct of the Waterloo Metro Quarter site approved under SSD 9393. Specifically, the proposal seeks to modify the approved building envelope for the northern precinct (previously comprising 'Building A', 'Building B', 'Building C' and 'Building D' under SSD 9393) through:

- increasing the maximum building height for the southern portion of the Northern Precinct from RL56.2 to RL72.60
- removing the 'tower component' of the Northern Precinct, reducing the overall height of the tower envelope from RL116.9 to RL90.40, to enable the redistribution of floor space to commercial office floor plates
- amending the description of development to refer to a mid-rise (approximately 17 storey) commercial office building, comprising approximately 34,125sqm of commercial office floor space within the northern portion of the site, rather than a third residential tower.

The concept DA seeks to modify the central building approved building envelope (previously comprising 'Building E' under SSD 9393) through:

- modifying the eastern extent of the podium envelope.

The modification of the approved concept SSD DA will enable the detailed design of a new commercial building (comprising office and retail premises) to be pursued on the site, significantly increasing the proportion of employment generating floor space on the Waterloo Metro Quarter site. This new commercial building is proposed in replacement of four building envelopes approved under SSD 9393, which comprised one residential tower, and three mid-rise residential buildings.

This proposal will not exceed the permissible building height for the site under the SLEP or the maximum height approved under SSD 9393. As noted above, separate detailed SSD DA(s) will be lodged concurrently for the detailed design, construction and operation of the northern precinct, and central building.

This amending concept DA does not propose to the amend the original concept approval as it relates to the southern precinct.

7. Site Establishment

The proposed amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

7.1 Hoardings

A range of both A-Class and B-Class Hoarding will be established around the perimeter of the OSD Site following handover of the specific Precincts by the Station Contractor.

All hoardings will be designed, installed, and maintained to ensure segregation of pedestrians, workforce and vehicles as was the intent under the Concept DA. The proposed type and layout of hoarding will be further detailed in each specific DA.

7.2 Site Security & Gates

The site perimeter will be secure at all times through the use of hoardings, lockable gates and out of hours security.

Construction worker access to the site will be controlled through the use electronic personnel gates that control unauthorised access to site and ensure that all authorised workers are accounted for whilst on site. The use of electronic gates and the associated technology will assist with the management of workers during emergency scenarios, ensuring efficient monitoring and evacuation of workers from site.

7.3 Project Office

The project office will be located within one block of the site and will include accommodation for project management staff. The exact location of this office will be further explored closer to commencement on site and is dependent on available space and market conditions.

7.4 Workforce Accommodation

Accommodation and amenities for the construction workforce will be provided in stages. Initial site accommodation will be erected on top of the B class hoarding along the surrounding streets (Wellington Street, Botany Road and/or Raglan Street). The exact staging of this accommodation is specific to each DA and will be further detailed in each DA.

8. Traffic & Pedestrian Management

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

8.1 Traffic Management

Traffic Control will be provided at the various access, egress gates & work zones to manage all vehicle deliveries, loading/unloading and general access/security of the gates during construction work hours. This will allow for a coordinated movement of traffic around site minimizing impacts to the community.

8.2 Pedestrian Management

The OSD Contractor will ensure that stakeholders, residents, commuters and visitors to the Waterloo area are suitably informed of required footpath closures and associated travel path alterations. The proposed closures are further detailed in the specific DA CTMPs.

During construction, pedestrians will have safe and functional access around the external perimeter of the site with overhead protection provided as required.

On completion, functional and safe footpaths around the perimeter of the site will be provided in accordance with the Separable Potion obligations detailed under the PDA, namely;

- Functional and safe footpaths will be provided with a clear width of at least
  a) 3.5 metres width along Raglan St
  b) 3.5 metres width along Botany Road; and
  c) 1.3 metres along Wellington Street for passing pedestrians, to facilitate safe interchange and access to the Station Lot.

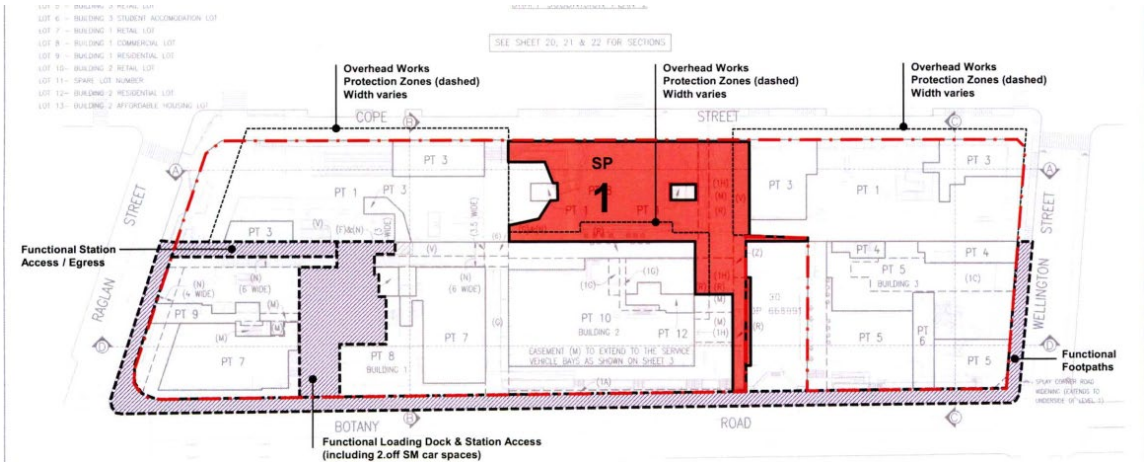

Figure 4 – Ground Level at Completion of SP1

8.3 Work Zones

There are a number of proposed work zones specific to the construction activities of each DA. These proposed work zones are further detailed in the associated CTMPs relevant to each DA.

8.4 Vehicle Parking

All construction vehicles will be directed to the designated construction vehicle gates for access onto site or to the associated work zones for unloading. Appropriate traffic control will be utilised as previously mentioned and further detailed in the associated CTMPs.

All staff, consultants and subcontractors will be encouraged to develop a Green Travel Plan for this project with use of public transport forming the preferred method of transport to and from site.

9. Construction Staging

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

9.1 Structure

The proposed OSD development is a combination of framed steel structures and reinforced concrete structures, composing of basements, slabs on ground, podiums, and suspended slabs. The utilisation of cranes and pump zones will be critical to the successful construction of the varying building types with specific staging and methodology detailed further in each specific DA.

9.2 Facade

The façade type will differ depending on the varying structures approved under each DA.

- Northern Precinct: Curtain Wall
- Central Precinct – Window Wall
- Basement – N/A
- Southern Precinct – Curtain Wall and Window Wall

Scaffold and screens will be utilised across the OSD depending on the façade type and proposed construction methodology of each building. The scaffold/screens will provide edge protection during construction of the varying structures and ensure the safety of workers both within and below the buildings. The specific construction of each façade type will be further developed in the corresponding specific DA.

9.3 Services & Finishes

Services and Finishes will sequentially follow the installation of facade

9.4 Commissioning & Testing

A commissioning plan will be developed for commission and testing purposes by the OSD Contactor. This will detail the guidelines to be followed for commission of each building. It will typically involve individual systems testing and an overall integrated system testing.

9.5 External Works

Prior to obtaining Occupation Certificate the final external works such as landscaping and paving will be completed by the OSD Contractor. There is no material impact to stakeholders under this Amending DA.

10. Material Handling

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

10.1 Tower Cranes

A total of 5 Tower Cranes are proposed to be utilised across the OSD site, providing material handling coverage to each structure under this Amending DA.

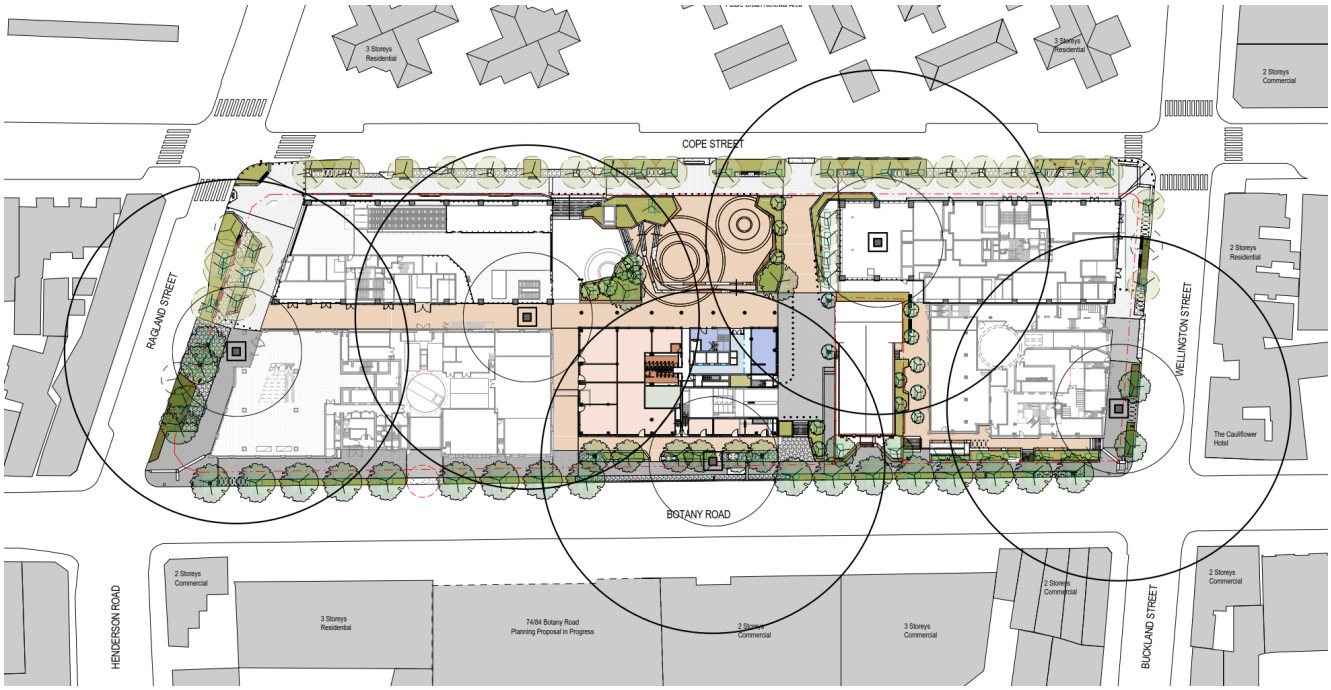

Figure 5 – OSD Craneage Layout

10.2 Hoists and Loading Platforms

Hoists as well as loading platforms will be used in combination with the tower cranes to ensure efficient delivery of material to the desired location. Refer specific DAs for further details

10.3 Concrete Pumping Zones and Placement Booms

Static concrete booms will be utilised in throughout the OSD works to ensure efficient supply of concrete to the appropriate structural element. The use of static booms will reduce the need for mobile booms and therefore cut down on unnecessary people/plant interaction.

11. Waste Management & Recycling

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

11.1 Waste Management Approach

The OSD Contractor will ensure that the project supply chain is responsible and accountable for maintaining a clean, clear and safe working environment. This will be documented in further detail in a Waste Management Plan **(WMP)** completed by a separate party appointed by the developer and submitted separately to this report. Typically, the head contractor of the site will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements.

Bins will be provided for work areas and will be regularly removed to a suitable skip bin location for collection and transport from the site to the waste recycle facility.

Bins will be moved using the man and materials hoists and also by tower cranes, dependant on where they are loaded from, and the waste material being removed from site. Crane lifted steel bins will be used to service the top floors where structure trades will be working, and large wheelie bins/or similar will service the lower levels where fit-out and service trades will be working. The site skips will be suitably located to ensure easy pick-up by the waste subcontractor.

Excess materials generated throughout construction will be separated at an approved waste management facility. Auditable records will be kept of quantities of all materials both recycled and disposed to landfill. Records will be monitored to ensure any applicable recycling targets can be achieved. This information will be collected and reported in compliance with the WMP over the duration of the project. It is intended to engage a licenced entity for the purpose of waste management and recycling.

The EPA waste hierarchy, which sets priorities for the efficient use of resources, will be implemented during construction to minimise unnecessary waste generation.
The waste hierarchy is:

- avoidance including action to reduce the amount of waste generated by households, industry and all levels of government
- resource recovery including re-use, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources
- disposal including management of all disposal options in the most environmentally responsible manner.

To implement the waste hierarchy the following will be implemented, where practical and appropriate:

- Order materials in appropriate quantities and request minimal packaging;

- Give a high priority to using non-hazardous products where practical;
- Investigate packaging takeback schemes with suppliers during the procurement phase;

11.2 Waste Types and Classification

Waste will be classified according to the EPA's Waste Classification Guidelines 2014, prior to disposal. Spoil excavated is expected to be classified as excavated natural material (ENM) or as identified in a remediation action plan prepared for the site.

12. Noise & Vibration Management

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following section.

12.1 Management Approach

Noise and vibration generated from construction activities occurring on site and its impact on site operations and workers will be managed to minimise adverse impact on neighbouring residents, businesses and associated building structures.

All noise generating activities are proposed to occur during the approved Standard Construction Hours. Primary source of noise generated will be associated with vehicle movements, generators, heavy machinery, hand-held machinery and tools.

Any noise activities proposed outside the nominated site operating hours will require prior written consent from the nominated approval authority. Noise limits during the construction works will meet the maximum allowable noise contribution.

During construction, the OSD Contractor will utilise existing noise impact assessment data, where required, to determine noise sources and confirm ambient background levels or alternatively will conduct baseline noise monitoring prior to construction work commencing. OSD Contractor may engage an acoustic consultant to monitor construction noise level during its activities, routine inspections of plant and equipment will be conducted to ensure performance relative to compliance requirements.

When planning for construction work that includes vibration, all practical efforts to protect vibration sensitive buildings and the amenity of adjoining stakeholders will be considered. A practical and economical combination of vibration control measures will be applied to manage vibration impacts such as:

- Substitution by an alternative process
- Restricting times when work is carried out
- Screening or enclosures
- Consultation with affected residents
- Utilisation of temporary supports where deemed necessary

13. Air Quality Management

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following section.

13.1 Management Approach

The sources of air emissions from the proposed construction works at the site are primarily associated with traffic movements as a result of deliveries to site, e.g. concrete trucks.
The generation of dust, air emissions or odours from the site can be a nuisance to adjacent land users, create unsafe working conditions on site and result in environmental degradation if not managed appropriately.

The minimisation of air borne pollution is a key component for the Construction Phase CEMP for the site. Air quality impacts shall be minimised or avoided by incorporation of appropriate dust suppression and air quality control measures at various stages of the project. Construction site layout and placement of plant would consider air quality impacts to nearby receivers; pedestrian, commercial receivers, public and road traffic.

14. Soil and Water Quality Management

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following sections.

14.1 Stormwater Runoff

Water courses within the Project site catchment are heavily urbanised, with stormwater collected by developed stormwater networks. Environmental protection during construction will involve the installation, use and maintenance of a number of temporary erosion and sediment control measures as required in accordance with the following principles:

- Before undertaking excavation work implement all soil and water management controls required to minimise pollution of waters
- All erosion and sediment controls will be installed in accordance with NSW Blue Book Volumes 1 and 2D (Landcom, 2004 and DECC, 2008)
- Minimisation of soil erosion and mobilisation of sediment during rain events
- Use of suitable sediment retention structures and control measures to filter or retain mobilised sediment generated during rain events over surface disturbances
- Maximum sediment capture through effective positioning of temporary erosion and sediment control structures
- Regular inspection and maintenance of all erosion and sediment controls to ensure they are effective
- Ensure that any road, footpath, shared path or cycleway is at all times kept free of mud, dirt, dust, deleterious material, debris, obstructions and trip hazards
- Site exit controls may include wheel wash facilities. These measures would be put in place to mitigate the risk of any loss of fuels, lubricants, load or other substances
- Any spillage or build-up of such material or debris would be cleaned up as soon as practicable.

An erosion and sediment control plan will be developed for the site prior to the commencement of construction. This will be prepared in accordance with the NSW Blue Book requirements. All stormwater will be managed to prevent off site pollution.

14.2 Groundwater Seepage

Groundwater seepage is expected to be limited to the Basement. The mitigation measures will be further detailed under this specific Detailed Development Application.

14.3 Soil

Potential impacts to soil will be limited to areas of landscaping within the Northern precinct. Where soil pollution occurs as a result of spills or leaks, the impacted soil will be removed and disposed at an appropriately licenced facility. All known areas of contamination will be managed prior to commencement of the Northern Precinct and is subject to a separate approval process (being the CSSI consent).

15. Cumulative Impacts

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised below

The cumulative assessment considers the Waterloo Station works that are programmed to be occurring during the construction of the OSD. The timing for other external developments (e.g. renewal of the social housing estate) are not confirmed at this stage, therefore, specific impacts are not able to be assessed as part of this Amending DA. An assessment of the potential cumulative impacts of the proposed development with regards to the Station works is provided below.

Aspect	Impact	Management tools
Noise & Vibration	Disruption to the community from construction and additional traffic, including out of hours activities	Implementation of noise and vibration management requirements are detailed further in Noise and Vibration Plan. Site inspections and monitoring to confirm noise and vibration levels are being met will be implemented by the construction manager, environmental officers and supervisor
Traffic	Disruption to the community and road users from increased traffic	Implementation of traffic management requirements are detailed further in the CTMP
Air quality	Dust generation is expected to be minimal from the Waterloo Station due to the stage of work and limited ground disturbance	Air quality will be managed in accordance with the requirements stipulated within this CEMP
Soil and Water	Minimal cumulative impacts are expected based on limited ground disturbance work by the Waterloo Station team	Odour will be managed in accordance with the requirements stipulated within this CEMP

Table 2 - Cumulative Impacts

16. Program Management

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following section.

16.1 Project Planning

OSD Contractor has standardised processes and procedures to ensure that project planning and scheduling is consistent, transparent, efficient, and integrated across the delivery cycle of the project. This provides a greater level of certainty in delivery through robust benchmarked baseline programs, and ensures that project controls are accurate and up-to-date.

The project team will have regular planning meetings to track, plan and disseminate information regarding the upcoming or ongoing activities. After implementation of the program, a structured cycle of monitoring and review will be maintained. Progress updates with the client will also be done periodically. These updates will be done by the project team members in charge of the works-activities.

17. Stakeholder Management & Communications

The proposed Amendment to the Concept DA has no material impact on the initiatives established in the Concept DA Construction Management Plan. Notwithstanding, a summary of the proposed initiatives, having regard for the Detailed Development Application's that have been prepared for the site are summarised in the following section.

17.1 Management Plans

A stakeholder management plan will be developed and community members/stakeholder will be engaged to address the implementation of project specific mitigation and management strategies in order to minimise the potential for negative impacts on the community in and around the construction site.

18. Conclusion

The amending concept DA seeks consent for an amended building envelope and description of development for the northern and central precinct of the Waterloo Metro Quarter site approved under SSD 9393. This amending concept DA does not propose to amend the original concept approval as it relates to the southern precinct.

The modification of the approved concept SSD DA will enable the detailed design of a new commercial building (comprising office and retail premises) to be pursued on the site, significantly increasing the proportion of employment generating floor space on the Waterloo Metro Quarter site.

This proposal will not exceed the permissible building height for the site under the SLEP or the maximum height approved under SSD 9393. As noted throughout this report, separate detailed SSD DA(s) will be lodged concurrently for the detailed design, construction and operation of the northern precinct, and central building.

It is anticipated that this Amending DA will have no material affect on the construction methodology proposed under the approved Concept DA.