



# WATERLOO METRO QUARTER OVER STATION DEVELOPMENT

**Environmental Impact Statement** 

**Appendix EE – Fire Safety Strategy Report** 

SSD-10438 Basement Car Park

Detailed State Significant Development Development Application

Prepared for Waterloo Developer Pty Ltd

30 September 2020





| Reference                         | Description   |  |
|-----------------------------------|---|--|
| Applicable SSD<br>Applications    | SSD-10438 Basement Carpark                                    |  |
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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   |
| ESD            | ecologically sustainable design   |





| Reference                                | Description  |
|--|--|
| 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<br>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   |





| Reference | Description                  |  |
|-----------|------------------------------|--|
| WMQ       | Waterloo Metro Quarter       |  |
| WMP       | Waste Management Plan        |  |
| WSUD      | water sensitive urban design |  |





# 2. Executive summary

This planning report has been prepared by Omnii Pty Ltd 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.

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





#### 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 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 OSD is suitable want warrants approval.





## 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).





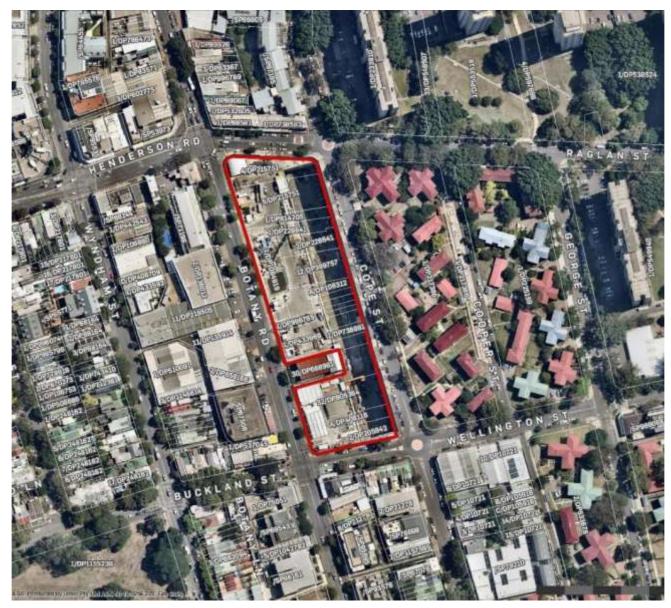


Figure 1 - Aerial image of the site Source: Urbis

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.





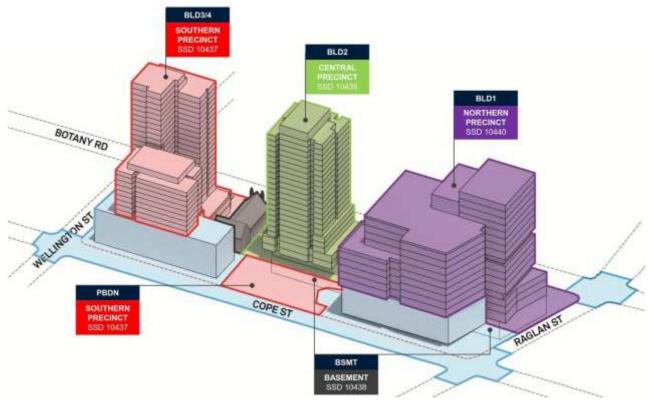


Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified Source: HASSELL

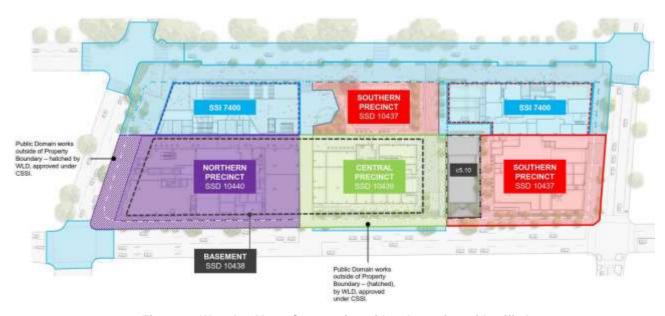


Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified Source: Waterloo Developer Pty Ltd





# 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.





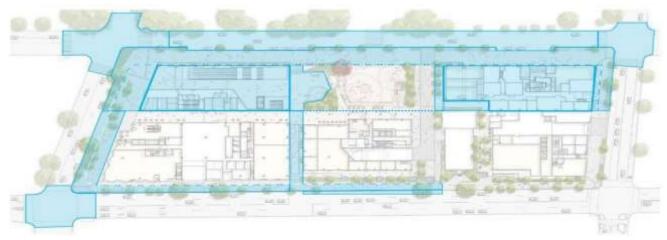


Figure 5 - CSSI Approval scope of works Source: WL Developer Pty Ltd

# 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 other 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).





#### 6.2 Sources of Information

This document is based on the following sources of information:

- a. WoodsBagot architectural plans received 31st July 2020, refer to Table 6.1.
- b. McKenzie Group Pty Ltd Building Code of Australia Report dated 20th July 2020.

Table 6.1 - Architectural Plans

| Drawing No.                     | Revision | Drawing No.                    | Revision |
|---------------------------------|----------|--------------------------------|----------|
| WMQ-BLD1-WBG-AR-<br>DRG-DA091   | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA108 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA092  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA109 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA100  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA110 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA100M | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA113 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA101  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA114 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA102  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA115 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA103  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA116 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA104  | В        | WMQ-BLD1-WBG-AR-<br>DRG- DA117 | В        |
| WMQ-BLD1-WBG-AR-<br>DRG- DA105  | В        |                                |          |

## 6.3 Building Description

The basement building part is located beneath the Northern and Central Precincts. A description both the North Precinct and Central Precinct are included for illustrative purposes.

#### **6.3.1** Northern Precinct

The proposed building consists predominantly of a commercial office use. It comprises a rise in stories of fifteen (15) plus basement carparking and plant levels, with an atrium connecting eleven (11) floors above ground. It also contains retail at Ground Level, and a four (4) level breezeway which separates the building from the adjacent metro station at low level. An artist's perspective of the building is shown in Figure 6.1.

The building will be provided with a specifically designed smoke control strategy incorporating zone smoke control, atrium exhaust and stair pressurisation systems. It will also be provided with an automatic sprinkler system and Sound System and Intercommunication System for Emergency Purposes (SSISEP).







Figure 6.1 – Northern Precinct Artist Perspective

#### 6.3.2 Central Precinct

The proposed building consists predominantly of (Class 2) Residential Units. It comprises a rise in stories of 23 (plus plant levels), as shown in Figure 6.2 and Figure 6.3. The building also contains residential communal areas, Retail at Ground Level, and a Childcare tenancy on Level 1 and Level 2. Levels 3-5 (inclusive) will contain affordable housing owned by a separate stratum and operated by a community housing provider.

The building will be provided with a Smoke Detection and Alarm System, automatic sprinkler system, Fire Control Centre, stair pressurisation, Sound System and Intercommunication System for Emergency Purposes (SSISEP), Fire Hydrant Coverage, portable fire extinguishers, and Fire Hose Reels to the retail and childcare tenancies.







Figure 6.2 – North Elevation







Figure 6.3 - West Elevation





# 6.4 Building Characteristics

Table 6.2 and Table 6.3 detail the general subject building characteristics that are relevant to the NCC.

Table 6.2 - Northern Precinct General Building Characteristics

| Effective height     | >50m                   |
|----------------------|------------------------|
| Rise in storeys      | 15 (excluding plant)   |
| Storeys contained    | 17 (2 Basement Levels) |
| Classifications      | Class 5, 6, 7a, 7b     |
| Type of construction | A                      |
| Relevant Code        | NCC 2019 Volume One    |

Table 6.3 – Central Precinct General Building Characteristics

| Characteristic       | Description           |
|----------------------|-----------------------|
| Effective height     | 72.98m                |
| Rise in storeys      | 23 (excluding plant)  |
| Storeys contained    | 24                    |
| Classifications      | Class 2, 6, 7a and 9b |
| Type of construction | A                     |
| Relevant Code        | NCC 2019 Volume One   |





# 7. Expected Performance Requirements

Table 7.1 summarises the relevant NCC DTS Clauses, NCC Performance Requirements determined in accordance with A2.2, for each NCC DTS item, based on our preliminary review.

| Table 7.1 - NCC DTS Provision Departures |                             |                                 |  |
|--|-----------------------------|---------------------------------|--|
| Item<br>Reference                        | NCC DTS Clause              | NCC Performance<br>Requirements | NCC DTS Provision Departures   |
| Item 1                                   | C2.7                        | CP2                             | It is proposed that:  a. Building 1 and Building 2 need not be provided with separation at Basement Level.   |
| Item 2                                   | D1.4                        | DP4, EP2.2                      | The exit travel distance from any point on a floor:  a. to the nearest exit, where two (2) exits are available, is not more than: i. 47m within the Basement Carpark, in lieu of 40m   |
| Item 3                                   | D1.5                        | DP4, EP2.2                      | Distance between alternative exits on basement carparking levels to be not more than 80m   |
| Item 4                                   | E1.3                        | EP1.3                           | It is proposed that:  a. a fire hydrant system be provided in accordance with AS 2419.1:2017 (except where modified as part of a Performance Solution), in lieu of being provided in accordance with AS 2419.1:2005.  b. the fire hydrant booster assembly need not be located within sight of the main building entrance. |
| Item 5                                   | E1.5. Specification<br>E1.5 | EP1.4                           | It is proposed that a fire sprinkler system be provided in accordance with AS 2118.1:2017, in lieu of AS 2118.1:1999 as required by AS 2118.6:2012.  |





# 8. Proposed Fire Engineering Outcomes

A fire engineering assessment is to be undertaken to show that the proposed Performance Solution, as detailed below, will meet the NCC Performance Requirements. All other items of fire and life safety, where not specifically addressed or reviewed as part of this document, are to be in accordance with the DTS provisions of the NCC.

The proposed Compliance Solution detailed below is subject to the Outcomes of the fire engineering assessment and approval by the relevant Authorities.

#### Fire and Smoke Resistance

a. The building must be constructed in accordance with the NCC DTS requirements for Type A construction.

#### **Compartmentation and Separation**

- b. Separation via fire walls must be in accordance with NCC DTS Clause C2.7, except that:
  - i. Fire separation between Building 1 and the Metro Station building is permitted to be provided by vertical and horizontal fire-rated elements, in lieu of vertical elements only.
  - ii. Building 1 and Building 2 need not be fire-separated at Basement Level.

#### **Provisions for Escape**

- c. The exit travel distances must comply with NCC DTS Clause D1.4, except that the distance of travel from any point on the floor:
  - i. to the nearest exit, where two (2) exits are available is permitted to be not more than:
    - 47m within the Basement Carpark.
- d. Distance between alternative exits must comply with NCC DTS Clause D1.5, except that:
  - i. the distance between alternative exits is permitted to be not be less than 80m within the Basement Carpark area.
- e. Evacuation routes must be kept free from obstruction, as per the requirements of the Building Fire Safety Regulation 2008, or any legislation that supersedes it.

#### Fire Hydrants, Hose Reels and Extinguishers

- f. The building must be provided with a fire hydrant system in accordance with NCC DTS Clause E1.3 and AS 2118.6:2012, except that:
  - i. a fire hydrant system must be provided in accordance with AS 2419.1:2017, except where modified as part of the Performance Solution.
  - ii. the fire hydrant booster assembly need not be located not within sight of the main building entrance.
- g. The building must be provided with a fire hose reel system in accordance with NCC DTS provisions.
- h. The building must be provided with portable fire extinguishers in accordance with NCC DTS provisions.

#### Fire Sprinkler Systems

- i. Fire sprinkler protection in accordance with NCC DTS Clause E1.5 must be provided throughout the building, except that:
  - i. a fire sprinkler system must be provided in accordance with AS 2118.1:2017, except where modified as part of the Performance Solution.

#### **Smoke Detection System**

j. A smoke detection and alarm system must be installed throughout the building in accordance with NCC DTS Specification E2.2a





#### **Occupant Warning**

k. A Sound System and Intercom System for Emergency Purposes (SSISEP) must be provided throughout the building in accordance with NCC DTS provisions.

#### **Emergency Lighting and Exit Signs**

- I. Emergency lighting must be provided in accordance with the NCC DTS requirements.
- m. Exit signs must be provided in accordance with the NCC DTS requirements.

#### Commissioning

n. All fire safety equipment or equipment associated with fire safety must be correctly commissioned including integrated testing.

#### **Maintenance**

- Special Fire Services and Fire Safety Installations must be maintained in accordance with current and future building maintenance legislation. Failure to do so will render the outcomes of this document invalid, null and void.
- Maintenance of Special Fire Services and Fire Safety Installations must be undertaken by an independent, suitably qualified and/or competent, i.e. qualified maintenance company or Building Manager's representative not by the Building Owner.
- q. Up to date logbooks must be provided on site.

## **Other Provisions**

- r. A no-smoking policy must be implemented in accordance with State legislation.
- s. All occupants of the building must be given instruction on the fire and evacuation plan in accordance with the Building Fire Safety Regulation 2008 and/or future legislation, when it comes into force.
- t. A sign must be provided adjacent to the Fire Detection and Control Indicating Equipment (FDCIE) or in the main entry listing the Performance Solution applicable to the building. The sign must be incised, inlaid or embossed letters on a metal, wood, plastic or similar plate, securely and permanently attached to the wall.
- u. A copy of the approved Fire Engineering Report must be provided at building handover and be located at one of the following:
  - i. within the FDCIE; or
  - ii. in the Essential Safety Measures logbook cabinet; or
  - iii. Management In Use Plan manual; or
  - iv. Maintenance manual for the fire protection systems.
- v. No changes to the fire safety strategy without the express written consent of Omnii Pty Ltd.





## 9. Conclusion

Utilising the NCC, an acceptable Compliance Solution is to be achieved by a combination of compliance with the NCC Deemed-to-Satisfy (DTS) provisions and formulating an acceptable Performance Solution. This approach is intended to allow the development of an effective performance-based building design, whilst maintaining an acceptable level of Fire and Occupant Life Safety