

PRELIMINARY CONSTRUCTION MANAGEMENT STATEMENT

APPENDIX O



Sydney Metro City & Southwest: Crows Nest Over Station Development

Preliminary Construction Management Statement

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Executive Summary

Statement Purpose

This document has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) for a concept State Significant Development Application (concept SSD Application) proposing over station development (OSD) above Crows Nest Metro Station. The SEARs issued on the 26th September 2018 for the concept proposal call for the preparation of a preliminary construction management statement (the Statement) addressing how future construction stages will manage impacts to pedestrians, rail users, bus services and taxis. This Statement focuses on the management of traffic and transport impacts associated with the construction of the Crows Nest Metro station and OSD above Site C.

OSD Overview

Construction management planning is proceeding on the basis of concurrent construction of the station infrastructure and OSD above Site C, with design considerations to ensure future OSD above Sites A and B can be constructed after the Metro is operational. The concept SSD Application seeks approval commercial development above the station at Sites A (40,207m²) and C (3,031m²), and residential development (12,685m²) above Site B. The proposed on-site supply of 101 car parking spaces is in line with a similar nearby developments and North Sydney Development Control Plan 2013, excluding service vehicle spaces and associated loading dock facilities which would be accessed via Clarke Lane. In the end state, pedestrian access to the metro station would be from Pacific Highway and Hume Street and the OSD lobbies would be accessed from Hume Street, Oxley Street and Pacific Highway.

OSD Construction Traffic Management Principles

Construction would occur generally in accordance with the following:

- Metro contract requirements and relevant standards
- Construction Traffic Haulage Routes (as provided for in the EIS and CSSI approval)
- Construction Traffic Management Framework (CTMF): This document provides the overall strategy and approach for construction traffic management for the Metro project, and an outline of the traffic management requirements and processes that will also apply to OSD construction at the Crows Nest and other OSD sites
- Construction Traffic Management Plan (CTMP): This document is a plan showing how traffic will be managed when construction works are being carried out. It describes the work activities being proposed, their impact on the roadway and on road users, and how these impacts are being addressed.
- Relevant traffic management methodologies and procedures approved previously for the sites. (Note that these did not take account of the possibility of concurrent Metro station and OSD construction above Site C as outlined below)

OSD Construction Scenario

The buildings that comprise the Crows Nest OSD are on different sites and are most likely to be developed at different times. Construction management planning is therefore proceeding on the basis of the following scenario:

- Construction Scenario: The Metro station and OSD above Site C are constructed concurrently, while Metro station construction above Sites A and B occurs at a later date post Metro opening.

The anticipated timeline for the construction scenario is for Metro station works and OSD above Site C works to be complete in 2024.

OSD Construction Impacts & Mitigation

The developer awarded the Station and site C OSD development rights will determine the timeframe of construction and communicate these in a Construction Traffic Management Plan (CTMP). Further details confirming the construction methodology and associated impact assessment and mitigation measures will be provided with the future detailed SSD Application. A number of measures have been identified to minimise and mitigate construction impacts having regard to the adopted construction staging scenario. Mitigation strategies have also been developed to ensure that impacts on pedestrians, rail users, bus services and taxis are manageable.

1.0 Introduction

1.1 Purpose of this report

The purpose of this Statement is to identify changes in the Amended OSD Scheme and to provide a high level assessment of the traffic management impacts of the concurrent Metro station and OSD above Site C works with Site A and Site B to be constructed in the future.

This report supports the Response to Submissions Report (Submissions Report) for the concept State Significant Development application (concept SSD Application) submitted to the Department of Planning, Industry and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The concept SSD Application is made under Section 4.22 of the EP&A Act.

Sydney Metro is seeking to secure concept approval for a mixed use development comprising three buildings above the Crows Nest Station, otherwise known as the over station development (OSD). The concept SSD Application seeks consent for building envelopes and land uses, maximum building heights, maximum gross floor areas, pedestrian and vehicular access, circulation arrangements and associated car parking and the strategies and design parameters for the future detailed design of the development.

The station and public domain elements form part of a separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPIE on 9 January 2017.

As the development is within a rail corridor, is associated with railway infrastructure and is for commercial premises and residential accommodation with a Capital Investment Value of more than \$30 million, the project is identified as State Significant Development (SSD) pursuant to Schedule 1, 19(2)(a) of the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). The development is, therefore, State significant development for the purposes of Section 4.36 of the EP&A Act.

A Preliminary Construction Management Statement Report (2018) was prepared as Appendix BB of the Environmental Impact Statement for the concept SSD Application to specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued on 26 September 2018. Following Exhibition of the Environmental Impact Statement, the design of the OSD has responded to issues raised in submissions. The purpose of this report is to identify those changes in the Amended OSD Scheme and to assess the impacts of changes with regards to Preliminary Construction Management.

1.2 Changes between the Exhibited Scheme and Amended Scheme

In response to the submissions made on the Exhibited Scheme, the following changes have been made to the concept SSD Application under what is termed the Amended Scheme:

- Changes to the building envelope
- Changes in proposed land use on each site
- Reduction in car parking numbers
- Inclusion of an articulation zone

- Clarification on the provision of social infrastructure
- Amendments to the Design Guidelines

These changes are described in further detail in Chapter 7 of the Submissions Report. The western elevation of the Amended Scheme is shown below, with a summary of the changes between the Exhibited Scheme and Amended Scheme provided in the table below.

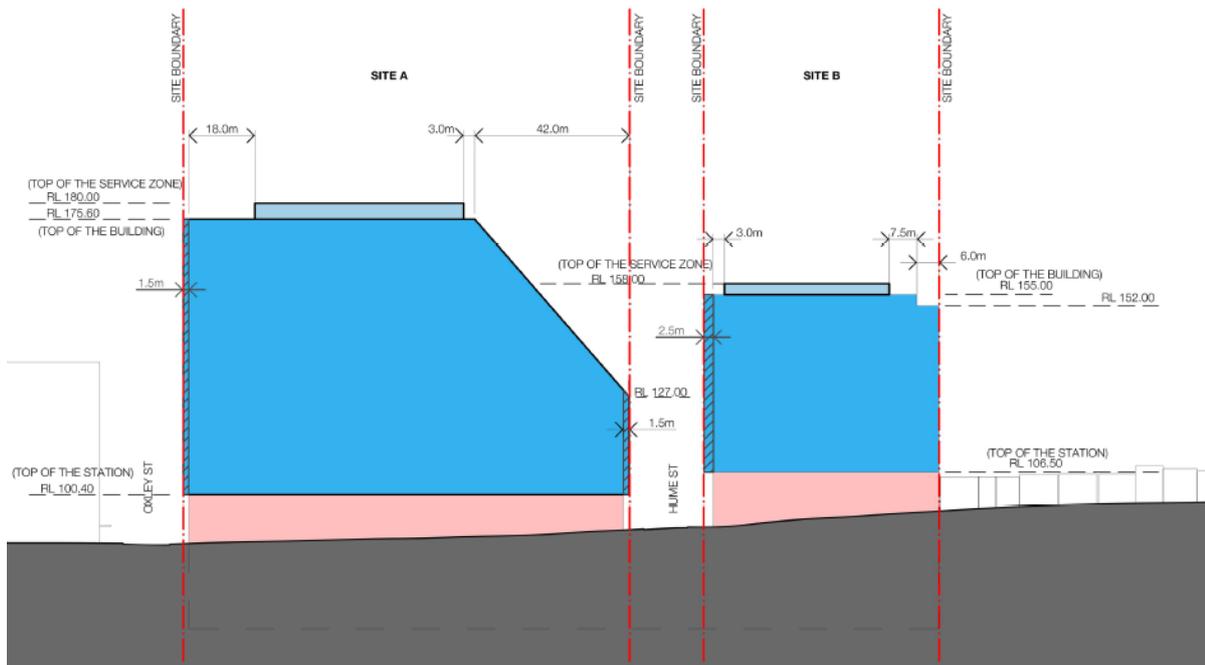


Figure 1 – West elevation of the building envelope under the Amended Scheme, showing CSSI Approval (pink) and OSD components (blue)

Table 2 – Changes to overall concept scheme per site under the Exhibited Scheme and Amended Scheme (excluding station GFA)

	Exhibited Scheme ¹	Amended Scheme ¹
Site A		
Land Use	Residential ²	Commercial
GFA	37,500m ²	40,207m ²
Max height – top of roof (RL)	183	175.6
Max height – top of services zone (RL)	188	180
FSR - OSD	9.67:1	10.4:1
Non-residential FSR - OSD	0.7:1	10.4:1
Car parking	125	46

¹ GFA figures exclude GFA attributable to the station and station retail space approved under the CSSI approval

² The Exhibited Scheme included a provisional option for social infrastructure GFA to be located on Site A or Site C inclusive of the GFA figures nominated above.

	Exhibited Scheme ¹	Amended Scheme ¹
Site B		
Land Use	Tourist / visitor accommodation	Residential
Max height – top of roof (RL)	155	155
Max height – top of services zone (RL)	158	158
GFA	15,200m ²	12,685m ²
FSR - OSD	8.12:1	6.8:1
Non-residential FSR - OSD	8.12:1	0.1:1
Car parking	25	55
Site C		
Land Use	Commercial ²	Commercial
Max height – top of roof (RL)	127	127
Max height – top of services zone (RL)	132	132
GFA	2,700m ²	3,031m ²
FSR – OSD	4.44:1	4.9:1
Non-residential FSR - OSD	4.44:1	4.9:1
Car parking	0	0

The revised concept SSD Application (SSD-9579) under the Amended Scheme seeks approval for the following:

- maximum building envelopes for Sites A, B and C, including street wall heights and setbacks as illustrated in the plans prepared by Crows Nest Design Consortium for Sydney Metro at Appendix A to the Submissions Report
- maximum building heights:
 - **Site A:** RL 175.60 metres or equivalent of 21 storeys (includes two station levels and conceptual OSD space in the podium approved under the CSSI Approval)
 - **Site B:** RL 155 metres or equivalent of 17 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)
 - **Site C:** RL 127 metres or 9 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)

Note 1: the maximum building heights defined above are measured to the top of the roof slab and exclude building parapets which will be resolved as part of future detailed SSD Application(s)

- maximum height for a building services zone on top of each building to accommodate lift overruns, rooftop plant and services:
 - **Site A:** RL 180 or 4.4 metres
 - **Site B:** RL 158 or 3 metres
 - **Site C:** RL 132 or 5 metres

Note 1: the use of the space within the building services zone is restricted to non-habitable floor space.

Note 2: for the purposes of the concept SSD Application, the maximum height of the building envelope does not make provision for the following items, which will be resolved as part of the future detailed SSD Application(s):

-
- *communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like, which are excluded from the calculation of building height pursuant to the standard definition in NSLEP 2013*
 - *architectural roof features, which are subject to compliance with the provisions in Clause 5.6 of NSLEP 2013, and may exceed the maximum building height, subject to development consent.*
 - maximum gross floor area (GFA) of 56,400 square metres for the OSD comprising the following based on the proposed land uses:
 - **Site A:** Commercial office premises - maximum 40,300 square metres
 - **Site B:** Residential accommodation - maximum of 13,000 square metres
 - **Site C:** Commercial office premises - maximum of 3,100 square metres

Note: *GFA figures exclude GFA attributed to the station and station retail space approved under the CSSI Approval*

- minimum non-residential floor space for the OSD across combined Sites A, B and C of 43,505 square metres
- the use of conceptual areas associated with the OSD which have been provisioned for in the Crows Nest station box (CSSI Approval) including areas above ground level (i.e. OSD lobbies and associated spaces)
- a maximum of 101 car parking spaces on Sites A and B associated with the proposed commercial and residential uses
- modulation and expression of built forms within an articulation zone extending to the property boundary
- loading, vehicular and pedestrian access arrangements
- strategies for utilities and services provision
- strategies for managing stormwater and drainage
- a strategy for the achievement of ecological sustainable development
- a public art strategy
- indicative signage zones
- a design excellence framework
- the future subdivision of parts of the OSD footprint, if required.

2.0 Construction Traffic Management Principles

2.1 CSSI EIS & CSSI Approval Conditions

Condition A4 of Schedule 2 of the CSSI Approval states that except to the extent described in the EIS or PIR, any OSD, including associated future uses, does not form part of this CSSI and will be subject to the relevant assessment pathway prescribed by the EP&A Act. Notwithstanding, the construction haulage routes identified within the CSSI EIS (refer to **Figure 1**) are those that would generally apply to any OSD construction on the site whilst OSD works are undertaken concurrently with works approved by the CSSI, subject to CTMP preparation and road authority views.



Figure 1: CSSI construction haulage routes, Crows Nest

Haulage routes are via Pacific Highway to the north of the site, accessing the site via Hume Street and also Oxley and Clarke Streets, and egressing from Clarke Lane, Clarke Street and Hume Street to Pacific Highway. These haulage routes may need to be modified through the CTMP process.

2.2 Construction Traffic Management Framework

The OSD does not form part of the Sydney Metro CSSI Approval dated 9 January 2017. The Construction Traffic Management Framework (CTMF) prepared by Sydney Metro in accordance with Condition E81 of the CSSI Approval provides the overall strategy and approach for construction traffic management for the Metro project, and an outline of the traffic management requirements and processes that will be common to each of the proposed work sites. It establishes the traffic management processes and acceptable criteria to be considered and followed in managing roads and footpaths adjacent to Project worksites. The principles and procedures outlined in the CTMF are proposed to apply the concurrent construction of the Metro station and OSD above Site C, notwithstanding Clause A4, Schedule 2 of the CSSI Approval. However, the Sydney Co-Ordination Office (SCO) and the Roads and Maritime Services (RMS) may require that additional OSD specific requirements are placed on any CTMP approval.

The CSSI CTMF identifies a number of issues at the Crows Nest site(s) that CSSI CTMPs will need to address and mitigate for the construction scenario. These include:

- pedestrian activity on the Pacific Highway
- pedestrian and cyclist safety
- impact on bus stops and bus operations
- impact of heavy vehicle movements on sensitive receivers (residents, schools)
- business and residential access
- cumulative construction traffic from other developments.

Additionally, Appendix C of the CTMF identifies a number of traffic and transport management operational imperatives as follows:

- CTMP to clearly demonstrate turning paths for truck and dogs and heavy rigid vehicles in and out of Clarke Lane.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

In addition to the above, the CTMP will also need to address the contractors approach to the management of active transport activities and the general public.

2.3 Other Recently Approved Metro CTMPs for the Site

Multiple (Metro Demolition and TSE contract) CTMPs have been approved by RMS for the Crows Nest site since May 2017. These include:

- Sydney Metro City & South West CTMP Crows Nest Sites April 2017 Rev C-00 (Demolition).
- Sydney Metro City & South West CTMP – Crows Nest utility Works - TSE Works Rev C SMCSWTSE-JCG-SCN-CN-PLN-002301 for utility relocation.
- Sydney Metro City & South West CTMP – Crows Nest Utility Works – Addendum 1 - TSE Works Rev H SMCSWTSE-JCG-SCN-CN-PLN-002301

- Sydney Metro City & South West CTMP – Crown Nest Site Establishment - TSE Works Rev D SMCSWTSE-JCG-SCN-CN-PLN-002270 for site establishment
- Sydney Metro City & South West CTMP – Crows Nest Stage 1 site operations - TSE Works Rev D SMCSWTSE-JCG-SCN-TM-PLN-002271 - closure of Hume Street.

In addition to the logistics lane in the Pacific Highway referred to in Section 3.1 of this Statement, the OSD contractor is likely to require vehicular access to and from the kerbside lanes in Clarke Lane, Clarke Street and Hume Street, designated as work zones at different times throughout construction.

2.4 Other OSD Construction Considerations

2.4.1 Approvals

Sydney Metro contractors would be required to secure all required statutory approvals prior to the commencement of works. Refer to Section 6 of the CTMF (prepared by Sydney Metro) for traffic management related approvals.

2.4.2 Hoardings

Hoardings would need to be placed around the perimeter of construction site areas to protect the site and any passing pedestrians and vehicles in accordance with relevant standards and having regard to Section 9.2 of the CTMF.

2.4.3 Vulnerable Road Users

The OSD Contractor would be required to adopt applicable vulnerable road user safety measures, as outlined in the CTMF and in accordance with the Sydney Metro Principal Contractor Health and Safety Standard.

3.0 OSD Construction Traffic Methodology

3.1 Construction Scenario

The amended scheme proposes only one construction scenario (as opposed to the three scenarios outlined in the exhibited SSD Application). The Crows Nest Metro station will be delivered as a single construct only package. Given the constraints of constructing the OSD during live metro operations, this package is to also include OSD construction above Site C. Prior to construction above Site C, a Stage 2 detailed SSD determination will be required.

Construction management planning is therefore proceeding on the basis of concurrent construction of the Metro station infrastructure and OSD above Site C, with design considerations to ensure future OSD above Sites A and B can be constructed after the Metro is operational.

Vehicular access will be facilitated by a proposed 'logistics lane' (use of the southbound kerbside lane along the Pacific Highway frontage to sites A and B by Metro construction vehicles) and via Oxley Street, Hume Street, Clarke Street and Clarke Lane. Shared use of construction site accesses will not be required as the works will be delivered as a single construct only package.

In addition to the logistics lane, kerbside loading or works zones may be required along the Clarke Street, Clarke Lane and Hume Street frontages at some points during construction. Multiple tower cranes may be operational at the sites during Metro and OSD construction. Loading dock facilities will be delivered as part of the Metro station works. In the end state, after the Metro station is operational, these loading dock facilities will serve both the Metro station and OSD. During concurrent construction of the Metro station and OSD above Site C, the loading docks will not be accessible for construction access.

4.0 Indicative Construction Traffic Generation

Indicative estimates of traffic generation associated with concurrent Metro station works and OSD works above Site C are provided below in **Table 2**. These estimates are indicative and will be refined during preparation of the CTMP.

Table 2. Indicative Traffic Generation Estimates

Use	Peak Hour ¹			Non Peak Hour ²			Evening ³			Night ⁴		
	Light	HV	Total	Light	HV	Total	Light	HV	Total	Light	HV	Total
Metro Station ⁵	2	6	8	10	22	32	2	6	8	2	6	8
OSD ⁶	2	3	5	8	10	18	2	5	7	2	5	7
Total	4	9	13	18	32	50	4	11	15	4	16	20

Notes:

1. AM peak hour x 1 and PM peak hour x 1 (7-8am / 5-6pm)
2. 9 hours (8-5pm)
3. 4 hours (6-10pm)
4. 9 hours (10pm-7am)
5. Sourced from Sydney Metro Chatswood to Sydenham EIS, May 2016
6. Sydney Metro estimates (assumes 23 HV arrivals per day on average). Refined estimates will be provided in the Construction Traffic Management Plan (CTMP) documentation.

The Metro City and Southwest Chatswood to Sydenham EIS assessment did not include an assessment of concurrent Metro station works and OSD works above Site C. The EIS analysis demonstrates that the operational performance of the road network does not deteriorate as a result of the Metro station construction works. SCO and RMS, however, may still require that restrictions be placed on peak hour OSD heavy vehicle traffic generation in order to maintain road network efficiency.

5.0 Impacts and Preliminary Mitigation Proposals

The key impacts and possible mitigations for the construction scenario are addressed below.

5.1 Construction Scenario

Pedestrians – The logistics lane proposal provides for the closure of the eastern footpath on the Pacific Highway between Oxley and Hume Streets. Closures will be in place during operation of the logistics lane. Other short term footpath closures may be required at other locations throughout construction. Site access driveways will be required via Clarke Lane and/or Clarke Street. Measures will be required to minimise pedestrian/vehicular conflict and these will be outlined in the CTMP. The risk to pedestrians is mitigated by construction occurring prior to the opening of the Metro station.

Mitigations would include pedestrian advisory signage and wayfinding, appropriate barrier treatments and retention of signalised marked foot crossings at traffic lights where feasible.

Metro customers – The Metro station has yet to open and therefore Metro customers would not be moving into and out of the station. Concurrent construction of the Metro station and the OSD above Site C means Metro customers are not moving into and out of the Metro station while works are underway. This mitigates risks to pedestrians.

Buses and bus customers – The existing southbound bus stop on the Pacific Highway between Oxley and Hume Streets, will need to be closed during the works. Bus customers will be able to use existing stops to the north and south of this stop. Currently, buses operate along the Pacific Highway and via Hume Street. The addition of construction vehicle routes on these streets may result in impacts to these bus services such as minor delays to travel times. The Hume Street bus stop was removed in 2017 to accommodate the Metro TSE contract works.

Closing the bus stop during operation of the logistics lane in the Pacific Highway means that buses would not be picking up and setting down customers in the area where construction vehicles are arriving and departing the work site. This would mitigate risk to bus customers and bus drivers.

Taxis – there are currently no dedicated taxi parking spaces on Pacific Highway, Hume Street, Clarke Street or Oxley Street outside the sites, and thus no impacts to taxi operations outside of general construction traffic management applying to all vehicles. The Integrated Access Plan for Crows Nest station proposes to deliver taxi and kiss and ride spaces on the southern side of Clarke Street northwest of OSD Site C as part of the station development. These spaces will be available for use from commencement of Metro station operations.

During construction, contractors will also need to accommodate regular deliveries to adjacent land uses. Some of these uses receive heavy vehicle deliveries via Clarke Lane. The CTMP will need to take these activities into account.

6.0 Conclusion

Construction management planning is proceeding on the basis of concurrent construction of the Metro station infrastructure and OSD above Site C, with design considerations to ensure future OSD above Sites A and B can be constructed after the Metro is operational.

Concurrent construction of the Metro station and OSD above Site C will be facilitated by a proposed 'logistics lane' (use of the southbound kerbside lane along the Pacific Highway frontage to Sites A and B by Metro construction vehicles). The anticipated impacts of the concurrent works would be mitigated as follows:

- Pedestrians – closure of the eastern footpath on the Pacific Highway between Oxley and Hume Streets will be managed in accordance with an approved CTMP (yet to be documented). Mitigations would include pedestrian advisory signage and wayfinding, appropriate barrier treatments and retention of signalised marked foot crossings at traffic lights where feasible.
- Pedestrians – other short term footpath closures may also be required from time to time and these will also be managed in accordance with an approved CTMP.
- Metro customers – works will occur prior to Metro station opening thereby mitigating the risk of construction vehicle / pedestrian conflict.
- Buses and bus customers – the existing southbound bus stop on the Pacific Highway between Oxley and Hume Streets, will need to be closed during the works. Bus customers will be able to use existing stops to the north and south of this stop. Bus pick up and set down would occur remote from the work site which would mitigate risks to bus customers and bus drivers.
- Taxis – no impact on taxis or taxi customers is expected as a result of the works.

The construction traffic management principles outlined in the City and Southwest Metro CTMF are those that are proposed to apply to Crows Nest ISD construction. Further detail will be provided in a Construction Traffic Management Plan for the works which will need to be documented and approved prior to the commencement of the works.