Integrated Management System

Construction Traffic Management Framework – City & Southwest Chatswood to Sydenham Contracts

SM ES-ST-217

Sydney Metro Integrated Management System (IMS)

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Table of Contents

List of Figures

List of Tables

1. Introduction

1.1. Purpose

This Construction Traffic Management Framework (CTMF) sets out the approach to managing traffic impacts during the construction of the Chatswood to Sydenham component of Sydney Metro City & Southwest (the Project). The CTMF also outlines contractor requirements, including those detailed in project-specific agreements such as Work Authorisation Deed (WAD) with RMS agreements with local councils and third party interface agreements.

This CTMF has been prepared to address the general requirements for the following contracts:

- Tunnel and Station Excavation (TSE)
- Integrated Station Development (ISD) for Crows Nest, Victoria Cross, Martin Place, Pitt Street.
- Barangaroo Station
- Waterloo Station
- Line-wide works (LW)
- Trains, Systems, Operations and Maintenance (TSOM)
- Sydenham Station Junction (SSJ)
- Central Station Main (CSM)
- Any other contract commissioned for construction of the Chatswood to Sydenham component of Sydney Metro City & Southwest.

The above contracts form part of the Project that was approved to proceed as State Significant Infrastructure (SSI) by the Department of Planning and Environment on 9 January 2017 (SSI 15_7400). The CTMF is a requirement under the conditions of the SSI Approval for the Chatswood to Sydenham component of Sydney Metro City & Southwest. See Table 1-1 below. At the time of preparation of this document, the SSJ and CSM works are modifications to the Project and are subject to approval of the modifications by the Department of Planning and Environment.

1.2. Scope

The CTMF provides the overall strategy and approach for construction traffic management for the 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.

A contract-wide Construction Traffic Management Plan (CTMP), along with site specific CTMPs, and Traffic Control Plans (TCPs) as required, will also be documented based on this framework. These documents will be prepared by the Project's contractors responsible for each works package as outlined in Section 1.1 to align with the contents, principles and objectives of this CTMF, as well as contractual requirements, Revised Environmental Mitigation Measures (REMM) and all other obligations of the SSI Approval.

The worksites along the Sydney Metro City & Southwest corridor will be located within high-activity, densely developed, and in some cases congested sections of the road network, and any traffic management measures will need to consider all the potential impacts that might occur because of the construction activities.

1.3. Project Description

Sydney Metro is a key component of Sydney's Rail Future (Transport for NSW, 2012), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future. The Sydney Metro network will consist of Sydney Metro Northwest and Sydney Metro City & Southwest.

Sydney Metro City & Southwest has two components:

- Chatswood to Sydenham – 16.5 kilometres of new metro line between Chatswood and Sydenham, including 15.5 kilometres of new twin rail tunnels (the Project referred to in this document).
- Sydenham to Bankstown upgrade – 13.5-kilometre upgrade and conversion of the T3 Bankstown Line to metro standards (subject to a separate environmental assessment process).

The key components of the Project (from north to south) include:

(a) Realignment of T1 North Shore Line surface track within the existing rail corridor between Chatswood Station and Brand Street, Artarmon, including a new bridge for a section of the 'down' (northbound) track to pass over the proposed Northern Dive Structure.

(b) About 250 metres of new above-ground metro tracks between Chatswood Station and the Northern Dive Structure.

(c) A Northern Dive Structure (about 400 metres in length) and tunnel portal just north of Mowbray Road, Chatswood.

(d) About 15.5 kilometres of twin (side-by-side) rail tunnels between the Northern Dive Structure and Bedwin Road, Marrickville (the Southern Dive Structure).

(e) A substation (for traction power supply) at Artarmon.

(f) New metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street and Waterloo, as well as new underground platforms at Central Station.

(g) A southern dive structure (about 400 metres in length) and tunnel portal north of Sydenham Station and south of Bedwin Road, Marrickville.

(h) A services facility (for traction power supply and an operational water treatment plant) adjacent to the Southern Dive Structure.

(i) Station works and track works at Sydenham Station to convert platforms 1 and 2 to metro operation, and to provide the southern turnback for the Chatswood to Sydenham section of the Project.

(j) Construction of a stabling facility to the north of Sydenham Station, adjacent to the Southern Dive Structure.

The Project will also include ancillary components, including new or upgraded overhead wiring, signalling, access tracks/paths, rail corridor fencing, noise walls, fresh air ventilation equipment, temporary and permanent alterations to the road network, facilities for pedestrians, and other construction related works.

1.4. Construction Staging

Construction works for the Sydney Metro City & Southwest commenced in early 2017, and the Project aims to be operational by 2024. The delivery packages are:

- Enabling Works (EW).
- Demolition (consisting of over 50 buildings and separated into Demo 1 and Demo 2 contracts for delivery purposes).
- Sydney Yard Access Bridge (SYAB).
- Central Station Main (CSM), to include the recently announced Central Walk.
- Tunnel and Station Excavation (TSE).
- Trains Systems Operations and Maintenance (TSOM).
- Integrated Station Development (ISD) for Crows Nest, Victoria Cross, Martin Place, Pitt Street.
- Barangaroo Station.
- Waterloo Station.
- Line-wide works (LW)
- Sydenham Station and Junction (SSJ).

The indicative construction program is outlined in Figure 1.1.

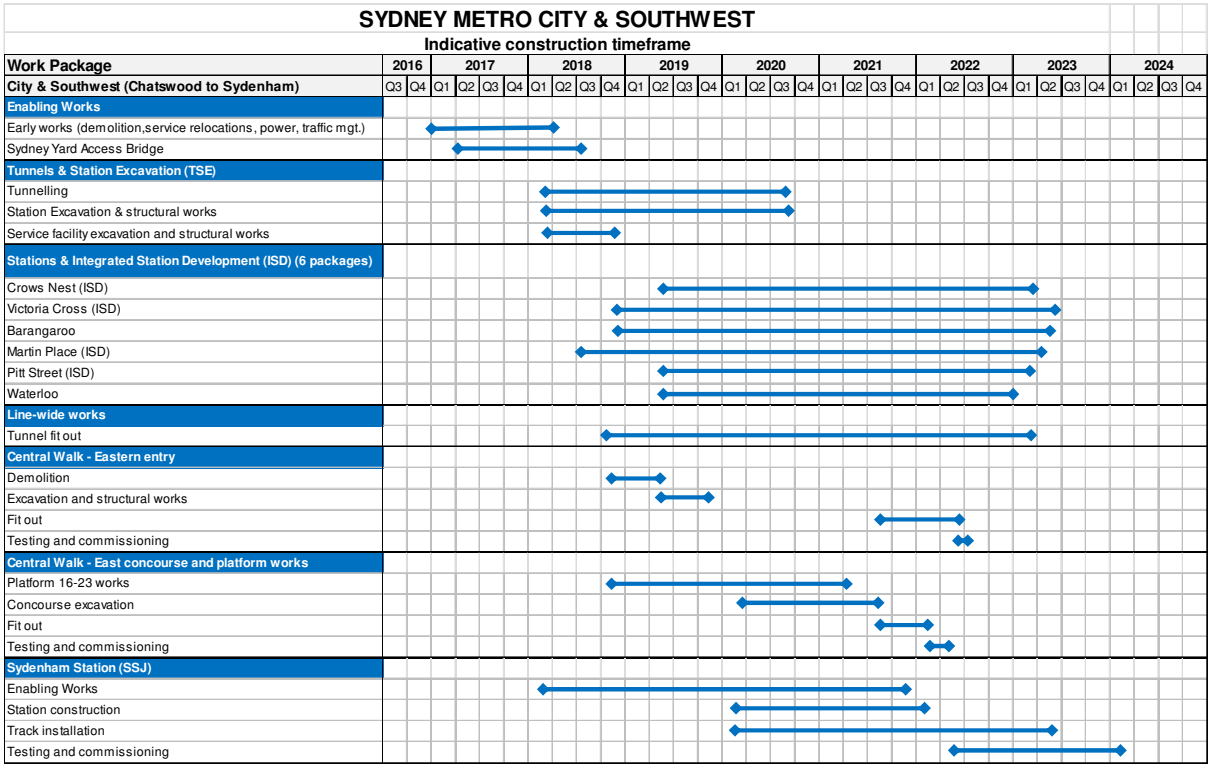


Figure 1-1: Draft construction program
(Note: TSOM timeframes not available at this time)

1.5. Governance

The approved version of the CTMF will be available on the Sydney Metro website.

The Sydney Metro Delivery Office will be the document owner of the approved CTMF. This CTMF requires approval by the Secretary, Department of Planning and Environment in accordance with Condition E81.

1.6. Compliance

This document has been prepared to address the requirements of the SSI Approval received on 9 January 2017 for the Chatswood to Sydenham component of Sydney Metro City & Southwest, and the Revised Environmental Mitigation Measures (REMM) identified in the Sydenham to Chatswood Submissions and Preferred Infrastructure Report.

The following table indicates the correlation between the requirements of those two documents and this CTMF. The requirements of these documents are summarised in the table below and the full requirements list is provided in Appendix B.

Table 1-1: Compliance with the Conditions of Approval

SSI Approval requirement reference	CTMF Section reference
E75 – Integration of proposal and minimising impacts	
• Consultation with Traffic and Transport Liaison Group (TTLG).	4.1
• Consideration of existing and future demand	2.1, 2.2, 7, 10, 9.5
• Minimise and manage local area traffic impacts.	2.1
• Ensure property access	2.1, 5.1
• Meet relevant standards and guidelines	3.3.2, 3.3.4
• Submission of plans	4.1, 4.2, 6.3, 6.8
E76 – Safety audits	10
E77 – Establish TTLG	4.1, Appendix E
E78 – Supplementary analysis	4.1
E79 – Weight-restricted roads	6.8, 7.1
E80 – Minimise truck movements in peaks	7.1, 11.
E81 – Implement CTMF	
• Construction site access	9.3
• Hoardings, scaffolds, structures on roads.	9.1, 9.2, 9.3
• Lane closures.	5.2, 6.4
• Cumulative construction vehicle management	11.1
• Impact on bus stops and services	6.9
• Work zones	7.3
• Mail zone impacts	6.10
• Works in road reservation	8
• Sign changes and modifications	6.1, 6.2

• Parking management	7.4.1
• Heavy vehicle management	7.1, 7.2, 7.3
• Special event management	6.6
• Emergency and property access	2.1, 2.2, 2.3, 5
• Retention of user and passenger safety	9.4, 9.5
• Incident response	8.3
• Monitoring of impacts.	6.12.1, 8.1.2, 8.2
E82 – Construction Traffic Management Plans	3.3.2, 3.3.3, 3.3.4
E83 – Further impacts of construction on surrounding area	To form part of CTMP reviews through TTLG and TCG. 8.2
E84 – Removal of spoil by non-road methods	Being investigated as part of project development.
E85 – Heavy vehicles not to use local roads	7.1
E86 – Maintain pedestrian and vehicle access	2.1, 5.1
E87 – Permanent road works subject to safety audits	10.2
E88 – Haulage route details in CTMPs	7.1
E89 – Truck marshalling and logistics	7.3, 7.4.2
E90 – Road dilapidation report	6.12.1
E91 – Damage to roads	6.12.1
Planning Framework reference	**CTMF Section reference**
8.1a (i), b, d and j – CTMP	3.3.2
8.1a (i), b, d and j – site-specific CTMPs	3.3.3
8.1 a (iii), and e – Traffic staging plans	3.3.3
8.1 a (iv), c and f – TCP and ROLs	3.3.4
8.1 a (v) and g – Vehicle Movement Plan	3.3.4
8.1 a (vi) and h – Pedestrian Movement Plan	3.3.4
8.1a (vii) and i – Parking Management Plan	3.3.4
8.1 b, and j – TTLG and consultation	4.1
8.3 – Mitigation measures	7
REMM reference	**CTMF Section reference**
T1 – Ongoing consultation with stakeholders	4
T2 – Road safety audits	10
T3 – Signposting at construction sites	2.2, 8.1.2
T4 – Traffic related incidents	8.3
T5 – Notification to community	5.2, 5.3, 5.4
T6 – Management of pedestrian access	2.2, 9.5
T7 – Additional enhancements for pedestrian, cyclist and motorist safety including:	
• Speed awareness and variable message signs	5.4, 9.5
• Community educational events	9.5
• Construction driver training	7.4.3

• Vehicle monitoring systems • Blind-spot warning devices	7.4.3 9.5
T8 – Access to be maintained	2.1
T9 – Trucks to enter and exit in a forward direction	7.2
T10 – relocation of bus stops	6.9
T11 – Special events	6.6
T12 – staff parking	7.4.1
T13 – Minimise truck movements in peaks	7.1, 11
T14 – Minimise movements through School Zones	7.1
T15 – Pedestrian and cyclist access – Crows Nest	2.1, 2.2
T16 – Devonshire Street tunnel closure timing	11.1. To be considered in detail in Central Station construction planning.
T17 – Consultation with harbour authorities and ferry operators re shipping channels	4
T18 – Martin Place access closures pedestrian management	11.1. To be considered in detail in Martin Place construction planning.
T19 – Removal of parking	3.3.3, 4, 5
T20 – Alternate pedestrian access	2.1
T21 - Cumulative construction vehicle management	3.3.2, 11.1
T22 – Pedestrian paths condition surveys	9.4
CEMF Spoil Management reference	**CTMF Section reference**
6.1 a – minimise adverse traffic and transport related issues	2.1, 2.2, 7.1
6.2 a – description of spoil traffic movements	7.1
6.3 a – minimise traffic impacts associated with spoil removal	2.2

2. Traffic Management Objectives

This section outlines the approach, strategy and hierarchy of access required when managing traffic for the Project.

Sydney Metro City & Southwest requires demolition and construction work to be undertaken within the City of Sydney, North Sydney, Willoughby and Inner West council areas, and in the area of the Barangaroo Delivery Authority. At all locations, it is important that adequate consideration and emphasis is given to the operation of public transport, private vehicles and service vehicles, and pedestrian and cyclist management measures, to minimise impacts. It is also important that access for residents and businesses is maintained, consistent with the SSI Approval.

The design and operation of any proposed temporary traffic management measures will require careful planning, coordination and implementation.

Pedestrians, cyclists and vehicle drivers expect a high level of safety and service in using the existing road and pedestrian network. This requires efficient, effective and reliable traffic management strategies to be in place that:

- Achieve uniform traffic throughput.
- Minimise changes to pedestrian and cycle routes and movement.
- Ensure reliable and consistent travel times.
- Provide clear information to allow drivers and other road users to make appropriate decisions in relation to their journey.
- Support operation and use of sustainable transport modes to reduce on-road single occupant motor vehicle demand.

These traffic management goals will be achieved by:

- Understanding the impacts of the works and identifying appropriate methods to mitigate these impacts.
- Strategic advance planning of the traffic management.
- Taking an approach to traffic management that minimises traffic disruption.
- Ongoing stakeholder engagement and communication.

2.1. General Traffic Management Approach

The Sydney Metro Delivery Office is committed to achieving desired performance goals in relation to the health and safety of workers employed to construct Sydney Metro City & Southwest, and to minimising the impacts of the works on road users and the community. The construction objectives that relate to the CTMF are outlined in the table below.

Table 2-1: CTMF-related construction objectives

Key Result Area	Construction Objectives
Transport network	• Minimise disruption to pedestrians, cyclists and motorists. • Ensure Sydney Metro City & Southwest construction traffic accesses the arterial network as soon as practicable on route to, and immediately after leaving, the construction site. • Keep Sydney moving. • Ensure buses run on time with no disruption to routes and stops, where possible. • Minimise changes to traffic operation and kerbside access. • Minimise construction traffic generation during network peak periods (maximum peak period construction vehicle volumes should not exceed those outlined in the EIS). • Maintain access to properties and businesses.
Safety	• No worker injury accidents during construction. • No injury accidents to members of the public because of construction.
Cumulative impacts	• Work collaboratively with other stakeholders and other major projects to mitigate traffic and transport impacts.
Amenity	• Minimise noise and other environmental impacts on the residents and businesses in the vicinity of the worksite, in line with the Construction Noise and Vibration Strategy (CNVS) Section 5.3 and 5.9.

All Sydney Metro City & Southwest construction activity must comply with the following principles:

(a) A safe road and pathway network for construction personnel and the public (vehicular, cyclist and pedestrian) must be made at all work sites including alternative movement paths as a result of site works.

(b) Minimise delays to traffic and pedestrians in the immediate vicinity of work sites as much as practicable.

(c) Minimise construction traffic generation during network peak periods to the maximum numbers outlined in the EIS, unless otherwise agreed by the relevant authorities (such as Sydney Coordination Office (SCO), RMS or local council). It is an RMS operational imperative that the capacity and efficiency of the network is not reduced, particularly during the peak periods of 6:00am to 10:00am and 3:00pm to 7:00pm, Monday to Friday (excluding public holidays).

(d) Coordinate works so that road users do not encounter a series of delays in quick succession and so that the cumulative impact of multiple closures does not lead to unexpected congestion.

(e) Implement appropriate operational and other measures to ensure the safety of vulnerable road users (refer to Section 9.5).

(f) Maintain access for residents and businesses.

(g) Keep road users (vehicular, cyclists and pedestrians) informed about:

i. The location, date, time and duration of works, to enable informed decisions by the road user regarding times and routes of travel.

ii. Likely travel delays.

iii. Alternative routes, if applicable.

(h) Present a professional and helpful interface with road users during all parts of the construction process.

(i) Consider potential impacts on pedestrians and cyclists.

(j) Keep public transport users informed of changes, due to construction.

(k) Meet other RMS and SCO operational imperatives listed in Appendix C.

2.2. Traffic management strategy

There is the potential for activities associated with the construction of the Sydney Metro City & Southwest to have an impact on the surrounding road network. Where possible, these impacts will be minimised through the provision of effective traffic management measures, in accordance with Sydney Metro Delivery Office's objectives and relevant guidelines and standards, to achieve the objectives of the Project. Development of the traffic management measures will be carried out in consultation with the Traffic Control Group (TCG) Traffic and Transport Liaison Group (TTLG), RMS, SCO and other stakeholders in accordance with the SSI Approval.

Priority will be given to providing adequate guidance to pedestrians, cyclists, drivers and the community prior to the commencement of any works. Priority will also be given to responding appropriately to issues and events that may arise during the works. As part of this strategy, some key traffic management measures include:

(a) The provision of directional signage and line marking to direct and guide drivers, cyclists and pedestrians past work sites and to suitable alternative routes (if required) on the surrounding road network.

(b) Notification of proposed changes and duration using newspapers (local or majors), radio, project website, social media and direct community engagement (as required).

(c) On-going or direct co-ordination with the Transport Management Centre (TMC) and the SCO, to mitigate congestion and provide rapid response should incidents or increased congestion occur as a direct result of the works. Notification of incidents or congestion should also be relayed to the Sydney Metro Delivery Office immediately (refer to Section 8.3). The direct contact numbers of the contract-wide and site-specific lead contractors should be provided to the TMC and SCO. The contract-wide lead contractor is responsible for ensuring the direct contact numbers are current during any stage of construction.

(d) Management and coordination of construction vehicle access to and from the work sites across pedestrian paths. The type of traffic management to be employed will be dependent on, and adjusted according to, the volume of pedestrians, passing traffic and the volume of construction vehicle activities for the site. The types of management could include manual supervision, physical barriers,

temporary/portable traffic signals (where approved by RMS, BDA or council) or modification to existing traffic signals (where approved by RMS).

(e) Ensuring that access to existing properties and businesses is maintained during the period of the works, or suitable alternative.

(f) Retain existing on-street parking and restrictions, as far as is practicable.

2.3. Hierarchy of access

In identifying the most appropriate form of traffic management for each site, consideration should be given to the priorities of the potential different users. The site specific CTMPs should be developed in line with the following hierarchy of access, listed from the highest to the lowest priority:

1. Incidents and emergency Services access
2. Events (special and unplanned)
3. Pedestrians
4. Cyclists
5. Other public transport users – buses, coaches and light rail
6. Service vehicles
7. Coaches
8. Taxis
9. Kiss and ride and rideshare
10. Private cars

The strategic importance (functional hierarchy) of traffic routes and the existing administrative road classification is listed below, in order of highest to the lowest priority:

1. Arterial/State road
2. Sub-arterial or Regional road
3. Collector road
4. Local road

It should be noted that while most streets within the Sydney CBD are ‘local roads’, their role and function are as important traffic routes for circulation around the CBD serving public transport, active transport and service vehicles.

3. Implementation framework

3.1. Construction Environmental Management Framework (CEMF)

The Construction Environmental Management Framework (CEMF) sets out the environmental, stakeholder and community management requirements for construction. It provides a linking document between the planning approval documentation and the construction environmental management documentation to be developed by the Principal Contractors relevant to their scope of works. Chapter 8 of the CEMF outlines construction traffic management requirements.

3.2. Construction traffic management task

The Project requires construction work to be undertaken for the tunnels, stations, ancillary facilities and connections to the stations at various locations within the City of Sydney, North Sydney, Willoughby and Inner West (formerly Marrickville, Leichhardt, Ashfield) council areas.

Managing the impacts of construction traffic on the road and pedestrian networks near the surface construction works is vital to the success of the Project.

3.3. Implementation process

The Construction Traffic Management Framework (CTMF) is one of several management plans required for each of the construction sites. The hierarchy of the traffic management plans for the Project, their purpose, and the responsible entity for each are outlined in the table below.

Table 3-1: Traffic Management Plans hierarchy, purpose and responsible entity

Document	Purpose	Produced by
Construction Traffic Management Framework (CTMF)	Provides the approach within which subsequent contract specific and site specific CTMPs will be prepared.	Sydney Metro Delivery Office
Contract-wide Construction Traffic Management Plan (CTMP)	Contract-specific CTMPs are to be prepared for each Sydney Metro City & Southwest contract.	Contractor
Site-specific Construction Traffic Management Plan (CTMP)	Site-specific CTMPs are to be prepared for each Sydney Metro City & Southwest construction site for each contract.	Contractor
Traffic Control Plans (TCP)	Prepared as part of the site specific CTMP or as a standalone drawing for submission with Road Occupancy License applications and/or Council permits.	Contractor
Pedestrian Movement Plans (PMP) Vehicle Movements Plans (VMP)	Prepared as part of the site specific CTMP, combined with a TCP or as a standalone drawing for submission with Road Occupancy License applications and/or Council permits.	Contractor

Document	Purpose	Produced by
Parking Management Plan (PkMP)	Prepared as part of the site specific CTMP or as a standalone document for submission with Road Occupancy License applications and/or Council permits	Contractor
Other plans	Refer to Principal's General Specifications G10 – Traffic and Transport Management	Sydney Metro Delivery Office

3.3.1. Construction Traffic Management Framework (this document)

This CTMF provides the framework within which subsequent contract-specific and site-specific CTMPs will be prepared. The CTMF describes the traffic management objectives, principles and strategies to be implemented during Sydney Metro City & Southwest construction, having regard to contractual requirements, the Revised Environmental Mitigation Measures (REMM) and other obligations of the SSI Approval.

This CTMF identifies and outlines the major sections of the Project that will be potentially impacted by the construction works and will require traffic, cycling and pedestrian management. The development of suitable traffic management plans to minimise, as much as possible, the potential impacts of the works is a key component to managing any disruptions to vehicle and people movement and the efficient construction of the Project.

3.3.2. Construction Traffic Management Plans

A contract-wide Construction Traffic Management Plan (CTMP) will be prepared by contractors, covering the full spatial extent of their works and multiple sites.

The contract-wide CTMP will comply with the Traffic Control at Worksites Manual (RMS), relevant Australian Standards, relevant Austroads guides, RMS supplements to Australian Standards and Austroads, and Principal's General Specifications G10 – Traffic and Transport Management and, where relevant, the RMS Work Authorisation Deed (WAD) documentation. This will allow fulfilment of the WAD requirement for a Traffic Management and Safety Plan (TMSP) subject to RMS review and approval.

In addition, site specific CTMPs will be prepared and implemented having regard to the REMMs documented in Chapter 11 of the Chatswood to Sydenham Submissions and Preferred Infrastructure Report, October 2016. Some of the twenty-two construction traffic and transport REMMs include:

(a) T1 – Ongoing consultation would be carried out with (as relevant to the location) with the Sydney Coordination Office, Roads and Maritime Services, Sydney Trains, NSW Trains, the Port Authority of NSW, Barangaroo Delivery Authority, local councils, emergency services and bus operators to minimise traffic and transport impacts during construction.

(b) T2 – Road Safety Audits would be carried out at each construction site. Audits would address vehicular access and egress, and pedestrian, cyclist and public transport safety.

(c) T6 – Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist and motorist safety. Depending on the location, this may require manual supervision, physical barriers, temporary traffic signals and modifications to existing signals or, on occasions, police presence.

(d) T13 – Construction site traffic would be managed to minimise movements in the AM and PM peak periods.

(e) T18 – During the closure of existing entrances to Martin Place Station, marshals would be provided during the AM and PM peak periods to direct customers to available access and egress points.

(f) T21 – The potential combined impact of trucks from multiple construction sites would be further considered during the development of Construction Traffic Management Plans.

3.3.3. Site-specific CTMP

Contractors will also prepare more detailed site-specific Construction Traffic Management Plans (CTMPs). These will be developed by the contractor for each work site and identify proposed heavy vehicle routes, traffic and parking management measures. These plans will be developed in consultation with the TTLG and TCG meetings.

Details of station and construction work sites are to be provided in the contract-wide CTMP and each of the site-specific CTMPs for:

(a) Northern Dive Site.

(b) Artarmon substation.

(c) Crows Nest.

(d) Victoria Cross.

(e) Blues Point Temporary Retrieval Site.

(f) Barangaroo.

(g) Martin Place (north and south).

(h) Pitt Street (north and south).

(i) Central & Central Walk.

(j) Waterloo.

(k) Southern Dive Site.

(l) Sydenham Station.

(m) Sydney Metro Trains Facility South.

Figure 3.1 indicates the locations of the proposed stations and work sites.

Site specific CTMPs will detail construction work sites, access points, relevant signage, parking changes (if required), bus stop relocations (if required), proposed heavy vehicle routes, traffic and parking management measures, relevant correspondence with stakeholders (e.g. bus operators, Australia Post, business owners) and all traffic management and mitigation measures required to implement any proposed works.

It must also include Traffic Control Plans (TCP), Vehicle Movement Plans (VMP), Pedestrian Movement Plans (PMP), Parking Management Plans and Traffic Staging Plans for the specific works, unless otherwise agreed in writing with the Principal's Representative and relevant Authorities. The Parking Management Plan will also provide details regarding on-site and off-site staff parking arrangements, including any proposed busing to and from worksites.

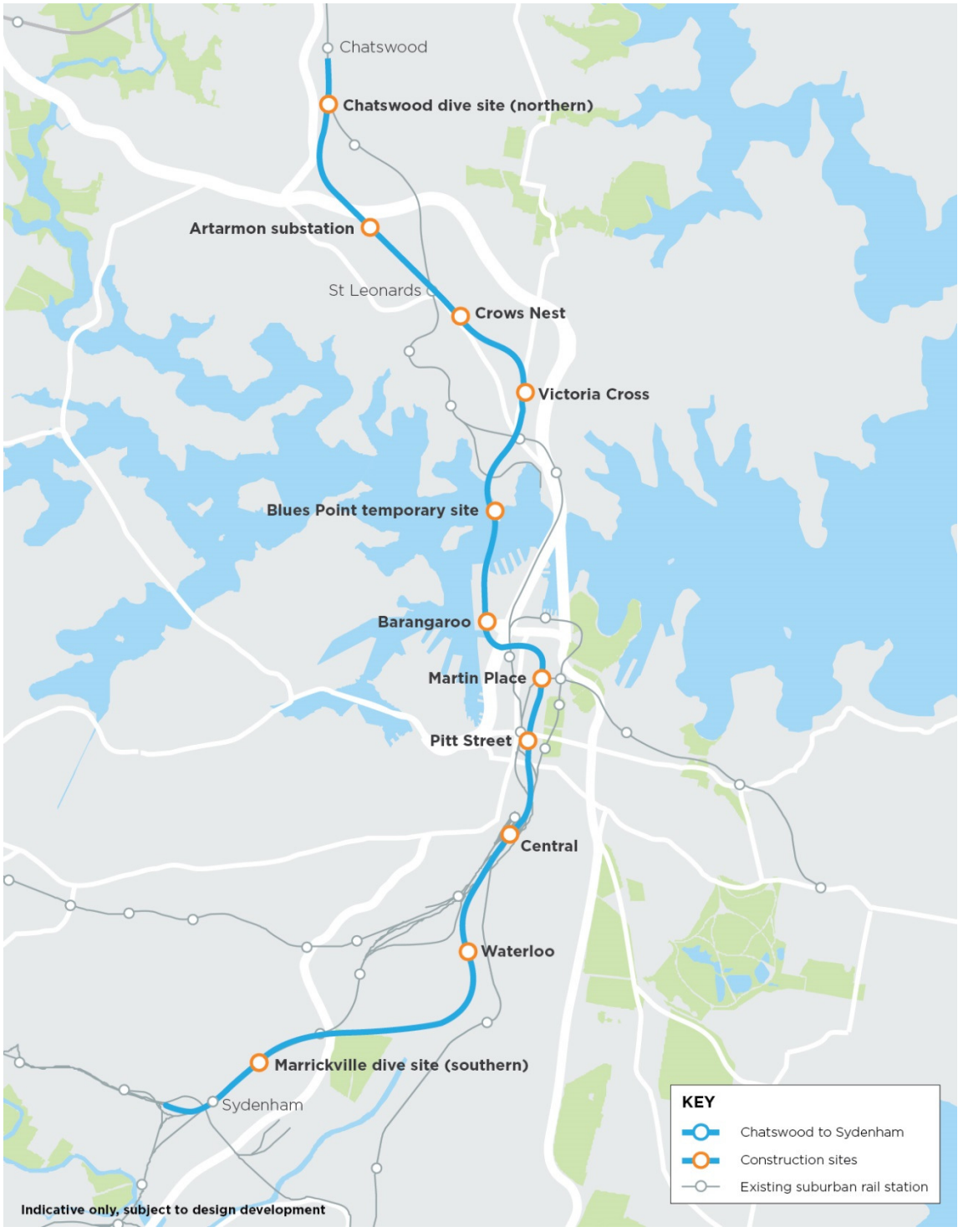


Figure 3-1: Proposed work sites

3.3.4. Traffic Control Plans and other plans

The site-specific CTMPs provide the basis for preparation of the Traffic Control Plans (TCP) and Road Occupancy Licence (ROL) applications.

3.3.4.1. Traffic Control Plans

All Traffic Control Plans (TCPs) prepared for construction activities will be developed in accordance with Australian Standard AS1742.3 and the RMS Traffic Control at Worksites Manual.

TCPs must be prepared by a person who has completed and passed the Prepare a Work Zone Traffic Management Plan training course and has current certification to the required level.

All work sites and related TCPs will be implemented in compliance with the ROL issued by the TMC for the approved times and appropriate standards.

Documents to be referenced in the preparation of TCPs include:

- Australian Standard AS1742.3 – Manual of uniform traffic control devices, Part 3, traffic control devices for works on roads.
- Roads and Maritime Services NSW – Traffic Control at Worksites Manual
- Principal's General Specifications G10 – Traffic and Transport Management.
- Relevant Austroads Guides.
- RMS Supplements to Austroads and Australian Standards.
- Sydney Metro Principal Contractor Health and Safety Standard

Initial consultation and feedback from RMS and SCO has highlighted several site-specific requirements associated with the forecast heavy vehicle and light vehicle movements at some of the proposed work sites along the Project corridor. These will be addressed by contractors during construction planning and CTMP preparation for each of the sites. These RMS and SCO operational requirements are provided in Appendix C. On local roads, Councils may also have operational requirements and these should be determined in consultation with the Councils.

3.3.4.2. Vehicle Movement Plans

The Traffic Control at Work Sites manual outlines a vehicle movement plan as "a diagram showing the preferred travel paths for vehicles associated with a worksite entering, leaving or crossing the through traffic stream. A Vehicle Movement Plan (VMP) should also show travel paths for trucks at key points on routes remote from the worksite such as places to turn around, accesses, ramps and side roads. A VMP may be combined with or superimposed on a TCP." The requirements for the provision of a VMP are detailed in chapter 7 of the Traffic Control at Worksites Manual.

Vehicle movement plans should be included in site-specific CTMPs prepared by a suitably qualified person for the contractor. The VMP should also include the proposed site access points and how these are to be managed.

3.3.4.3. Pedestrian Movement Plans

The Traffic Control at Worksites Manual outlines a Pedestrian Movement Plan (PMP) as *"a diagram showing the allocated travel paths for workers or pedestrians around or through a worksite. The plan shall show all associated signs and devices used to guide the workers or pedestrians. A Pedestrian Movement Plan (PMP) may be combined with or superimposed on a TCP."*

Wherever it is necessary to divert or warn pedestrians of works the PMP should be included in the CTMP prepared by the contractor. This may be a stand-alone document.

The needs of cyclists should also be considered and management measures documented in the pedestrian and cycle movement plan. This is particularly important where the work site is bounded by major roads such as State and Regional Roads.

PMPs are to be prepared for Barangaroo, Martin Place, Pitt Street and Central work sites. Other worksites may also require PMPs subject to site-specific assessments.

3.3.4.4. Parking management plans

Parking Management Plans identify parking requirements and also on-site and off-site parking arrangements and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures. For any proposed kerbside use impacts in the CBD a proposal for relocation of impacted users is required.

Changes to on-street parking restrictions will require the approval of the relevant road authority; either RMS or local council.

4. Consultation groups

The size of the Project requires effective and ongoing interaction between several different organisations, key stakeholders and the general public. This chapter outlines the consultation groups that will be convened to manage these interactions. Requirements for consultation with local businesses and the community are outlined in Chapter 5 Communication.

As the Project needs regular and ongoing discussions and distribution of information, the following groups will be convened to assist in traffic management planning, document review and stakeholder consultation:

(a) Traffic and Transport Liaison Group (TTLG).

(b) Traffic Control Group(s) (TCG).

4.1. Traffic and Transport Liaison Group

A Traffic and Transport Liaison Group (TTLG) operates, in accordance with the SSI approval (Condition E77), to ensure the stakeholders most affected are aware of the proposed construction activities, upcoming works and related traffic and transport implications. The participants in this group are specified in Condition E77 and will reflect the location of the work site however, representation is anticipated to include:

- Sydney Metro Delivery Office.
- Transport for NSW including:
  - Centre for Road and Maritime Safety.
  - Sydney Light Rail.
  - Metro Bus and Ferry Planning and Development.
  - Freight Strategy and Planning.
- Roads and Maritime Services (RMS).
- Transport Management Centre (TMC).
- Sydney Coordination Office (SCO).
- Sydney Trains.
- Port Authority of NSW.
- Barangaroo Delivery Authority (BDA).
- Department of Planning and Environment.
- Sydney Motorway Corporation (WestConnex).
- NSW Police.
- NSW Fire and Rescue.
- NSW Ambulance Service.
- Local councils (depending on work site locations).
  - Lane Cove Council.

- Willoughby Council.
- North Sydney Council.
- City of Sydney Council.
- Inner West Council.

- State Transit Authority.
- Sydney Metro contractor(s).

The TTLG provides a forum for key stakeholders, contractors and the Sydney Metro Delivery Office to discuss matters that could impact on the road network operations around the sites. The TTLG also provides a forum through which information on proposed traffic changes is made available to key stakeholders. It will allow key transport agencies, local councils and BDA to inform the development of traffic management plans and construction staging by providing local and specialist knowledge and insights. The TTLG:

(a) Maintains good communication between Sydney Metro Delivery Office project team, contractors and other stakeholders.

(b) Discusses the construction traffic management arrangements for the Sydney Metro City & Southwest works and approvals.

(c) Assists in identification and refinement of potential measures to mitigate the impacts of the Sydney Metro City & Southwest works in an area.

(d) Assists coordination of works for Sydney Metro City & Southwest and other projects.

(e) Can request the provision of supplementary analysis and modelling for proposed traffic management measures to ensure any disruption to the traffic and pedestrian network is minimised

(f) Ensures that submitted plans are actioned and agreed in a timely manner in accordance with the overall Sydney Metro City & Southwest project program.

(g) Is consulted in the preparation of road safety audits before the completion and use of infrastructure.

The Sydney Metro City & Southwest TTLG has been established and is separate to the Sydney Metro Northwest TTLG, which has been meeting since late 2012.

4.1.1. Other organisations

Other organisations may be asked to attend the TTLG and/or receive relevant information depending on the matters under discussion or consideration. This may include:

- NSW Taxi Council.
- NSW Taxi Drivers Association.
- BusNSW.
- Bicycle NSW.
- BIKESydney.
- BIKEast.

- Pedestrian Council of Australia.
- Sydney Buses.
- Private bus operators (such as NightRide contractors).
- Property NSW.
- Ports Authority of NSW (incl. Harbour Master).
- Sydney Ferries, Harbour City Ferries and other relevant ferry operator(s).
- Disability Council of NSW.
- Transurban.
- NRMA.
- NSW Trains.
- NSW Health Infrastructure.
- CSELR Managing Contractor.

4.2. Traffic Control Group

For each (or multiple) Sydney Metro City & Southwest contract, a Traffic Control Group (TCG) will be convened to provide a technical forum for the discussion of proposed works that will impact on the surrounding road network and feedback on proposed TCPs prior to formal submission. This group would meet on regular occasions (weekly, fortnightly or as agreed by TCG members) to provide an assessment of the forthcoming traffic management measures and to ensure that any identified or potential issues are raised and addressed to ensure that works proceed in accordance with the agreed program. The participants in this group will vary depending on the contracts. Representation would be expected to include:

- Relevant Sydney Metro contractor's Traffic Manager and other construction staff as required.
- Sydney Metro Delivery Office.
- Transport for NSW.
- RMS.
- TMC.
- SCO.
- Local councils.
- Barangaroo Delivery Authority.

The TCG will provide a forum for discussion on proposed traffic management measures during the various stages of each of the contracts, discussion of potential impacts on the road network operations around the sites, and how to address or minimise those impacts.

4.3. Government stakeholders

Consultation with the SCO, RMS and TfNSW for the preparation of this CTMF document has been carried out through a series of meetings and discussions in June and July 2017, the outcomes of which have been incorporated into this document. A comments register is provided at Appendix D.

Consultation has also been undertaken with officers from the following councils:

- Willoughby Council.
- Inner West Council.
- North Sydney Council.
- The City of Sydney Council.

Councils were asked to review the document and provided comments back to the Sydney Metro Delivery Office.

The Barangaroo Delivery Authority was also consulted in the development of this CTMF.

This CTMF was presented to the meeting of the City & South West Traffic and Transport Liaison Group held on 03/08/2017.

A summary of the comments and responses from the consultations has been provided to the Department of Planning and Environment.

5. Communication

All external communication with the community, including businesses, must follow the guidelines set out in the Sydney Metro City & Southwest Community Communication Strategy.

The community must be notified of any current and upcoming works, temporary works or contractor activities that have the potential to impact on stakeholders and the community before they happen.

An overview of stakeholder and community involvement during construction of the Project is provided in the Construction Environmental Management Framework. A Community Communication Strategy will be developed by each principal contractor. A key element of this strategy will relate to notifications to stakeholders, local Councils and the community that may be affected by changes to transport, access and local traffic arrangements.

5.1. Existing businesses and residents

Owners and operators of potentially affected properties and businesses will be consulted throughout the delivery of the Project and notified well in advance of any works that may potentially disrupt access to their property.

Every endeavour is to be made to maintain access at all times to properties for both pedestrians and vehicles. If works will temporarily affect access to a property, consideration should be given to the staging of the works, to maintain access and limit the disruption. Any access restrictions for residents, tenants or property owners and alternative arrangements are to be undertaken and agreed with the occupiers.

Residents, property owners and businesses in the surrounding area will also be notified prior to the start of works.

The proposed works and changes should also be advertised in the public notices section of newspapers (as required).

5.2. Notification of traffic changes or disruptive works

Activity specific communications strategies are required to be developed prior to any traffic event. These strategies should include details of the work, impacts and proposed mitigation measures. In addition to the strategy, activity-specific notifications will need to be developed and issued to directly impacted properties prior to works commencing. Notification of proposed changes should also be included on the Project website. Other communication methods that may be implemented could include, but are not limited to:

- Doorknocks.
- Letterbox drops.
- Advertising (newspapers).
- Social media updates.
- Radio.

5.3. Responsibilities

The contractor's Stakeholder and Community Manager will be responsible for ensuring a system is in place to advise the Sydney Metro City & Southwest Project Communications Team, the TTLG and other key stakeholders each time proposed changes are to be made to traffic arrangements. Advice will include information about the changes to the traffic operation, anticipated delays to traffic, any changes to the times and duration of the work, and any other potential major disruptions. This advice should be provided at the earliest opportunity and provide sufficient time for key agencies to provide comments or information as necessary . The principal contractor is to develop a Community Communications Strategy in accordance with the guidelines provided in the Sydney Metro City & Southwest Community Communications Strategy.

5.4. Roadside Messaging

Appropriate signposting, whether static or Variable Message Signs (VMS), should be located and installed to provide for the easy and safe passage of vehicles, pedestrians and cyclists. This also includes public transport users accessing facilities such as bus stops. The installation of signs will be detailed within the relevant CTMP.

Any signposting should be placed in accordance with relevant guidelines and standards. Messages should be clear and easily interpreted by drivers, pedestrians and cyclists, and should not create a safety hazard. The proposed location of any VMS would require the approval of the road authority.

6. Approvals

6.1. Policy Context and Legislative Backing

Notwithstanding the Project SSI Approval being secured under Part 5.1 of the EP&A Act, Sydney Metro contractors will be required to secure all required statutory approvals prior to the commencement of works.

Any changes to traffic control devices (e.g. traffic signals or traffic signs) and traffic control facilities will require the approval from the road authority and arrangements with the road authority for the changes to occur. Regulatory sign and line-marking changes on local or Regional roads will require approval from the local council through a submission to the local traffic committee. Sign and line marking changes on State roads will require the approval of RMS.

6.2. Stakeholders

The agencies that may have a potential interest in the traffic management measures proposed for each Project construction site are outlined in the table below.

Table 6-1: Principal agencies

Station/Site **Note:** Other councils will be consulted as required	Sydney Coordination Office	Barangaroo Delivery Authority	Sydney Trains	Roads and Maritime Services	Willoughby Council	North Sydney Council	City of Sydney Council	Inner West Council	Transport Management Centre
Northern Dive Site	●		●	●	●				●
Artarmon	●			●	●				●
Crows Nest	●			●		●			●
Victoria Cross	●			●		●			●
Blues Point	●			●		●			●
Barangaroo	●	●		●			●		●
Martin Place	●		●	●			●		●
Pitt Street	●			●			●		●
Central	●		●	●			●		●
Waterloo	●			●			●		●
Southern Dive Site and Sydney Metro Trains Facility South	●		●	●				●	●

Sydenham Station	●		●	●				●	●

6.3. Construction Traffic Management Plans Approvals Process

Construction Traffic Management Plans will require approval and consideration by several key stakeholders. Contractors should assess the overall required approval times at the beginning of the Project to provide adequate scheduling of the preparation and submission of the CTMPs.

Condition E82 requires "Construction Traffic Management Plans (CTMPs), consistent with the CTMF required in Condition E81, must be prepared for each construction site in consultation with the TTLG(s), and submitted to RMS for approval following Sydney Coordination Office endorsement before construction commences at the relevant construction site."

In addition, Condition E83 requires that "Where construction results in a worsening of the matters identified in Condition E81 (a)-(o), the Proponent must review the measures identified in the CTMPs in consultation with the TTLG(s), as relevant. Any changes to the CTMPs must be submitted to RMS for approval following Sydney Coordination Office endorsement and implemented."

An overview of the approvals process for Sydney Metro City & Southwest is as follows:

- Sydney Metro Delivery Office prepared Construction Traffic Management Framework:
  - Prepared in consultation with the TTLG (Condition E81).
  - Submitted to SCO and RMS and relevant road authority for review.
  - After SCO and RMS acceptance, RMS approves the CTMF.
  - Reviewed by environmental representative.
  - Submitted to the Secretary DP&E for approval no later than one (1) month before the commencement of construction (or within any other timeframe agreed with the Secretary) in accordance with SSI Approval (Condition E81).
  - Published on the Sydney Metro website (Condition B15).
- Contract-wide CTMP to be prepared consistent with this CTMF by the contractor (for example, there will be one CTMP covering all TSE works):
  - Initially tabled at TCG meeting for council and other stakeholder feedback.
  - Prepared in consultation with the TTLG
  - Submitted to SCO, RMS and relevant road authority for review and comment.
  - Reviewed by environmental representative.
  - After review and agreed edits, submitted to RMS for approval following the Sydney Coordination Office endorsement for approval, before construction commences at the relevant construction site.
  - Sent to DP&E for information only.
  - Published on the Contractors website prior to works commencing at the relevant site (Condition B15).

- Site-specific CTMPs will be prepared consistent with this CTMF as required under Condition E82 by the contractor for all sites listed in Section 3.3 (for example, there will be a minimum of one TSE CTMP for the Northern Dive Structure, one TSE CTMP for the Crows Nest worksite, etc.) for each site covered under the contract: These CTMPs must comprise other plans or drawings such as Traffic Staging Plans, Traffic Control Plans, Vehicle Movement Plans, Pedestrian Movement Plans, a Parking Management Plan, unless otherwise agreed with the Principal's representative and the relevant Authorities, and address any changes from the EIS indicative haulage routes:
    - Initially tabled at TCG meeting for council and other stakeholder review and feedback.
    - Prepared in consultation with the TTLG (Condition E81).
    - Submitted to SCO, RMS and relevant road authority (local council and/or BDA) for review and comment.
    - After review and resolution of issues, submitted to RMS for approval following the SCO endorsement for approval, before construction commences at the relevant construction site.
    - Sent to DP&E for information only.
    - Published on the Contractors website prior to works commencing at the relevant site (Condition B15).

      The contractor will be responsible for documenting all stakeholder feedback and comments in a document specific issues register. These comments will be addressed and closed out by the contractor in consultation with the relevant stakeholders. RMS and SCO will not be responsible for processing or referring comments on behalf of the contractor.
    - Changes to traffic management requirements at a site which requires material changes to the existing CTMP will require re-submission of the revised CTMP to RMS, SCO and local road authority for approval as applicable.
- ROL and related applications are submitted by the contractor to TMC for occupation of roadway (other than approved work zones) on State and Regional roads and all works within 100m of traffic signals. These applications are approved by TMC for the times shown on the licence. A CTMP will be required to be approved prior to approval of the ROL.
- Application made to TMC.
- TMC assesses for potential conflicts, any identified conflicts to be resolved to satisfaction of TMC.
- TMC will consult with SCO prior to submission to RMS for approval.
- Contractor may be requested by TMC to consult with other stakeholders including TfNSW (Infrastructure and Services).
- Contractors will require council approval of road occupancies/lane closures/permits to stand plant/road openings impacting Regional and local roads.

The contractor is to prepare and maintain a register of ROL applications and approvals providing stakeholders with status information throughout construction.

Upcoming ROL and related applications to be discussed at TCG meetings for council and other stakeholder feedback prior to submission.

6.4. Road Occupancy Licence Process

Whenever it is proposed to occupy or close a lane or road during the construction program for each of the sites, the closure will require the contractor to apply for a Road Occupancy Licence (ROL) from the Transport Management Centre (TMC) and/or the local council. ROLs are issued by the TMC for approved times, following endorsement by the SCO, for RMS State roads or locations on Regional or local roads within 100 metres of traffic signals. It should be noted that due to the critical nature of the potential traffic impacts for local roads within the Sydney and North Sydney CBDs that applications for ROLs on streets within these areas will be required to be submitted to TMC. The issuing of ROL's on local or Regional roads for lane or road closures in the CBD's above will also be subject to the approval of the local council.

The contractor will need to consult with stakeholders prior to submission of the ROL application and provide information as required.

For local roads, outside of the areas highlighted above, the approval of the local council will be required. This will require an application in the appropriate method to council.

For roads within the Barangaroo Delivery Authority's (BDA) area of responsibility (Hickson Road, Napoleon Street), the following process is required in obtaining a permit to occupy the roadway:

(a) The contractor provides the information to BDA on the proposed works, location and times for the proposed road occupancy.

(b) BDA provides a written agreement for the proposed road occupancy via email.

(c) The BDA agreement is included in with the ROL application to the TMC.

(d) Once TMC approval provided, BDA will issue a permit for the road occupancy.

For Cross City Motorway (Cross City Tunnel) requests for road occupancies within or on ramps to/from the tunnel, ROL applications would be processed by TMC after receipt of tunnel operator agreement.

The ROL requirements are outlined in the RMS Road Occupancy Manual (and in Principal's General Specifications G10 – Traffic and Transport Management).

The Contractor must allow a minimum of 10 working days for a response to an application from the TMC. A minimum of 10 working days should also be assumed for responses to applications from other roads authorities.

ROLs will generally be issued for relatively short periods of time and the TMC will require that an approved TCP or site CTMP for the work be in place.

Information on proposed and approved ROLs should also be provided to the Sydney Metro City & Southwest Project Communications Team for notification, prior to works commencement.

6.5. Speed Zone Authorisation

An application must be made to RMS for any proposed adjustment of the speed limit on the road network, whether they are proposed as temporary measures for work zones and road occupancies or for longer periods such as the duration of the construction works at a site. A Speed Zone Authorisation application usually accompanies a ROL application where a change in speed limit is proposed as part of the road occupancy.

The RMS speed zone change process involves the submission of the appropriate form, available online from the RMS website, which is to be submitted to the TMC's Planned Incident Unit. Depending on the extent of the works and project familiarity the application will be supported by the site specific CTMP or a TCP. Short-term speed zone changes can be dealt with via the CTMP process. Longer term (over six months) or permanent changes are included in the site specific CTMP and are to be referred to RMS for assessment, consideration and approval. Permanent speed zone changes can only be approved by RMS.

6.6. Special Event Coordination

There are many special events that occur in and around the Sydney CBD and North Sydney. These special events have an impact through increased visitor numbers, road closures and diversion of bus services. The major events such as New Year's Eve, Australia Day, Vivid Festival and ANZAC Day all have significant impacts on the CBD with increased visitor numbers and the need to provide additional rail and bus services, and impacts on the road network. At the Martin Place site this may include pedestrian marshals if increased pedestrian activity is identified in the preparation of the CTMP.

Class 1 and 2 events, outlined below, are to be facilitated in the planning of work programs as works may not be permitted during these classes of events. For example, works are not permitted to happen between 3pm and midnight during the Vivid Festival in and around the CBD, Pyrmont and parts of Chatswood. Other areas and times may be incorporated in these restrictions in the future.

In addition, pedestrian activity in the CBD and shopping centres increases significantly during December and early January, in the lead up to Christmas and the post-Christmas sales. Increased tourist numbers and frequent cruise ship arrivals and departures also occur during this period. The City of Sydney has a policy of not permitting works that will cause disruption to the retail core of the city during December. Works that would have a significant impact on pedestrian paths and station access should be minimised during these periods and/or additional and increased interface supervision should be provided between the site and the adjoining pedestrian network.

The RMS special event management guidelines identify four classes of special events. These classes provide direction on the approvals required, timeframes and methods of advertising measures such as road closures and other aspects of the event. The classes of events can be summarised as follows:

- Class 1 – Events that impact major traffic and transport systems and result in significant disruption to the non-event community. For example, an event that affects a principal transport route in Sydney, or one that reduces the capacity of the main highway through a country town.

- Class 2 – Events that impact local traffic and transport systems and result in low-scale disruption to the non-event community. For example, an event that blocks off the main street of a town or shopping centre but does not impact a principal transport route or highway.
- Class 3 – Events with minimal impact on local roads and negligible impact on the non-event community. For example, an on-street neighbourhood Christmas party.
- Class 4 – Events that are conducted entirely under Police control (but is not a protest or demonstration). For example, a small march conducted with a Police escort.

During the Project, special consideration and traffic planning will need to be undertaken for each of the sites to address the road user needs during programmed special events. It should also include the response to ad hoc events that may occur with minimal notice, including marches, protests and other public events.

The traffic management requirements of Special Events may require adjustments to times of operation and routes used for haulage or delivery operations as well as varying Road Occupancy Licence (ROL) conditions for Sydney Metro City & Southwest construction. The ROL approval and CTMP approvals will identify any time and day restrictions, taking in to account any known potential conflicts at the time of submission and approval.

Sydney Metro City & Southwest contractors will be responsible for identifying special events that occur in the area of the work site, incorporating known special events into the construction program and detailing responses and contingencies in the CTMP for each site. This coordination will occur through the Sydney Coordination Office, approved event registers of councils, the Barangaroo Delivery Authority, the TCG and the TTLG.

During development of the site specific CTMPs the proposed traffic management measures must take account of major and regular events, such as ANZAC Day or the Vivid Festival for example, to ensure that proposals do not impede or impact on these events.

6.7. Adjustments to Traffic Signals

Any temporary or permanent works that impact on the operation of, or require the reconstruction or adjustments to, traffic signals require close consultation with RMS and approval of the traffic signal design plans, prior to the commencement of any work. This will require entering in to a Works Authorisation Deed (WAD) with RMS.

The contractor will need to take account of potentially lengthy approval lead times in any works involving traffic signal construction or modifications. Additional time may also be required to facilitate the modification of the electronic hardware, in addition to undertaking any physical changes onsite.

The contractor will be responsible for the preparation of any traffic signal designs and obtaining the necessary approvals, allowing sufficient time to maintain the works program. Designs will be required to be carried out by an RMS accredited signal designer and comply with the RMS Traffic Signal Design Manual (RTA/Pub 08.092). Any works at a traffic signal site shall be carried out by an RMS accredited traffic signal contractor. A list of contractors for design and civil works can be found at http://www.rms.nsw.gov.au/business-industry/partners-suppliers/tenders-contracts/prequalified-contractors.html.

6.8. Over-size or Over-mass Vehicle Permits

Prior approval for the passage of any proposed over-size or over-mass vehicles is required from the National Heavy Vehicle Regulator, RMS for State roads, or councils for Regional or local roads, and an authorisation permit issued prior to the operation of the vehicle. A TMP is likely to be required that describes how an OSOM movement will be safely undertaken in NSW. Details can be found on the RMS website, which provides all requirements for applications.

6.9. Adjustments to Bus Routes and Stops

Any proposed adjustments or relocation of bus routes and stops to facilitate construction works require the prior approval of TfNSW, SCO, RMS, the local council and affected bus operators.

Any proposed adjustments or relocation of bus shelters associated with bus stop changes or construction works require the approval of the local council and affected bus operators.

Customer information and wayfinding information for any relocated bus stops is to be provided before, and after, the relocation works have been carried out.

6.10. Adjustments to Australia Post Boxes or Other Roadside Furniture

Consultation regarding the relocation and/or adjustments to post boxes and the associated kerbside ‘mail zone’ will be required to be undertaken with Australia Post and the relevant road authority prior to any relocations occurring. In some instances, post boxes may be able to be relocated, however there will be instances where the post box, for heritage requirements, will not be able to be relocated. These post boxes will need to be protected to ensure that they are not damaged during construction works.

Adjustments or relocation of other roadside furniture or modifications to signposting such as advisory signs or regulatory signs will require consultation and approval of the owner. In most cases this will be the local council. Changes to regulatory signposting and linemarking on local and Regional roads will require a submission to the Local Traffic Committee for agreement.

6.11. Council Traffic Committees

Each council is delegated authority by RMS on certain aspects for the control of traffic on Regional and local roads, including regulatory signposting. The delegation requires council to seek the advice of the NSW Police and RMS prior to exercising these delegated functions. This is usually done through the establishment and consultation with the Local Traffic Committee.

Councils can sub-delegate the approval of certain traffic control measures, such as Works Zones, to an appropriate staff member. These further delegations are determined by each individual council. Contractors will need to consult with council on the extent of the delegations.

Where possible, the contractor should endeavour to secure all necessary council approvals under delegation to avoid the need for approvals to be secured through the Local Traffic Committee and council meetings.

The Local Traffic Committee is a technical committee that considers matters related to prescribed traffic control devices and traffic control facilities for which the council has delegated authority. It is made up of four formal, or voting, members:

- One representative of council (may be a councillor or council officer).
- One representative of the NSW Police.
- One representative of RMS.
- The local state Member of Parliament or their nominee.

Matters that may need to be considered by the Local Traffic Committee include:

- Establishment of a kerbside work zone on a local or Regional road.
- CTMPs.
- Changes to parking restrictions.
- Road closures.

Meetings of the Local Traffic Committee can be conducted as face to face meetings on a monthly basis, as electronic meetings or a combination of the two formats.

Traffic management changes or proposed amendments to the public domain will require submission to the relevant Council, including possible referral to the Local Traffic Committee.

Changes to regulatory signposting on local roads will require a submission to the Local Traffic Committee for council approval.

6.12. Requirements under the approval

6.12.1. Dilapidation surveys

Condition E90 of the conditions of approval states “Road Dilapidation Report must be prepared for local roads proposed to be used by heavy vehicles for the purposes of the CSSI before the commencement of use by such vehicles. Copies of the Road Dilapidation Report must be provided to the Relevant Council within three (3) weeks of completing the surveys and no later than one (1) month before the use of local roads by heavy vehicles.”

Dilapidation surveys of local and Regional roads, where used by work site traffic, will be required to be undertaken prior to the commencement of contracted works. A dilapidation report submitted to the local government authority is to be in a format acceptable to that local government authority. Monitoring will also be carried out to the satisfaction of the relevant local government authority. The proponent will be responsible for any necessary repair of deterioration attributable to the impacts of construction activity as provided in condition E91 as follows:

“If damage to roads occurs as a result of construction of CSSI, the proponent must either (at the landowner’s discretion):

(a) Compensate the landowner for the damage so caused. The amount of compensation may be agreed with the landowner; or

(b) Rectify the damage so as to restore the road to at least the condition it was before construction commenced as identified in the road Dilapidation Report(s).”

If the selected route is already subject to some heavy vehicle use, this should be surveyed and the information provided as part of the initial assessment of the route.

They are also to consider any Interface Agreements that may be in place between Sydney Metro and local councils or road authorities.

7. Management of Construction Traffic

7.1. Haulage routes

Designated access routes for heavy vehicle movements during demolition, construction and spoil removal will be along the arterial (state) road network as much as practically possible. Condition E85 requires that heavy vehicles must not use local roads unless no feasible alternatives are available. Primary routes should be used as the first priority, as far as is practicable.

Details of any proposed routes for heavy vehicle access will be developed in consultation with the relevant state or local government authority and detailed in the appropriate section of the site-specific CTMP. Condition E88 then requires the CTMP to be approved by RMS following endorsement by Sydney Coordination Office and the relevant roads authority.

Where haulage routes differ from the primary and secondary routes shown in the EIS/Submissions Report/PIR, the contractor will undertake a review and where necessary document these in the contract wide and site-specific CTMPs and provide a justification for these changes in accordance with E88.

Figure 7-1: Chatswood worksite indicative haulage routes

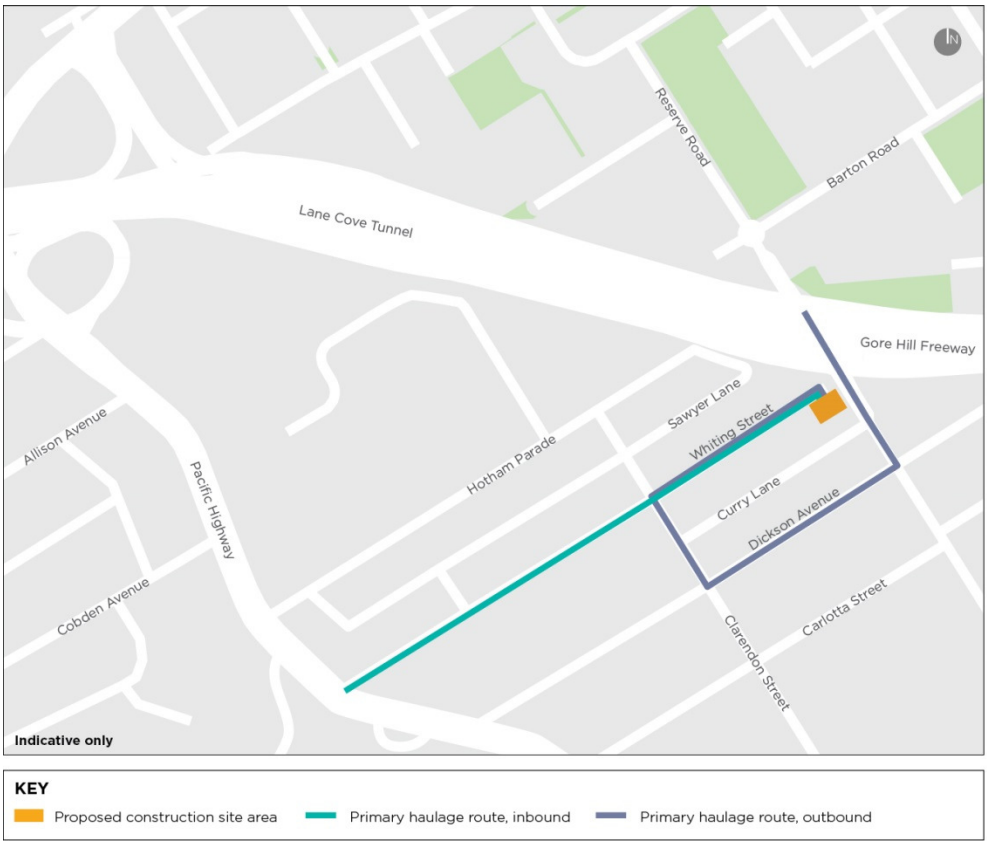


Figure 7-2: Artarmon worksite indicative haulage routes

The above diagram (Figure 7-2) has been prepared as the proposed location of the Artarmon works has changed from that outlined in the EIS. These routes are subject to confirmation and approval of a modification to the Project approval.

Figure 7-3: Crow Nest worksite indicative haulage routes

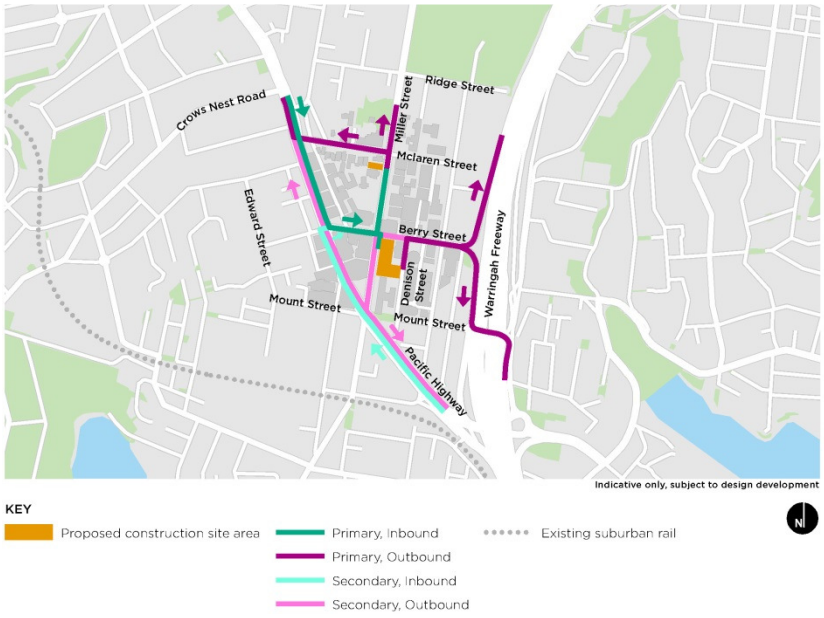


Figure 7-4: Victoria Cross worksite indicative haulage routes

The above diagram (Figure 7.4) was prepared for the original proposed location of the Miller Street (North) services facility. Feedback during the EIS exhibition raised concerns regarding the impacts of noise and vibration on the adjoining school. The SSI Conditions of Approval (Condition A21) required the undertaking of further detailed analysis of alternative locations for the construction of a services building to support Victoria Cross Station. An alternative site, located at the corner of Miller Street and McLaren Street, was identified for the services

facility. Changes to the indicative haulage routes for this alternative site have been considered and are included in Figure 7.5. These routes are subject to confirmation and approval of a modification to the Project approval.

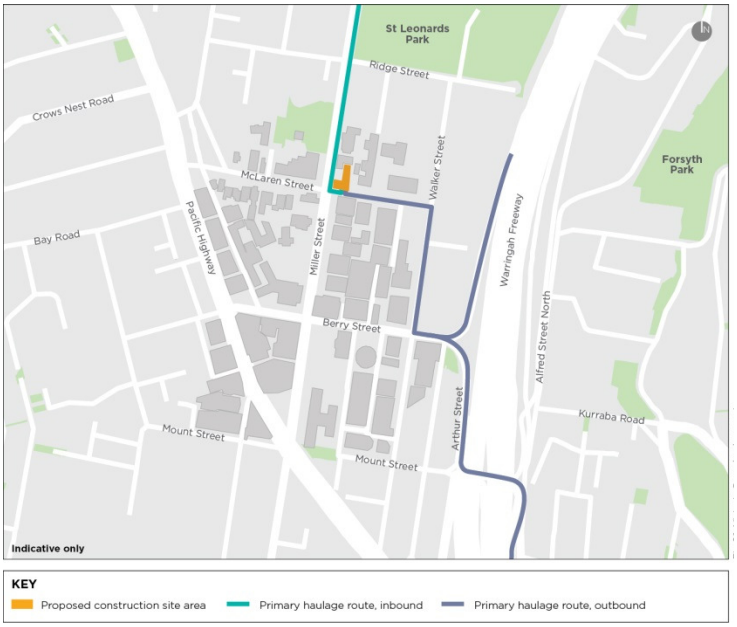


Figure 7-5: Victoria Cross Services Facility worksite alternative indicative haulage routes

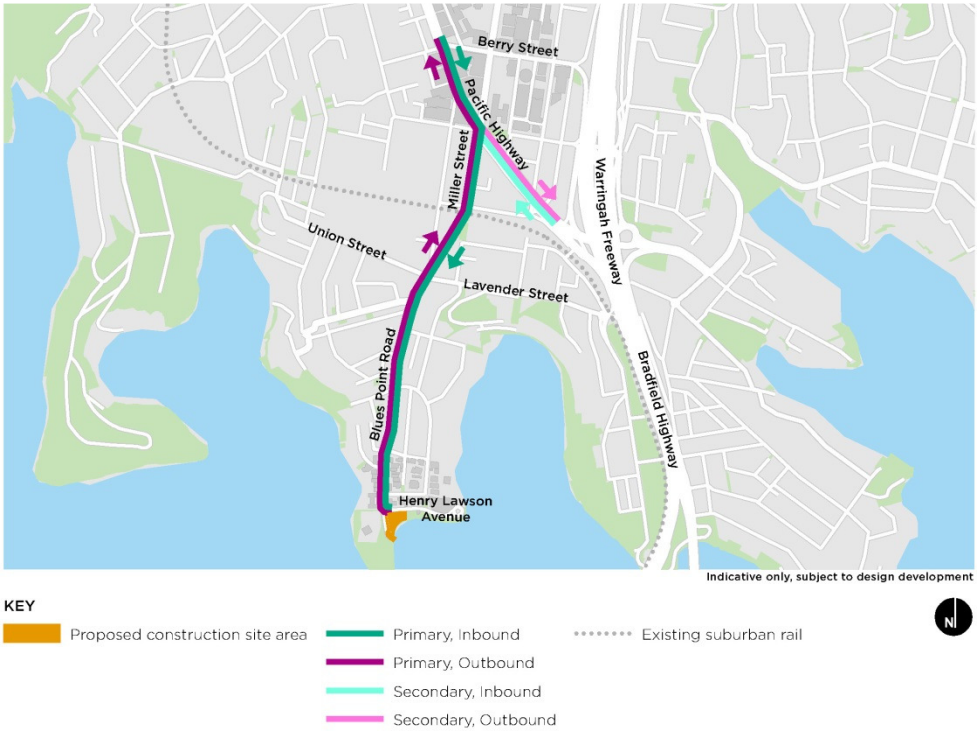


Figure 7-6: Blues Point worksite indicative haulage routes

Investigations are being carried out for spoil removal from the Blues Point site by barge. The dock for the barge would be located at a specially constructed loading point. The destinations of any spoil barging would be identified as part of the investigations.

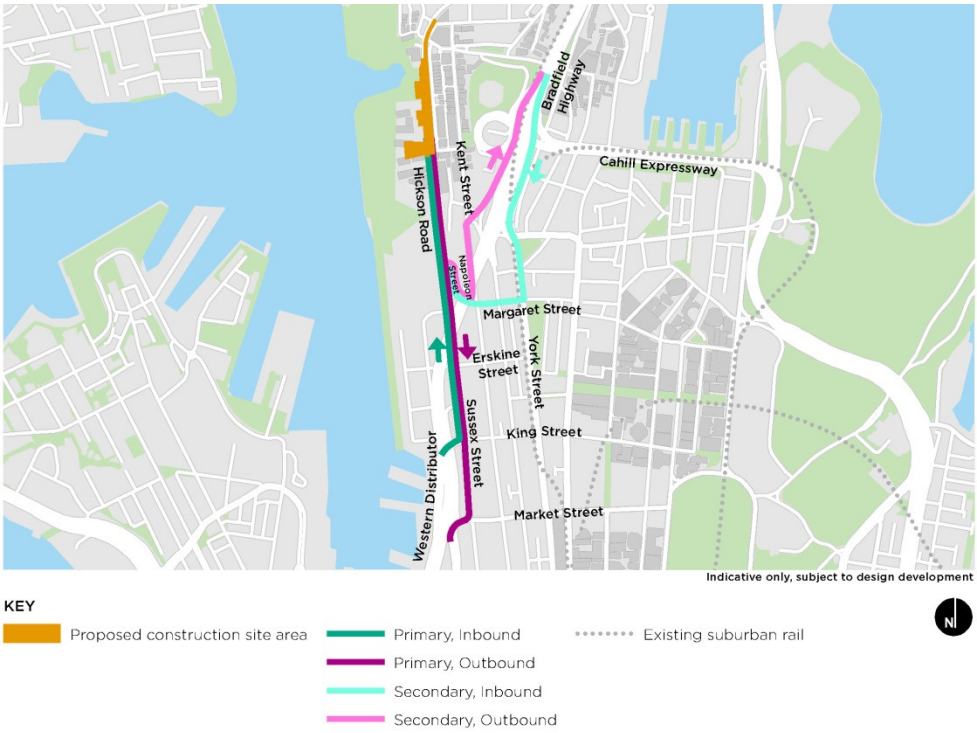


Figure 7-7: Barangaroo worksite indicative haulage routes

Investigations are being carried out for spoil removal from the Barangaroo site by barge. The dock for the barge would be located at a specially constructed loading point. The destinations of any spoil barging would be identified as part of the investigations.

City of Sydney Council has requested that spoil haulage and material delivery proposed outside the Standard Construction Hours be undertaken by barge only and that 'truck and dog' combinations be limited to the primary routes only.

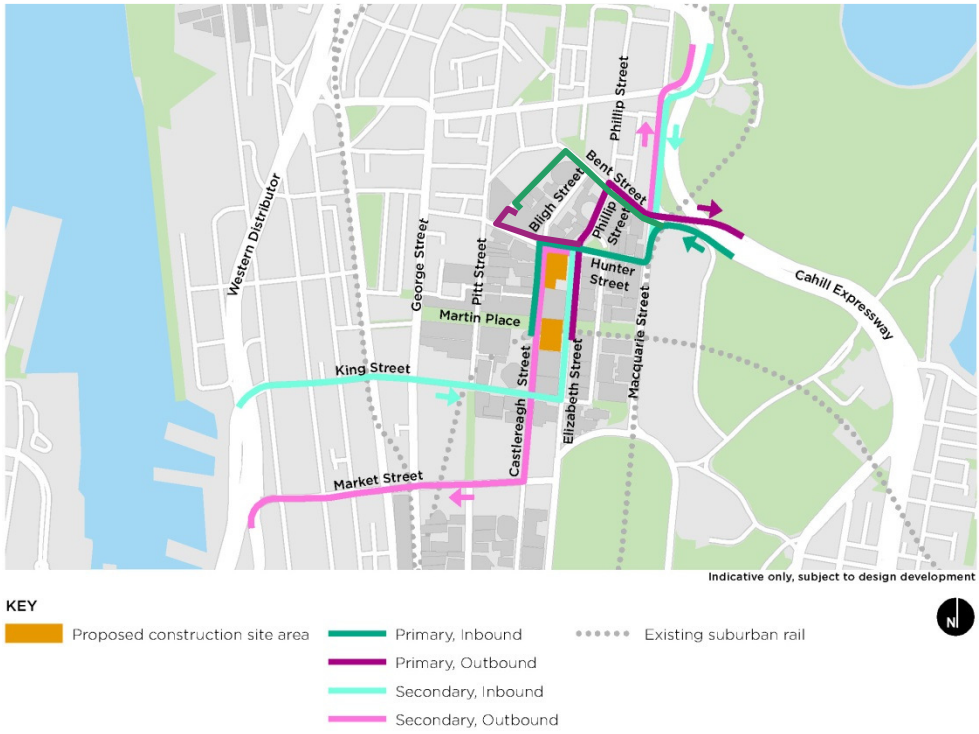


Figure 7-8: Martin Place worksite indicative haulage routes

Figure 7-9: Pitt Street worksite indicative haulage routes

Note: SCO has highlighted that due to the proximity of the site access to the traffic signals at Park Street the right turn movement from Castlereagh Street into Park Street is unable to be accommodated. Vehicles should continue on Castlereagh Street.

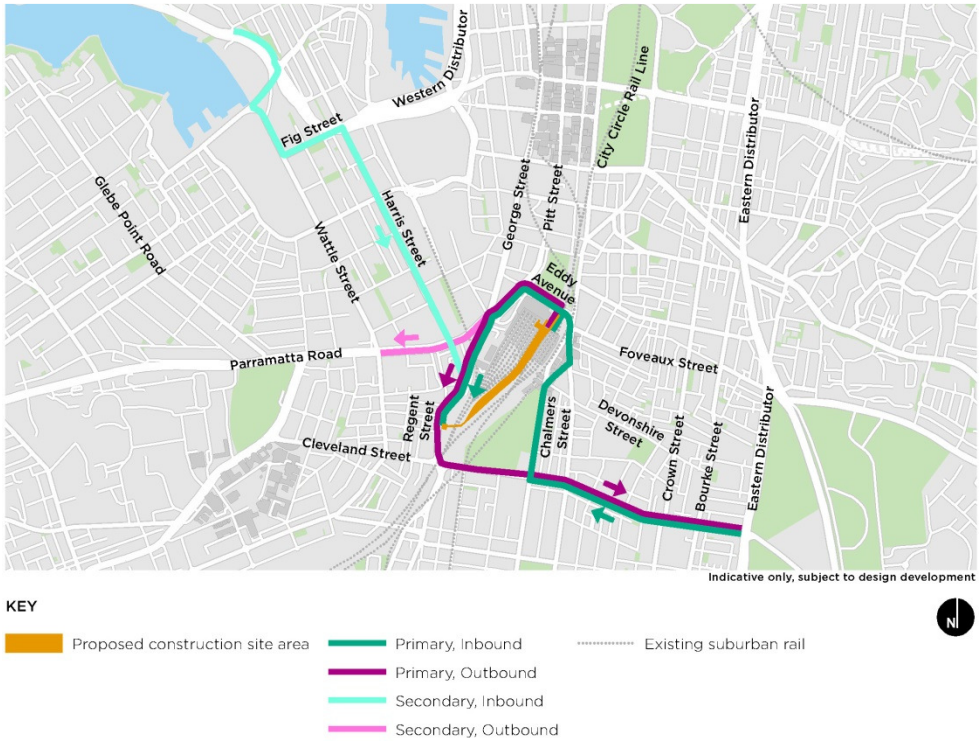


Figure 7-10: Central worksite indicative haulage routes

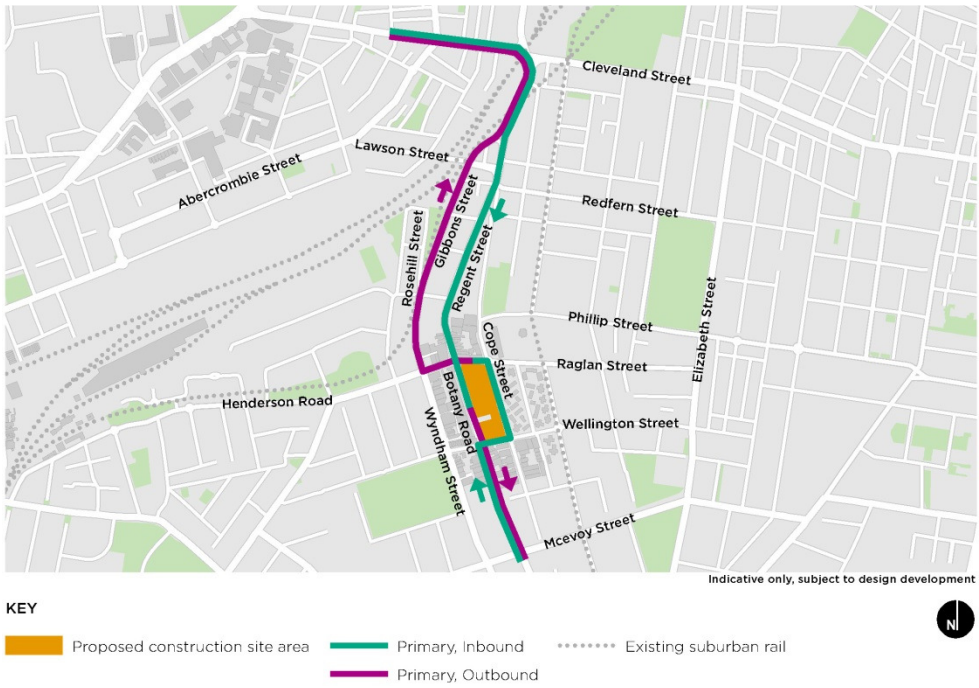


Figure 7-11: Waterloo worksite indicative haulage routes

Figure 7-12: Sydenham worksite indicative haulage routes

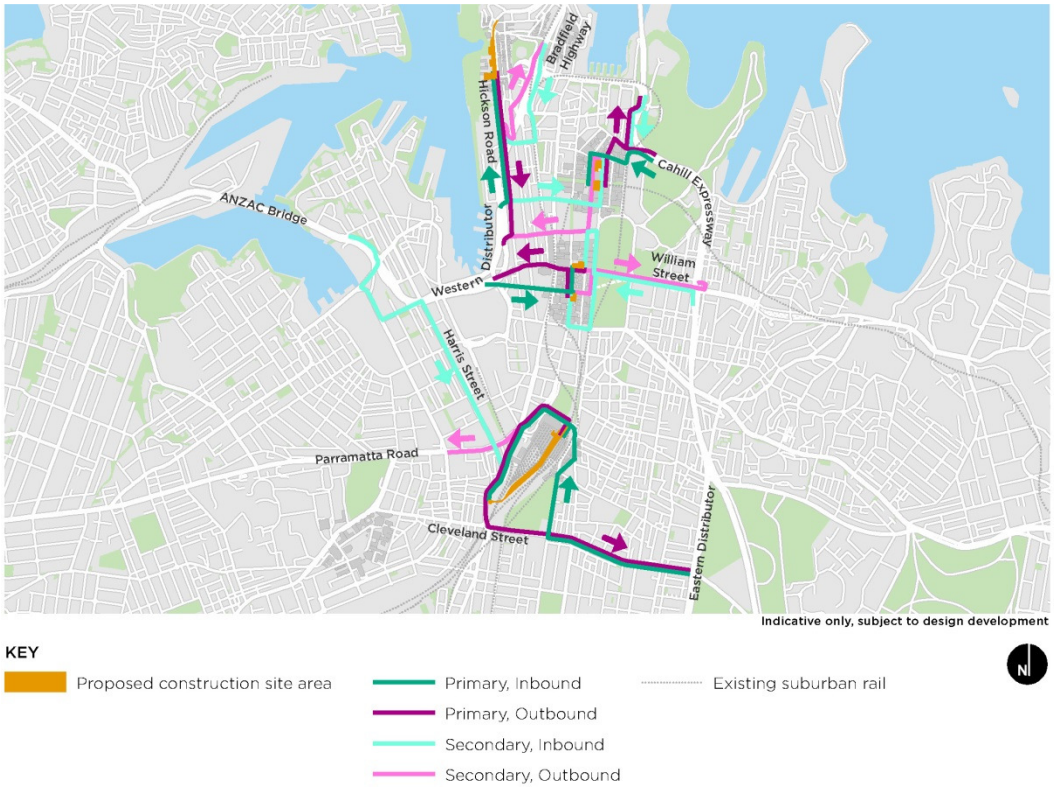


Figure 7-13: Proposed CBD worksite indicative haulage routes combined

In addition, measures should be in place to avoid heavy vehicles queuing on the road network near the worksite. In general, the sites for this project have a very constrained road network surrounding the site and the parking of vehicles on the surrounding road network will not be possible. A suitable off-street truck marshalling area and logistics facility may be required to ensure that heavy vehicle queuing on the road network does not occur within the Sydney and North Sydney CBDs or other locations where the road network is constrained (Condition E89).

It will be necessary for the contractor to manage arrivals and departures for each site to ensure a consistent and timely arrival and departure of vehicles for the site for example, the use of timetables. This should be communicated to all sub-contractors and operators prior to commencement of works.

It should also be noted that there will be a need to minimise the volume of truck movements in the CBD areas during the peak periods of 6:00am to 10:00am and 3:00pm to 7:00pm, Monday to Friday (excluding public holidays). The contractor will be required to schedule minimal arrivals and departures of trucks during these peak periods. Heavy vehicle movements through designated school zones should be minimised when these zones are in operation (8:00am to 9:30am, 2:30pm to 4:00pm, school days).

7.2. Management of Heavy Vehicle Movements

Heavy vehicle movements must be managed in accordance with construction and traffic management principles of the CTMP and in accordance with the relevant standards. Each site-specific CTMP will need to demonstrate, where applicable, how marshalling facilities will be used to manage truck movements and reduce congestion.

Vehicle and pedestrian access to each work site, including the locations of entries, exits, turning restrictions, slip lanes, traffic signals, signage and other site management requirements will be established in line with the requirements of the Project approvals and in consultation with RMS, SCO, BDA and councils.

All vehicles are to enter and exit the worksites in a forward direction. If this cannot be achieved then traffic control is to be provided. Refer to Section 7.3 of the Guide to Traffic Control at Worksites (RMS).

7.3. Work Zones and Heavy Vehicle Marshalling

During some stages of the works at each of the sites there may be a requirement for using kerb space on adjacent streets for short-term parking or unloading for deliveries to the site. Applications for a Works Zone will be undertaken by the contractor to the relevant authority (council for local and Regional roads and RMS for State roads). The use of a Works Zone should be minimised as much as practicable. Where approved, Works Zone locations are to be included in site specific CTMPs. In general, Works Zones will not be permitted within existing bus zones and their operating times, unless arrangements have been approved for the relocation of the bus zone.

During times of continuous construction traffic activity, such as during excavation works, one or more remote truck marshalling and logistics facility may be required to assist with construction traffic management and to minimise disruptions to other road users. These

facilities will need to be identified and an effective method of heavy vehicle arrivals established and approved in accordance with Condition E89.

This CTMF will be updated to include the identified facility and further detail will be included in the Ancillary Facilities Management Plan.

7.4. Construction/Demolition Vehicle Types

To minimise the number of heavy vehicle movements on the road network, the selection of vehicle size will consider the number of movements required, the impact of the quantity of vehicles on road and pedestrian movements, road geometry and safety. It is recognised that the Sydney and North Sydney CBD sites will have constraints on access routes, safety considerations and site constraints.

The types of truck to be used for the transporting of materials will be assessed in consultation with the relevant authorities in the preparation of the contract wide and site specific CTMPs.

Heavy vehicles used on the project must comply with the relevant standards including the safety requirements outlined in the SM PS-ST-221 Sydney Metro Principal Contractor Health and Safety Standard.

Higher mass and longer heavy vehicles will be required to transport certain materials to and from the sites (some under permit) and these would be subject to separate approvals. Daytime (7am-7pm) weekday use of ‘truck and dog’ combinations within the Sydney CBD is not supported.

It is anticipated that contractors will need to make greater use of truck and dog heavy vehicle combinations than envisaged in the EIS. Details of proposed truck and dog use is to be provided in the CTMPs.

7.4.1. Worker Access and Parking

The constrained nature of the sites means car parking for construction personnel will not be possible at most sites. Except for the Northern and Southern Dive Structure sites there may be the opportunity to provide minimal light vehicle parking spaces for engineers and other site management staff use.

The Northern and Southern Dive Structure sites could provide car parking spaces within the site. These parking facilities may provide the opportunity to be used as park and ride locations for workers from other sites with shuttle buses operating from the dive sites to other work sites. The contractor may also be required to identify remote parking areas for workers, to minimise any impacts of workers parking on-street.

Willoughby Council considers that the capacity and management arrangement for the provision of some level of on-site car parking spaces in the Northern Dive Site needs to be developed in consultation with Council as part of the CTMP.

The assumption for all site specific CTMPs is that there will be no provision, either on the road or within the work site, for worker parking. Workers should be encouraged to use public transport in travelling to and from the work sites.

7.4.2. Construction Consolidation Centre/Depot

To mitigate the potential impact of construction traffic the provision of a centralised Project centre should be considered. This centre could receive deliveries and arrange for combining of loads and materials for distribution to the various worksites. This may be incorporated into the truck marshalling and logistics facility and should address the intent of planning condition E89. This would have the potential to reduce construction traffic movements to the sites, particularly for small loads. Contractors may make use of their existing depots.

7.4.3. Driver training

Heavy vehicle drivers should be made fully aware by the contractor of the worksite traffic management arrangements and site-access requirements, including approach and departure routes, and any heavy vehicle noise management measures required. Driver training should consider current best practice and information, including cycle awareness training.

The contractor is to ensure that regular briefings are provided to drivers on routes, potential changes and impacts on the routes in the form of toolbox talks.

Contractors must ensure mandatory completion of the Sydney Metro City & Southwest project-specific heavy vehicle driver introduction training.

Contractors are required to have systems in place to monitor vehicle locations (e.g. telematics) at all times and address any identified non-conformances.

7.4.4. Chain of Responsibility and Heavy Vehicle National Law

Contractors must have systems in place to ensure compliance with ‘chain of responsibility’ legislation, including the Heavy Vehicle National Law and regulations, at all times. All necessary heavy vehicle approvals and permits (for example, over-size, over-mass, etc.) must be obtained from the relevant road manager. Specific ‘chain of responsibility’ requirements are further outlined in Sydney Metro Principal Contractor Health and Safety Standard.

8. Operational requirements

8.1. Traffic Control at Work Sites

The contractor must develop and implement Construction Traffic Management Plans (CTMPs) to minimise and mitigate traffic impacts, including road safety impacts, caused by the contractor's activities (Condition E82). In consultation with the TTLG, RMS, SCO, BDA and the relevant local council, the contractor must develop, formalise and implement traffic management, control and operational protocols, procedures, processes, systems and communication between the contractor and the TMC and SCO. Works within the road reservation will be identified in the CTMP.

This consultation will be initiated through the TTLG and TCG.

8.1.1. Policy and Responsibilities

Work zones provide for the safe operation of road workers and the safe passage of vehicular and pedestrian traffic. Traffic control devices are provided to warn, instruct and guide road users safely through, around or past worksites on roads and footpaths.

An important aspect is for the planning and staging of the works to ensure that any workers required to work on or near the road are separated from traffic as much as possible. Traffic control at worksites is to be provided in accordance with the latest edition of the Traffic Control at Work Sites Manual (RMS) and Sydney Metro Principal Contractor Health and Safety Standard. Australian Standard AS 1742.3 Manual of uniform traffic control devices – Traffic control for works on roads, is also to be referenced when determining traffic controls and signposting.

It is the responsibility of all personnel engaged on the Project and at worksites to ensure that any works carried out on the road are done so in a safe and efficient manner. The contractor will prepare specific Traffic Control Plans (TCP) for all work that will impact on the road and traffic.

TCPs are required to be prepared by a suitably qualified person who holds a current RMS certificate – Prepare Work Zone Traffic Management Plan.

When temporary speed limits are required, the contractor will be required to make the necessary application to RMS. This application will need to be submitted with sufficient time prior to the proposed implementation, to allow for processing and authorisation, via the TMC OpLinc system.

8.1.2. Traffic Control Techniques

There are several traffic control methods that can be used at worksites, which must be selected in accordance with the hierarchy of controls to ensure safety risks to workers (including traffic controllers) and the public are minimised 'so far as is reasonably practicable' (SFAIRP). These include:

(a) Temporary road deviations.

(b) Line-marking with raised pavement markers to delineate proposed diversion.

(c) The use of traffic cones, approved water filled barriers or other approved physical devices to delineate the required route.

(d) Directional and information signposting to direct or advise drivers. This can include Variable Message Signs (VMS), directional arrows or static signs.

(e) Portable traffic signals on local roads to control traffic flows if lane closures are required, subject to the relevant authority approval

(f) Other traffic control devices as provided in the Traffic Control at Worksites Manual (RMS).

Refer also to Sydney Metro Principal Contractor Health and Safety Standard.

For longer-term works, where traffic management devices are in place for an extended length of time, regular inspections are to be carried out by the contractor's works supervisor. This is to ensure that the controls in place continue to provide safe traffic management. All controls are to comply with the current RMS guidelines.

8.1.3. Approved Clothing for Work Personnel

Any worker working near traffic will be required to wear clothing in accordance with the requirements of Australian Standard AS1742.3 and Sydney Metro Principal Contractor Health and Safety Standard.

8.1.4. Plant and Equipment

Any plant used and working near traffic or pedestrians is to be suitably highlighted with physical protection and appropriate warning signs provided to ensure public safety. Refer also to the plant section of Sydney Metro Principal Contractor Health and Safety Standard.

8.2. Frequency of Inspections

For long-term works, that is, longer than one shift, traffic management road inspections will be carried out regularly to ensure the safe movement of traffic and the protection of persons and property through and/or around the worksite. The required inspections of all temporary traffic control devices are detailed in the following section.

Inspections will ensure that all signs and devices are properly located, oriented and maintained in an effective condition, and that the layout is satisfactory and not confusing to motorists or pedestrians. Records will be maintained by the contractor of all traffic guidance facilities and any adjustments or changes made to such facilities, together with dates and times the facilities were installed, varied and removed. Inspection reports recording dates and times of inspections of the traffic management facilities are to be recorded on a suitable pro-forma and made available for inspection.

Incidents are to be reported, investigated and actioned in accordance with Sydney Metro Principal Contractor Health and Safety Standard.

8.2.1. Inspections of Roadwork Traffic Management Schemes

The requirement to undertake inspections of traffic control measures is outlined in Section 6.1 of the Traffic Control at Worksites Manual (RMS) and Appendix A of Australian Standard AS 1742.3 – Manual of uniform traffic control devices – Traffic control for works on roads. There are three main types of inspections to be carried out:

(a) Pre-start and pre-close-down inspections of short-term traffic control.

(b) Weekly inspections of long-term traffic control.

(c) Night inspections of long-term traffic control.

Appendix E of the Traffic Control at Worksites Manual provides inspection checklists and forms that can be used for all inspections, whether short term, long term or night. The responsibility and frequency of the inspections required is provided in Section 6.1 of the Traffic Control at Worksites Manual.

8.3. Emergency Incident Planning

Incident management planning must be carried out in accordance with Sydney Metro Principal Contractor Health and Safety Standard, and must include incidents that could occur on roads. An Incident Management Plan for on-road incidents, or incidents that impact on the public transport network should be submitted to the TMC Emergency Transport Operation section for review and comment.

Examples of incidents could include the following:

- Traffic crashes.
- Hazardous material spillage.
- Power failure.
- Terrorist attack.
- Flooding.
- Fire.
- Structural damage to a rail line, building, road tunnel or bridge.

The Incident Management Plan should include procedures such as:

- Duties of workers attending the site.
- Procedures for contacting Police, emergency services, or back-up assistance from the relevant road authority.
- Equipment that is to be ready always on potential call-out vehicles.

All details of incidents that occur within the area of an approved ROL are to be recorded by the contractor, and reported and investigated in accordance with the requirements of the Sydney Metro Principal Contractor Health and Safety Standard.

8.3.1. Accidents/Incidents and Complaints

The contractor's ROL register will maintain records of traffic crashes and incidents reported at worksites. Any complaints received regarding traffic delays at worksites should be referred to the Principal. The contractor will be required to table the register, upon request, at TCG meetings.

The person in charge of the worksite will continue to be responsible for dealing with complaints regarding safety issues. Where action is considered necessary to address the matters of complaint, an appropriate recommendation will be forwarded to the Principal.

8.3.2. Chemical Spills and Leaks

Information on procedures to be followed and properties of hazardous chemicals are detailed in:

- NSW Environment Protection Authority (http://www.epa.nsw.gov.au/licensing/Dutytonotify.htm)
- Safe Work NSW codes of practice
- RMS policy procedure – Procedure for Managing Hazardous Chemicals
- Contractors' Construction Environmental Management Plans.

NSW Fire and Rescue is primarily responsible for rendering safe, and cleaning up after, incidents involving flammable or hazardous substances, vapours, gases or liquid spillage, as well as an actual fire or explosion.

NSW Fire and Rescue holds detailed information on dangerous goods and hazardous chemicals. Sydney Metro City & Southwest staff and contractors are to be instructed not to approach such spills until NSW Fire and Rescue have declared the site safe. In such cases the contractor will close the roadway at a safe distance until NSW Fire and Rescue arrives and issues appropriate instructions.

8.4. Traffic Controllers and Temporary Traffic Signals

The use of traffic controllers and/or temporary traffic signals to control traffic at worksites is to be in accordance with the Traffic Control at Work Sites Manual (RMS) and Sydney Metro Principal Contractor Health and Safety Standard.

Variable Message Signs (VMS) will be used to inform drivers, where necessary, to avoid particular roads or areas where activities associated with Sydney Metro City & Southwest construction would cause disruption. Where these are used, it is to be in accordance with documented Austroads Guidelines, RMS supplements, procedures, guidance and approval of the road authority.

The placement of temporary VMS must consider pedestrian safety and disabled access needs when placed on footpaths. A ROL may be required when a portable VMS is proposed to be in a parking or loading bay. VMS placement should conform to Austroads Guidelines, RMS supplementary material and approval processes of the road authority.

9. Management of Worksites

9.1. Worksite Boundaries

Details of the proposed erection and maintenance of hoardings, scaffolds and associated structures will be documented in the site-specific Construction Traffic Management Plans in accordance with the SSI approval (Condition E81). Where reasonable and feasible, all worksite boundaries will be clearly defined with the use of hoardings. The CTMPs will identify the boundaries and detail accesses for the site, the footpath and road controls. Activities within the worksite are excluded from the CTMPs, except in relation to ensuring the movement of construction traffic in and out of the worksite is physically possible and can be done safely. Worksites include any gantries (e.g. Type B hoardings) or other structures associated with the site layouts. The site specific CTMPs will consider these interactions and the impacts of gantries, etc., on the road and footpaths.

9.2. Hoardings

Hoardings will be required to be erected around the construction sites to protect the site and any passing pedestrians and vehicles. These may also need to provide site facilities for the workers on the site due to the constrained nature of the sites. The erection of hoardings around the sites will require the consideration and approval of the local council and BDA for sites at Barangaroo. Applications for scaffolds and hoardings would be to the relevant council with concurrent notifications to SMDO, RMS, SCO and TMC.

In providing any hoarding and gantry structures, consideration will be given to ensuring sight-lines for side roads, vehicle accesses, signposting, and traffic signals are maintained. The City of Sydney has published policies on hoardings on its website. While the policy document provides guidelines for the presentation of the hoarding, the branding and visual aspects of the hoarding are to be in line with TfNSW/Sydney Metro requirements.

Each council or BDA may specify requirements for the type of hoarding proposed and may require the submission and approval of an application prior to the commencement of the site establishment works. Detailed information should be obtained from the respective council websites. In some locations there may also be a requirement for the hoarding to comply with design guidelines.

All hoardings around Sydney Metro construction sites should comply with the TfNSW/Sydney Metro branding requirements. Council is likely to require the submission of an application for the erection of any hoarding. Information that would be required to be submitted with the application can include, but is not limited to, the following:

- Plans of the proposed hoarding drawn to scale, elevations of hoardings and identifying any council or other asset that may be impacted.
- An engineer's statement on the proposed hoarding and any facilities to be provided.
- Approval from NSW Police.
- Approval from RMS (for sites located on a state road or on any road within 100 metres of traffic signals).
- Structural certificate (for Class B hoarding).

Hoarding application forms for specific councils can be found at:

- North Sydney Council – http://www.northsydney.nsw.gov.au/Council_Meetings/Forms/Building_Development_Forms/Construction_Forms#4.
- Willoughby Council – http://www.willoughby.nsw.gov.au/About-Council/Forms-Policies---Publications/councilforms/permit-application---hoarding/.
- City of Sydney Council – http://www.cityofsydney.nsw.gov.au/development/building-and-construction-approvals/temporary-structures/hoardings-and-scaffolding.
- Inner West Council – http://www.marrickville.nsw.gov.au/Templates/Advanced/Bridge/TrimDownload.aspx?TrimDocNum=15221.00.

In addition, councils or BDA may have specific requirements for the type of hoarding and operational requirements. A sample of some of the hoarding requirements of the City of Sydney are provided below. The contractor must check with the relevant council and BDA over any specific requirements.

Sample of the City of Sydney hoarding requirements

"The design of hoardings will have an important impact on the success of pedestrian and vehicle management measures. The following considerations will be taken into account in designing hoardings:

- *Surfaces are bright.*
- *Smooth surfaces are used which allow pedestrians to brush past without snagging (this reduces shying from the edge).*
- *Surfaces are regularly cleaned and inspected.*
- *Removal of graffiti and advertisements.*
- *Adequate lighting provided.*
- *Where adjacent to road edge a minimum hoarding offset of 500mm from the road edge with design feature to prevent pedestrians walking alongside the kerb.*
- *A City of Sydney preference for concertina style driveway gates rather than fixed rigid gates."*

The application for permits to erect hoardings may differ between councils or BDA, and this will need to be considered for each worksite.

9.3. Site Security, Site Access and Signage

The issues to be considered in determining the location of site accesses are:

- Safety of travelling public.
- Safety of construction workers and equipment.
- Efficient and safe entry and exit to the site including turning paths, consistent with the requirements of the relevant Australian Standard, Austroads or RMS guidelines.
- Impact on local communities in terms of safety, noise and road damage.

- Ease of access for emergency vehicles.
- Site security.

The worksites will have appropriate arrangements to discourage entry without approval and minimise vandalism. All access points to worksites will have lockable gates.

Appropriate information signs will be provided at worksites to identify the Project and contact persons.

Contractors will be required to develop and prepare Security Management Plans based on the site-specific security threats (hazards) identified. Requirements for Security Management Plans are outlined in Sydney Metro Principal Contractor Health and Safety Standard.

9.4. Pedestrian Security/Safety/Lighting

The consideration of safety and security issues for pedestrians will be considered at all worksites. In those footpath or specific cycle facility areas which will be impacted by construction works the contractor is to undertake a condition assessment to ensure that they remain suitable for use. This would include an assessment of the paving and lighting of the footpath/cycleway to maintain a safe and suitable passage.

Any hoardings or other structures on the site boundaries will have lighting in accordance with current standards, particularly where existing street lighting is removed or obscured because of the site works. In those locations where this occurs, supplementary lighting is to be provided to meet the current standards.

Discussions will be carried out with the relevant authority or operator of CCTV cameras if the coverage or operation of CCTV cameras is impacted by the works. The relevant authority may be RMS, council, other authority or building owner.

9.5. Management of Risks to Vulnerable Road Users

The contractor is to adopt applicable vulnerable road user safety measures, as per Sydney Metro Principal Contractor Health and Safety Standard, to minimise the road safety risks to pedestrians, cyclists and motorcyclists on route to, and near, construction sites. Such measures include, but are not limited to:

(a) The deployment of speed awareness signs in conjunction with variable message signs.

(b) Heavy vehicles equipped with safety technology and equipment to improve vehicle safety, visibility and the detection of vulnerable road users.

(c) Provision of driver training, instruction and information of the haulage routes, potential changes, common road users and hazards/risks along the routes.

(d) Mandatory completion of Sydney Metro City & Southwest project-specific heavy vehicle driver introduction training.

(e) Contractor engagement in shared experience educational events and involvement in promoting road safety awareness in collaboration with TfNSW.

Where worksites have an impact on footpaths, consideration must be given to the requirements of all pedestrians and especially where there is the potential for vulnerable

road users, such as school children, elderly people and mobility impaired people. This is to include condition surveys of affected footpath areas to ensure that they are suitable and appropriate for use.

DDA requirements will be adopted with kerb ramps or other measures provided at road crossings. Footpath widths are required to provide for two-way pedestrian traffic allowing for prams or strollers and wheelchairs to pass each other without requiring temporary widening from their existing width prior to construction commencement. Narrowing of the footpath width, if required, is to be approved by the relevant authorities.

Where high numbers of vulnerable road users are using a footpath, special provision and design consideration may be required to mitigate any impacts.

10. Road Safety Audits

10.1. Purpose and Benefits

A Road Safety Audit (RSA) “assesses a road’s safety performance and crash potential at various stages of a road/project’s life cycle” (Road Safety Audits Fact sheet – RTA 2010).

It is a formal procedure for checking the design, implementation and operation of road works and other traffic measures from a safety perspective. The establishment of quality systems provides the philosophy underpinning the RSA process. The overriding objective of the process is to ensure that all existing road schemes and future routes operate at an acceptable level of safety, with safety being an integral part of the road network development process (Condition E87).

The benefits of a RSA are that:

(a) The likelihood of crashes on the road and the adjacent network can be reduced.

(b) The severity of crashes can be reduced.

(c) Road safety is given prominence in the minds of road designers.

(d) The need for costly remedial work is reduced.

(e) The total cost of a project to the community, including crashes, disruption and trauma, is reduced.

10.2. Stages When Road Safety Audits Are Undertaken

Road Safety Audits will be undertaken by the contractor during the three stages outlined below.

10.2.1. Detailed Design Stage

At this stage, the geometric design, traffic signage scheme, line-marking plans, lighting plans and landscaping plans are available and will be reviewed in in relation to the operation of the road.

10.2.2. Pre-opening Stage

Prior to the opening of a site, an inspection will be made for all relevant conditions during both the night and day for all likely road users, to ensure that the construction has addressed earlier audit concerns and to check for any hazardous conditions that were not apparent at the feasibility or design stages.

10.2.3. Road Safety Audits of temporary work/Construction Traffic Management Plans

Sydney Metro City & Southwest and/or its contractors will undertake Road Safety Audits for site-specific CTMPs, to be submitted with the CTMP to stakeholders, including BDA.

Regular safety audits of work zones are also to be undertaken to ensure all worksite safety arrangements are in place. These audits will be additional to the daily inspections by the site staff. Attention will be given to WHS guidelines, work areas adjacent to the road, movement of construction traffic, vehicle speeds and all warning devices or systems.

10.2.4. Road Safety Audit Procedure

All Road Safety Audits will be undertaken in accordance with the Guidelines for Road Safety Audit Practices (RMS, 2011), with reference to current practices outlined in Guide to Road Safety Part 6 Road Safety Audit (Austroads, 2009) and Sydney Metro Principal Contractor Health and Safety Standard.

11. Key Project Traffic Management Considerations

The stations along the proposed Sydney Metro City & Southwest route will be a mixture of mined caverns or cut-and-cover excavations. A single-span mined cavern is proposed for Victoria Cross Station, with binocular mined caverns proposed for Martin Place and Pitt Street Stations. Crows Nest, Barangaroo, Central and Waterloo Stations are proposed to be constructed as cut-and-cover.

Tunnel Boring Machines (TBMs) will be used to excavate the twin tunnels. Two machines are proposed to commence at Chatswood and tunnel to Blues Point with a further two TBMs commencing at Sydenham and tunnelling to Barangaroo. A fifth, specialist TBM for operations in soft soils will be used to tunnel the section from Barangaroo to Blues Point and under the harbour.

A primary worksite will be established at the surface to support the station construction. Secondary work sites will be required to support tunnelling, power supply and station excavations. While site constraints at the surface level for the stations are significant, and will impact on pedestrian and vehicular traffic for the period of construction, it is an RMS operational imperative that the capacity and efficiency of the network is not reduced, particularly during peak periods (6:00 to 10:00am, 3:00pm to 7:00pm, Monday-Friday, excluding public holidays). Heavy vehicle movements are to be minimised during these periods.

Currently, it is proposed that station shafts will be excavated using conventional excavation methods and the station caverns will be excavated using roadheaders and rock breakers. Cavern excavation would be completed prior to the arrival of the TBM, which will be excavating the main tunnels. The TBMs will be pulled through the station cavern and prepared for the tunnelling excavation to the next station. A range of activities will be required at the primary worksite to support this process.

The main heavy-vehicle-generating activity will be associated with spoil removal from the tunnelling excavation and the excavation of the stations, entrances/surface connections, emergency egress and ventilation shafts. Other activities that would be supported by heavy vehicle activities include:

(a) Enabling works, including building demolition works, power, water and other utilities, and site establishment of the station worksites.

(b) Ground support and lining works for stations, with plant and materials delivered to the station sites from the surface.

(c) Delivery of tunnel linings from the pre-cast yard at the Southern Dive Structure to other TBM launch sites at the Northern Dive Structure and Barangaroo.

(d) Delivery of rail and other large or long track materials.

(e) Delivery of structural materials for the stabling facility.

(f) Structural concrete works for station entrances, emergency egress and ventilation shafts, with internal building works and station architectural fit-out.

(g) Specialised installation works associated with station platforms, concourses, accommodation and circulation areas, services and other amenities, station entry/exit gates, platform screens and doors and barrier installation.

(h) Mechanical and electrical fitout of station services and communication systems.

(i) Testing and commissioning station and train systems.

11.1. Site-specific issues

The site specific CTMPs for each of the sites will provide details on the various construction and traffic related issues, and measures to mitigate those issues (where possible). The table below summarises some of the issues identified for each of the work sites. The site specific CTMPs will also need to consider, assess and identify potential traffic management measures with regard to construction traffic from other developments as information becomes available. This will be facilitated through the TCG and TTLG meetings.

Table 11-1: Site issues

Station/worksite	Key issues
Northern Dive Site	• Closure of Nelson Street. (Refer Section 11.1.1) • Introduction of traffic signals at the Mowbray Road/Hampden Road intersection to accommodate construction traffic. • Pedestrian and cyclist safety. • Retention of bus stop on Pacific Highway. • Access to Mowbray Road. • Residential access (Nelson Street). • Gordon Avenue site access. • Cumulative construction traffic from other developments.
Artarmon Services Facility	• Business access.
Crows Nest Station	• Pedestrian and cyclist safety and access. • Closure of Hume Street including wayfinding signposting for alternate access for pedestrians and cyclists. • Pedestrian activity on Pacific Highway. • Relocation of bus stops. • Business and residential access. • Cumulative construction traffic from other developments.
Victoria Cross Station	• Pedestrian and cyclist safety. • Pedestrian activity on Miller Street, Berry Street, McLaren Street, Denison Street. • 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.
Blues Point	• Community/resident amenity. • Adjacent residential buildings. • Steep grade along Blues Point Road on approach and departure to site. • Impact on parking and public reserve. • Impact of heavy vehicle movements on sensitive receivers (residents, businesses, schools). • Impact on bus stop and bus and coach services.

Station/worksite	Key issues
Barangaroo Station	• Impact on Hickson Road carriageway and footpaths. • Pedestrian and cyclist safety. • Impact on vehicle access to Overseas Passenger Terminal (OPT). • Special events. • Surrounding multiple concurrent construction activity. • Sensitive community, including community/resident amenity, particularly for Millers Point and Kent Street. • Cumulative construction traffic from other developments. • Impact on parking. • Bus and coach operations. • Business and residential access.
Martin Place Station	• Pedestrian and cyclist safety, and access through Martin Place, particularly during weekday AM, weekday lunch, weekday PM and special events. • Heavy pedestrian activity in Martin Place, Castlereagh Street, Elizabeth Street, Hunter Street. • Access to Martin Place station including marshals to direct commuters during peak periods. • Impact on bus stops and bus operations. • Special events. • Impact on service vehicle parking and car parking. • Cumulative construction traffic from other developments.
Pitt Street Station	• Heavy pedestrian activity in Pitt Street, Castlereagh Street, Bathurst Street and Park Street, particularly during weekday AM, weekday lunch, weekday PM and special events. • Pedestrian and cyclist safety • Community/resident amenity • Impact on bus stops and bus operations in Park Street. • Special events. • Impact on service vehicle parking. • Cumulative construction traffic from other developments.
Central Station	• Heavy pedestrian activity in the Central Station precinct and Eddy Avenue, particularly during weekday AM, weekday lunch, weekday PM and special events. • Pedestrian and cyclist safety. • Bus and coach operations. • Light rail construction and operation in Eddy Avenue and Chalmers Street. • General precinct traffic congestion. • Impact of heavy vehicle movements on sensitive receivers (residents, schools). • Residential and business access. • Cumulative construction traffic from other developments. • Timing of any Devonshire Street Tunnel temporary closure to avoid peak pedestrian demand and provision of adequate wayfinding and customer information to alternatives.

Station/worksite	Key issues
Waterloo Station	• Nearby residential development. • Pedestrian and cyclist safety. • Community/resident amenity. • Impact on parking and traffic movements on Botany Road. • Cumulative construction traffic from other developments. • Access from Botany Road only, as far as is practicable
Southern Dive Site	• Managing access to Bedwin Road and Edgeware Road from Edinburgh Road including introduction of traffic signals at Bedwin Road/Edinburgh Road intersection. • Pedestrian and cyclist safety. • Traffic activity for Marrickville Metro shopping centre and surrounding commercial uses. • Construction traffic activity for the Marrickville Metro shopping centre expansion and the surrounding streets. • Construction traffic activity for the WestConnex site in St Peters, particularly construction traffic on May Street, Campbell Street, Bedwin Road and Edgeware Road. • WestConnex works involving the reconstruction of Campbell Street and the intersection with Unwins Bridge Road.
Sydenham Station and Junction works	• Impact on parking and traffic movements on Sydenham Road, Railway Parade, Gleeson Avenue, Burrows Avenue. • Pedestrian and cyclist safety. • Pedestrian movements associated with operation of Sydenham station. • General precinct traffic congestion. • Impact on bus stops and bus operations. • Residential and business access.

11.1.1. Nelson Street Bridge closure

In 2017, planning approval was obtained for the Sydney Metro City & Southwest project between Chatswood and Sydenham. Approval was given subject to a number of conditions including Condition E95 which requires that "*the Proponent must in consultation with the TTLG review the need and opportunities for a pedestrian and cycling bridge across the rail corridor to replace the Nelson Street bridge. The review must be presented in the interchange Access Plan(s) and the findings implemented by the Proponent.*"

SMDO will continue to work with Willoughby Council and other stakeholders in the development of a concept plan for the provision of a shared path along the northern side of Mowbray Road. The strategic response for the removal of the bridge and concept plan of the shared path will be documented in a Chatswood Interchange Access Plan (IAP).

As indicated in table 11.1, the closure of the Nelson Street Bridge is a key issue for the northern dive site and will be documented in the Construction Traffic Management Plan that will be developed by the Principal Contractor. This plan will also document relevant mitigation measures in response to the potential impacts this may cause to surrounding sensitive receivers and existing users.

12. Definitions and Terminology

All terminology in this CTMF Document is taken to mean the generally accepted or dictionary definition. Other terms and jargon specific to this CTMF Document are defined within SM QM-FT-435 Integrated Management System (IMS) Glossary. Terms and acronyms specific to this document are listed below.

Term	Definition
Approval	Any licence, permit, consent or approval required to be obtained from any authority to perform the construction activities or required in relation to the construction site by the contractor.
Authority/authorities	Any authority or person that has a right to impose requirements on any part of the contractor's activities or over the construction site.
Construction site	The land where the contractor undertakes the contractor's activities.
Sydney Coordination Office	The delivery office established to lead the proactive planning and coordination of the operations and management of the transport network for major infrastructure projects on behalf of Transport for NSW.
Construction Traffic Management Plan (CTMP)	The Construction Traffic Management Plan required by the SSI Approval. The CTMP 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. A CTMP may incorporate Traffic Staging Plans, Traffic Control Plans and Vehicle Movement Plans. Pedestrian Movement Plans may also be required to be incorporated. Sydney Metro City & Southwest contract-wide CTMPs will need to be prepared in addition to site-specific CTMPs. These plans will be developed in consultation with the TTLG and TCG meetings.
Contractor	The organisation engaged by the Principal for the delivery of the Project Works and the Temporary Works.
Contractor's Activities	All things and tasks that the contractor is required to do under the contract, whether or not such things and tasks are performed by subcontractors.
Disability Discrimination Act (DDA)	The Disability Discrimination Act 1992.
Emergency	An unforeseen event which requires urgent action to protect life or property, or an occasion when emergency services (Police, Fire and Rescue, Ambulance or State Emergency Services) take control of a portion of the road network.
Hold Point	A point beyond which a work process must not proceed without the authorisation or release of a designated authority.
Local Traffic Committee (LTC)	A technical committee chaired by the local council under delegated authority from RMS, which considers matters related to prescribed traffic control devices and traffic control facilities for which the council has delegated authority. It is made up of four formal, or voting, members: Council, NSW Police, RMS, and the local state Member of Parliament.
Long-term works	Works that impact on the road network for more than one shift. Traffic management measures will be installed on one day/night and remain in place for weeks or months but are removed on completion of the project or that work; for example, concrete barriers and signage.
Pedestrian Movement Plan	A diagram showing the allocated travel paths for workers or pedestrians around or through a worksite. A PMP may be combined with or superimposed on a Traffic Control Plan.
Planning Approval	The approval being sought under the EP&A Act by TfNSW and which is required to be complied with by the contractor, as directed in respective Project Deeds.

Term	Definition
Preferred Infrastructure Report (PIR)	The report prepared to address issues raised in submissions on the Environmental Impact Statement and any proposed changes to the project to minimise its environmental impact.
Principal	Transport for NSW
Project Works	Any permanent works that the contractor is required to design, construct, complete and hand over.
Reference documents	The codes, standards, specification and guidelines specified in this document.
Revised Environmental Mitigation Measures	Mitigation measures, additional to the project design, which are identified through the Environment Impact Assessment.
Road occupancy	An activity that is likely to impact on the traffic flow of the road network, and may involve the closure of traffic lane(s) or parking lane(s).
Road Occupancy Licence	A licence for Road Occupancy issued by TMC that allows the holder to use or occupy a specified road space at approved times, providing that certain conditions are met.
Road Safety Audit (RSA)	An assessment and report of a road's safety performance and crash potential at various stages of a road/project's life cycle.
Road user	All users of roads and public spaces including, but not limited to, pedestrians, pedal cyclists, public transport passengers, public transport operators and motorists.
Short-term works	Works that are undertaken for one shift only. They may return the next day/night but it is set up and packed entirely in one shift; for example, cones and signs for a lane closure.
Subcontractor	A subcontractor of the contractor and includes a supplier of goods or services (including professional services and construction plant hire) or both.
Sydney Metro City & Southwest	In this CTMF means that section of the proposed Sydney Metro City & Southwest between the Northern Dive Structure and the Sydenham Station & Junction works, including the proposed construction sites along its length.
Temporary works	Any temporary works required to carry out the contractor's activities but which do not form part of the Project works.
TBM	Tunnel boring machine.
Traffic Control Plan	A diagram showing signs and devices arranged to warn traffic and to guide it around, past or if necessary through a work site or temporary hazard.
Traffic Control Group (TCG)	A group chaired by the Sydney Coordination Office and including the Principal, relevant contractor's traffic and transport representative and other stakeholders.
Traffic Staging Plan	Road design drawings showing traffic lane configurations to be provided for traffic passing through the site during the various construction stages, including details of road alignment and geometry, intersection layouts, provision for buses and cyclists, work areas and pedestrian areas, drainage, signs and pavement markings, etc.
Traffic and Transport Liaison Group (TTLG)	The group formed by the Principal in accordance with the requirements in the Project Planning Approval. Meetings are chaired by the Sydney Coordination Office.
Transport Management Centre	The Transport for NSW Transport Management Centre located at Eveleigh.
Traffic and transport representative	The person appointed to the position of traffic and transport representative by the contractor.
Vehicle Movement Plan	A diagram showing the preferred travel paths for vehicles associated with a worksite entering, leaving or crossing the through traffic stream. A VMP may be combined with or superimposed on a Traffic Control Plan.
Verifier	A person appointed to the position of verifier by the contractor.

Term	Definition
WAD	A Works Authorisation Deed, an agreement between RMS and the proponent authorising implementation of road works or other works for which RMS has a statutory interest and subject to identified requirements and conditions.
WHS	Workplace Health & Safety.

13. Related Documents and References

Related Documents and References
• SM PS-ST-221 Sydney Metro Principal Contractor Health and Safety Standard • SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management • SM QM-FT-435 Integrated Management System (IMS) Glossary

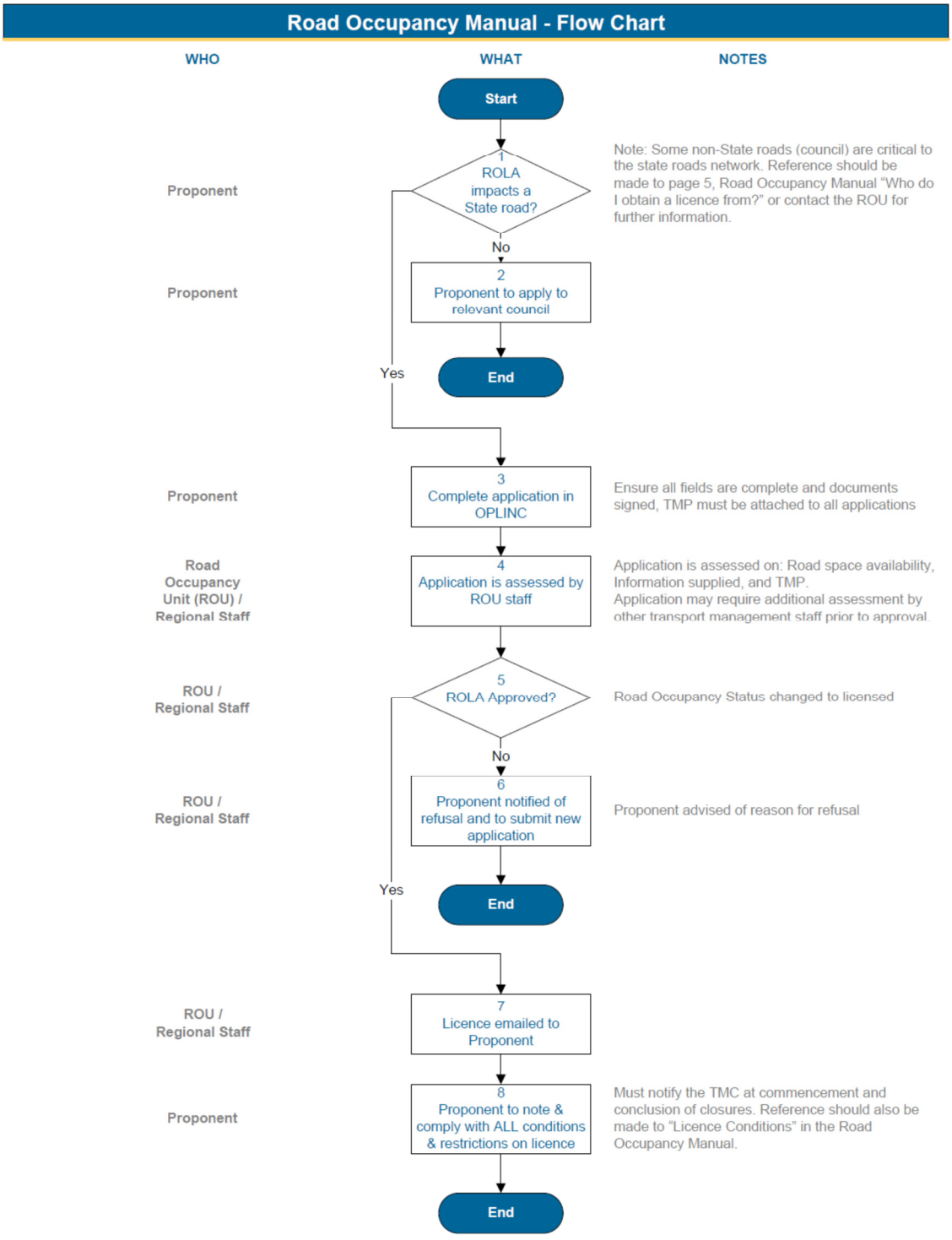
14. Superseded Documents

Superseded Documents
There are no documents superseded as a result of this document.

15. Document History

Version	Date of approval	Notes
1.0	Pending	New IMS document.

Appendix A: Road Occupancy Licence Process



Appendix B: Extract of SSI Approval and REMMS

Planning & Environment

The revised *Sydney Metro City and Southwest Construction Noise and Vibration Strategy* must be submitted to the Secretary for approval at least one (1) month before construction commences.

E33 Construction Noise and Vibration Impact Statements must be prepared for each construction site before construction noise and vibration impacts commence and include specific mitigation measures identified through consultation with affected sensitive receivers.

E34 Noise generating works in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) must not be timetabled within sensitive periods, unless other reasonable arrangements to the affected institutions are made at no cost to the affected institution or as otherwise approved by the Secretary.

E35 The Proponent must review alternative methods to rock hammering and blasting for excavation as part of the detailed construction planning with a view to adopting methods that minimise impacts on sensitive receivers. Construction Noise and Vibration Impact Statements must be updated for each location or activity to adopt the least impact alternative in any given location unless it can be demonstrated, to the satisfaction of the AA, why it should not be adopted.

Standard Construction Hours

E36 Construction, except as allowed by Condition E48 (excluding cut and cover tunnelling), must only be undertaken during the following standard construction hours:

(a) 7:00am to 6:00pm Mondays to Fridays, inclusive;
(b) 8:00am to 1:00pm Saturdays; and
(c) at no time on Sundays or public holidays.

Respite for Receivers

E37 The Proponent must identify all receivers at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street and Central likely to experience internal noise levels greater than $L_{eq(15\ minute)}$ 60 dB(A) inclusive of a 5 dB penalty, if rock breaking or any other annoying activity likely to result in regenerated (ground-borne) noise or a perceptible level of vibration is planned (including works associated with utility adjustments), between 7am – 8pm.

E38 The Proponent must consult with all receivers identified in accordance with Condition E37 with the objective of determining appropriate hours of respite so that construction noise (including ground-borne noise), does not exceed internal noise levels of:

(a) $L_{eq(15\ minute)}$ 60 dB(A) inclusive of a 5 dB penalty if rock breaking or any other annoying activity likely to result in ground-borne noise or a perceptible level of vibration is planned between 7am – 8pm for more than 60 percent of the time; and
(b) $L_{eq(15\ minute)}$ 55 dB(A) inclusive of a 5 dB penalty if rock breaking or any other annoying activity likely to result in ground-borne noise or a perceptible level of vibration is planned between 7am – 8pm for more than 25 percent of the time,

unless an agreement is reached with those receivers. This condition does not apply to noise associated with the cutting surface of a TBM as it passes under receivers.

Note This condition requires that noise levels be less than $L_{eq(15\ minute)}$ 60 dB(A) for at least 6.5 hours between 7am and 8pm, of which at least 3.25 hours must be below $L_{eq(15\ minute)}$ 55 dB(A). Noise equal to or above $L_{eq(15\ minutes)}$ 60 dB(A) is allowed for the remaining 6.5 hours between 7am and 8pm.

iv. intermittent vibration values measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.4 of *Assessing Vibration: a technical guideline* (DEC, 2006); or

(e) where a negotiated agreement has been reached with a substantial majority of sensitive receivers who are within the vicinity of and may be potentially affected by the particular construction, and the noise management levels and/or limits for ground-borne noise and vibration (human comfort) cannot be achieved. All agreements must be in writing and a copy forwarded to the Secretary at least one (1) week before the works commencing; or

(f) construction approved through an **Out of Hours Work Protocol** referred to in Condition E47, provided the relevant council, local residents and other affected stakeholders and sensitive receivers are informed of the timing and duration at least five (5) days and no more than 14 days before the commencement of the works.

E45 On becoming aware of the need for emergency construction in accordance with Condition E44(b), the Proponent must notify the AA, the ER and the EPA (if an EPL applies) of the need for those activities or work. The Proponent must also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

E46 Notwithstanding Conditions E44 and E48, rock breaking and other particularly annoying activities are not permitted outside of standard construction hours, except at Central, unless the noise management level derived from the *Interim Construction Noise Guideline* can be achieved at sensitive receivers.

Out of Hours Work Protocol

E47 An **Out of Hours Work Protocol** for the assessment, management and approval of work outside of standard construction hours, as defined in Condition E36 of this approval, must be prepared in consultation with the EPA and submitted to the Secretary for approval before construction commences for works not subject to an EPL. The protocol must include:

(a) the identification of low and high risk construction activities;
(b) a risk assessment process in which the AA reviews all proposed out of hours activities and identifies their risk levels;
(c) a process for the endorsement of out of hours activities by the AA and approval by the ER for construction activities deemed to be of:
    i. low environmental risk; or
    ii. high risk where all construction works cease by 9pm.

All other high risk out of hours construction must be submitted to the Secretary for approval unless otherwise approved through an EPL.

The protocol must detail standard assessment, mitigation and notification requirements for high and low risk out of hours works, and detail a standard protocol for referring applications to the Secretary.

24 Hour Construction

E48 Notwithstanding Condition E36 of this approval and subject to Condition E47, the following activities may be undertaken 24 hours per day, seven (7) days per week:

(a) tunnelling and associated support activities (excluding cut and cover tunnelling);
(b) excavation within an acoustic enclosure;
(c) excavation at Central without an acoustic enclosure;
(d) station and tunnel fit out; and
(e) haulage and delivery of spoil and materials.

E68 A copy of the **Site Audit Statement** and **Site Audit Report** must be submitted to the Secretary and Council for information no later than one (1) month before the commencement of operation.

E69 An **Unexpected Contaminated Land and Asbestos Finds Procedure** must be prepared and must be followed should unexpected contaminated land or asbestos be excavated or otherwise discovered during construction.

E70 The **Unexpected Contaminated Land and Asbestos Finds Procedure** must be implemented throughout construction.

SUSTAINABILITY

E71 The proponent must seek to achieve a best practice level of performance for the CSSI using market leading sustainability ratings tools (including a minimum 'Design' and 'As built' rating score of 65 using the Infrastructure Sustainability Council of Australia infrastructure rating tool, or an equivalent level of performance using a demonstrated equivalent rating tool).

E72 The Proponent must prepare a **Sustainability Strategy** to be submitted to the Secretary within six (6) months of the date of this approval, or within another timeframe agreed with the Secretary, which must be implemented throughout design, construction and operation of the CSSI. The Sustainability Strategy must include:

(a) details of the sustainability objectives and targets for the design, delivery and operation of the CSSI;
(b) details of the sustainability initiatives which will be investigated and / or implemented; and
(c) a description of how the strategy will be implemented for the CSSI.

E73 Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design. The sustainability initiatives identified must be implemented, reviewed and updated regularly throughout design development and construction, and annually during operation.

E74 The Proponent must fully offset the greenhouse gas emissions associated with consumption of electricity during operation of the CSSI.

TRAFFIC, TRANSPORT AND PEDESTRIAN ACCESS

E75 The CSSI must be designed, constructed and operated with the objective of integrating with existing and proposed road and related transport networks and minimising adverse changes to the safety, efficiency and, accessibility of the networks, and facilitate an improved level of service in relation to permanent and operational changes. Detailed design and assessment of related traffic, parking, pedestrian and cycle accessibility impacts and changes shall be undertaken:

(a) in consultation with, and to the reasonable requirements of the Traffic and Transport Liaison Group(s) established under Condition E77;
(b) in consideration of existing and future demand, connectivity (in relation to permanent changes), performance and safety requirements;
(c) to minimise and manage local area traffic impacts;
(d) to ensure access is maintained to property and infrastructure; and
(e) to meet relevant design, engineering and safety guidelines, including Austroads, Australian Standards, and RMS (RTA) requirements.

Planning & Environment

Copies of civil, structural and traffic signal design plans shall be submitted to the Relevant Road Authority for consultation before the commencement of the relevant works.

E76 Permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclists, and public transport users must be subject to safety audits demonstrating consistency with relevant design, engineering and safety standards and guidelines. Safety audits must be prepared in consultation with the Traffic and Transport Liaison Group before the completion and use of the subject infrastructure and must be made available to the Secretary upon request.

Traffic and Transport Liaison Group

E77 The Proponent must establish a Traffic and Transport Liaison Group(s) (TTLGs) to inform traffic and transport management measures during construction and operation of the CSSI. Management measures must be coordinated with and approved by the RMS following endorsement by the Sydney Coordination Office and consultation with the Relevant Roads Authority.

The TTLG must comprise representatives from the Relevant Road Authority(ies) (including the RMS, relevant Councils, and the Barangaroo Delivery Authority as appropriate), transport operators (including bus and taxi operators), emergency services and Port Authority of NSW as required. The TTLG must be consulted on to inform the preparation of the Construction Traffic Management Plan(s) and Interchange Access Plan(s).

E78 The Proponent must undertake supplementary analysis and modelling as required by the TTLG to demonstrate that construction and operational traffic can be managed to minimise disruption to traffic network operations, public including changes to and the management of pedestrian, bicycle and public transport networks transport services, pedestrian and cyclist movements. Revised traffic management measures, must be incorporated into the Construction Traffic Management Plan(s), Interchange Access Plan(s) and Station Design and Precinct Plan(s).

Construction Transport and Access

E79 The Proponent must consult with the Relevant Road Authority regarding the use of any weight restricted road by heavy vehicles.

E80 The Proponent must minimise truck movements during peak periods within commercial centres. Peak periods are 7am to 10am and 4pm to 7pm Monday to Friday.

E81 The Proponent must prepare and implement a Construction Traffic Management Framework (CTMF). The CTMF must be prepared in consultation with TTLG(s) and submitted to the Secretary for approval no later than one (1) month before the commencement of construction (or within any other timeframe agreed with the Secretary). The CTMF will set out the approach to managing issues across the CSSI and include but not be limited to:

(a) construction site access, including the efficient and safe egress and ingress of vehicles, consistent relevant Austroads, Australian Standards and RMS requirements;
(b) the erection and maintenance of hoardings, scaffolds and associated structures on roads;
(c) short and long term lane and road closures including those associated with plant, crane and other operations between the road reservation and construction site;
(d) cumulative construction vehicle management from surrounding developments;
(e) bus stop and associated facilities relocation and service rerouting;
(f) short and long term works zones on roads adjacent to the construction site;
(g) mail zone and associated facilities relocation;
(h) short and long term works within the road reservation;

(f) regulatory, advisory and other signage changes and modifications;
(j) parking management, including on and off street and remote parking and access;
(k) heavy vehicle management, the restriction (unless otherwise approved) of heavy vehicles to certain routes and the minimisation of heavy vehicle traffic in peak traffic periods;
(l) special event management;
(m) the retention and reinstatement of emergency and property access;
(n) the retention of user and passenger safety, including pedestrians, cyclists, public transport users, including at stops and related facilities;
(o) incident response planning around construction worksites; and
(p) monitoring of transport and access related impacts attributable to the CSSI.

E82 Construction Traffic Management Plans (CTMPs), consistent with the CTMF required in Condition E81, must be prepared for each construction site in consultation with the TTLG(s), and submitted to the RMS for approval following Sydney Coordination Office endorsement before construction commences at the relevant construction site.

E83 Where construction results in a worsening of the matters identified in Condition E81(a)-(o), the Proponent must review the measures identified in the CTMPs in consultation with the TTLG(s), as relevant. Any changes to the CTMPs must be submitted to the RMS for approval following Sydney Coordination Office endorsement and implemented.

E84 Notwithstanding the above, the Proponent must investigate opportunities to maximise spoil removal by non-road methods and schedule final track laying as soon as practicable following completion of tunnelling with a view to transporting materials and equipment for station fit-out, systems and commissioning by rail to minimise truck movements in town centres and the Sydney CBD. The findings of the investigation must be reported to the Secretary before commencement and before completion of tunnel spoil generation as relevant. A decision to not adopt spoil haulage or materials delivery by non-road methods must be demonstrated to the satisfaction of the Secretary.

E85 Heavy vehicle haulage must not use local roads unless no feasible alternatives are available.

E86 During construction, measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Alternative pedestrian and vehicular access, and parking arrangements must be developed in consultation with affected businesses. Such arrangements must be outlined in the Business Management Plan required in Condition E64 and implemented as required. Adequate signage and directions to businesses must be provided before, and for the duration of, any disruption.

E87 Permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclists and public transport users will be subject to safety audits demonstrating consistency with relevant design, engineering and safety standards and guidelines. Safety audits must be included within each relevant CTMP and carried out in consultation with the TTLG before the completion and use of the subject infrastructure and must be made available to the Secretary on request.

E88 Details of haulage routes and heavy vehicle sizes to transport material to and from any construction site must be specified in the Construction Traffic Management Plan(s) and be approved by the RMS following endorsement by Sydney Coordination Office and the Relevant Roads Authority.

E89 The Proponent must implement traffic and transport management measures with the aid of a truck marshalling and logistics facility located within close proximity to the Sydney and North Sydney CBDs. The facility must be operational in advance of tunnel spoil generation. Details of the facility must be documented in the Ancillary Facilities Management Plan required by Condition A16.

Planning & Environment

Road Dilapidation

E90 A **Road Dilapidation Report** must be prepared for local roads proposed to be used by heavy vehicles for the purposes of the CSSI before the commencement of use by such vehicles. Copies of the **Road Dilapidation Report** must be provided to the Relevant Council within three (3) weeks of completing the surveys and no later than one (1) month before the use of local roads by heavy vehicles.

E91 If damage to roads occurs as a result of construction of CSSI, the Proponent must either (at the landowner's discretion):

(a) compensate the landowner for the damage so caused. The amount of compensation may be agreed with the landowner; or
(b) rectify the damage so as to restore the road to at least the condition it was before construction commenced as identified in the Road Dilapidation Report(s).

Interchange Access Plans

E92 The Proponent must develop an **Interchange Access Plan** for each station to inform the final design of transport and access facilities and services, including footpaths, cycleways, passenger facilities, parking, traffic and road changes, and integration of public domain and transport initiatives around and at each station. The Interchange Access Plan(s) must consider walking and cycling catchments and take into account:

(a) station access hierarchy consistent with the transport planning principles defined in the EIS;
(b) safe, convenient, efficient and sufficient access to stations and transfer between transport modes (including subterranean connections and the safeguarding of additional entrances in response to land use change and patronage demand);
(c) the maintenance or improvement of pedestrian and cyclists level of service within a justified proximity to stations;
(d) current transport initiatives and plans;
(e) opportunities and constraints presented by existing and proposed transport and access infrastructure and services;
(f) patronage changes resulting from land use, population, employment, transport infrastructure and service changes;
(g) integration with existing and proposed transport infrastructure and services;
(h) pedestrian, cycle, bus, taxi, vehicle and emergency vehicle access and parking infrastructure and service changes;
(i) legislative requirements and applicable guidelines;
(j) safety audits, including but not limited to a review of traffic facility and cycle changes to ensure compliance with Austroads design criteria;
(k) final design, infrastructure, management and service measures and the level of access and service to be achieved for all users; and
(l) the contents of the Interchange Operations and Maintenance Plan (IOMP) and operational management provisions for future operational requirements, including maintenance, security and management responsibilities.

The Interchange Access Plan(s) must be prepared in consultation with the TTLG and the Design Review Panel and must be supported by traffic and transport analysis. Where necessary, consultation must also be undertaken with major landholders adjoining station precincts. The Plan(s) must detail a delivery and implementation program which must be provided to and agreed by the Secretary before commencement of permanent aboveground facilities at any station site.

E93 In developing the Interchange Access Plan(s), the Proponent must consider:

(a) traffic and accessibility design requirements; and
(b) the Station Design and Precinct Plan(s) required by Condition E101.

E94 The Proponent must in consultation with the TTLG review the need and opportunities for lift access between Hickson Road and High Street and which the meets the objective of increasing the patronage catchment to Barangaroo Station and improved community accessibility. The review must be presented in the Interchange Access Plan and the findings implemented by the Proponent.

E95 The Proponent must in consultation with the TTLG review the need and opportunities for a pedestrian and cycle bridge across the rail corridor to replace the Nelson Street Bridge. The review must be presented in the Interchange Access Plan(s) and the findings implemented by the Proponent.

E96 The Interchange Access Plan(s) must be reviewed by a qualified traffic and transport professional(s), independent of the detailed design process for the CSSI, having regard to the requirements of this approval.

Bicycle Infrastructure

E97 The Proponent must provide adequate bicycle infrastructure at stations that form part of the project, and provide adequate areas for future expansion of that infrastructure.

E98 The Proponent must undertake an audit of bicycle patronage at stations and end-of-trip facility adequacy 12 and 36 months following commencement of operation of the project to ensure the level of bicycle parking and end-of-trip facilities available are adequate in terms of both quantity and quality. The audit must be undertaken with the Relevant Council(s), RMS, Bicycle NSW and relevant local bike user groups.

URBAN DESIGN AND VISUAL AMENITY

Visual Amenity

E99 The CSSI must be constructed in a manner that minimises visual impacts of construction sites, including, providing temporary landscaping where appropriate to soften views of the construction sites, minimising light spill, and incorporating architectural treatment and finishes within key elements of temporary structures that reflect the context within which the construction sites are located.

Design Review Panel

E100 The Proponent must establish a Design Review Panel (DRP) to refine design objectives for place making, public realm and urban and heritage integration applicable to the length of the project and provide advice on the application of the objectives to key design elements in relation to place making, architecture, heritage, urban and landscape design and artistic aspects of the CSSI.

The DRP must:

(a) comprise five members who are experts in one of the identified design elements;
(b) include:
    i. the NSW Government Architect as Chair;

11.2 Revised environmental mitigation measures

The list of mitigation measures and performance outcomes presented in Chapter 27 of the Environmental Impact Statement has been revised on the basis of submissions received, the additional assessment work carried out and the preferred infrastructure report. In some cases new measures have been added, while in others, the wording of existing measures has been adjusted.

Table 11-1 provides the revised consolidated environmental mitigation measures. This table supersedes the mitigation measures presented in the Environmental Impact Statement. New mitigation measures or additions to existing mitigation measures are shown in **bold** text, with deletions shown with a ~~strikethrough~~.

Table 11-1 Revised environmental mitigation measures

ID	Mitigation measure	Applicable location(s)[1]
Construction traffic and transport		
T1	Ongoing consultation would be carried out with (as relevant to the location) the CBD Coordination Office, Roads and Maritime Services, Sydney Trains, NSW Trains, **the Port Authority of NSW, Barangaroo Delivery Authority**, local councils, emergency services and bus operators in order to minimise traffic and transport impacts during construction.	All except metro rail tunnels
T2	Road Safety Audits would be carried out at each construction site. Audits would address vehicular access and egress, and pedestrian, cyclist and public transport safety.	All except metro rail tunnels
T3	Directional signage and line marking would be used to direct and guide drivers and pedestrians past construction sites and on the surrounding network. This would be supplemented by Variable Message Signs to advise drivers of potential delays, traffic diversions, speed restrictions, or alternate routes.	All except metro rail tunnels
T4	In the event of a traffic related incident, co-ordination would be carried out with the CBD Coordination Office and / or the Transport Management Centre's Operations Manager.	All except metro rail tunnels
T5	The community would be notified in advance of proposed road and pedestrian network changes through media channels and other appropriate forms of community liaison.	All except metro rail tunnels
T6	Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist and motorist safety. Depending on the location, this may require manual supervision, physical barriers, temporary traffic signals and modifications to existing signals or, on occasions, police presence.	All except metro rail tunnels

ID	Mitigation measure	Applicable location(s)[1]
T7	Additional enhancements for pedestrian, cyclist and motorist safety in the vicinity of the construction sites would be implemented during construction. This would include measures such as: • Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers • ~~Shared experience~~ **Community** educational events that allow pedestrians, cyclists or motorists to sit in trucks and understand the visibility restrictions of truck drivers, and for truck drivers to understand the visibility from a bicycle; **and a campaign to engage with local schools to educate children about road safety and to encourage visual contact with drivers to ensure they are aware of the presence of children** • Specific construction driver training to understand route constraints, expectations, safety issues, **human error and its relationship with fitness for work and chain of responsibility duties**, and to limit the use of compression braking • **Use of In Vehicle Monitoring Systems (telematics) to monitor vehicle location and driver behaviour** • Safety devices on construction vehicles that warn drivers of the presence of a vulnerable road user located in the vehicles' blind spots and warn the vulnerable road user that a vehicle is about to turn.	All except metro rail tunnels
T8	Access to existing properties and buildings would be maintained in consultation with property owners.	All except metro rail tunnels
T9	All trucks would enter and exit construction sites in a forward gear, where feasible and reasonable.	All except metro rail tunnels
T10	Any relocation of bus stops would be carried out by Transport for NSW in consultation with Roads and Maritime Services, the CBD Coordination Office (for relevant locations), the relevant local council and bus operators. Wayfinding and customer information would be provided to notify customers of relocated bus stops.	All except metro rail tunnels
T11	For special events that require specific traffic measures, those measures would be developed in consultation the CBD Coordination Office (for relevant locations), Roads and Maritime Services, **Barangaroo Delivery Authority (for relevant locations)** and the organisers of the event.	BN, MP, PS, CS
T12	Construction sites would be managed to minimise construction staff parking on surrounding streets. The following measures would be implemented: • Encouraging staff to use public or active transport • Encouraging ride sharing • Provision of alternative parking locations and shuttle bus transfers where feasible and reasonable. **Transport for NSW would work with local councils to minimise adverse impacts of construction on parking and other kerbside use in local streets, such as loading zones, bus zones, taxi zones and coach zones.**	All except metro rail tunnels
T13	Construction site traffic would be managed to minimise movements in the AM and PM peak periods.	All except metro rail tunnels
T14	Construction site traffic immediately around construction sites would be managed to minimise movements through school zones during pick up and drop off times.	All except metro rail tunnels

ID	Mitigation measure	Applicable location(s)[1]
T15	Pedestrian and cyclist access would be maintained at Crows Nest during the temporary closure of Hume Street, and at Martin Place during the temporary partial closure of Martin Place. Wayfinding and customer information would be provided to guide pedestrians and cyclists to alternative routes.	CN, MP
T16	Timing for the temporary closure of the Devonshire Street tunnel would avoid periods of peak pedestrian demand. Wayfinding and customer information would be provided to guide pedestrians to alternative routes.	CS
T17	Consultation would occur with the Harbour Master, Roads and Maritime Services and Sydney Ferries' to ensure shipping channels are maintained during the Sydney Harbour ground improvement works.	GI
T18	During the closure of existing entrances to Martin Place Station, marshalls would be provided during the AM and PM peak periods to direct customers to available access and egress points.	MP
T19	Where existing parking is removed to facilitate construction activities, alternative parking facilities would be provided where feasible and reasonable.	All except metro rail tunnels
T20	Alternative pedestrian routes and property access would be provided where these are affected during the construction of the power supply routes.	PSR
T21	The potential combined impact of trucks from multiple construction sites would be further considered during the development of Construction Traffic Management Plans.	All except metro rail tunnels
T22	Where existing footpath routes used by pedestrians and / or cyclists are affected by construction, a condition survey would be carried out to confirm they are suitable for use (eg suitably paved and lit), with any necessary modifications to be carried out in consultation with the relevant local council.	All except metro rail tunnels

Appendix C: RMS and SCO operational imperative site specific access and vehicular routing requirements

Northern Dive Structure

- Any left turn from Mowbray eastbound into site must be from a newly constructed deceleration/turning lane.
- Delivery of tunnel segments to occur at night or not at same time as tunnel spoil haulage.
- Light vehicles to be encouraged to exit via Nelson Street.
- Heavy vehicle exit via Nelson Street not endorsed between hours of 5:00am till 10:00pm (subject to Council agreement).
- Heavy vehicle entry via Nelson Street acceptable subject to adequate turning movements that do not impact lane 2 of Pacific Highway.
- Heavy vehicles to be allowed to exit via Bryson Street or equivalent onto Pacific Highway after 10.00pm and prior to 5.00am only.
- All heavy vehicle movements to be supervised by the contractor.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Crows Nest

- 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.

Victoria Cross

- Vehicular site access via Berry Street will not be supported, unless as otherwise agreed by SCO and RMS.
- Any vehicular site access via Miller Street shall provide sufficient separation from the Berry Street traffic signals.
- Any vehicular accesses via Miller Street shall be located and designed to avoid traffic delays for Miller Street traffic.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Barangaroo

- RMS and SCO do not support the use of truck and dog heavy vehicle combinations via York Street/Margaret Street or Erskine Street/Napoleon Street/Hickson Road during 7:00 to 10:00am and/or 4:00 to 7:00pm.
- RMS and SCO do not endorse heavy vehicle turnaround via Towns Place, heavy vehicles should turn around within the work site.
- RMS and SCO support the installation of traffic signals along Hickson Road to control site access/egress provided they are SCATS connected and all costs are borne by the contractor.

- RMS and SCO have no objection to the night time haulage route of York Street, Erskine Street and Margaret Street. RMS and SCO do not endorse the use of truck and dogs during peak hours via York Street – Erskine Street – Margaret Street, however no objection to the use of single unit trucks (tippers) is raised.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Martin Place

- RMS and SCO do not endorse the use of truck and dogs during the day. RMS and SCO has no objection to the use of truck and dogs as follows: Sunday to Wednesday 8:00pm to 6:00am, Thursday 10:00pm to 6:00am, Saturday 3:00am to 9:00am, Sunday from 3:00am for the whole day. RMS and SCO do not support their use during special events.
- RMS and SCO have no objection to the use of the Bent Street – Bligh Street or O'Connell Street – Castlereagh Street site access entry points.
- RMS and SCO have no objection to the use of the exit driveways onto Elizabeth Street. RMS and SCO do not support exit driveway onto Castlereagh Street.
- RMS and SCO raise no objection to a maximum number of truck movements (4 per hour) within morning and evening peak periods provided single unit trucks (tippers) are used.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Pitt Street

- RMS and SCO do not endorse the use of truck and dogs during the day. RMS and SCO has no objection to the use of truck and dogs as follows: Sunday to Wednesday 8:00pm to 6:00am, Thursday 10:00pm to 6:00am, Saturday 3:00am to 9:00am, Sunday from 3:00am. Single trucks (tippers) for the whole day Saturday and Sunday. RMS and SCO do not support their use during special events.
- RMS and SCO do not support the exit driveway onto Bathurst Street with entry via Pitt Street. RMS and SCO support the EIS proposal with entry via Bathurst Street and exit via Pitt Street.
- RMS and SCO raise no objection to a maximum number of truck movements (4 per hour) within morning and evening peak periods provided single unit trucks (tippers) are used.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Central

- SCO does not support reversing movements from Elizabeth Street or Randle Street into Randle Lane.
- No reversing of vehicles onto State roads.
- Coordination of any works to be carried out in consultation with, and approval of, CSELR in those areas that form CSELR worksites.
- Any closure of Devonshire Street tunnel to be minimised and any closure to be carried out during low demand periods.

- RMS and SCO raise no objection to a maximum number of truck movements (6 per hour) within morning and evening peak periods.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Waterloo

- RMS and SCO raise no objection to the use of truck and dogs for both day and night movements provided entry/exit is left in and left out during 7:00am to 10:00am and 4:00pm to 7:00pm.
- RMS and SCO prefer that access to and from the work site be via state roads.
- RMS and SCO raise no objection to a maximum number of truck movements (3 per hour) within morning and evening peak periods.
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Marrickville

- RMS and SCO raise no objection to the use of truck and dogs for both day and night movements provided School Zones are avoided.
- RMS and SCO raise no objection to a new driveway to the site provided it is located away from the roundabout and not immediately adjacent to it. RMS and SCO prefer that access to and from the work site be via state roads.
- RMS and SCO raise no objection to a maximum number of truck movements (18 per hour during morning peak/11 per hour during evening peak).
- SCO does not support the use of on-street parking zones by trucks, without prior approval.

Appendix D: Comments Register

Report Name:	Construction Traffic Management Framework – Chatswood to Sydenham
Author:	Ken Hind
Version:	1.1
Date:	August 2017

Section	Issue	Stakeholder Comment	Response
Road and Maritime Services (RMS)			
2.1 p14	3rd dot point on construction activity	Change peak periods to 6-10am and 3-7pm.	The peak periods of 7-10am and 4-7pm were previously provided by RMS and SCO for operational imperatives at Chatswood to Sydenham sites. This was provided to tenderers in development of works programs. It is not proposed to change these times as this has potential impacts on the delivery of the project. 15/12/2017 – Peak period times amended
4.1 p.23	TTLG 2nd dot point	Include 'and Maritime' to 'Centre for Road Safety' – Centre for Road and Maritime Safety.	Noted and amended
6.1 p.29	Policy context and legislative backing, 2nd paragraph	Change last two sentences from 'Regulatory sign changes on local or regional roads will require a submission to the local council and approval of the local traffic committee. Sign changes on state roads will require the approval of RMS.' To 'Regulatory sign changes on local or regional roads will require approval from the local council through a submission to the local traffic committee. Sign and line marking changes on state roads will require the approval of RMS.'	Noted and amended.
6.3 p.30	Dot point regarding Site specific CTMPs	Include 'a minimum of' to 'one CTMP for the Northern Dive Structure.'	Noted and amended.
6.3 p.31	Site specific CTMPs	Add dot point Changes to traffic management requirements at a site will require new CTMPs or updates to the CTMP to be approved.	New CTMPs may not be warranted for some traffic management changes. An update of the CTMP is all that will generally be required e.g. minor non-material change to TCP.

Section	Issue	Stakeholder Comment	Response
6.3 p.31	ROL and related applications. Changes to paragraph.	ROL and related applications are submitted by the contractor to TMC for occupation of roadway (other than approved work zones) on state and regional classified roads and all works within 100m of traffic signals where RMS is the road manager. These applications plans are approved by TMC. A CTMP will be required to be approved prior to approval of the ROL.	Noted and amended.
6.3 p.31	ROL and related applications, 4th dot point	TMC will consult with SCO prior to submission to RMS for approval.	Noted and amended.
6.3 p.31	ROL and related applications, 6th dot point	Change 'impacting non classified roads' to 'impacting regional and local roads.'	Noted and amended.
6.3 p.31	Last paragraph, change wording	'Applications for scaffolds and hoardings would be applied for with to the relevant council'	Noted and amended in Section 9.2.
6.3 p.31	Last paragraph – comment	Is there a purpose for this? This seems an onerous process and requirement and has potential to delay application process times? Maybe particular ones discussed?	Propose to change wording to 'Upcoming ROL and related applications to be discussed at TCG meetings prior to submission.' As operates with current TCG meetings contractors can bring upcoming applications/traffic management proposals to TCG to ensure that applications are submitted that include all relevant comments.
6.5 p.32	Speed Zone Authorisation, last two sentences	Change as follows: 'Longer term (multiple years over six months) or permanent changes must be referred to RMS for assessment, consideration and approval. Permanent speed zone changes can only be approved installed by RMS.	Noted and amended.
6.9	Sentence edited and added	Prior approval for the passage of any proposed over-size or over-mass vehicles is required from National Heavy Vehicle Regulator, RMS for state roads or, and councils for regional or local roads, and an authorisation permit issued prior to the operation of the vehicle. A TMP is likely to be required that describes how an OSOM movement will be safely undertaken in NSW. Details of requirements for permit types required depending upon loads can be found on the RMS website.	Noted and amended, except that 'for state roads' retained and subsequent amendment to delete "of requirements for permit types depending upon loads".
6.10 p.35	Add RMS	'require the prior approval of TfNSW, RMS, SCO, the local council and affected bus operators'	Noted and amended.
6.11 p.35	Last sentence	'Changes to regulatory signposting on local roads will require a the submission approval of to the Local Traffic Committee for council approval.	Noted and amended except "for Council approval" not included as submission to Local Traffic Committee will be the avenue for council approval. 15/12/2017 – Section 6.11 amended to include suggested wording.

Section	Issue	Stakeholder Comment	Response
8.1.1 p.51	Policy and responsibilities, last paragraph	Delete 'or construction' from beginning of sentence.	Noted and amended.
8.1.2 p.52	Portable traffic signals	Delete dot point regarding portable traffic signals.	Not agreed to. While portable traffic signals would not be permitted on state roads there may be instances on local roads where these would be accommodated, subject to the relevant authority approval. 15/12/2017 – Section 8.1.2 (e) amended to include 'Portable traffic signals on local roads to control traffic flows if lane closures are required, subject to the relevant authority approval.'
8.3.1	Accidents/incidents and complaints	Change 'accidents' to 'crashes'.	Noted and amended.
8.4 p.54	Traffic controllers and temporary traffic signals	Paragraph 2, last sentence: 'it is to be in accordance with documented Austroads Guidelines, RMS supplements, procedures, and guidance and approval of the roads authority. Paragraph 3 – Add: 'VMS placement should conform to Austroads Guidelines, RMS supplementary material and approval processes of the roads authority.'	Noted and amended.
Sydney Coordination Office (SCO)			
Section 2.2	Additional information	Third dot-point should include the following text: "The direct contact numbers of the contract-wide and site-specific lead contractors should be provided to the TMC and SCO. The contract-wide lead contractor is responsible for ensuring the direct contact numbers are current during any stage of construction."	Noted and amended.
Fig 7.8	Missing data	Add the access routes to the O'Connell Street site.	Noted and added.
Fig 7.9	Updated information	Due to the proximity of the site to the signals the right turn movement from Castlereagh Street into Park Street is unable to be accommodated. Vehicles should continue on Castlereagh Street.	This would be subject to the contractor's assessment as part of the CTMP for that site.
Appendix C	Additional information	For all sites listed, include the below text: "SCO does not support the use of on-street parking zones by trucks, without prior approval."	Noted and amended

Section	Issue	Stakeholder Comment	Response
	Central	Add requirements: SCO does not support reversing movements from Elizabeth Street or Randle Street into Randle Lane. No reversing of vehicles onto State roads. Coordination of any works to be carried out in consultation with, and approval of, CSELR in those areas that form CSELR worksites. Any closure of Devonshire Street tunnel to be minimised and any closure to be carried out during low demand periods.	Noted and amended.
City of Sydney			
General Comment		The CTMF excludes any reference to the moving of spoil by barge from the Blues Point and Barangaroo sites even though the Contractor has already indicated this option will be pursued (see http://www.smh.com.au/nsw/barges-to-shift-thousands-of-tonnes-of-rock-from-sydneys-new-rail-tunnels-20170622-gww8w1.html). The City is very supportive of this proposal and would like to see if referenced in the CTMF.	Paragraphs included for the Blues Point and Barangaroo sites under Section 7.1 – Haulage routes.
Sect 3.3.2 – pg.18		REMM T18 notes that "during the closure of existing entrances to Martin Place Station, marshals would be provided during the AM and PM peak periods to direct customers to available access and egress points". Will these same marshals be available to manage pedestrian access during major events like Vivid, Anzac Day, NYE, etc?	In section 6.6 – Special Event Coordination, it is highlighted that 'works that would have a significant impact on pedestrian paths and station access should be minimised during these periods and/or additional and increased supervision should be provided between the site and the adjoining pedestrian network.'
Sect 3.3.4 – pg.21		Under the 'Traffic Control Plans' heading, the CTMF references the RMS and SCO operational requirements for the work sites across the City's LGA. Would it also be beneficial to include the operational requirements from each relevant Council to indicate to the Contractor where RMS, SCO and Council are in agreement (e.g. limiting vehicular access to the Waterloo work site to State Roads only) and where there is disagreement (e.g. use of truck and dog combinations at Sydney CBD sites, 24-hour operations, etc.)? This would provide each Contractor with clarity when preparing subsequent CTMPs, TCPs, etc.	Added "On local roads, councils may also have operational requirements and these should be determined in consultation with councils." As each council may have different requirements.
Sect 3.3.4 – pg.21		The City requests that 'Pedestrian Movement Plans' are made mandatory for the Barangaroo, Martin Place, Pitt Street and Central work sites and provided to the City prior to the commencement of works for review and comment	No amendment proposed as these locations will require the contractor to "warn pedestrians of works" due to the volume of pedestrians at these sites.

Section	Issue	Stakeholder Comment	Response
Sect 3.3.4 – pg.22		The CTMF should note that any proposed change to on-street parking will require review and approval by the City and may require referral to the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) for consideration and endorsement	This is covered in Section 6.11 – Council Traffic committee, which outlines the matters that might be considered by the traffic committee.
Sect 4.4 – pg.25		Please replace the text "Meetings were arranged with relevant traffic officers in each of these Councils and a summary of key points of the CTMF were provided" to "The Draft CTMF was circulated via email to the relevant traffic officers in each of these Councils"	Noted, section updated to reflect current consultation with councils. 15/12/2017 - Consultation occurred through the TTLG and with electronic copies of the CTMF and outline of the changes from the earlier CTMF provided to those Council and BDA representatives who had been involved in providing comments for the earlier CTMF. Face to face consultation was carried out with Willoughby Council representative due to a staff change at Council.
Sect 6.1 – pg.29		Text should be updated to also note that traffic management changes or proposed amendments to the public domain will require submission to the relevant local Council and may require referral to the Local Traffic Committee for consideration and endorsement	This aspect and suggested wording is covered in Section 6.11 – Council Traffic Committees.
Sect 6.4 – pg.31		For clarity, it would beneficial to note that any proposal to temporarily close traffic lanes or a full road closure will also require relevant approvals from the respective local Council in addition to acquiring a Road Occupancy Licence (ROL). For previous NSW Government projects (like Wynyard Walk), the City has found that some Contractors believed all they needed was an ROL to close a road which isn't the case when the road is under the jurisdiction of the local Council. It would also be beneficial to include web links to the relevant approvals required for partial or full road closures similar to the text provided on Page 56 for Section 9.2 – Hoardings	Wording amended to clarify requirement for council approval for lane or road closures.
Sect 6.7 – pg.34		replace "Traffic Control at Worksites Manual (RMS) training course" with "Prepare a Work Zone Traffic Management Plan" training course	Noted and amended. Relocated to Section 3.3.4
Sect. 6.12 – pg.35		Text should be updated to also note that traffic management changes or proposed amendments to the public domain will require submission to the relevant local Council and may require referral to the Local Traffic Committee for consideration and endorsement	Considered to be already included in Section 6.12 under 'Matters that may need to be considered by the Local Traffic committee' 15/12/2017 – Section 6.11 (formally 6.12) amended.

Section	Issue	Stakeholder Comment	Response
Page 42		Barangaroo Work Site Haulage Routes – given the high volumes of pedestrians in the vicinity of Wynyard Station, combined with sensitive land uses fronting both York and Kent Streets (e.g. high-density residential buildings, hotels, child care centre, etc.), the City requests that the secondary routes proposed in Figure 7.7 (inbound via York, Margaret Streets; outbound via Napoleon, Kent Streets) only be used when the primary routes (inbound and outbound via Sussex Street, Hickson Road) are unavailable. Furthermore, for spoil haulage and material delivery proposed outside the Standard Construction Hours noted in Condition E36 of the Department of Planning and Environment SSI Approval, the City requests this be undertaken by barge only and that 'truck and dog' combinations be limited to the primary routes only	Noted, no change proposed to CTMF wording. Information will be relayed to contractor undertaking works on the Barangaroo site. Council's concern for the site is acknowledged. Investigations for barging of materials are to be carried out as part of the site investigations. 15/12/2017 - Paragraph added to Section 7.1 re Barangaroo barging request and use of truck and dog vehicles to primary routes only.
Page 43		Martin Place Work Site Haulage Routes – given the high volumes of pedestrians in the vicinity of the Martin Place work site during peak periods in particular, the City requests that heavy vehicle deliveries are also minimised between 12pm and 2pm, Monday to Friday (Weekday Lunch Peak), as well as 7am to 10am and 4pm and 7pm, Monday to Friday. Furthermore, the City strongly objects to the use of 'truck and dog' combinations from the Martin Place work site at any time; spoil haulage and material delivery should be limited to the Standard Construction Hours noted in Condition E36; and spoil haulage and material delivery should be limited to primary (via Shakespeare Place) and secondary routes (via Cahill Expressway) to the east and north of the work site to avoid tracking directly through the Sydney CBD (via King and Market Streets) and 'doubling up' on heavy vehicle movements generated from the Barangaroo work site	Objection noted regarding use of truck and dog for spoil haulage. The use of the primary or secondary haulage routes will be dependent on a number of factors including traffic conditions and destinations for spoil. Any change of the route from the approved EIS route will require an assessment to be carried out by the contractor. Materials haulage will be carried out in line with the CSSI conditions of consent. 15/12/2017 – Section 7.1 – sentence added 'Primary routes should be used as the first priority, as far as is practicable.'

Section	Issue	Stakeholder Comment	Response
Page 44		Pitt Street Work Site Haulage Routes – given the high volumes of pedestrians in the vicinity of the Pitt Street work site during peak periods in particular, the City requests that heavy vehicle deliveries are also minimised between 12pm and 2pm, Monday to Friday (Weekday Lunch Peak), as well as 7am to 10am and 4pm and 7pm, Monday to Friday and that the secondary routes proposed in Figure 7.9 (inbound and outbound via William Street, CCT) only be used when the primary routes (inbound via Bathurst Street and outbound via Druitt Street) are unavailable. Furthermore, the City strongly objects to the use of 'truck and dog' combinations from the Pitt Street work site at any time and given the sensitive land uses in the vicinity of both sites associated with the Pitt Street Station (e.g. high-density residential buildings, hotels, late night entertainment venues, Town Hall Station portals, St Andrews Cathedral School, etc.), spoil haulage and material delivery should be limited to the Standard Construction Hours noted in Condition E36. The City is also concerned that given major development works are already underway in close proximity to the two Pitt Street Station sites (e.g. demolition works associated with Sydney Metro, CSELR Project, 115-119 Bathurst Street (Greenland), 116 Bathurst Street, etc.), if works associated with the TSE Contract were to continue 24/7 there would be no respite from construction activity for local residents and businesses	Objection noted regarding use of truck and dog for spoil haulage. The use of the primary or secondary haulage routes will be dependent on a number of factors including traffic conditions and destinations for spoil. Materials haulage will be carried out in line with the CSSI conditions of consent. 15/12/2017 – Section 7.1 – sentence added 'Primary routes should be used as the first priority, as far as is practicable.'
Page 45		Central Work Site Haulage Routes – given the high volumes of pedestrians in the vicinity of the Central work site during peak periods in particular, the City requests that heavy vehicle deliveries are also minimised between 12pm and 2pm, Monday to Friday (Weekday Lunch Peak), as well as 7am to 10am and 4pm and 7pm, Monday to Friday. Consideration should also be given to limiting heavy vehicle deliveries when special events (like those at Moore Park, Allianz Stadium, SCG, etc.) increase pedestrian volumes in the vicinity of Central Station. Furthermore, the City strongly objects to the use of 'truck and dog' combinations from the Central work site at any time and given the sensitive land uses in the vicinity of Central Station (e.g. residential precincts, hotels, late night entertainment venues, Central Station portals, Sydney TAFE, UTS, etc.), spoil haulage and material delivery should be limited to the Standard Construction Hours noted in Condition E36. The City is also concerned that given major development works are already underway in close proximity to Central Station (e.g. Central Walk, SYAB, CSELR Project, Central Park, etc.), if works associated with the TSE Contract were to continue 24/7 there would be no respite from construction activity for local residents and businesses	Comments noted. Limiting of deliveries during special events would be considered by the contractor under the Section 6.6 requirements. Access to the Central Station site works will mainly be via the Sydney Yard Access Bridge (SYAB). This bridge is to be completed prior to any Central station works commencing. Materials haulage will be carried out in line with the CSSI conditions of consent. Objection noted regarding use of truck and dog for spoil haulage. 15/12/2017 – Section 7.1 – sentence added 'Primary routes should be used as the first priority, as far as is practicable.'

Section	Issue	Stakeholder Comment	Response
Page 45		Waterloo Site Haulage Routes – to avoid the use of local roads under the City's control for haulage, the City supports the operational restriction proposed by RMS and SCO for Waterloo which limits vehicular access to and from the work site to the State Road network only	Noted 15/12/2017 - Point added in Table 11-1 regarding access to and from the site via Botany Road.
Page 47		the CTMF references the need for a "suitable off-street truck marshalling area and logistics facility" to limit heavy vehicle queuing on Sydney CBD streets. Has an appropriate site been selected? If so, the City believes the site should be referenced within the CTMF	Investigations for identification and procurement for a suitable site are continuing at the present time. 15/12/2017 - Truck marshalling area being dealt with through an Ancillary Facilities Management Plan. CTMF will be updated to include the truck marshalling site once identified.
Sect 7.3 – pg.47		might be beneficial to make it clear that the provision of Works Zones is likely to incur fees and charges to the relevant Roads Authority – this will assist to avoid any ambiguity on whether the Contractor pays or not. It would also be beneficial to include web links to the relevant approvals required for a Works Zone similar to the text provided on Page 56 for Section 9.2 – Hoardings	May be subject to separate agreement between SMDO and Council.
Sect 7.4 – pg.48		the CTMF references that "daytime weekday use of 'truck and dog' combinations within the Sydney CBD is not supported" – it would be beneficial to clearly define the time period "daytime weekday use" applies and given the City opposes 'truck and dog' combinations in the Sydney CBD at any time, please add that "the use of 'truck and dog' combinations within the Sydney CBD outside these times will require negotiation and approval from RMS, SCO and the City of Sydney"	Noted, have included (7am-7pm) after daytime. Paragraph two of this section highlights that "The types of truck to be used for the transporting of materials will be assessed in consultation with the relevant authorities in the preparation of the site CTMPs."
Sect 11.1 – pg. 63		Please add the following key issues for the various work sites Barangaroo Station – community/resident amenity, particularly for Millers Point and Kent Street; accumulative impact of nearby construction activities Martin Place Station – safe management of heavy pedestrian activity during Weekday AM, Weekday Lunch, Weekday PM and special events; accumulative impact of nearby construction activities Pitt Street Station – safe management of heavy pedestrian activity during Weekday AM, Weekday Lunch, Weekday PM and special events; community/resident amenity; accumulative impact of nearby construction activities Central Station – safe management of heavy pedestrian activity during Weekday AM, Weekday Lunch, Weekday PM and special events; community/resident amenity; accumulative impact of nearby construction activities Waterloo Station – community/resident amenity	Barangaroo – these issues are already included with "Sensitive community" and "construction traffic from other developments." Martin Place – "Heavy" added to beginning of second dot point as a consideration for CTMP preparation. Pitt Street – "Heavy" added to beginning of first dot point as a consideration for CTMP preparation. Central – "Heavy" added to beginning of first dot point as a consideration for CTMP preparation. 15/12/2017 – Suggested wording added to Table 11.1

Section	Issue	Stakeholder Comment	Response
North Sydney Council			
5.3	Responsibility for Community Engagement	Who is responsible for managing community engagement and ensuring the community is updated? The communication strategies talk about getting their message out to stakeholders but neglects to establish a process to receive and respond to stakeholder inputs during the project. Metro should take responsibility for responding to such input.	As highlighted in Section 5.3, the principal contractor is to develop a Community Communications Strategy in accordance with the guidelines provided in the Sydney Metro City & Southwest Community Communications Strategy. Section 5.3 amended to include the above wording to the Strategy.
6.4	Road Occupancy Licence approval process	In most instances both Council approval and TMC ROL will be required for works that will impact on any footpaths and the carriageway, not just on local roads. Council also manages footpaths and most parking on State roads. Paragraph 3 needs to be amended to avoid potential confusion down the track.	This section relates to the ROL process for the closure of a traffic lane. Impacts on parking are covered in Section 6.1, 6.11 and 7.3. Impacts on footpaths would be considered in the CTMP, which is required to be submitted to Council as part of the approval process. The RMS document 'A guide to the delegation to councils for the regulation of traffic' indicates at Section 3.1 that "Council cannot exercise a function on a State Road as defined in the RTA document 'Schedule of Classified Roads and State and Regional Roads.'"
Barangaroo Delivery Authority			
2		It is suggested that Barangaroo Delivery Authority (BDA) be listed with the local councils in the first sentence of the second paragraph.	Noted and amended
3.3.3		BDA assumes there will be some level of coordination across the various Metro contracts.	Noted, it would be included as a requirement for the contractors.
4.2		BDA should be listed in the organisation expected to have representation on a Traffic Control Group.	Noted and amended
6.5		BDA should be consulted with regard to speed zones within the Barangaroo area.	It is understood that any speed zone changes should be applied for through RMS. Consultation will occur via the TCG.
9.2		BDA has specific requirements regarding the erection of hoarding within the Barangaroo area.	BDA added to Section 9.2
10.2.3		BDA requests that copies of completed Road Safety Audits are provided.	RSA's will be submitted as part of the site specific CTMP. BDA is included in this process. (Section 6.3)

Section	Issue	Stakeholder Comment	Response
11.1		Under Key Issues for Barangaroo Station: Replace 'Adjacent construction activity' with 'Multiple concurrent construction activities' Add 'Bus and coach operations' Add 'General precinct traffic operations' Add 'Residential and business access'	Noted and amended except 'general precinct traffic operations' as this is a project wide consideration and not restricted to this site and is highlighted in Section 2.
12		Is intended for a Network Management Plan to be prepared?	It is not intended that a Network Management Plan be provided.
Appendix C		BDA also supports RMS and SCO position on the second dot point under the Barangaroo heading. BDA requests to be consulted regarding the installation of traffic lights.	Note added to the dot point regarding heavy vehicles turning around in Towns Place. Noted regarding traffic signals. BDA added to fourth dot point in Section 2.2 – Traffic Management Strategy.
Willoughby Council			
General		Use 'State', 'Regional' and 'Local' in road classification terminology	Noted and amended.
1.2		Include footpaths in managing roads.	Noted and amended
2		Include the following dot points re traffic management strategies: A safe road and pathway network. Support operation and use of sustainable transport modes to reduce on-road single occupant motor vehicle demand. Include bicycles in dot point two.	Reference to safe road and pathway network included as part of Section 2.1. Not a requirement of the project. Agreed and amended.
2.1, Table 2.1		Include under Safety: Provide a safe road and pathway network by application of the safe systems approach. Ensure traffic management maximises safety for all road users at all times. Include new result area – 'Amenity' with the following: Minimise noise and other environmental impacts on the residents and businesses in the vicinity of the work site.	These dot points covered in the principles points provided following the table. This would be covered by the environmental requirements for the project in the CEMF. It is not specifically a traffic management requirement. 15/12/2017 – Table 2.1 updated to include suggested wording and reference to Sydney Metro City & southwest Construction Noise and Vibration Strategy section 5.3 and 5.9.

Section	Issue	Stakeholder Comment	Response
2.1		Add the following dot points: Vehicles generated by the work site with destinations beyond the work site will travel on the road network in a safe manner consistent with safe system principles and practices. Noise and other environmental changes generated by construction traffic management do not worsen the local environment for residents and businesses. Provide a coordinated incident management approach that is consistent with the level of risk to safety and travel movement. Change the seventh main dot point to: Existing travel paths used by pedestrians and cyclists are maintained so far as is practicable with detours provided that are safe and do not lead to unreasonable increases in travel time and distance.	Refer to Section 9.5 Refer to CEMF Refer to Section 8.3 'pedestrians' added to second dot point regarding minimising delays.
2.2		Add dot points: The provision of regulatory signs and pavement markings on the road network adjacent to the work site to support construction activities. The operation of traffic control signals to ensure safe travel and support optimal movement of all road users including construction vehicles. Existing adjacent curbside parking and restrictions be retained for residents and businesses.	These facilities would be provided as required and outlined in the RMS Traffic Control at Worksites Manual. Existing parking and restrictions would be maintained as far as is practicable.
2.3	Hierarchy of access	The priority of the road users may change depending on the location, in some instances they may have equal priority. The strategic importance (functional hierarchy) of traffic routes and the existing administrative road ~~hierarchy~~ classification is listed below, from the highest to the lowest ~~priority~~ importance in the movement of people and goods :	This is based on the TfNSW hierarchy of access to stations. It is not proposed to change. Noted and partially amended, last phrase not included.
3.3.3	Site descriptions	The site description e.g. Northern Dive structure is different from that shown in Figure 3.1.	Noted and amended to correspond with Fig. 3.1.
3.3.4	Traffic control plans	Include "TCP to incorporate local council requirements where provided or work with the local council to provide a satisfactory alternate management arrangement."	Included as part of the CTMP requirements. No change proposed.

Section	Issue	Stakeholder Comment	Response
3.3.4	Traffic control Plans	Last sentence regarding RMS and SCO operational requirements. Council requirements should also be acknowledged and adopted where necessary. In Willoughby Council's case motor vehicle ingress and egress to the work site should all be via Mowbray Road.	This refers to the requirements that were provided as the approving authority in the development of the CTMP's. The use of Nelson Street would be dependent on the contractor's requirements and would be discussed with Council.
3.3.4	Pedestrian movement plans	Include: The needs of bicyclists should also be considered and management measures documented in the pedestrian and bicycle movement plan. This is particularly important where the work site is bounded by major roads such as State and Regional Roads.	Noted and included.
3.3.4	Parking management plans	Include: All changes the kerbside parking and restrictions on the non-State Road network should be reviewed and approved by Councils following review and recommendation by the Local Traffic Committee. Impacted users (residents and businesses) should be consulted and notified.	These matters covered in Section 6.1 (for Local Traffic Committee) and 5.1 (for consultation with residents and businesses).
5.1	Existing businesses and residents consultation	Third paragraph – add 'councils' to be notified	This section relates to potentially affected businesses and residents. Councils notice will be provided with the submission of the CTMP's for comment, in addition to the TCG and TTLG meetings. 15/12/2017 – 'local Councils' added to third paragraph in Section 5.
5.2	Notification of traffic changes	Include in second paragraph a reference to council and "A minimum of 7 days' notice is requested to minimise impacts including disruption to business as usual activities and programmed/planned works."	As indicated in the previous response, council's will received information through the provision of CTMP's for comment, TCG's and TTLG's.
5.4	Roadside messaging, second paragraph	Include "pedestrians and cyclists".	Noted and amended.
6.1	Policy context and legislative backing, second paragraph	Alter the paragraph as follows: Any changes to ~~regulatory signs~~ traffic control devices and traffic control facilities will require the approval from the road ~~authority~~ manager and arrangements with the road ~~authority~~ manager for the changes to occur. ~~Regulatory sign~~ Traffic control device and traffic control facility changes on ~~local~~ Local or ~~regional~~ Regional roads will require a submission to the local council and approval of the ~~local~~ Local ~~traffic~~ Traffic ~~committee~~ Committee and approval from the Council. Traffic control device and traffic control facility ~~Sign~~ changes on ~~state~~ State roads will require the approval of RMS.	Noted and amended, except for road manager and Local Traffic Committee. It is considered that the current wording adequately provides that the approval from council will require the submission to the LTC.

Section	Issue	Stakeholder Comment	Response
6.3	ROL	The road types for submission of an ROL should be State and Regional roads, not classified roads. Remove 'ROL' regarding council approvals and change to 'permits to undertake road occupancy'. Change 'non-classified' to 'Regional and Local'.	Propose removing 'classified' as this refers to roads where RMS is the Road Manager. This could include local roads within 100m of traffic signals. Agreed for removal of the term ROL as this is a specific TMC application. Agreed re removal of 'non-classified'.
6.4	Road Occupancy Licence approval process, first paragraph	Amend sentences as follows: ROLs are approved by the TMC, following endorsement by the SCO, for RMS ~~classified~~ managed roads (~~state~~ State roads) or locations on ~~unclassified~~ non-State roads within 100 metres of traffic signals. It should be noted that due to the critical nature of the potential traffic impacts for ~~unclassified~~ non-State streets roads within the Sydney and North Sydney CBDs	Generally agreed although would use 'Regional and local' in place of 'non-State'
7.4.1	Worker access and parking, Northern Dive site	Willoughby Council will not support the use of the Northern Dive Site for a park and ride site as this will generate unnecessary additional general traffic on already congested road network. Whilst the provision of some level of on-site car parking spaces in the Northern Dive Site is likely and beneficial, as it will reduce on-street parking demand, the capacity and management arrangement needs to be developed in consultation with the local Council. The draft final management plan should be provided to, and agreed by, the local Council	Noted, however, due to constraints on the other sites it may be necessary to provide parking on the northern site. Noting that this includes the Southern site and will be dependent on the contractor's requirements for the site and space being available. Any on-site parking would be considered as part of the site management plan prepared by the contractor. 15/12/2017 – Paragraph provided outlining need for consultation with Council as part of CTMP for on-site parking.
8.1.1	Policy and responsibilities, fifth paragraph	Construction speed limits on local roads to be applied for through council. The accuracy of this statement should be confirmed. I was not aware that Council could approve changes in speed limits.	Agreed, does not comply with the information provided in Section 6.5. Amended.
9.5	Management of risks to vulnerable road users	Add the following dot point: Maintain the existing pathway used by pedestrians and bicyclists. Maintain an acceptable width of the pathway if narrow is necessary. Minimise deviations from the existing pathway used by pedestrians and bicyclists should full/temporary/intermittent closure of the existing pathway is required.	Footpath widths are addressed in the second last paragraph of this section.

Section	Issue	Stakeholder Comment	Response
11.1	Site-specific issues	For Northern Dive site should include: Retention of the bus stop in Pacific Highway (north of Mowbray Road) so that it is safe and comfortable to access and use to ensure on-going road based public transport is accessible and safe for all residents and others in area surrounding the worksite.	Will include 'Bus stop on Pacific Highway'
TSE Contractor			
2.1, Table 2.1	Transport network, 4th dot point	Remove 'buses run on time'	Not agreed, it is one of the state government's objectives.
	Transport network, 6th dot point	Include 'where reasonable and feasible' at the end of the point	Not agreed, this is a condition of consent and does not include these words (Condition E80)
2.1	Construction activity compliance principles, 1st dot point	Remove 'must be made' regarding safe provision for vehicles, cyclist and pedestrians.	Not agreed, this is a condition of consent (condition E86)
	Construction activity compliance principles, 3rd dot point	Include 'where reasonable and feasible' at the end of the point	Not agreed, this is a condition of consent and does not include these words (Condition E80), also REMM T13
2.2	Traffic management strategy, 3rd dot point	Remove 'to mitigate congestion and provide rapid response should incidents or increased congestion occur as a direct result of the works. Notification of incidents or congestion should also be relayed to the Sydney Metro Delivery Office at the earliest opportunity.'	Not agreed, RMS and SCO requirement.
	Traffic management strategy, 4th dot point	Remove 'This may also require a NSW Police presence.'	Agreed and amended
	Traffic management strategy, 5th dot point	Add 'unless agreed with the owner/tenant prior.'	Not agreed, Condition E86 requires that 'measures must be implemented to maintain pedestrian and vehicular access to ….businesses and affected properties.'
3.3, Table 3.1	Traffic Control Plans	Delete 'Produced for each traffic change, and road occupancy, for all work sites. Requires the preparation of supporting plans.' And replace with 'Can form part of the site specific CTMP or be used as a standalone drawing for submission with Road Occupancy License applications and/or Council permits.'	Suggested sentence agreed. Deletion not agreed. In compliance with SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management.
		Add items and descriptions for Pedestrian Movement Plans, Vehicle Movement Plans and Parking Management Plans	Agreed, in accordance with SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management.
3.3.2	Construction Traffic Management Plans, 2nd paragraph	Add 'and, where relevant, the RMS Work Authorisation Deed (WAD) documentation. This will allow fulfilment of the WAD requirement for a Traffic Management and Safety Plan (TMSP).'	Agreed, also add 'subject to RMS review and approval' at end of sentence.

Section	Issue	Stakeholder Comment	Response
3.3.3	Site specific CTMP, 4th paragraph	Delete 'would' and insert 'may'	Not agreed, does not conform to SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management.
		Delete 'CTMPs will also provide details regarding on-site and off-site staff parking arrangements, including any proposed busing to and from worksites.'	Not agreed, requirement outlined in SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management and REMM T12. G10 refers to Parking Management Plans for this requirement. Sentence to be amended from 'CTMP' to 'Parking Management Plan'.
3.3.4	Traffic control Plans and other plans, 1st paragraph	Add' However, where works are in accordance with the definition of construction exempted works in the Conditions of approval or are low impact works which do not impact peak hour traffic flows, the TCP or a standalone drawing will be submitted to the relevant road authority for the temporary occupation of the road/path.	Not agreed, RMS and SCO will provide the determination if suitable.
	Traffic control plans, 2nd paragraph	Add "or has accreditation to a similar level."	Not agreed, TCP's should only be prepared by a suitably NSW qualified person.
	Vehicle movement plans	Delete " Vehicle movement plans should be included in site-specific CTMPs prepared by a suitably qualified person for the contractor. The requirements for the provision of VMP are detailed in Chapter 7 of the Traffic Control at Worksites Manual."	Not agreed.
	Pedestrian movement plans	Delete "Wherever it is necessary to divert or warn pedestrians of works the PMP should be included in the CTMP prepared by the contractor."	Not agreed
	Parking management plans	Insert "outside of the parking losses nominated in the EIS."	Not agreed, parking management plan will need to identify alternate parking arrangements, whether identified in the EIS or not.
5.1	Existing businesses and residents, 4th paragraph	Insert "significant" before changes and replace 'should' with "may".	Not agreed, refer to REMM T5.
5.4	Roadside messaging, 1st paragraph	Replace 'should' with "may".	Not agreed, any placement of signposting must be provided to provide for safe passage of vehicles, pedestrians and cyclists.
	Roadside messaging, 1st paragraph	Insert "The installation of signs will be detailed within the relevant traffic plan."	Agreed, although changed to "relevant construction traffic management plan."

Section	Issue	Stakeholder Comment	Response
6.3	Construction Traffic Management Plans Approval Process, Contract wide CTMP dot points.	Delete: Reviewed by environmental representative. After review and agreed edits, submitted to RMS for approval following the Sydney Coordination Office endorsement for approval, before construction commences at the relevant construction site. Published on the Contractors website prior to works commencing at the relevant site (Condition B15)	Not agreed, these requirements are outlined in the Conditions of Approval.
	Site specific CTMP dot points	Insert after 'Section 3.3' "for works identified as construction under MCoA definition"	Not agreed, any works that may impact on the road or footways will require a CTMP.
		Replace 'Sent to DP&E for information only' with "Will not be sent to DPE unless specifically requested for information purposes only."	Not agreed, these requirements are outlined in the Conditions of Approval.
		Delete: Published on the Contractors website prior to works commencing at the relevant site (Condition B15)	Not agreed, these requirements are outlined in the Conditions of Approval.
	ROL and related applications dot points, 1st paragraph	Delete 'A CTMP will be required to be approved prior to approval of the ROL:'	Not agreed, for ROL's that are required for project works, a CTMP will be required to be approved.
	Last paragraph	Delete 'Applications for scaffolds and hoardings would be to applied for with the relevant council with concurrent notifications to SMDO, RMS, SCO and TMC.'	Agreed as not specific top the ROL process.
	Last paragraph, last sentence.	Delete 'for council and other stakeholder feedback prior to submission'.	Not agreed, information on future ROL requirements are required to be presented to the TCG.
6.4	Road Occupancy Licence approval process, last two paragraphs	Delete: 'ROLs will generally be issued for relatively short periods of time and the TMC will require that an approved TCP or site CTMP for the work be in place. Information on approved ROLs should also be provided to the Sydney Metro City & Southwest Project Communications Team for notification, prior to works commencement.'	Not agreed, a minimum of a TCP is required and information on ROL's must be provided to the Communications Team to ensure co-ordination of any messages or enquiries from the public.
6.5	Speed Zone Authorisation, 2nd paragraph.	Change wording as follows: Depending on the extent of the works and project familiarity the application ~~will~~ may be supported by the site specific CTMP or a TCP. Short-term speed zone changes can be dealt with via the ~~CTMP~~ ROL process. Longer term (over six months) or permanent changes ~~must~~ are included in the site specific CTMP and are to be referred to RMS for assessment, consideration and approval.	Agreed and amended except for "ROL process". SM ES-ST-214 Principal's General Specifications G10 – Traffic and Transport Management requires CTMP.

Section	Issue	Stakeholder Comment	Response
6.7	Traffic Control Plans	Comment that the section appears to repeat information provided in Section 3.3.4.	Agreed, section deleted and information combined in Section 3.3.4.
6.9	Over-size or over-mass vehicle permits	Delete 'for requirements for permit types required, depending upon loads'	Agreed and amended.
6.10	Adjustments to bus routes and stops, 1st paragraph	Delete 'prior to submitting and ROL application to TMC'	Agreed and amended.
7.1	Haulage routes, 3rd paragraph	Delete 'contract wide and' before 'site specific CTMPs'	Not agreed, would still be required in contract wide CTMP if changes are proposed.
	Haulage diagrams	Suggested changes to routes shown.	Not agreed, routes shown are those exhibited and approved in the EIS. Changes to these approved routes would need to be documented in the CTMPs.
	Haulage routes, last paragraph	Add "where reasonable and feasible" regarding heavy vehicle movements during peak periods and through school zones.	Not agreed, REMM T13 does not include this. RMS and SCO have also rejected this.
7.2	Management of heavy vehicle movements, 2nd paragraph.	Amend sentence as follows: Each site-specific CTMP will need to demonstrate, where applicable, how marshalling facilities will need to be used to manage truck movements and reduce congestion.	Agreed and amended.
7.4	Construction/demolition vehicle types, 2nd paragraph	Insert "specific" before CTMPs at the end of the sentence.	Not agreed, vehicle type information should be included in all of the CTMPs. Sentence amended to include contract wide and site specific CTMPs.
7.4.1	Worker access and parking, 2nd paragraph.	Delete 'up to 300' from first sentence	Agreed and amended. Does not reduce the contractor's requirement to minimise the impacts of staff parking on the surrounding streets.
7.4.3	Driver training, 4th paragraph.	Amend sentence as follows: "Contractors are required to have systems in place to monitor heavy vehicles regularly used on the Project at locations at all times and address any identified non-conformances."	Not agreed, REMM T7 does not specify only heavy vehicles.
8.3	Emergency incident planning, 1st paragraph	Delete: 'An Incident Management Plan for on-road incidents, or incidents that impact on the public transport network should be submitted to the TMC Emergency Transport Operation section for review and comment.' Also 3rd dot point under Incident Management Plan procedures: 'Equipment that is to be ready always on potential call-out vehicles.'	Not agreed, SCO and RMS requirement.

Section	Issue	Stakeholder Comment	Response
9.2	Hoardings, 1st paragraph	Delete 'These may also need to provide site facilities for the workers on the site due to the constrained nature of the sites.'	Not agreed, this is a reference to type B hoardings with site sheds included on the hoarding.
	2nd paragraph	Delete 'The City of Sydney has published policies on hoardings on its website. While the policy document provides guidelines for the presentation of the hoarding, the branding and visual aspects of the hoarding are to be in line with TfNSW/Sydney Metro requirements.'	Not agreed.
	3rd paragraph	Delete 'In some locations there may also be a requirement for the hoarding to comply with design guidelines.'	Not agreed, no justification for removal.
	4th paragraph.	Delete 'all hoardings around Sydney Metro construction sites should comply with the TfNSW/Sydney Metro branding requirements.'	Not agreed, no justification for removal.
9.4	Pedestrian security/safety/lighting, 1st paragraph, last sentence.	Delete 'In those locations where this occurs, supplementary lighting is to be provided to meet the current standards.'	Not agreed, lighting will be required to highlight any potential hazards for pedestrians.
9.5	Management of risks to vulnerable road users, 4th paragraph, last sentence.	Insert "where current footpath widths are in accordance with DDA requirements."	Proposed wording not agreed, sentence amended as follows: Footpath widths are required to provide for two-way pedestrian traffic allowing for prams or strollers and wheelchairs to pass each other without requiring temporary widening from their existing width prior to construction commencement. Narrowing of the footpath width, if required, is to be approved by the relevant authorities.
Appendix C	RMS and SCO operational imperatives	A number of changes proposed to wording of imperatives.	Not agreed, will require consultation with RMS and SCO for any changes.
Inner West Council			
Page 39, Table 11-1	Inclusion of further wording within the Marrickville Dive Site.	Marrickville Dive Site contains 3 dot points regarding key issues and we would like you to include a few more. These are; • Construction traffic activity for the Marrickville Metro shopping centre expansion and the surrounding streets. • Construction traffic activity for the WestConnex site in St Peters, particularly with the involvement of May Street, Campbell Street, Bedwin Road & Edgeware Road. • Managing access at the intersection of Bedwin Road, Edgware Road & Edinburgh Road (potential signalised intersection).	Table 11-1 (page 61) updated to include Council's requested issues.

Appendix E: Meeting Notes

Sydney Metro City & Southwest – Traffic & Transport Liaison Group (TTLG Meeting No.1)

Date	Thursday 16 February 2017	**Time**	10:30 am – 12:00noon
Venue	12 Castlereagh St, Sydney, Level 7, Cherrybrook Meeting Room.		
Chairperson	Giovanny Ramirez GR	**Agency**	**Discipline**
Attendees	Nick Abrahim NA	Taxi Cl.	Agency liaison
	Mark Black MB	Fire Rescue	Metro East Zone Cmd.
	Stephen Blair SB	Police	Inspector
	Philip Brogan PAB	SMDO	Traffic & transport
	Adrian Bull AB	S Motorway	Technical Director
	Fil Cerone FC	SMDO	Sustainability & Env
	Emelye Coleridge EC	Lg Orourke	SYAB Contractor
	Jake Coles JC	SCO	Traffic & transport
	Bryony Cooper BC	C of Sydney	Exec. Manager
	David Donahue DD	Police	C of Sydney LAC
	Naomi Fiegel NF	SMDO	Stakeholder relationships
	Melanie Fyfe MF	BDA	Dir Transport/Infra.
	Aaron Gale AG	SCO	Traffic & transport
	Michael Garrard MG	SMDO	Mgr SYAB
	Brad Goodwin BG	Ambulance	Zone Mgr
	Eric Graham EG	STA	Mgr Eastern Region
	Huw Griffiths HG	Lg Orourke	SYAB Contractor
	Rick Griffiths RG	Fire Rescue	Commander Metro East
	Mark Hannan MH	C of Sydney	Traffic Ops Manager
	Ken Hind KH	SMDO	Traffic & transport
	Gordon Hughes GH	SMDO	Mgr Transport Planning
	Steve Illek SI	SMDO	Stakeholder relationships
	Wayne Johnson WJ	Metropolitan	Demo contractor
	Sean Kearns SK	Ambulance	Director South East
	Michaela Kemp MK	N Sydney Cl.	Traffic & transport
	Van Le VL	C of Sydney	Traffic & transport
	Terry Lee-Williams TLW	C of Sydney	Transport Advisor
	Tim Marsden TM	TfNSW	LRT
	Anthony McMahon AM	RMS	Interface Mgt
	Bert Musch BM	Metropolitan	Demo contractor
	Terry O'Connor TO	TfNSW	Mgr Delivery LRT
	Peter O'Leary POL	SMDO	Mgr Demolition
	Tim Parker TP	SMDO	Project Director
	Josh Powell JP	SCO	Traffic & transport
	Saskia Star SS	Port Authority	Marine Operations
	Daniel Sui DS	Willoughby	Traffic & transport
	Brendan Wiseman BW	Port Authority	Mgr Marine Operations
	Abdullah Uddin AU	L Cove Cl.	Traffic & transport
	Col Warne CW	C of Sydney	Traffic & transport
	Katherine Ziatar KZ	SCO	Traffic & transport
	Ben Shum BS	Delta Pty Ltd	Mng Demolition
Apologies:	Ian McCarthy IM		
	Trevor Newman TN		
	Brad Stafford BS		

Agenda Item No.	Action/Decision	Action By	Due Date
1.	**Welcome and Meeting Purpose**		
	GR welcomed all to the first Sydney Metro City & Southwest TTLG meeting. GR advised that the purpose of the TTLG meetings is to oversee and coordinate Sydney Metro City & Southwest project-specific and cumulative traffic and transport issues and impacts during construction. GR welcomes input from TTLG representatives so that, working together, we can ensure smooth delivery of the City & Southwest Metro project.		
2.	**Sydney Metro City & Southwest – Project Overview**		
	TP spoke to a presentation entitled City & Southwest Overview, February 2017 (pdf attached) noting by exception as follows: Strategic context of the Metro project developed via a coherent set of land use and transport plans for NSW and Sydney. Staged delivery. Delivery strategy through multiple contracts (refer to slide 5). First TBM in the ground in 2018. Two demolition contracts awarded in January 2017 (Metropolitan: Martin Place north and Delta Group: Chatswood, Crows Nest, Victoria Cross, Pitt St north, Waterloo and Marrickville) Sydney Yard Access Bridge (SYAB) contract awarded and will commence works in Q1 2017. Tunnels & Station Excavation (TSE) contract to be awarded in mid-2017. Over Station Development (OSD) investigations underway. Sydney Metro 'Customer Principles' being used to guide the design, development and operation of the services, products, systems and spaces.		
3.	**TTLG – Draft Terms of Reference**		
	PAB spoke to the TTLG Terms of Reference noting as follows: • Purpose as outlined by GR above. • Chair will be Sydney Coordination Office (SCO). Secretariat support will be provided by the Sydney Metro Delivery Office (SMDO). • TTLG attendance will be supplemented by a 'wider team' on an as needs basis. • All attendees will be invited to sign a confidentiality agreement as was done for the Sydney Metro Northwest Metro TTLG at inception in 2012. • The 12 Castlereagh Street building will be demolished in mid-2017 so a new TTLG meeting venue will need to be found. Stakeholders will be advised during March. Regular Traffic Control Group (TCG) meetings are being held		

	with roads SCO, RMS, SMDO, Metro contractors and roads authorities. • The TTLG endorsed the TTLG Terms of Reference.		
4.	**Sydney Metro SSI Approval – TTLG Roles**		
	FC spoke to a presentation entitled *Sydney Metro – Chatswood to Sydenham Planning Approval – TTLG Roles, February 2017 (pdf attached)* noting as follows: • Project declared as Critical State Significant Infrastructure. • SSI approval obtained for Chatswood to Sydenham section with 109 conditions. • Condition E77 calls for TTLG. • Condition E78 provides for the TTLG to request supplementary analysis and modelling where required. • Conditions E75-E98 deal in various ways with traffic and transport matters. **Action 1A**: TTLG representatives are requested to familiarise themselves with the SSI approval conditions as they relate to their organisations.	**All**	
5.	**Construction Traffic Management Framework & Consents**		
	PAB spoke to a *draft Construction Traffic Management Framework (CTMF)* document dated 15 February 2017 noting as follows: • SSI approval requires preparation of the CTMF and consultation with TTLG prior to lodgement with DP&E for approval. • CTMF may be lodged in DP&E in stages, a first draft dealing with the SYAB and the Demolition works and another subsequent draft dealing with TSE and all other City & Southwest contract works. • Metro contractors will produce contract wide (SYAB and Demolition excepted) and then site specific Construction Traffic Management Plans (CTMPs) within the context of the CTMF. Traffic Control Plans (and supporting plans) will also be prepared as required. • Site specific CTMP's will be required to be developed on the basis of a hierarchy of access. • Metro contractors will need to take account of potentially lengthy approval lead times in any works involving traffic signal construction or modifications. Action 1B: Local Council and BDA TTLG representatives are requested to provide the following advice before the next TTLG meeting: 1. Works which will require referral/consideration via the Local Traffic Committee and/or full council meetings. 2. Processing times for these and other consents/applications.	All	

6.	The Metro contracts (Sydney Yard Access Bridge (SYAB) & Demolition Contracts		
	EC spoke to a Sydney Yard Access Bridge video and slides noting as follows: • Three interface points: one at STA bus depot, Eddy Avenue existing Sydney Trains access and Regent Street access to SYAB bridge. • Haulage to and from the site will involve tower crane sections, some spoil and the large beams for the bridge itself under permit. • A Class B hoarding is proposed for Regent Street. This will require short term lane closures in Regent Street, a classified arterial road. • Program: Kick off in April 2017, demolition of terraces in June 2017, work under rail possessions (x3) in late September/early October 2017. SB asked how many heavy vehicle movements would occur via the bus depot and EC advised about 5 per hour. EG advised that heavy vehicle entries and exits via the bus depot would need to avoid the peak periods. TO noted that there would be a critical interface with the Light Rail project requiring coordination of the CTMPs. The key interfaces would be at Eddy Avenue and Chalmers Street and works associated with the move of the coaches to the western forecourt. MG noted that a draft CTMP for SYAB was with PAB and would be reviewed internally within SMDO prior to referral to the TCG and TTLG. POL spoke to three slides titled Demolition Status noting as follows: • Two demolition contracts awarded in January 2017 (Metropolitan: Martin Place north and Delta Group: Chatswood, Crows Nest, Victoria Cross, Pitt St north, Waterloo and Marrickville). • Demolition commencement dates driven by building acquisition and building vacant possession. • Program provides for works commencement in late March 2017 at multiple locations. • Ten other buildings to be demolished, 5 as part of the SYAB contract works and 5 under the TSE contract works. NA asked what the arrangements would be for stakeholder consultation for the demolition works and GR advised that this would occur through the TTLG and also via the weekly TCG meetings. SB asked if there will be issues associated with the demolition of homes and POL advised that the key issues will be noise, vibration and dust generation all of which will be mitigated during the works. SI reaffirmed that the SMDO Communications team has place managers		

	whose role it is to get to know the stakeholders in the affected areas with a view to ensuring the works do not have adverse impacts and to ensure that stakeholders are aware of upcoming works. CW noted that the City of Sydney has various requirements in regards to demolition works within the LGA.		
7.	**Other Matters**		
	1. PAB noted that SMDO is keen to identify and adopt streamlined approval processes applying to traffic management and other consents with a view to minimising the time taken to secure approvals. This may involve officer delegations, out of session referrals or other initiatives. SMDO will continue to investigate opportunities in consultation with roads authorities. 2. RG requested further details for emergency services representatives in relation to spoil removal haulage routes, vehicle types, pedestrian management and so forth. SI advised that briefings of emergency services have been organised in 2016 but additional briefing can be provided. [Post Meeting note: SMDO meeting with Local Area Command representatives will be held of 23 February 2017]. 3. NA asked if background material could be provided by SMDO so that TTLG representatives could communicate this information internally within their agencies. GR advised that the material presented today would be issued with the meeting minutes.		
8.	**Actions & Next Meeting**		
	Actions will be summarised in an actions register.		
	Next Meeting: The next TTLG meeting will be (TTLG 2) Thursday 16 March 2017.		

Meeting Notes

Sydney Metro City & Southwest - Traffic & Transport Liaison Group (TTLG Meeting No.7)

Date	Thursday 3 August 2017	**Time**	11:00 am – 12:30pm
Venue	680 George Street, Level 43, Boardroom.		
Chairperson	Giovanny Ramirez GR	**Agency**	**Discipline**
Attendees	Mark Black MB	Fire Rescue	Zone mgr
	Stephen Blair SB	Police	Superintendent
	Philip Brogan PAB	SMDO	Traffic & transport
	Emelye Coleridge EC	Lg Orourke	SYAB contractor
	Aaron Gale AG	SCO	Traffic & transport
	Luke Garden LG	SMDO	Tech advisor
	David Garrod DG	SMDO	SYAB contract mgt
	Berin Gordon BG	SMDO	TSE contract mgt
	Ken Hind KH	SMDO	Traffic & transport
	Michael Holmes MH	SMDO	Safety coordinator
	Gordon Hughes GH	SMDO	Director transport
	Justin Knight JK	BDA	Traffic & transport
	Sue Lewis SLw	TSE	TSE contractor
	Tony Ly TL	C of Sydney	Traffic officer
	Anthony McMahon AM	RMS	Metro interface mgt
	Alan McNamara AMcN	SMDO	TSE contract mgt
	Terry O'Connor TO	Light Rail	Mgr delivery LRT
	Frank Passarelli FP	STA	Eastern region
	Ken Reid KR	S Motorway	Construction Mgr
	Rob Ronchi RR	SMDO	Constructability
	Daniel Sui DS	Willoughby	Traffic & transport
	Ganesh Vengadasalam	C of Sydney	Traffic & transport
Apologies:	Nick Abrahim NA	Taxi Cl.	
	David Donahue DD	Police	
	Naomi Fiegel NF	SMDO	
	Melanie Fyfe MF	BDA	
	Eric Graham EG	STA	
	Rick Griffiths RG	Fire Rescue	
	Sean Kearns SK	Ambulance	
	Michaela Kemp MK	N Sydney Cl.	
	Van Le VL	C of Sydney	
	Ian McCarthy IM	RMS south	
	Sashika Perera SP	Lane Cove	
	Brendan Wiseman BW	Port Authority	

Agenda Item No.	Action / Decision	Action By	Due Date
1.	**Welcome and Meeting Purpose**		
	GR welcomed all to the meeting. The TTLG confirmed that the minutes from TTLG Meeting No.6 were an accurate record of the meeting.		
2.	**Actions arising from the Minutes**		
	There were no actions arising from the previous TTLG meeting.		
3.	**Contracts Update**		

Agenda Item No.	Action / Decision	Action By	Due Date
3.1	**Sydney Yard Access Bridge (SYAB):** EC provided a status update as follows: • Site compound established next to Mortuary Station • Demolition to start on Monday 7 August 2017. Works over 2 weeks. Then change hoardings. • Set up 450t crane August / September 2017. • Set up tower crane in Regent St site. • Beam and other deliveries being planned. • Road safety audit summary by location (refer to slides). SB asked about possession of Regent St for beams. EC advised that lifts would be done from the rail corridor. SB asked about delivery of beams noting that the Hawkesbury River bridge cannot be used at some times. Concern about heavy vehicles mixing with peak period traffic. EC to check timing. GR noted in response to the road safety summary that appropriate signage would be required in Regent Street to advise of the left in/left out access restriction.	**EC**	
3.2	**Tunnels and Station Excavation (TSE):** SLw provided a status update as follows: • CTMPs approved for demolition works at Chatswood dive site, Crows Nest, Victoria Cross, Martin Place, Pitt Street Stage 1, Waterloo station and Marrickville dive site. Stage 2 CTMP for Pitt Street being reviewed. • Overarching CTMP has been distributed to agencies for comment. Site specific CTMP will be developed for each site. CTMPs will include: hoarding placement to ensure sight distance is maintained, site access/ egress points including nominating traffic control devices, emergency services access requirements and a review of special and/or cumulative events that may be impacted or impact on TSE works. • CTMPs will include Traffic Control Plans (TCP), pedestrian movement plans (maybe included on TCP), vehicle management plans (maybe included on TCP), road safety audits. CTMPs may also include traffic staging plans (applicable at sites where multiple changes to the travel way are proposed over the duration of the project for example Martin Place station and Barangaroo) and parking management plans BG spoke to a series of demolition slides at each of the works sites.		
3.3	**City & Southwest (SSC):** RR provided a status update as follows: • Bridge, rail corridor and station works. • EIS for the SSC works being finalised for exhibition in Q3 2017. • Interface with ARTC between Marrickville and Belmore. • Works to multiple bridges with partial bridge closures. Illawarra Rd bridge to be replaced.		
3.4	**Central Station Main Works:** LG provided a status update as follows: • Metro Station Box – included in C&SW base planning approval. • Central Walk – Modification to C&SW base planning approval. • Modification public exhibition 21 Jun 2017, closed 2 Aug 2017. • In procurement stage. • Each platform planned to have 4 escalators and a lift.		
4.	**Sydney Metro Approval Update**		

Agenda Item No.	Action / Decision	Action By	Due Date
	PAB summarised the approvals status of key SMDO projects (slide attached) noting that the Central Station Main Works, Sydenham Station & Sydney Metro Trains Facility South (SSJ), Victoria Cross/Artarmon Substation and Martin Place Station are all modifications to the approved EIS.		
5.	**Heavy Vehicle Road Safety Assessment - Overview**		
	MH provided an overview of SMDOs approach to heavy vehicle road safety as follows: • SMDO has estimated the levels of risk associated with heavy vehicle activity during project construction. Equivalent fatalities defined. • Different risk profile than for Sydney Metro Northwest, a more constrained network with higher concentrations of pedestrian and cyclist activity in the Sydney CBD. • Learnings from London Crossrail project. • Ongoing liaison with SCO, Centre for Road Safety and RMS heavy vehicle compliance unit. • Vulnerable road users important. • Risk mitigation measures identified and backed down to project contracts. • Haulage companies must satisfy accreditation including safer vehicles accreditation. • Safety measures to be installed on vehicles (mirrors, under-run guards etc). • Ongoing marketing (Be truck aware, etc) and education (TAFE) campaigns. MH advised that engagement with industry on Heavy Vehicle Safety Standard requirements was ongoing.		
6.	**Construction Traffic Management Framework – Update**		
	KH provided an overview of the draft CTMF as follows: • Prepared in response to Condition E81 of project approval. • Removes need for contractor prepared CTMPs to be submitted to DP&E for approval. • Demolition and SYAB specific CTMF approved. • Separate CTMF covering other Metro contracts nearing completion. • Includes RMS / SCO operational imperatives. • Council consultation ongoing through Metro construction. • Special Events requirements. • Addresses heavy vehicles types including truck and dogs. • Will be submitted to DP&E in August 2017.		
7.	**Other Matters**		
	Nil other matters		
	Next Meeting: The next TTLG meeting will be (TTLG 8) Thursday 31 August 2017.		

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Mr Stuart Hodgson
Principal Manager,
Program Sustainability Environment & Planning
Sydney Metro
Transport for NSW
PO Box 588
NORTH RYDE BC NSW 1670

18 September 2017

Ref: 170108_CTMF II

Dear Stuart

RE: Endorsement of Construction Traffic Management Framework (CTMF) II- Sydney Metro City & Southwest Chatswood To Sydenham Contracts – TSE, STME, TSOM, SSJ, CSM

Thank you for providing the following documents for Environmental Representative (ER) review and endorsement as required by the Condition of Approval E81 of the Sydney Metro City & Southwest project (SSI – 15_7400 January 9 2017).

- Construction Traffic Management Framework II (CTMF-II) Sydney Metro City & Southwest Chatswood To Sydenham Contracts – TSE, STME, TSOM, SSJ, CSM (28 August 2017, Version: 2.1)

This CTMF has been prepared to address the general requirements for the following contracts:

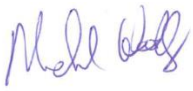
- Tunnel and Station Excavation (TSE).
- Stations, Mechanical and Electrical Works (STME).
- Trains, Systems, Operations and Maintenance (TSOM).
- Sydenham Station Junction (SSJ).
- Central Station Main (CSM).
- Any other contract commissioned for construction of the Chatswood to Sydenham component of Sydney Metro City & Southwest.

The CTMF has gone through a consultation process with relevant agencies. Comments and Sydney Metro responses to comments dated 28 August 2017 were provided as part of the CTMF documentation.

It is noted that the ERs are not traffic specialists and have not considered technical aspects of the document. In reviewing this document, Environmental Representatives (ERs) have relied on RMS and SCO feedback on the CTMF noting that they have no further comments on the document (emails from RMS and SCO dated 13 September 2017).

As an approved ER for the Sydney Metro City & Southwest project, I and other ERs have reviewed and provided comment on earlier versions of this document and (subject to the above comments) consider the referenced version appropriate for submission to the Department of Planning and Environment for their review.

Yours sincerely



Michael Woolley
Environmental Representative – Sydney Metro – City and South West

NSW GOVERNMENT | Planning & Environment

Mr Stuart Hodgson
Principal Manager
Program Sustainability Environment & Planning
Sydney Metro, Transport for NSW
PO Box 588
North Ryde BC NSW 1670

Our ref: SSI 15_7400

Dear Mr Hodgson

Sydney Metro City & Southwest Chatswood to Sydenham (SSI 15_7400)
Construction Traffic Management Framework (Other Contracts) under Condition E81.

I refer to your correspondence dated 20 September 2017, submitting the Construction Traffic Management Framework (CTMF) for Other Contracts, under condition E81 for the Secretary's approval. I also note the further revisions to this document, responding to the Department's detailed comments and requirements.

The Other Contracts are additional to the Sydney Yard Access Bridge and demolition works, for which a CTMF was previously approved and include:

- Tunnel and Station Excavation
- Integrated Station Development for Crows Nest, Victoria Cross, Martin Place, Pitt Street.
- Barangaroo Station
- Waterloo Station
- Line-wide works
- Trains, Systems, Operations and Maintenance
- Sydenham Station Junction
- Central Station Main
- Any other contract commissioned for construction of the Chatswood to Sydenham component of Sydney Metro City & Southwest.

The Department has reviewed the updated CTMF (Rev 2.5 dated 18 December 2017) for the other contracts and is satisfied it addresses the requirements of condition E81 by setting out the approach to managing transport and traffic issues for the works. I'm also satisfied that consultation with relevant stakeholders, including Councils and the Traffic and Transport Liaison Group (TTLG) has been undertaken as required.

I note that the management of the site-specific issues will be addressed within the relevant Construction Traffic Management Plan (CTMP), required under condition E82. I remind you of the need to ensure the CTMPs are consistent with the CTMF and to consult with the TTLG and gain Sydney Co-ordination Office's endorsement and RMS's approval of these documents before construction commences at the relevant construction sites.

If you have any further queries or require clarification on this matter, please contact Jacqui McLeod, Team Leader - Infrastructure Management at jacqui.mcleod@planning.nsw.gov.au.

Yours sincerely

21/12/17

Stacy Warren
Director Infrastructure Management
as delegate of the Secretary