



Metropolitan

DEMOLITIONS GROUP

Construction Traffic Management Plan (CTMP)

Sydney Metro City & Southwest
Demolition Works - Package B Martin Place

Project/Plan No: MD1968/14
for Transport for NSW

Controlled Document Number: 001

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Contents

1	Project Information	6
1.1	Introduction	6
1.2	Scope.....	6
2	Objectives.....	8
2.1	Report Structure	8
3	Project Information	9
3.1	Project Name.....	9
3.2	Project Address	9
3.3	Project Duration	9
3.4	Project Manager.....	9
3.5	Site Supervisors	9
3.6	Client Contact.....	9
4	Legislative Requirements, Guidelines and Standards	10
4.1	Approvals and procedures	11
4.2	CTMP Principles.....	11
4.3	Compliance to the Legislative Requirements, Guidelines and Standards.....	11
5	Existing Transport Conditions	31
5.1	Site Location	31
5.2	Road Network	31
5.3	Traffic Volumes	32
5.4	Kerbside Uses	32
5.5	Pedestrian and Cyclist Facilities	33
5.6	Public Transport Services	34
5.6.1	Bus Services	34
5.6.2	Train Services	35
5.6.3	Taxi Services.....	35
5.6.4	Existing Traffic Generation.....	35
5.6.5	Concurrent Construction Projects	36
6	Stakeholder Consultation.....	37
6.1	During Development of CTMP	37
6.2	Post CTMP Approval.....	38
7	Demolition Methodology.....	39
7.1	Description	39
7.2	Demolition Stages and Duration	39
7.3	Hours of Operation	40
7.4	Site Access.....	40

7.5	Traffic Staging Plans	42
7.6	Construction Traffic Generation	44
7.7	Material Haulage Options	45
7.8	Traffic Management.....	47
7.9	On-Site Parking.....	48
7.10	Pedestrian and Cyclist Management.....	48
7.11	Dilapidation Survey	49
8	Assessment of Construction Impacts	49
8.1	Impacts to Incidence and Emergency Services Access.....	49
8.2	Impacts to Special Events.....	50
8.3	Impacts to Unplanned Events	51
8.4	Impacts to Pedestrians and Cyclists	51
8.5	Impacts to Bus Zone and Bus Services	52
8.6	Impacts to Taxis.....	52
8.7	Impacts to On-Street Parking and Loading Zone.....	52
8.8	Impacts to Adjacent Properties.....	52
8.9	Cumulative Impacts to Surrounding Road Network	52
8.10	Impacts to Light Rail	55
9	Mitigation Measures	56
9.1	General Traffic Management Mitigation Measures.....	56
9.2	Parking/ Loading/ Bus Zone Signage	58
9.3	Traffic Control Plan	58
9.4	Pedestrian Access Management	60
9.5	Additional Enhancement for Road User Safety	61
9.6	Road Safety Audits	61
9.7	Contingency Plans	61
9.8	Consultation and Communications	62
9.9	Any comment, feedback, complaint can be made to the project manager and site supervisors via the contact details listed in Section 3.4 and 3.5.Implementation of Corrective Actions.....	62
9.10	Site Inspections and Record Keeping	62
9.11	Staff Training	63
9.11.1	Site Induction	63
9.11.2	Driver Training	63
10	Complaint Management	64
11	Signature of Employees.....	65
12	Conclusions	66
	Appendix A – Stakeholders Comments to Earlier Version of this CTMP	67
	Appendix B – Minutes of TTLG Meeting	68

Appendix C – Swept Path Analysis69

Appendix D – Proposed Signage Plan70

Appendix E – Traffic Control Plan71

Appendix F – Road Safety Audit72

CTMP - Revision Control

Issue number	Date Issued	Amended Page(s)	Action / Amendment Description	Approved By
001	14/03/17		Created	Bert Musch
002	24/04/17	Refer to tracking sheet	Re-issue for final review and comment	Bert Musch

CTMP – Review

Date Reviewed	Reviewed By	Was Revision Required

CTMP - Controlled Document Distribution

Copy	Issued To	Organisation	Date	Authority
01				
02				
03				

1 Project Information

1.1 Introduction

The New South Wales (NSW) Government through Transport for NSW (TfNSW) is implementing *Sydney's Rail Future*, 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 commuters and customers in the future.

Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*. The Sydney Metro network consists of Sydney Metro Northwest (previously known as the North West Rail Link) and Sydney Metro City & Southwest.

The proposed Sydney Metro City & Southwest (SMC&SW) comprises of two core components:

- The Chatswood to Sydenham project involves the construction and operation of an underground rail line approximately 15.5 kilometres long inclusive of new stations between Chatswood and Sydenham.
- The second core component will involve upgrading the 13.5 kilometre rail line and existing stations from Sydenham to Bankstown.

Metropolitan Demolitions Pty Ltd (MD) has been awarded the contract to undertake the Sydney City Metro & Southwest, Package B - Martin Place (the Project).

Metropolitan Demolitions Pty Ltd (MD) together with Metropolitan Demolitions & Recycling (MDR) are collectively referred in our Management Plans as Metropolitan Demolitions Group (MDG).

1.2 Scope

The scope of works consists of the demolition and removal of four buildings located at:

- 55 Hunter Street
- 5 Elizabeth Street
- 7 Elizabeth Street;
- 8 to 12 Castlereagh Street.

The Projects scope of works includes:

- Demolition and removal of buildings elements and infrastructure including basement levels, excluding
- Concrete slab on ground
- Section of walls acting as retaining structures
- Disconnect and cap all utilities/services at relevant property boundaries or as per provided location
- Traffic management
- Waste sorting and removal
- Site remediation
- Asbestos removal
- Decommissioning of plant
- Designing and installation of Temporary Works
- Remove all water meters and return to Sydney Water
- Protection of structures
- Transport of waste
- Prepare Management Plans
- Prepare and submit Survey Plan
- Coordination of the interface Work

Key stages of the project will be carried out as described in **MD1968/03.A Demolition Work Plan** (DWP) prepared for the project. Work will generally follow the sequence as indicated below.

1. Receive Handover of Site and sign off services
2. Site induction
3. Demarcate site and define Exclusion Zones
4. Install Environmental Controls
5. Practical Removal of Hazardous Materials

6. Soft strip structure
7. Erect scaffold and protection
8. Mechanical Demolition
9. Remove rubble and rubbish from site
10. Handover
11. Demobilisation.

All works will be completed in accordance with Code of Practice: Demolition work, AS2601: The demolition of structures and shall meet the requirements of the Work Health and Safety Act 2011 (NSW) and Work Health and Safety Regulation 2011 (NSW).

2 Objectives

This Construction Traffic Management Plan (CTMP) is a sub plan to the Construction Environmental Management Plan (CEMP) and is to be read in conjunction with all Management Plans related to this project.

The objective of this CTMP is to identify how MD will implement traffic management procedures to ensure that the works required for the demolition of four high rise buildings are undertaken safely, while minimising the impact of constructions works on pedestrian, traffic and public transport in the vicinity of the site.

This CTMP and the associated traffic staging plan, traffic management plan, vehicle movement plan, and pedestrian movement plan are in compliance with the Sydney Metro documents outlined in Section 4.

During the refinement of this CTMP, MD has discussed the proposed demolition works and traffic management strategies various stakeholders as documented in Section 6.

This CTMP is to be submitted to Traffic Management Centre (TMC) of the Roads and Maritime Services (RMS) following City of Sydney and Sydney Coordination Office endorsement before demolition commences at the site. In accordance with Construction Traffic Management Framework Section 3.6.4, due to the critical nature of the potential traffic impacts for unclassified streets within the Sydney and North Sydney CBDs that application for ROL on streets within these areas will be required to be submitted to TMC.

Various stakeholders including City of Sydney, Transport for NSW and Sydney Metro have provided comments to the earlier version of this CTMP which has been documented in Appendix A. This CTMP has considered all comments and addressed in various sections of the report accordingly.

The primary traffic and pedestrian management objectives and principles are to:

- provide an appropriate, convenient and safe environment for pedestrians
- maintain existing levels of safe public transport access
- retain, as far as possible, existing kerb space for parking, loading and buses
- restrict construction vehicle movements to designated routes to/ from the site
- manage and control construction vehicle activity in the vicinity of the site
- minimise disruption to traffic operation, road users, pedestrians, cyclists and access to adjoining properties
- maximise the safety for workers by applying low exposure work methods, education and installing appropriate traffic controls
- construction activity to be carried out in accordance with approved hours of works.

2.1 Report Structure

This report has been structured as follows:

- Section 3 provides project details and contact persons.
- Section 4 confirms this CTMP has been prepared in accordance with the legislative requirements, guidelines and standards.
- Section 5 describes the existing transport context and the concurrent construction works.
- Section 6 details the consultation process with the stakeholders and various agencies.
- Section 7 provides an overview of the proposed demolition methodology.
- Section 8 assesses the construction impacts.
- Section 9 recommends the mitigation measures.
- Section 10 details the complaint management.
- Section 11 states the employees' agreement to work to this CTMP in entirety.
- Section 12 draws conclusions on the CTMP.

3 Project Information

3.1 Project Name

Sydney Metro City & Southwest – Package B – Martin Place
Demolition Works of 8-12 Castlereagh Street, 5-7 Elizabeth Street, and 55 Hunter Street, Sydney

3.2 Project Address

8-12 Castlereagh Street, 5-7 Elizabeth Street, and 55 Hunter Street, Sydney

3.3 Project Duration

Project Start Date: 01/05/17

Project Completion Date: 30/04/18

3.4 Project Manager

Signature: _____

3.5 Site Supervisors

MD nominates the following site supervisors who will be responsible for maintenance of traffic control devices and temporary roadways during and outside normal working hours, and attendance at traffic incidents where required to do so by the Police and emergency services. These contact details will be provided to the Police.

Supervisor 1

3.6 Client Contact

Name: tba

Phone: tba

4 Legislative Requirements, Guidelines and Standards

This CTMP is designed to comply with the requirements outlined in the documents listed in Table 1 as follows:

Table 1: Overview of the Legislative Requirements, Guidelines and Standards

Document / Guide	Summary	Specific Requirements
Principal's General Specifications G10 - Traffic and Transport Management SM ES-ST-214, Sydney Metro Integrated Management System	It contains the traffic and transport management requirements that are to be met by the Contractor during the performance of the Contractor's Activities, including the management of the impacts of the Contractor's Activities.	The CTMP should include any traffic staging arrangements, and inclusion of traffic control plan, vehicle movement plans, pedestrian movement plans, and parking management plans. A road occupancy license to be obtained for occupancies that occur on-road.
Construction Traffic Management Plan Framework, Sydney Metro City & Southwest, Chatswood to Sydenham, Revision 1, November 2016, Transport for NSW	It provides an outline of the traffic management requirements and processes required for the preparation of the CTMP in terms of contents, principles and objectives, contractual requirements, Revised Environmental Mitigation Measures (REMM) and other obligations of the SSI Planning Approval.	The site specific CTMP should include the proposed traffic and parking management measures which are developed in consultation with the Sydney Coordination Office, RMS, Sydney Light Rail Team within TfNSW, and City of Sydney. It includes any relevant correspondence with stakeholders (e.g. bus operators) where applicable. It also includes the Traffic Control Plan (TCP) for the specific works.
Critical State Significant Infrastructure, Sydney Metro City & Southwest Chatswood and Sydenham, Conditions of Approval, January 2017	It lists administrative conditions for the critical state significant infrastructure including the establishment of Traffic and Transport Liaison Group (TTLG), traffic, transport and pedestrian access, and construction traffic and access.	Ongoing consultation with TTLG regarding the traffic and management measures during the development of the CTMP. The CTMP should include efficient and safety site access, erection and maintenance of hoarding, cumulative construction vehicle management, bus facilities, signage changes, parking management, heavy vehicle management, emergency and property access, user and passenger safety, incidence response, monitoring of transport and access impacts etc.
Revised Mitigation Measures Allocation, Tunnel and Station Excavation, Revision 2.0.	It provides a list of specific mitigation measures in relation to construction traffic and transport.	The CTMP should include mitigation measures to manage construction traffic and transport impacts.
City of Sydney Standard Requirements for Construction Traffic Management Plans and Standard Requirements for Construction Traffic Management Plan Report	The document details specific requirements during the demolition, excavation and construction works to be undertaken within the City of Sydney area.	The CTMP should include, site access locations, truck movements, traffic control measures, road user priority and TCP etc.
Road and Maritime Services Guide to Traffic Control at Worksites Version 4, 2010.	This Guide must be used on all RMS road work sites, and is also encouraged to be used on non-RMS sites. Standard TCPs can be used at work sites for which the plan meets all requirements,	The TCP should show signs and devices arranged to warn traffic and guide it around, or past, a work site. It is to detail the location, spacing and sizes of all signs and devices, parking marking, any containment or safety fencing and pedestrian routes etc.

Document / Guide	Summary	Specific Requirements
	where appropriate, the standard TCP could be modified with strict limits to suit site conditions.	
Australian Standard AS1742.3-2002 – Manual of uniform traffic control devices, Part 3, traffic control devices for works on roads.	It provides a set of uniform practices for the signing and delineation of construction and maintenance works which will promote the safety of both workers and road users at the work site.	Any temporary traffic control devices must be installed in accordance with AS 1742.3:2009.
Roads Act 1993	Obtaining a road occupancy license (ROL) for the specified activities is a legal requirement under Section 138 of the Roads Act 1993.	In this case, a ROL is to be applied through TMC due to the critical nature of the potential traffic impacts for the roads within the Sydney CBD.

4.1 Approvals and procedures

This CTMP has been prepared in consultation with the Sydney Coordination Office, RMS, Sydney Light Rail Team within TfNSW, and City of Sydney.

Prior to any demolition works a ROL must be obtained for the specified activities as it is a legal requirement under the Roads Act 1993.

The Application for a ROL consists of a CTMP and traffic control plans (TCP). Although the subject site is located within the City of Sydney area, it is understood that TMC will assess, manage and issue the ROL due to the critical nature of the potential traffic impacts for unclassified streets within the Sydney CBD. As such this CTMP will be submitted to the TMC for approval of the ROL following City of Sydney and Sydney Coordination Office endorsement and approval by RMS before demolition commences at the site.

4.2 CTMP Principles

This CTMP has been developed with the following principles in mind to ensure:

- the provision of a safe environment for road users and workers.
- the hierarchy of access given to the following order, with incidents & emergency services given top priority, followed by events (special and unplanned), pedestrians, bicycles and buses etc.
- the overall impact on road users is kept to a minimum.
- access is maintained for the local community, transport operators and commercial developments.
- road users and local communities are regularly informed in relation to changed traffic conditions.

4.3 Compliance to the Legislative Requirements, Guidelines and Standards

Compliance tables against the relevant requirements are shown in Table 2 through to Table 7 with a reference of where the information is located in this CTMP.

Table 2: Compliance to Principal's General Specifications G10 - Traffic and Transport Management

Heading	Requirements	Reference in this CTMP
2.1	(a) The Contractor must construct the Project Works and construct and remove the Temporary Works with the least possible obstruction to pedestrians, cyclists, public transport services and road traffic.	Section 7.4
	(b) The Contractor must undertake all work necessary to provide for the safe movement of pedestrians, cyclists, public transport services and road traffic and the	Sections 9.1 to 9.4

Heading	Requirements	Reference in this CTMP
	protection of persons and property around the Construction Site and all other areas affected by the Project Works, the Temporary Works and the Contractor's Activities.	
	(c) The Contractor must prepare and submit the Construction Traffic Management Plan and, where required, all Traffic Control Plans to the Principal's Representative and each relevant Authority and obtain all necessary Approvals from the relevant Authority for temporary pedestrian, cyclist, public transport service and road traffic arrangements, including the installation of and changes to any regulatory traffic control devices, road or thoroughfare.	Section 9.3
	(d) The Contractor must also obtain all necessary Approvals from each relevant Authority to enable it to direct traffic and to appoint Traffic Controllers to provide for the safe movement of pedestrians, cyclists, public transport services and road traffic and the protection of persons and property around the Construction Site.	Section 4.1
	(e) The Contractor must conform to the requirements of all relevant Authorities, the RMS Traffic Control at Worksites Manual, AS 1742.3 Manual of uniform traffic control devices Part 3: Traffic control devices for works on roads and this Principal's Specification G10, when planning and carrying out traffic and transport management.	Section 4 and throughout the CTMP
	(f) The Contractor must conform to applicable vulnerable road user initiatives required by the Principal and relevant Authority to enhance pedestrian, cyclist and motorist safety in the vicinity of construction sites. These may include measures such as deployment of speed awareness signs in conjunction with variable message signs, blind spot and other construction vehicle devices, Metro project specific heavy vehicle driver training and shared experience educational events.	Section 9.11.2
	(g) The Contractor must not reduce or adversely impact road network traffic capacity and traffic flow efficiency, except after hours, where approved.	Section 7.4
2.2	(a) Details of any traffic staging arrangements associated with each proposed construction stage, including Traffic Staging Plans, and the time periods during which each stage will be in operation	Section 7.5
	(b) Traffic Control Plans (TCP), including provision for cyclists, and any specific traffic control arrangements associated with the conditions of approval of the ROL. The TCP sets out the specific traffic and transport management arrangements to be implemented at specific locations during the construction of the Project Works and Temporary Works	Section 9.3
	(c) Vehicle Movement Plans (VMP) showing the preferred travel paths for vehicles to enter, leave or cross the through traffic stream. A VMP is a diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP may be combined with or superimposed on a TCP.	Section 7.7
	(d) Pedestrian Movement Plans (PMP) showing the allocated travel paths for workers or pedestrians around or through the work site. A PMP may be combined with or superimposed on a TCP.	Section 9.3 and 9.4
	(e) Parking Management Plans (PMP) that identify parking requirements and on and offsite 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.	Section 9.2
	(f) Provision of access to adjoining properties and side roads affected by the construction	Section 8.8
	(g) Copies of any ROL and approvals from other relevant authorities obtained	N/A

Heading	Requirements	Reference in this CTMP
	<p>(h) Design drawings for any temporary roadways and detours, including alignment and surface levels, pavement widths, pavement cross-sections and drainage.</p> <p>(i) Names and contact details of nominated personnel responsible for attendance at traffic incidents where required to do so by the Police and emergency services, and for maintenance of traffic control devices and temporary roadways outside normal working hours. Provide confirmation that these details have been provided to the Police.</p>	<p>N/A</p> <p>Section 3.1</p>
2.3	<p>The TCP must show, where applicable and appropriate, the following details:</p> <p>(a) Types and locations of permanent regulatory (R series) and warning (W series) signs.</p> <p>(b) Types and locations of temporary signs (T series) including advance warning signs and variable message signs (VMS).</p> <p>(c) Locations of permanent and temporary traffic signals.</p> <p>(d) Locations of any required Traffic Controllers.</p> <p>(e) Locations and lengths of taper and safety buffer areas.</p> <p>(f) Locations of safety barrier systems including end terminals.</p> <p>(g) Pedestrians and cyclists paths.</p> <p>(h) Locations of entry and exit gates to work areas, individually numbered and signposted.</p> <p>(i) Details of access to adjoining properties, car parking areas, and side roads.</p> <p>(j) Pavement marking details, including types of delineation required, turning arrows, stop/holding lines and other road markings, types and positions of raised pavement markers and other delineation devices.</p> <p>(k) Locations of temporary lighting.</p>	Section 9.3
2.4	<p>The Traffic Staging Plans must show, where applicable and appropriate, the following details:</p> <p>(a) Lane configurations on existing and new (temporary and permanent) pavements, indicating any departures from existing traffic lanes.</p> <p>(b) Intersection layouts and temporary traffic signal arrangements.</p> <p>(c) Working areas and pedestrian and cyclist paths.</p> <p>(d) Access to residential properties, local businesses and community facilities.</p> <p>(e) Pavement markings.</p> <p>(f) Drainage system, both temporary and permanent, including any pollution control measures.</p> <p>(g) Utility services and their impact on the Project works, temporary works and Contactor's activities.</p> <p>(h) If removal of pavement markings is required, details of the proposed methods for removal, the estimated durations to carry out the removal, and if necessary any proposed measures to restore the road surface.</p>	Section 7.5
2.5	Road Occupancy Licences	Section 3.1
3.1	<p>Traffic Control Devices</p> <p>The Contractor must supply and install the following, and remove them when the devices are no longer required:</p> <ul style="list-style-type: none"> • regulatory traffic control devices • temporary speed zoning signs • portable and temporary fixed traffic signals • public transport service related portable and temporary fixed regulatory and advisory signage 	Section 9.3 and 9.5

Heading	Requirements	Reference in this CTMP
	Public transport service portable and temporary fixed regulatory and advisory signage must be legible, of a high standard and similar to that used in permanent situations to the satisfaction of the Principal.	
3.2	Roads and Property Accesses – The Contractor must at all times provide safe and convenient passage for vehicles, pedestrians and cyclists along, to and from roads and property. Contractor’s Activities that affect the use of areas around the Construction Site and existing accesses must not be undertaken without providing adequate alternative provisions, as required by all relevant Authorities and affected property owners, and to the prior satisfaction of the Principal’s Representative.	Section 8.8
3.3	Traffic Controllers – The Contractor must advise the Principal’s Representative of the names of proposed traffic controllers and their traffic controllers’ certificate numbers and expiry dates.	Section 9.3
3.4	Opening Temporary Roadways and Detours to Traffic – All signposting, pavement marking, safety barriers and portable or temporary traffic signals must be completed before the opening of temporary roadways to traffic, pedestrian and cyclist route changes and public transport facility changes.	N/A
3.5	Maintenance – The Contractor is responsible for the maintenance of temporary pedestrian and cyclist thoroughfares and detours, temporary public transport facilities and temporary roadways and detours and must ensure the thoroughfares and road surfaces are kept safe for pedestrians, cyclists and traffic. Any potholes or other failures must be repaired without delay and within 2 days of the occurrence of the pothole or failure.	Section 9.1
3.6	Removal – Upon completion of the Project Works all temporary pedestrian and cyclist thoroughfares and detours, temporary public transport facilities and temporary roadways and detour arrangements must be removed and the area restored to at least the state which existed prior to the commencement of the Contractor’s Activities.	Table 9.3?
4.1.1	The Contractor must make the following pedestrian traffic management measures: (i) Existing longitudinal pedestrian footpaths will be maintained either in their current form, or on an alternative adjacent alignment. Wherever possible works on footpaths (where required) will be scheduled to occur outside of peak pedestrian times.	Section 9.4
	(ii) Where construction works require full or partial occupation of the existing footpath, the Contractor must temporarily narrow footpaths around the worksite or to divert pedestrians to adjacent footpaths via safe crossing facilities with the appropriate barriers and signage. Any diversions may require pedestrian demand modelling and must be agreed with the relevant Authorities.	N/A
	(iii) Footpath widths are to allow two-way pedestrian traffic that meets the pedestrian demand and has sufficient space provided to accommodate prams, strollers and wheelchairs without requiring temporary widening from their existing width prior to construction commencement. Narrowing of footpath width if required is to be approved by the relevant authorities.	Section 8.4 and 9.4 for a width reduction of 600mm
	(iv) Access to public transport facilities must be made available for customers at all times. Where excavation works and associated works limit accessibility to a facility, the Contractor must provide safe and secure temporary access incorporating handrails and other infrastructure where required. All temporary works must be in accordance with relevant standards.	N/A
	(v) Access to shops must be available for the public during business hours. Where excavation works limit accessibility to a shop during business hours, the Contractor must provide safe and secure temporary access incorporating handrails where required. All temporary works must be in accordance with relevant standards.	N/A

Heading	Requirements	Reference in this CTMP
	(vi) The Contractor must provide additional traffic control at locations where there is an interaction between pedestrians and construction vehicles.	Section 9.3 and 9.4
	(vii) Existing transverse pedestrian movements must be maintained at existing pedestrian crossing facilities using existing traffic control signals or controlled by traffic controllers, unless approved otherwise.	Section 9.4
	(viii) All mid-block transverse pedestrian crossings must be maintained by the Contractor during construction of the Works.	Section 9.4
	(ix) The width of the mid-block crossing at Martin Place will require pedestrian demand modelling to determine the optimum width during construction. Approval will be by the relevant Authorities. It is anticipated that a larger crossing or multiple crossings is likely to be required at this location to accommodate the high pedestrian flows.	N/A
4.2	Cycle Routes – Where the Sydney Metro Works will impact cycling routes, the Contractor must provide alternative cycle routes. The Contractor must consult with local bicycle user groups, local communities, and relevant authorities regarding any proposed alternative route. The Contractor must submit that proposal and summaries of that consultation for approval by TfNSW and RMS prior to implementation.	N/A
5	Road Safety Audit – All Road Safety Audits will be undertaken in accordance with the RMS 'Guidelines for Road Safety Audit Practices (2011), with reference to current practices outlined in Austroads Guide to Road Safety Part 6 Road Safety Audit (2009) and the Sydney Metro Principal Contractor H&S Standard. Road safety audits shall be undertaken with due consideration to the high levels of pedestrian activity in the Sydney and North Sydney CBD environments.	Section 9.6 and Appendix F

Table 3: Compliance to Construction Traffic Management Plan Framework

Heading	Requirements	Reference in this CTMP
2.4.1	Construction Traffic Management Plan Framework – The suitable development of traffic management plans for the potential impacts of the works is a key component to ensure that the impacts are minimised as much as possible with regard to vehicle and people movement disruption and to manage the efficient construction of the Sydney Metro City & Southwest.	Throughout this CTMP

Heading	Requirements	Reference in this CTMP
2.4.2	<p>Construction Traffic Management Plan</p> <ul style="list-style-type: none"> Individual site specific CTMPs will be prepared for each demolition site, and in compliance with the RMS' "Guide to Traffic Control at Worksites" and the Principals General Specification (G10 – Traffic and Transport Management) documentation. All CTMP's 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. Contractors will also prepare more detailed site specific Construction Traffic Management Plans (CTMPs) developed for each work site and identifying proposed traffic and parking management measures. These plans will be developed in consultation with the Sydney Coordination Office, RMS, Sydney Light Rail Team within TfNSW, Barangaroo Delivery Authority and relevant Councils. This consultation can be initiated through the TTLG and TCG meetings. The site specific CTMPs provide the basis for preparation of the Traffic Control Plans (TCP) and Road Occupancy Licence (ROL) applications. The CTMP provides the plan detailing the potential works and the traffic management and mitigation measures that would be required to be implemented for the proposed works. It would include any relevant correspondence with stakeholders (e.g. bus operators) where applicable. It would also include the Traffic Control Plan (TCP) for the specific works. 	Throughout this CTMP
2.4.3	Preparation and implementation of Traffic Control Plans – All Traffic Control Plans to be prepared for the construction activities will be developed in accordance with Australian Standard AS1742.3 and RMS' "Guide to Traffic Control at Worksites" by a suitably qualified person who has completed and passed the RMS' "Traffic Control at Worksites Manual" training course and whose certification is current, to the required level. Relevant documents are to be referenced in the preparation of TCP's.	Section 9.3
2.4.4	Authorisation – All personnel employed on the Sydney Metro City & Southwest demolition and construction phases will perform their duties in accordance with the requirements of this Plan and in compliance with the manuals and procedures outlined, and any specific Project Plans or instructions.	Section 9.11.1
3.1	<p>General traffic management approach</p> <ul style="list-style-type: none"> Minimum 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. Keeping Sydney moving Buses run on time with no disruption to routes and stops, where possible. Minimum of changes to traffic operation and kerbside access. Minimise disruption to access for adjoining properties. Minimise construction traffic generation during network peak periods. Safe provision for vehicular and pedestrian traffic must be made at all work sites. Delays to traffic in the immediate vicinity of work sites should be minimised as much as practicable. Minimise construction traffic generation during network peak periods. It is an RMS operational imperative that the capacity and efficiency of the network is not reduced during peak periods. 	<p>Section 9.1 to 9.4</p> <p>Section 7.7</p> <p>Throughout the CTMP</p> <p>Section 9.2</p> <p>Section 9.2</p> <p>Section 8.8</p> <p>Section 7.6</p> <p>Section 9.1 to 9.4</p> <p>Section 7.8</p> <p>Section 7.6</p>

Heading	Requirements	Reference in this CTMP
	<ul style="list-style-type: none"> • Works should be co-ordinated so that road users do not encounter a series of delays in quick succession and such that the cumulative impact of multiple closures does not lead to unexpected congestion. • Implement appropriate operational and other measures to ensure the safety of vulnerable road users. • Access for residents and businesses is to be maintained. • Road users should be kept informed about: <ul style="list-style-type: none"> – The location of works. – Forecast travel delays they are likely to experience. – Suitable alternative routes, if available. – Timing of any works, including dates and times, to enable informed decisions by the road user regarding times and routes of travel. • The project should present a professional and helpful interface with road users during all parts of the construction process. • Consideration of the above for road users should include potential impacts on pedestrians and cyclists. • Safe provision for cyclists must be made at all work sites. • Public transport users should also be kept informed of changes due to construction. 	<p>N/A</p> <p>Section 9.3 to 9.5</p> <p>Section 8.8</p> <p>N/A</p> <p>N/A</p> <p>Section 8.4 and 9.4</p> <p>Section 8.4</p> <p>N/A</p>
3.2	<p>Traffic management strategy</p> <ul style="list-style-type: none"> • The provision of directional signage and line marking to direct and guide drivers and pedestrians past work sites and to suitable alternative routes (if required) on the surrounding road network. • Notification of proposed changes and duration using newspapers (local or majors), radio, project website, social media and direct community engagement (as required). • On-going or direct co-ordination with the Transport Management Centre and CCO to mitigate congestion and provide rapid response should incidents or undue congestion occur. • Management and co-ordination of construction vehicle access to and from the work sites where these access will cross pedestrian paths. The type of traffic management to be employed will be dependent and adjusted accordingly, with regard to the volume of pedestrians, passing traffic and volume of construction vehicle activities for the site. The types of management could include manual supervision, physical barriers, temporary traffic signals (where approved by RMS or Council) or modification to existing traffic signals (where approved by RMS). This may also require NSW Police presence. • Ensure that access to existing properties is maintained during the period of the works. 	<p>N/A</p> <p>Section 9.8</p> <p>Section 6</p> <p>Section 9.1 to 9.5</p> <p>Section 8.8</p>
3.2.1	<p>Information</p> <ul style="list-style-type: none"> • 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, RMS, Sydney Coordination Office, Councils, other road authorities (Barangaroo Delivery Authority, Property NSW), bus & coach operators, taxi operators, NSW Police, NSW Fire & Rescue, NSW Ambulance Service and other key stakeholders each time proposed changes are to be made to traffic arrangements. Advice will include information about the 	Section 6

Heading	Requirements	Reference in this CTMP
	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.	
	<ul style="list-style-type: none"> 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. 	Section 9.3
	<ul style="list-style-type: none"> Any signposting should be placed in accordance with relevant guidelines and standards. Messages should be clear and easily interpreted by drivers, and should not create a safety hazard 	Section 9.2 and 9.3
3.3	Hierarchy of access –The site specific CTMP’s will be required to be developed on the basis of the following hierarchy of access: (1) Incidents & emergency services access, (2) Events (Special and unplanned), (3) Pedestrians, (4) Cycles, (5) Public transport – buses, (6) Service vehicles, (7) Coaches, (8) Taxis, (9) Kiss and Ride, and 10) Private cars (Shoppers/short stay, commuters).	Section 8
3.4.1	<p>Inter-agency and Community Liaison – General Approach</p> <p>The magnitude of this project requires effective and ongoing interaction between a number of different organisations, key stakeholders and the general public. Having regard for the need for regular and ongoing discussions and distribution of information, the Traffic and Transport Liaison Group (TTLG) and Traffic Control Group(s) (TCG) will be convened to assist in traffic management planning, document review and stakeholder consultation.</p>	Section 6
3.4.2	<p>Traffic and Transport Liaison Group – TTLG includes representatives from Sydney Metro Delivery Office, Transport for NSW (including Centre for Road Safety; Sydney Light Rail; Metro Bus & Ferry Planning and Development; Freight Strategy & Planning), RMS, TMC, Sydney Coordination Office, Port Authority of NSW, Barangaroo Delivery Authority (BDA), Department of Planning and Environment, Sydney Motorway Corporation (WestConnex), NSW Police, NSW Fire & Rescue, NSW Ambulance Service, Local Council (depending on worksite locations), Lane Cove Council, Willoughby Council, North Sydney Council, City of Sydney Council, Inner West Council, State Transit Authority, Sydney Metro Contractor(s).</p>	Section 6
3.4.3	<p>Traffic Control Group – TCG includes representatives from Sydney Metro Contractor, Sydney Metro Delivery Office, Transport for NSW, RMS, TMC, Sydney Coordination Office and Local Councils.</p>	Section 6
3.4.4	<p>Other organisations – Other organisations may be asked to attend the TTLG and/or receive relevant information depending on the matters under discussion or consideration.</p>	Section 6
3.5	<p>Communication with Community – 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’s Activities with the potential to impact on stakeholders and the community, prior to them occurring. A Community Communication Strategy will be developed by each Principal Contractor to notify stakeholders that may be affected by changes to transport, access and local traffic arrangements.</p>	Section 9.8
	<p>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, in order to maintain access and limit the disruption.</p>	Section 8.8
3.6	Approvals	This CTMP will be sent

Heading	Requirements	Reference in this CTMP
		to TMC for approval
3.6.4	Road Occupancy Licence Approval Process – Whenever it is proposed to occupy or close a lane or road during the construction program for each of the sites, the approval of the closure will require the Contractor to apply for a Road Occupancy Licence (ROL) from the Transport Management Centre (TMC) for RMS classified roads (State Roads) or locations on unclassified roads within 100m of traffic signals. It should be noted that due to the critical nature of the potential traffic impacts for unclassified streets within the Sydney and North Sydney CBDs that applications for ROLs on streets within these areas will be required to be submitted to TMC.	Section 4.1
3.6.5	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.	N/A
3.6.6	Special Event Co-ordination – 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. Sydney Metro City & Southwest Contractors will be responsible for identifying special events that occur in the area of the worksite, incorporating known special events into the construction program and to detail responses and contingencies in the CTMP for each site. This coordination will occur through the Sydney Coordination Office, approved event registers of Councils, the TCG and the TTLG. During development of the site CTMP's the proposed traffic management measures should take account of major and regular events to ensure that proposals do not impede or impact on these events.	Section 8.2
3.6.7	Traffic Control Plans – All TCPs to be used for the site works will be developed in accordance with Australian Standard 1742.3 and the RMS "Guide to Traffic Control at Worksites" by a suitably qualified person who has undertaken and passed the RMS' "Traffic Control and Worksites Manual" training course and holds a minimum qualification of "Prepare Work Zone Traffic Management Plan".	Section 9.3
3.6.8	Adjustments to traffic signals – Any temporary or permanent works which impact upon the operation or require the reconstruction or adjustments to traffic signals. The contractor will be responsible for the preparation of any traffic signal designs and obtaining the necessary approvals. Designs should 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.	N/A
3.6.9	Over-dimension or Over-mass vehicle permits	N/A
3.6.10	Adjustments to bus routes and stops – Any proposed adjustments or relocation of bus stops to facilitate construction works require the prior approval of TfNSW, CCO and affected bus operators in consultation with local councils prior to submitting an ROL application to TMC.	Section 8.5 and 9.2
3.6.11	Council traffic committees – Contractor should endeavour to secure all necessary Council approvals under delegation so as to avoid the need for approvals to be secured through the Local Traffic Committee and Council meetings. 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, CTMP's, other changes to parking restrictions and road closures.	Section 6

Heading	Requirements	Reference in this CTMP
3.7.1	<p>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. 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.</p> <p>Measures should be in place to avoid heavy vehicles queuing on the road network near the worksite, and a suitable off-road 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. The contractor is to develop a timetable of arrivals and departures to ensure a consistent and timely arrival and departure of vehicles for the site.</p>	Section 9.3
3.7.2	Dilapidation surveys	Section 7.11
3.7.3	Chain of Responsibility and Heavy Vehicle National Law – All necessary heavy vehicle approvals and permits (e.g. oversize, over mass, etc.), must be obtained from the relevant road manager.	N/A
3.7.4	Management of heavy vehicle movements – 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, CCO, BDA and Councils.	Section 6 and 9.1 to 9.5
3.7.5	Work zones and heavy vehicle marshalling – Applications for a ‘Works Zone’ will be undertaken by the contractor to the relevant authority.	N/A
3.7.6	Construction/demolition vehicle types – The EIS/Submissions report/PIR acknowledges that single unit tipper trucks (length between 8.8 and 12.5 metres) with a 10m ³ capacity would be used at all sites during the day with only Chatswood and Marrickville Dive sites being able to accommodate truck and dog combinations or semi-trailers of about 19 metres in length. The use of higher mass and longer heavy vehicles would be subject to separate approvals.	Section 7.4
3.7.7	Worker access and parking – The assumption for all site specific CTMP’s is that there will be no provision, either on the road or within the work site, for worker parking. The only exceptions are Chatswood and Marrickville dive sites.	Section 7.9
3.7.85	Construction consolidation centre/depot – The provision of a centralised Project Centre should be considered to receive deliveries and arrange for combining of loads and materials for distribution to the various work sites. This may be incorporated into the truck marshalling and logistics facility. This would have the potential to significantly reduce construction traffic movements to the sites, particularly for small loads.	N/A
3.7.9	Driver training	Section 9.11
3.8	<p>Worksites</p> <p>(i) Details of the proposed erection and maintenance of hoardings, scaffolds and associated structures shall be documented in the CTMP.</p>	Separate application will be made by the contractor.
	(ii) The CTMPs will identify the boundaries and detail the footpath and road controls, detail the movement of construction traffic in and out of the worksite. The site specific CTMPs will consider these interactions and the impacts of gantries, etc. on the road and footpaths.	Section 7.4 and 7.5
3.8.1	Hoardings – Consideration will be given to ensuring sight lines for side roads, vehicle accesses, signposting, and traffic signals are maintained. The presentation of the	Separate application will be made

Heading	Requirements	Reference in this CTMP
	hoarding, the branding and visual aspects of the hoarding are to be in line with City of Sydney policies, and TfNSW/Sydney Metro requirements.	by the contractor.
3.9	<p>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, impact on local communities in terms of safety, noise and road damage, ease of access for emergency vehicles, and site security.</p> <p>The worksites will have appropriate arrangements to discourage entry without approval and minimise vandalism. All access points to work sites will have lockable gates. Appropriate information signs will be provided at work sites 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 the SM PS-ST-221 Sydney Metro Principal Contractor Health and Safety Standard.</p>	Section 7.4 and 9.1
3.10	<p>Safety Audits – Sydney Metro City & Southwest and/or its contractors will undertake Road Safety Audits for CTMP's, to be submitted with the CTMP. 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. Particular 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</p>	Section 9.6 and Appendix F
3.11	<p>Pedestrian security/safety/lighting – 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 as a result 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 if the coverage or otherwise of CCTV cameras is impacted by the works.</p>	Section 7.10
3.12	<p>Management of risks to vulnerable road users – The Contractor is to adopt applicable vulnerable road user safety measures as per the SM PSST-221 Sydney Metro Principal Contractor Health and Safety Standard. Such measures include, but are not limited to:</p> <ul style="list-style-type: none"> • The deployment of speed awareness signs in conjunction with variable message signs • Heavy vehicles equipped with systems to improve vehicle safety, visibility and the detection of vulnerable road users • Mandatory completion of Sydney Metro City & Southwest project specific Heavy Vehicle Driver Introduction Training • Contractor engagement in shared experience educational events. <p>Where worksites have an impact on footpaths, consideration will be given to the requirements of all pedestrians and especially vulnerable road users (school children, elderly and mobility impaired). DDA requirements will be adopted with kerb ramps or other measures provided at road crossings. Footpath widths are required to allow for two way pedestrian traffic allowing for prams/strollers and wheelchairs. Where high numbers of vulnerable road users are using a footpath, special provision and design consideration may be required to mitigate any impacts.</p>	Section 8.4, 9.5 and 9.11
4.1	<p>Traffic Management Considerations –The individual 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):</p> <ul style="list-style-type: none"> • Pedestrian and cyclist safety • Pedestrian activity in Martin Place, Castlereagh Street, Elizabeth Street, Hunter Street • Impact on bus stops and bus operations • Impact on service vehicle parking and car parking 	Section 8.9, 9.1 to 9.5

Heading	Requirements	Reference in this CTMP
	<ul style="list-style-type: none"> Construction traffic from other developments. 	
5.1.1	Policy and responsibilities – When temporary or construction speed limits are required, the contractor will be required to make the necessary application to either RMS for classified roads or the local council for unclassified roads. This application will need to be submitted prior to the proposed implementation time to allow for processing and authorisation.	N/A
5.1.2	Traffic Control Techniques – There are a number of traffic control methods that can be used at worksites that 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: <ul style="list-style-type: none"> Temporary road deviations. Linemarking with raised pavement markers to delineate proposed diversion. Other traffic control devices as provided in the RMS’ Traffic Control at Work Sites manual. Portable traffic signals to control traffic flows if lane closures are required. Directional and information signposting to direct or advise drivers. This can include Variable Message Signs (VMS), directional arrows or static signs. The use of traffic cones, water filled barriers or other physical devices to delineate the required route. Refer also to the 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 Construction Manager. 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.	Section 9.3
5.1.3	Approved clothing for work personnel	Section 7.10
5.1.4	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.	N/A
5.2	Frequency of inspections – For long term, i.e. 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 work site.	Section 9.9 and 9.10
5.2.1	Inspections of roadwork traffic management schemes – three main types of inspections to be carried out: <ul style="list-style-type: none"> Pre-start and pre-close down inspections of short term traffic control. Weekly inspections of long term traffic control. Night inspections of long term traffic control. 	Section 9.10
5.3	Emergency Incident Planning – 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.	Section 8.1 and 8.3
5.3.1	Accidents/incidents and complaints – The contractor’s ROL register will maintain records of traffic accidents and incidents reported at work sites. Any complaints received regarding traffic delays at work sites should be referred to the Principal. The contractor will be required to table the register, upon request, at TCG meetings.	Section 10
5.3.2	Chemical spills and leaks – Sydney Metro City & Southwest staff and contractors are to be instructed not to approach flammable or hazardous substances until NSW Fire and Rescue have declared the site safe. In such cases the contractor will close the roadway at a safe distance until Fire and Rescue arrives and issues appropriate instructions.	Section 8.3

Heading	Requirements	Reference in this CTMP
5.4	<p>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 RMS' Traffic Control at Work Sites Manual and the Sydney Metro Principal Contractor Health and Safety Standard.</p> <p>VMS will be used in accordance with documented RMS procedures and guidance. The placement of temporary VMS is to consider pedestrian safety and disabled access needs when placed on footpaths. A ROL may be required when a portable VMS is proposed to be located in a parking or loading bay.</p>	Section 9.3

Table 4: Compliance to Critical State Significant Infrastructure Conditions of Approval

Heading	Requirements	Reference in this CTMP
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:	Section 6
	(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;	Section 5.8 and 8.9
	(c) to minimise and manage local area traffic impacts;	Section 9.1 to 9.5
	(d) to ensure access is maintained to property and infrastructure; and	Section 8.1 and 8.8
	(e) to meet relevant design, engineering and safety guidelines, including Austroads, Australian Standards, and RMS (RTA) requirements.	Section 4, 9.3
	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.	N/A
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.	Section 9.6 and Appendix F
E77	<p>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.</p> <p>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).</p>	Section 6

Heading	Requirements	Reference in this CTMP
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).	Noted – to be advised by the TTLG
E79	The Proponent must consult with the Relevant Road Authority regarding the use of any weight restricted road by heavy vehicles.	Section 6
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.	Section 7.6
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:	CTMF is not required for demolition sites, but this CTMP has covered these conditions.
	(a) Construction site access, including the efficient and safe egress and ingress of vehicles, consistent relevant Austroads, Australian Standards and RMS requirements;	Section 7.4
	(b) the erection and maintenance of hoardings, scaffolds and associated structures on roads;	Section 7.2
	(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;	Separate application will be made by the contractor.
	(d) cumulative construction vehicle management from surrounding developments;	Section 8.9
	(e) bus stop and associated facilities relocation and service rerouting;	N/A
	(f) short and long term works zones on roads adjacent to the construction site;	Separate application will be made by the contractor.
	(g) mail zone and associated facilities relocation;	N/A
	(h) short and long term works within the road reservation;	Separate application will be made by the contractor.
	(i) regulatory, advisory and other signage changes and modifications;	Section 9.2 and 9.3
	(j) parking management, including on and off street and remote parking and access;	Section 9.2
	(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;	Section 7.6 and 7.7
	(l) special event management;	Section 8.2
	(m) the retention and reinstatement of emergency and property access;	Section 8.8
	(n) the retention of user and passenger safety, including pedestrians, cyclists, public transport users, including at stops and related facilities;	Section 8.4 and 8.5

Heading	Requirements	Reference in this CTMP
	(o) incident response planning around construction worksites; and	Section 8.1
	(p) monitoring of transport and access related impacts attributable to the CSSI.	Section 9.10
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.	Section 4.1 and 6
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	Section 9.7
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.	N/A
E85	Heavy vehicle haulage must not use local roads unless no feasible alternatives are available	Section 7.7
E86	(i) During construction, measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties.	Section 9.3 and 9.4
	(ii) 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.	N/A
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	Section 9.6 and Appendix F
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.	Section 7.7
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.	N/ A
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.	Section 7.11
E91	If damage to roads occurs as a result of construction of CSSI, the Proponent must either (at the landowner's discretion):	Section 7.11

Heading	Requirements	Reference in this CTMP
	(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).	Section 7.11

Table 5: Compliance to Revised Environmental Mitigation Measures

REMM	Requirements	Reference in this CTMP
T1	Ongoing consultation would be carried out with (as relevant to the location) 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 in order to minimise traffic and transport impacts during construction.	Section 6
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.	Section 9.3 and Appendix F
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.	N/A
T4	In the event of a traffic related incident, co-ordination would be carried out with the Sydney Coordination Office and / or the Transport Management Centre's Operations Manager.	Section 8.3
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.	Section 9.8
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.	Section 9.1 to 9.5
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: <ul style="list-style-type: none"> • Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers • 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 behavior • 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. 	Section 9.1 and 9.5

REMM	Requirements	Reference in this CTMP
T8	Access to existing properties and buildings would be maintained in consultation with property owners.	Section 8.8
T9	All trucks would enter and exit construction sites in a forward gear, where feasible and reasonable.	Section 7.4 and Appendix C
T10	Any relocation of bus stops would be carried out by Transport for NSW in consultation with Roads and Maritime Services, the Sydney 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.	N/A
T11	For special events that require specific traffic measures, those measures would be developed in consultation the Sydney Coordination Office (for relevant locations), Roads and Maritime Services, Barangaroo Delivery Authority (for relevant locations) and the organisers of the event.	Section 8.2
T12	Construction sites would be managed to minimise construction staff parking on surrounding streets. The following measures would be implemented: (i) Encouraging staff to use public or active transport, (ii) Encouraging ride sharing, (iii) 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.	Section 7.9
T13	Construction site traffic would be managed to minimise movements in the AM and PM peak periods.	Section 7.6
T14	Construction site traffic immediately around construction sites would be managed to minimise movements through school zones during pick up and drop off times.	N/A
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.	N/A
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.	N/A
T17	Consultation would occur with the Harbour Master to ensure shipping channels are maintained during the Sydney Harbour ground improvement works.	N/A
T18	During the closure of existing entrances to Martin Place Station, marshal's would be provided during the AM and PM peak periods to direct customers to available access and egress points.	N/A
T19	Where existing parking is removed to facilitate construction activities, alternative parking facilities would be provided where feasible and reasonable.	Section 8.7 and 9.2
T20	Alternative pedestrian routes and property access would be provided where these are affected during the construction of the power supply routes.	N/A
T21	The potential combined impact of trucks from multiple construction sites would be further considered during the development of Construction Traffic Management Plans.	Section 8.9
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.	N/A

Table 6: Compliance to City of Sydney Standard Requirements for Construction Traffic Management Plans and Standard Requirements for Construction Traffic Management Plan Report

Item	Requirements	Reference in this CTMP
1	Details of routes to and from site and entry and exit points from site – site specific	Section 7.4 and 7.7
2	Details of roads that may be excluded from use by construction traffic i.e. roads with load limits, quiet residential streets or access/turn restricted streets – site specific	Section 6
3	The approved truck route plan shall form part of the contract and must be distributed to all truck drivers.	Section 7.7 and 9.11
4	All vehicles must enter and exit the site in a forward direction (unless specific approval for a one-off occasion is obtained from the City's Construction Regulation Unit).	Section 7.4 and Appendix C
5	Trucks are not allowed to reverse into the site from the road (unless specific approval for a one-off occasion is obtained from the City's Construction Regulation Unit).	Section 7.4 and Appendix C
6	The Applicant must provide the City with details of the largest truck that will be used during the demolition, excavation and construction. NOTE: No dog trailers or articulated vehicles (AV) to be used (unless specific approval for a one-off occasion is obtained from the City's Construction Regulation Unit).	Section 7.4
7	Oversize and over-mass vehicles are not allowed to travel on Local Roads (unless approval for a one-off occasion is obtained from the City's Traffic Operations Unit). Requests to use these vehicles must be submitted to the City 28 days prior to the vehicle's scheduled travel date.	Separate application will be made by the contractor.
8	No queuing or marshalling of trucks is permitted on any public road.	Section 7.8
9	Any temporary adjustment to Bus Stops or Traffic Signals will require the Applicant to obtain approval from the STA and RMS respectively prior to commencement of works.	Section 8.5
10	All vehicles associated with the development shall be parked wholly within the site. All site staff related with the works are to park in a designated off street area or be encouraged to use public transport and not park on the public road.	Section 7.9
11	All loading and unloading must be within the development site or at an approved "Works Zone".	Section 7.2
12	The Applicant must apply to the City's Traffic Works Co-ordinator to organise appropriate approvals for Work Zones and road closures.	N/A
13	The Applicant must apply to the City's Construction Regulations Unit to organise appropriate approvals for partial road closures.	N/A
14	The Applicant must apply to the Transport for NSW's Transport Management Centre for approval of any road works on State Roads or within 100m of Traffic Signals and receive an approved Road Occupancy Licence (ROL). A copy of the ROL must be provided to the City.	Section 4.1
15	The Applicant must apply to the City's Construction Regulations Unit to organise appropriate approvals for temporary driveways, cranes and barricades etc.	Separate application will be made by the contractor.
16	The Applicant must comply with development consent for hours of construction.	Section 7.3
17	All Traffic Control Plans associated with the CTMP must comply with the Australian Standards and Roads and Maritime Services (RMS) Traffic Control At Work Sites Guidelines.	Section 4
18	Traffic Controllers are NOT to stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way.	Section 9.3

Item	Requirements	Reference in this CTMP
19	Pedestrians may be held only for very short periods to ensure safety when trucks are leaving or entering BUT you must NOT stop pedestrians in anticipation i.e. at all times the pedestrians have right-of-way on the footpath not the trucks.	Section 9.3
20	Physical barriers to control pedestrian or traffic movements need to be determined by the City's Construction Regulations Unit prior to commencement of work.	N/A
21	The Applicant must obtain a permit from the City's Construction Regulation Unit regarding the placing of any plant/equipment on public ways.	Separate application will be made by the contractor.
22	The Applicant must apply to the City's Building Approvals Unit to organise appropriate approvals for hoarding prior to commencement of works.	Separate application will be made by the contractor.
23	The CTMP is for the excavation, demolition and construction of building works, not for road works (if required) associated with the development. Any road works will require the Applicant or the contractor to separately seek approval from the City and/or RMS for consideration. Also WorkCover requires that Traffic Control Plans must comply with Australian Standards 1742.3 and must be prepared by a Certified Traffic Controller (under RMS regulations).	Section 4
24	Please note that the provision of any information in this CTMP will not exempt the Applicant from correctly fulfilling all other conditions relevant to the development consent for the above site.	Section 4

Table 7: Compliance to City of Sydney Standard Requirements for Preparing a CTMP Report

Item	Requirements	Reference in this CTMP
1	<ul style="list-style-type: none"> Details of the project including site location, scope of works, general breakdown of activities and hours of operation. 	Section 5.1, 7.2 and 7.3
	<ul style="list-style-type: none"> Surrounding traffic environment showing State, Regional and Local Roads, road network configuration and use, public transport facilities and existing parking restrictions 	Section 5.2, 5.4 to 5.7
2	Management of Construction Vehicles	Section 7.7
	<ul style="list-style-type: none"> Truck routes to and from the site utilising State and Regional Roads – map of the routes must be provided 	
	<ul style="list-style-type: none"> The largest vehicle that will be used during construction in accordance with the City’s CTMP Standard Requirements 	Section 7.4
	<ul style="list-style-type: none"> Frequency of truck movements 	Section 7.6
	<ul style="list-style-type: none"> Demonstrate using swept path diagrams how trucks enter, circulate and exit the site or Works Zone in a forward direction 	Appendix C
	<ul style="list-style-type: none"> Works Zones will need to be considered if trucks cannot enter or exit the site in a forward direction at all times 	N/A
	<ul style="list-style-type: none"> Demonstrate using swept path diagrams how trucks will navigate to and from the site along the nominated truck route 	Section 7.7
	<ul style="list-style-type: none"> Provide a plan showing where vehicles stand to load and unload, where plant will stand, location of storage areas for equipment, materials and waste, location of Works Zones (if required) and location of cranes (if required) 	Section 7.5 Separate crane application will be made by the contractor.
	<ul style="list-style-type: none"> The approvals of Works Zones and Road Closures (to install cranes) is a separate process that requires Traffic Committee endorsement 	N/A
3	Impact of project – Provide details of the impact of the works on residents, businesses, pedestrians, cyclists, local traffic and emergency services and management of staff parking.	Section 8.8, 8.4, 8.9, 8.1, 7.9
4	Appendices <ul style="list-style-type: none"> Swept Path drawings for vehicles entering, circulating and exiting the site and Works Zones 	Appendix C
	<ul style="list-style-type: none"> Traffic Control Plans (done by RMS accredited traffic controller) for any diversions or Traffic Management relating to vehicles accessing the site 	Section 9.3 and Appendix E
	<ul style="list-style-type: none"> The City’s CTMP Standard Requirements. (There are some parts of the requirements that are in red and will need to be completed on a site specific basis). 	Table 6

5 Existing Transport Conditions

5.1 Site Location

Figure 1 shows the four buildings to be demolished are located with a site bound by Hunter Street to the north, Elizabeth Street to the east, adjacent properties to the south and Castlereagh Street to the west. The demolition site comprises the following buildings:

- 8–12 Castlereagh Street
- 55 Hunter Street
- 5 Elizabeth Street
- 7 Elizabeth Street.

5.2 Road Network

The roads surrounding the demolition site are described below, as of April 2017:

- Castlereagh Street – is a local road in the CBD road network and operates as a one-way street in the southbound direction from Hunter Street. It has four trafficable lanes with two kerbside lanes used for parking and the two middle lanes used for through traffic movements. One of which is a red painted bus lane.
- Hunter Street – is a local road in the CBD road network and is configured as a two-way, four-lane road. It stretches from George Street in the west to Macquarie Street in the east. The section of the road from Pitt Street to Macquarie Street is a two-lane two-way street with the kerbside lanes generally restricted for parking. The intersections with Castlereagh and Elizabeth Streets are signalised with provisions for pedestrians on all legs of the intersection.
- Elizabeth Street – is a local road in the CBD road network. It provides connections to Phillip Street to the north, in Circular Quay, and to Bourke Street to the south. Its intersection with Hunter Street is signalised with provisions for pedestrian crossings on all legs of the intersection. Wide footpaths exist on both sides of the street. There is an on-footpath post office box on Elizabeth Street. The day to day operation of the post office box will not be affected by the demolition works.

All of these streets are located within the 40km/h CBD speed limit area.

Figure 1: Road Network



5.3 Traffic Volumes

Table 8 provides a summary of the traffic volumes on the surrounding road network as documented in the Sydney Metro EIS.

Table 8: EIS Traffic Volumes

Road	Direction	AM Peak Hour (2-way movements)	PM Peak Hour (2-way movements)
Castlereagh Street Between King Street and Hunter Street	Southbound	380	510
Hunter Street Between Castlereagh Street and Elizabeth Street	Eastbound	190	190
	Westbound	790	630
Elizabeth Street Between King Street and Hunter Street	Southbound	1,130	1,110
	Northbound	410	590

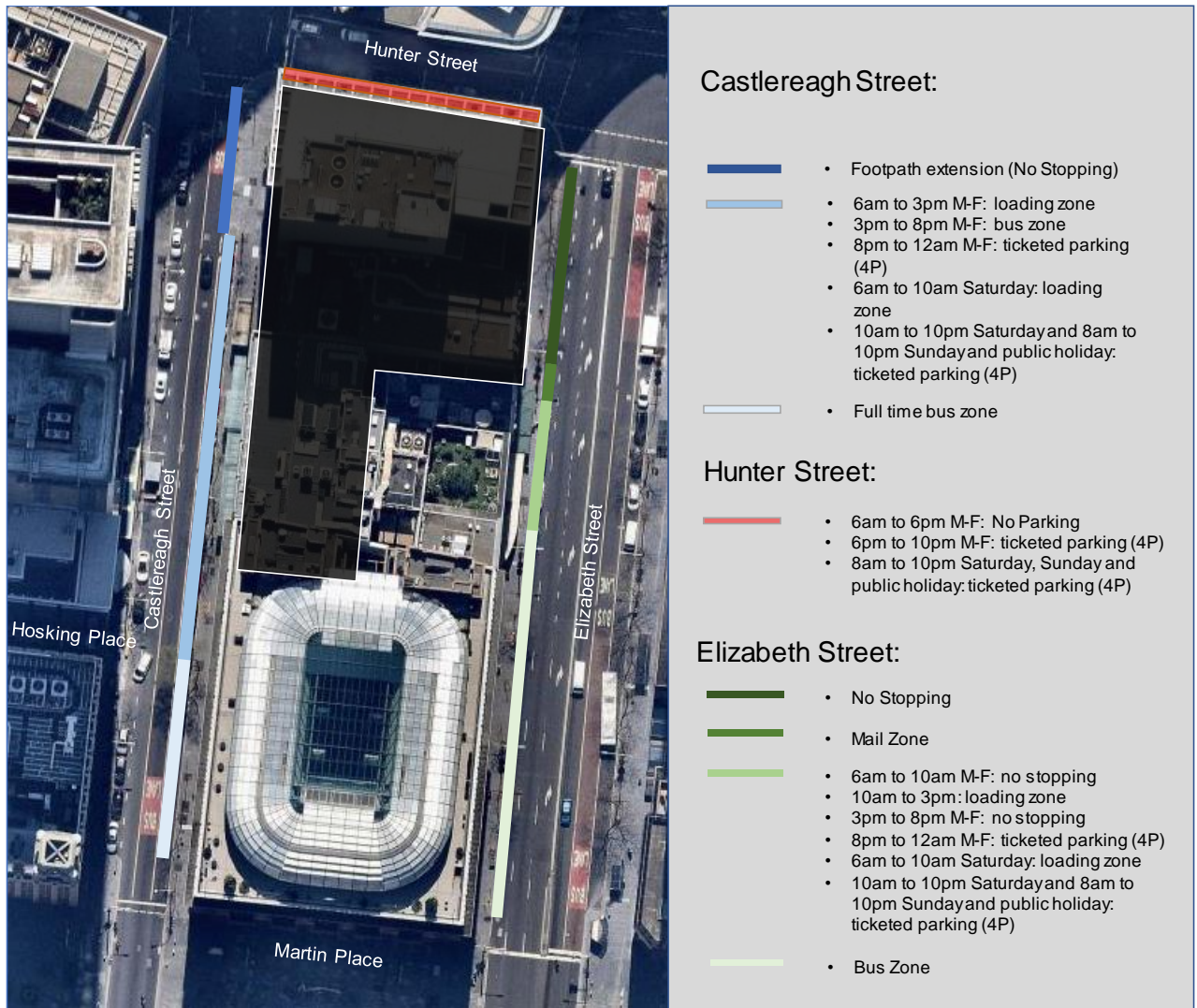
Source: Sydney Metro EIS

5.4 Kerbside Uses

Figure 2 depicts the current kerbside uses along Castlereagh Street, Hunter Street and Elizabeth Street. Eleven parking spaces (or 65m loading zone) are currently located along the Castlereagh Street frontage, and 4 parking spaces (or 30m loading zone) along the Hunter Street frontage. No parking is permitted along the Elizabeth Street frontage.

Of particular interest in this CTMP, the eastern kerbside lane in Castlereagh Street provides a part time loading zone, parking zone and bus zone between the footpath extension and Hosking Place, as shaded in light blue in Figure 2.

Figure 2: Kerbside Uses



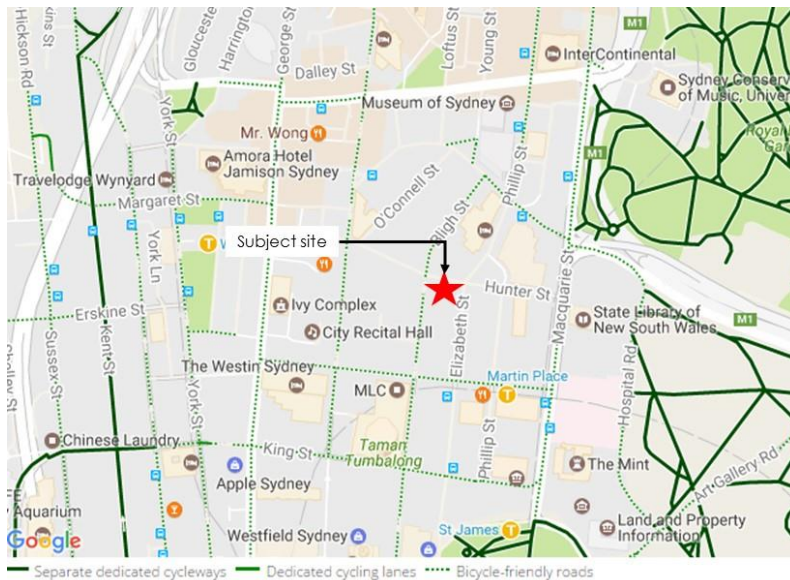
5.5 Pedestrian and Cyclist Facilities

Well established pedestrian paths are provided along both sides of all roads in the vicinity of the site. The paths surrounding the demolition site provide a good level of connectivity in the area and they are of different widths with the following approximate measurements: Elizabeth Street (3.8m), Hunter Street (7m) and Castlereagh Street (3.5 to 5.5m) along the site’s frontages.

Signalised pedestrian crossing facilities are provided at the intersections of Hunter Street with Elizabeth Street and Castlereagh Street.

Castlereagh Street is a designated on-road cycle route in the City of Sydney Council’s designated bicycle network. The bicycle routes are shown in Figure 3.

Figure 3: Existing Bicycle Route



Source: City of Sydney

5.6 Public Transport Services

5.6.1 Bus Services

Castlereagh Street, Hunter Street and Elizabeth Street are served by a number of bus routes operated by Sydney Buses, linking Sydney CBD with various suburbs across Sydney. Figure 4 shows the bus routes in the vicinity of the demolition site.

Regular services are provided with a frequency of 10–20 minutes for each service during the AM and PM peak periods.

A bus lane coloured red is provided along Castlereagh Street’s lane 2, adjacent to the eastern kerbside lane. This lane operates from 6:00am to 8:00pm from Monday to Friday, and 10:00am to 6:00pm on Saturday, Sunday and public holidays.

Figure 4: Existing Bus Routes



5.6.2 Train Services

The closest train station is Martin Place Station with the exits located in Martin Place some 130m walking distance south from the site.

Martin Place Station on the T4 Eastern Suburbs and Illawarra Line and the South Coast Line provides a key Sydney CBD access point between the eastern suburbs and the southern regions of Sydney.

Trains heading in the easterly and southerly direction have a frequency of three minutes for each service during the AM and PM peak hours.

5.6.3 Taxi Services

The closest taxi rank is located in the western side of Castlereagh Street opposite the site and is operational for 24 hours.

5.6.4 Existing Traffic Generation

The four existing office buildings and the associated car park generate traffic for deliveries, traffic and parking movements. The existing car park has 30 spaces. Assuming a typical trip rate of 0.5 trips per car space in the AM or PM peak hour, this equates to fifteen 2-way trips per hour accessing the car park.

5.6.5 Concurrent Construction Projects

The subject demolition site is located adjacent to a number of major projects which are currently under construction or about to commence.

The following major project is currently taking place along George Street:

- CBDSE Light Rail** (2015 – 2019) is a new light rail network currently under construction. The 12km route will feature 19 stops, extending from Circular Quay along George Street to the south east with two terminals located at Kingsford and Randwick. Construction will be completed and services will start running in 2019. George Street is currently partially closed between Alfred Street and Rawson Street, with all cross streets open to traffic. As such, general traffic has been diverted to alternate north-south roads in the eastern side of the CBD which may include Elizabeth Street and Castlereagh Street. Construction vehicles travelling to/from Lilyfield and the George Street work sites generally take the Western Distributor route, which is outside the proposed haulage routes as described in Figure 8.

Construction of the following major projects is likely to overlap with the proposed demolition activities of the subject site between May 2017 and April 2018, with construction vehicles travelling along the same haulage routes as shown in Figure 8:

- 33 Bligh Street Substation and Commercial Office Development** (2009 – 2018) is a new building combining a major new city zone electricity substation with a commercial tower. Demolition of the old building has been completed but excavation has not been completed as of April 2017. The latest construction program is unknown, but its construction is likely to coincide with the demolition activities of the subject site. The Environment Assessment which contains the construction traffic management details has been sourced for this adjacent project.
- 60 Martin Place Commercial Office Development** (2016 – 2019) is a 33-storey commercial and retail development. Currently the existing building is being demolished and construction is expected to complete by the end of 2019. It is anticipated that the demolition activities will occur during the same period with the subject site. The CTMP is currently not available.
- 50 Bridge Street Commercial Office Development** (2017 – 2020) involves a partial demolition of the existing commercial tower and podium, and alterations and extensions to the tower to create commercial office and retail space over a podium and a 5 level basement car park. Demolition is scheduled to start in 2017 and it will take approximately 2.5 years to complete the construction. The CTMP is currently not available.

Table 9 provides a summary of the construction traffic generation associated with the above major projects that are likely to occur during the demolition period. The CTMP for the latter two projects are not available but assumptions have been made for the peak hour traffic volumes, given the scale of these adjacent construction works are somewhat similar to the 33 Bligh Street project.

Table 9: *Traffic Generation of Other Major Project Constructions*

Project	Movements Per AM and PM Peak Period	
	AM Peak Hour	PM Peak Hour
33 Bligh Street Substation and Commercial Office Development (2009-18)	10 light vehicles, up to 20 trucks during excavation works. Addition of four trucks for equipment delivery. Total 34 vehicles per peak hour.	10 light vehicles, up to 20 trucks during excavation works. Addition of four trucks for equipment delivery. Total 34 vehicles per peak hour.
60 Martin Place Commercial Office Development (2016-19)	Unknown. Assume similar to the 33 Bligh Street project i.e. 34 vehicles per peak hour.	Unknown. Assume similar to the 33 Bligh Street project i.e. 34 vehicles per peak hour.
50 Bridge Street Commercial Office Development (2017 – 2020)	Unknown. Assume similar to the 33 Bligh Street project i.e. 34 vehicles per peak hour.	Unknown. Assume similar to the 33 Bligh Street project i.e. 34 vehicles per peak hour.

Ongoing communication with these project representatives will occur to ensure that coordination of work activities is managed to minimise impacts on the road network.

6 Stakeholder Consultation

6.1 During Development of CTMP

Sydney Metro held meetings on 15 and 16 February 2017 to outline the proposed demolition works and the methodology to various stakeholders, including Sydney Coordination Office, RMS, Sydney Light Rail Team within TfNSW, and City of Sydney. The Sydney Metro provided a project overview on 15 February 2017, and no minutes are available. Minutes of the 16 February 2017 meeting are shown in Appendix B.

Sydney Coordination Office advised TTPP that the preferred inbound haulage route between Eastern Distributor and the Martin Place site is to be via Bent Street instead of Macquarie Street. The Sydney Coordination Office requested construction vehicles to approach to the demolition site via Bent Street to avoid the congested right turn movement from Macquarie Street into Hunter Street.

City of Sydney mentioned that any proposed changes to the parking will require approval through the Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) and Council meetings. Metropolitan will continue to liaise with City of Sydney regarding the parking changes in the ongoing consultation process, and will apply and pay associated fees for any works on the City of Sydney's footpath or road.

To date, the following TTLG meetings were held for the stakeholder engagement that involved representatives from Taxi Council, Fire Rescue, NSW Police, Laing O'Rourke, SMDO, S Motorway, Sydney Coordination Office, City of Sydney, BDA, Ambulance, STA, Ambulance NSW, North Sydney Council, TfNSW, RMS, Port Authority, Willoughby City Council and Lane Cove Council. The following monthly meetings were held to date to discuss various aspects of the wider Sydney Metro project, including the subject demolition site:

- TTLG monthly meeting no. 1 (16 February 2017)
- TTLG monthly meeting no. 2 (16 March 2017)
- TTLG monthly meeting no. 3 (13 April 2017).

To date, the following TCG meetings were held to coordinate traffic management for the demolition works. These meetings have attended by Sydney Metro Contractors, Sydney Metro Delivery Office, Transport for NSW, RMS, TMC, Sydney Coordination Office and Local Councils. The following weekly meetings have been held:

- TCG Meeting No. 1 (21 December 2016)
- TCG Meeting No. 2 (17 January 2017)
- TCG Meeting No. 3 (21 February 2017)
- TCG Meeting No. 4 (28 February 2017)
- TCG Meeting No. 5 (7 March 2017)
- TCG Meeting No. 6 (14 March 2017)
- TCG Meeting No. 7 (21 March 2017)
- TCG Meeting No. 8 (28 March 2017)
- TCG Meeting No. 9 (4 April 2017)
- TCG Meeting No. 10 (11 April 2017)

Various stakeholders including City of Sydney, Transport for NSW and Sydney Metro have provided comments to the earlier version of this CTMP which has been documented in Appendix A. This CTMP has considered all comments and addressed in various sections of the report accordingly.

An on-site meeting was held between City of Sydney and Metropolitan representatives on 29 March 2017 regarding various aspects of the proposed works, including the driveway location, hoarding configuration and tree trimming. Subsequent to this meeting, the proposed driveway location has been relocated further south along the Castlereagh Street frontage (refer to Section 7.4).

6.2 Post CTMP Approval

Formal and ongoing consultations with the authorities will continue to be undertaken following approval of this CTMP. These organisations include City of Sydney, Sydney Coordination Office, RMS, TMC, Sydney Light Rail Team within TfNSW. This consultation will also involve TTLG and Traffic Control Groups in the consultation process.

Whenever there are proposed changes to be made to traffic arrangements, Metropolitan will advise, obtain the relevant approval and pay associated fees from the Sydney Metro City & Southwest Project Communications Team, RMS, Sydney Coordination Office, Councils, other road authorities (Barangaroo Delivery Authority, Property NSW), bus & coach operators, taxi operators, NSW Police, NSW Fire & Rescue, NSW Ambulance Service and other key stakeholders. 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.

7 Demolition Methodology

7.1 Description

Metropolitan will sequence the demolition works to maximise the safety of workers and road users, maintain existing capacity, minimise road user delays and avoid major activities during peak periods.

The demolition activities will not impact existing traffic flows along streets in close proximity to the site.

7.2 Demolition Stages and Duration

The demolition works will be broken up into five stages as described below:

Stage 1 – Establishment of site

During establishment works, the construction of laybacks and driveways will occur in Castlereagh Street and a B-Class hoarding will be erected over the footpaths in Elizabeth, Hunter and Castlereagh Streets for overhead protection to pedestrians. Metropolitan will submit the *Temporary Works Application* for the minor construction works including laybacks and driveways. It is essential that the new driveway is established before regular heavy vehicle movements commence.

Site accommodation will be inside the buildings for the first 20 weeks of the contract and then placed on the B-Class hoarding for the final 20 weeks. These works will be carried out over a 2-4 week duration. There will be around 25 workers on site and approximately 14 truck movements (2-way) per day to deliver materials during the peak of activities.

Short-term construction zones are to be set up for night works to remove awnings and the delivery and installation of the 'B' Class hoardings. A separate application for the erection of hoarding will be submitted to City of Sydney as per the requirement specified in the Framework CTMP and City of Sydney CTMP requirements.

Mobile cranes will be required to lift demolition plant and equipment onto the roof levels of the buildings and to periodically remove items from the buildings. These cranes will work off Elizabeth Street and Castlereagh Street and will be brought in at night or on weekends to avoid disruption to normal traffic flow. A crane permit will be obtained separately by the crane operator, and it is understood that all mobile crane works associated with this project will be raised and discussed in TCG meetings before applying for ROLs and council permits.

Stage 2 – Hazmat Removal and Scaffolding

a) Hazmat Removal

This will commence with two crews operating, one in 55 Hunter Street and the other in 5 Elizabeth Street. This will allow clear access to the scaffold crews to 55 Hunter Street. The crews will then move to 8–12 Castlereagh and 7 Elizabeth Street.

b) Scaffold

As soon as the 'B' Class hoarding is installed around 55 Hunter Street, the erection of scaffolding, complete with shade cloth and mesh, around this building will commence. The full exposed face of this building will be covered in scaffolding with the rear section coming off the roof of 5 Elizabeth Street. The scaffold crews will then move to 8-12 Castlereagh Street and finally 5 and 7 Elizabeth Street. It is anticipated that around 12 scaffolders will be on-site with deliveries averaging 32 truck movements (2-way) per day over a ten week period. All loading activities will occur on-site.

Metropolitan will submit the Application for *Approval – Temporary Structures* for the installation of hoarding and scaffolding. The hoarding and scaffolding will be installed in accordance with City of Sydney's Hoarding and Scaffolding Policy.

Any mobile hoisting devices operating from a public road will be require City of Sydney's approval. An Application for *Approval – Mobile Hoisting Devices Operating from a Road/ Footway* will be submitted for approval.

Stage 3 – Demolition works phase 1

The existing multi-story building at 55 Hunter Street will be demolished first and brought down to approximately the same level as the roof of the adjoining 5 Elizabeth Street building. Around 40 workers will be on-site during the peak work period. All loading activities will occur on-site. Trucks will enter the site in a forward direction via the proposed

driveway located in the southern end of the Castlereagh Street frontage (refer to Section 7.4), and manoeuvre toward the loading area (refer to Appendix C), and subsequently depart from the site via the same driveway in a forward direction. Up to two trucks (i.e. 4 movements) per hour will visit the site to load demolition waste from the site to St Peters Recycling Yard or a scrap metal yard in Banksmeadow. Waste material that cannot be recycled will go to a registered tip site in Western Sydney. About 95% of material will go to St Peters or the scrap metal yard at Banksmeadow, and 5% of material will go to a registered tip site in Western Sydney.

These works will commence in August 2017 and continue through until November 2017.

Stage 4 – Demolition works phase 2

Stage 4 works will peak with strip-out and demolition works being undertaken on all four buildings. Around 60 workers will be on-site during the peak work period. All loading activities will occur on-site and the truck access arrangement will be the same as phase 1. Up to three trucks (i.e. six movements) per hour will visit the site to remove demolition waste from the site. Similar to phase 1, about 95% of material will go to St Peters or Banksmeadow, and 5% of material will go to Western Sydney.

These works will commence in November 2017 and continue through until March 2018.

Stage 5 – Hoardings, Survey and Handover

The final stage of works will include the replacement of the 'B' Class hoarding with an 'A' Class hoarding complete with graphics, vehicle and pedestrian gates. A registered surveyor will be engaged to conduct the end state survey and the site left clean and tidy for hand over to the Principal's Representative. Up to 14 truck movements are expected per day during this stage.

These works will be completed in the final month of the contract being April 2018.

7.3 Hours of Operation

Works are to be undertaken during approved construction hours:

- 7am to 6pm Monday to Friday
- 7am to 1pm Saturday
- No works on Sunday and public holiday.

No trucks are to access the site after 3pm Monday to Friday when the bus zone is operational.

The number of trucks accessing and leaving the site would be limited during the AM, lunch time and PM peak periods when the pedestrian and traffic volumes are higher. Refer to Section 7.6 for details.

Consideration of the operating hours would consider the Special Events in the CBD and Martin Place. Refer to Section 8.2 for details.

Any work outside of the approved hours will require separate approval. These include the night works for removing awnings and the delivery and installation of the 'B' Class hoardings in short-term construction zones.

7.4 Site Access

In order to minimise impacts to pedestrians and cyclists, buses, general traffic, parking and loading, a combined entry and exit location has been selected in Castlereagh Street and is being proposed in this CTMP.

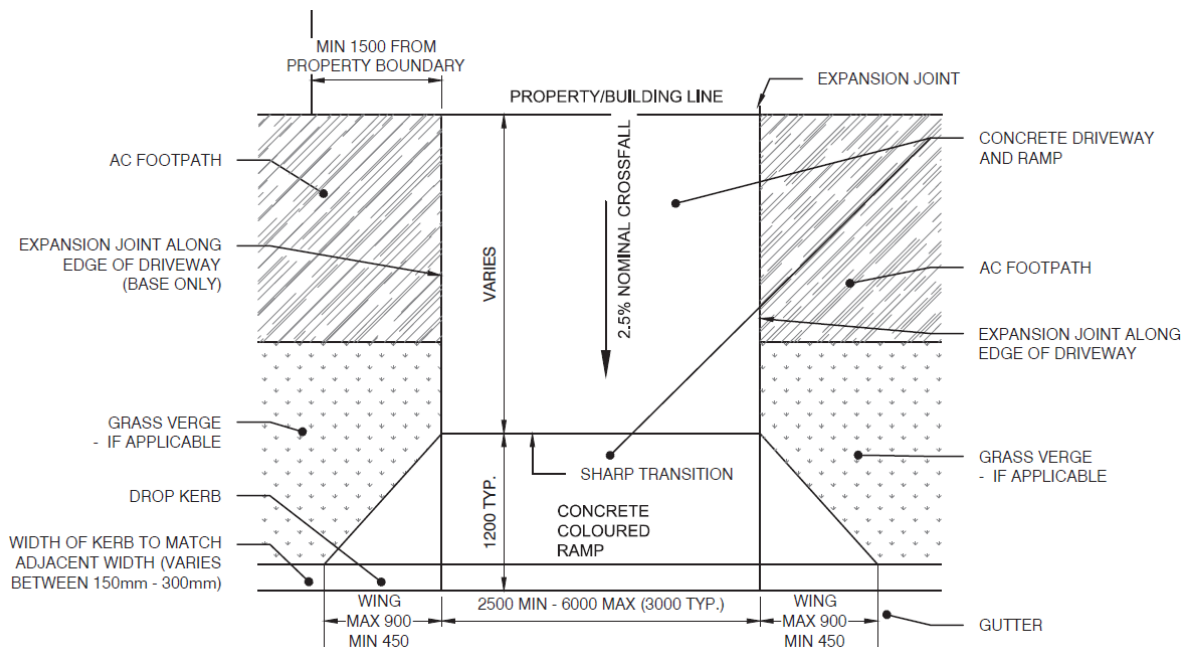
The proposed combined entry and exit is located in Castlereagh Street some 70m south of Hunter Street, about 6-7m from the southern end of the Castlereagh Street frontage (refer to Figure 5). The vehicular crossing will occupy a section of the parking/ loading / bus zone for up to 6.9m to facilitate the driveway and layback in accordance with City of Sydney's requirement for commercial/ industrial vehicle crossings (refer to Figure 6). The proposed vehicular crossing will be located north of the light pole and require a tree will be removed. It is understood that installation of infrastructure adjacent to or requires the removal of street trees will need the concurrence of City of Sydney's Greening and Leisure Team.

The road network capacity will not be reduced as the proposed access point is on the departure side of the Castlereagh Street/ Hunter Street intersection. As such, the traffic lights will create sufficient gaps in traffic to enable construction vehicles to safely egress the construction site in Castlereagh Street.

Figure 5: Proposed Site Entry and Exit in Castlereagh Street



Figure 6: City of Sydney Standard Vehicular Crossing Width – Commercial/ Industrial Vehicle Crossing



Source: City of Sydney Standard Drawings

At the proposed vehicular crossing in Castlereagh Street, satisfactory sight visibility towards pedestrians exceeds the required 55m desirable sight distance requirement in accordance with AS2890.1:2004. No permanent sight obstruction is located within this sight distance.

Medium rigid trucks (largest design vehicle being 8.8m in length and 2.5m in width) will make a left turn from Castlereagh Street and enter the site in a forward direction as per the proposed TCP (refer to Section 9.3), subject to

approval. Trucks will be loaded within the site and will turn left from the site, in a forward direction, into Castlereagh Street. Refer to Appendix C for the swept path assessment of the design vehicle.

Sliding gates will be utilised at each site access point with qualified traffic controllers with approved clothing to ensure public safety and no disruption to traffic flow. Appropriate information signs will be provided at the site access to identify the Project and relevant contact persons.

The worksites will have appropriate arrangements to discourage entry without approval and minimise vandalism. The access point to the work site will have a lockable gate.

A traffic Controller will be placed at the site access to separate pedestrian and truck movements, but they will not stop pedestrians in anticipation i.e. at all times the pedestrians have right-of-way on the footpath not the trucks. Pedestrians have the right of way at all times. Pedestrian may be held only for short periods by the pedestrian concertina gate to ensure safety when trucks are entering and leaving the site. Metropolitan will develop Security Management Plans based on the site specific security threats (hazards) identified to meet the requirements outlined in the SM PS-ST-221 Sydney Metro Principal Contractor Health and Safety Standard.

The redundant driveway located further north of proposed driveway will be removed to allow for kerbside parking to return. As such parking loss as a result of the construction of the new driveway and the parking gain due to the reinstatement of the driveway would be balanced out resulting in no net change in parking supply. Therefore the proposed works would not impose impacts to the parking provision in Castlereagh Street.

7.5 Traffic Staging Plans

Figure 7 presents the traffic staging plan for proposed site access location.

The construction of the proposed vehicular crossing will not alter the lane configurations in Castlereagh Street. A temporary vehicular crossing and footpath pavement will be constructed in accordance with City of Sydney's specifications.

No new pavement markings are being proposed. General traffic and cyclist movements will not be altered.

Figure 7: Traffic Staging Plan



Liaison with the utility service providers and City of Sydney will be undertaken for any utilities located within the roadway that will be impacted by the construction of the proposed vehicular crossing. The utility pits and/or lids will be replaced with engineered trafficable items.

Traffic arrangements for Stage 1 site establishment and Stage 2 hazmat removal and scaffolding will be dealt with in a separate application to City of Sydney and other relevant authorities for lane occupancy and crane permit etc.

7.6 Construction Traffic Generation

Table 10 provides a summary of the anticipated construction traffic volume for each stage. The below time periods are aligned with the AM and PM peak periods defined in Condition E80 in the Conditions of Approval (2017).

Table 10: Traffic Generation and Vehicle Type

Stage	Approximate Duration (weeks)	Vehicle Type	Daily 2-Way Movements	2-Way Movements Per Time Period			
				7am–10am	10am–4pm	4pm–7pm	7pm–7am
Stage 1 – Establishment of site	2-4	Staff	8	4	-	4	-
		Light	6	2	4	-	-
		Heavy	0	-	-	-	-
		Total	14	6	4	4	-
Stage 2 – Hazmat Removal and Scaffolding	10	Staff	8	4	-	4	-
		Light	10	-	4	-	6
		Heavy	14	2	4	-	8
		Total	32	6	8	4	14
Stage 3 – Demolition works phase 1 (soft) (2 trucks x 3 bins per day)	12	Staff	8	4	-	4	-
		Light	16	4	8	4	-
		Heavy	11	2	7	1	-
		Total	35	10	15	9	-
Stage 4 – Demolition works phase 2 (main) (4 trucks x 4 loads per day)	20	Staff	8	4	-	4	-
		Light	8	2	4	2	-
		Heavy	28	4	22	1	-
		Total	44	10	26	7	-
Stage 5 – Hoardings, Survey and Handover	4	Staff	0	-	-	-	-
		Light	6	1	4	1	-
		Heavy	4	2	2	-	4
		Total	14	3	6	1	4

Note: Haulage activities will reduce during the AM, lunch time and PM peak periods, and no haulage activities are to take place after 3pm on weekdays

Table 10 indicates that the peak activities will occur during Stage 4 Demolition works (phase 2) where up to 44 vehicle movements will occur per day. Truck movements are distributed across the day, with less traffic occurring during the lunch time and peak periods, and are described as follows:

- During the peak periods, up to 4 truck movements are anticipated to occur during the 3-hour AM peak period and 1 truck movement during the 3-hour PM peak period. These equate to an average of 1-2 movements per peak hour, or 1 vehicle in and 1 vehicle out.
- During the off-peak period, up to 22 truck movements will occur between 10am and 4pm. This equates to an average of 4-5 movements on hourly basis (excluding lunch time), or 2-3 vehicles in and 2-3 vehicles out.

A comparison of the existing and proposed demolition works traffic generated by the site is shown in Table 11.

Table 11: Traffic Generation Reduction

Time Period	Peak Hour Traffic Generation	Difference
Existing Car Park (30 spaces)	15 trips / hour	-
Demolition Stage 1 – Establishment of site	2 trips / hour	Reduction of 13 trips / hour
Demolition Stage 2 – Hazmat Removal and Scaffolding	2 trips / hour	Reduction of 13 trips / hour
Demolition Stage 3 – Demolition works phase 1 (soft)	3-4 trips / hour	Reduction of 11-12 trips / hour
Demolition Stage 4 – Demolition works phase 2 (main)	3-4 trips / hour	Reduction of 11-12 trips / hour
Demolition Stage 5 – Hoardings, Survey and Handover	1-2 trips / hour	Reduction of 13-14 trips / hour

Table 11 shows that the proposed construction vehicle traffic will generate less traffic than the existing office developments.

The maximum truck size will be medium rigid trucks (up to 8.8m long). Semi-trailers or truck and dogs will not be used on this project with the exception of cranes and their support vehicles as well as hoarding deliveries. A temporary works permit will be submitted separately to City of Sydney for 'one-off' deliveries using articulated flatbed trucks.

The works are expected to generate a maximum of 60 site personnel per day during peak activities.

Haulage activities during Special Events in the CBD and Martin Place will be rescheduled where necessary to minimise impact to the special events. Refer to Section 8.2 for details.

7.7 Material Haulage Options

Metropolitan recognises that the effective management of haulage operations is not only critical to the success of the project, but is also necessary to minimise the impact on the road network and to maintain the safety of pedestrians.

The demolition activities will involve demolition of the existing four buildings which will require material to be transported to an appropriately licensed disposal facility. About 95% of the material including hard rubble and scrap metal will be transported to Metropolitan Demolitions Recycling yard on the Princes Highway, St Peters, or the scrap metal yard at Banksmeadow.

The remaining 5% of the material including non-recyclable materials and general solid waste materials will be transported directly to licensed landfill facilities mainly located in Western Sydney. The locality of these facilities is to be confirmed as the works progress.

The selection of the haulage routes was on the basis that trucks are to utilise State and Regional Roads first before travelling on Local Roads. It is understood that City of Sydney could approve access for oversize and/or over mass vehicles on the City's roads following the submission of Oversize & Over Mass Vehicle Permit Application.

The proposed haulage routes are listed as follows and presented graphically in Figure 8.

Arrival Routes:

There are a number of arrival routes however the primary arrival route to be adopted to minimise traffic disruptions in the CBD is the route from the South where 95% of haulage trucks will occur:

- From South: Trucks will approach from the Eastern Distributor (northbound), then turn off to Shakespeare Place, straight into Bent Street, left into Bligh Street, continue into Castlereagh Street and turn left into the site.
- From East: Trucks will approach the site from William Street, right into Sir John Young Crescent and Shakespeare Place, straight into Bent Street, left into Bligh Street, continue into Castlereagh Street and turn left into the site.
- From West: Trucks will approach the site from Western Distributor, exit into King Street, left into Elizabeth Street, left into Hunter Street and turn left into the site.
- From North: Trucks will approach the site from the Harbour Bridge, then Cahill Expressway, exit into Bridge Street, left into Phillip Street, right into Hunter Street, left into Castlereagh Street and turn left into the site.

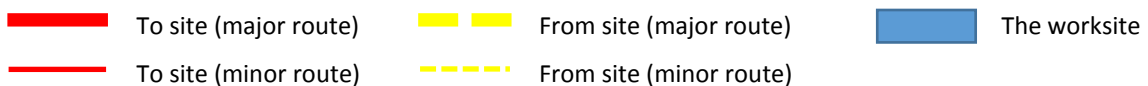
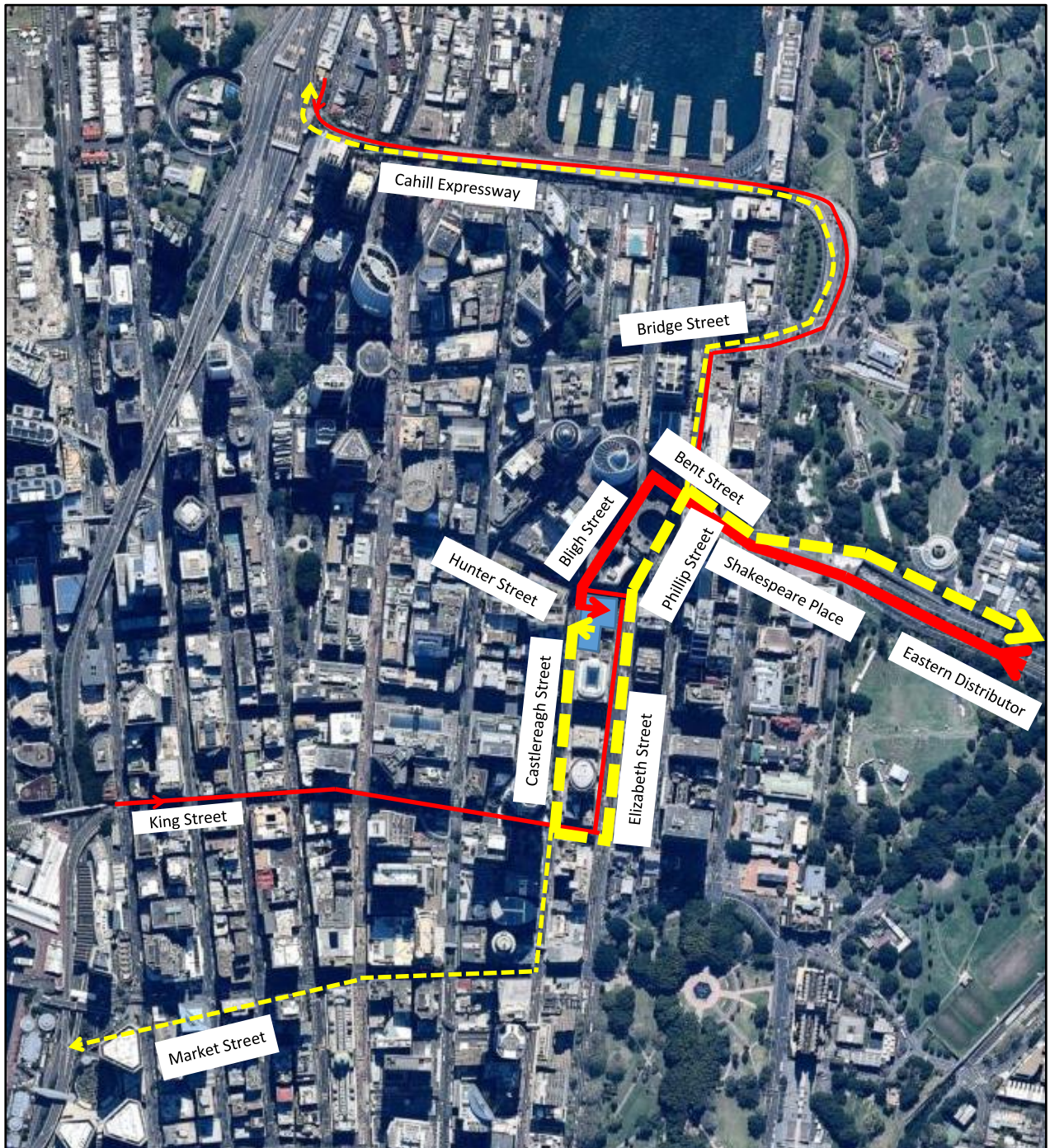
Departure Routes:

There are a number of departure routes however the primary departure route is to the South where 95% of haulage trucks will occur:

- To South: Turn left from the site into Castlereagh Street, left into King Street, left into Elizabeth Street, across into Philip Street, right into Bent Street, then onto the Eastern Distributor.
- To East: Turn left from the site into Castlereagh Street, left into King Street, left into Elizabeth Street, across into Philip Street, right into Bent Street, then onto the Eastern Distributor.
- To West: Turn left from the site into Castlereagh Street, right into Market Street and continue into the Western Distributor.
- To North: Turn left from the site into Castlereagh Street, left into King Street, left into Elizabeth Street, across into Phillip Street, right into Bridge Street and continue into the Cahill Expressway.

Proposed haulage routes are shown in the Vehicle Movement Plan in Figure 8 below.

Figure 8: Proposed Haulage Routes



7.8 Traffic Management

Truck movements to and from the demolition site will be scheduled to minimise traffic disruption in the surrounding road network. This will comprise the following measures:

- Heavy vehicles equipped with systems to improve vehicle safety, visibility and the detection of vulnerable road users.

- Oversized vehicles will be transported to and from the site in strict accordance with RMS guidelines and City of Sydney requirements, subject to one-off approval, in minimising traffic disruption during normal business hours.
- Truck arrivals to site will be staggered to prevent the queuing of trucks in Castlereagh Street.
- Haulage routes will be designated and communicated to all truck drivers to ensure truck movements to and from the site are as efficient as possible.
- Truck arrival and material haulage routes will be primarily from the recycling facility at St Peters and will travel to site via the Eastern Distributor and from site via Hunter Street and Blich Street.
- The loading and unloading of trucks will be planned to ensure each individual truck haulage capacity is fully utilised reducing the number of truck movements.

7.9 On-Site Parking

Vehicles associate with the construction site must not park in any on-street parking spaces. On-site parking will not be made available for employees working on the project. Given the proximity of the site to public transport facilities, all workers will be encouraged to utilise the proposed tool drop facility and storage facility that will be provided on-site near the site entrance. This would allow construction personnel to drop off and store their tools and use public transport to travel to and from the site on a daily basis. This measure would encourage construction personnel to use the public transport system and hence minimise traffic impacts on the surrounding road network.

The existing basement parking may be utilised in the early phases of the demolition works for deliveries and short-term storage of materials such as scaffolding, hazmat consumables/decontamination units, demolition small tools and consumables. All vehicles associated with the site will be parked wholly within the site in designated off-street parking areas.

7.10 Pedestrian and Cyclist Management

Class B hoardings erected over the footpath on Elizabeth, Hunter and Castlereagh Streets will provide overhead protection to pedestrians and maintain pedestrian thoroughfare on these streets.

It is understood that the installation of hoarding and scaffolding requires *an Application for Approval – Temporary Structures* with the City of Sydney. Smooth surface, sufficient hoarding offset from the road edge, concertina style driveway gates, branding and visual aspects will be provided in compliance with the City of Sydney Guideline for Hoardings and Scaffoldings 2017. In addition, the branding and visual aspects of the hoarding will be in line with TfNSW/Sydney Metro requirements. A separate application for the erection of hoarding will also be submitted to City of Sydney as per the requirement specified in the CTMP Framework and the Council Guideline. The lighting levels beneath the hoarding along the centre-line will provide an illumination of no less than 30 lux average with a minimum at any point of 10 lux.

Pedestrian access will be maintained along the footpath in Castlereagh Street. Qualified traffic controllers with approved clothing will be in place to manage and control pedestrian movements. Concertina gates will be used to manage pedestrian movements at the vehicular crossing.

Pedestrian concertina gates will extend across the footpath, either side of the vehicular crossing to temporarily contain pedestrians when the gate is in use. When the vehicular crossing is not in use the pedestrian concertina gates will be opened and pedestrian activity along the footpath will be available.

Traffic Controllers will not stop pedestrians in anticipation i.e. at all times the pedestrians have right-of-way on the footpath not the trucks. Pedestrians have the right of way at all times. Pedestrian may be held only for short periods by the pedestrian concertina gate to ensure safety when trucks are entering and leaving the site. Day time use of the vehicular crossing will be limited to one minute to minimise delay to pedestrians in Castlereagh Street.

It is understood that the proposed pedestrian concertina gate will be determined by the City of Sydney's Construction Regulations Unit prior to commencement of work. Cyclists in Elizabeth, Hunter or Castlereagh Streets will not be affected by the demolition works. Cyclists will be required to follow the traffic controller's directions as are other road users.

7.11 Dilapidation Survey

A dilapidation survey of the surrounding infrastructure, including road pavement and footpaths in Elizabeth, Hunter and Castlereagh Streets, will be carried out at the commencement and completion of the demolition works. This will identify existing defects prior to construction to assist in identifying damage possibly related to the works.

Copies of the Road Dilapidation Report will be provided to City of Sydney within three weeks of completing the surveys and no later than one month before the use of local roads by heavy vehicles.

If damage to roads occurs as a result of demolition activities and haulage operations, Metropolitan will either (at the landowner's discretion):

- compensate the landowner for the damage that caused. The amount of compensation may be agreed with the landowner, or
- 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 reports.

8 Assessment of Construction Impacts

Construction impacts have been assessed in the following hierarchy of access in accord with the CTMP Framework set out by Sydney Metro:

- Incidents & emergency services access
- Special events
- Unplanned events
- Pedestrians and cycles
- Public transport – buses
- Service vehicles – loading zone
- Coaches – N/A
- Taxis
- Kiss and Ride – N/A
- Private cars (Shoppers/short stay, commuters) – on-street parking.

Other impacts assessed included:

- Cumulative impacts to surrounding major construction projects
- Impacts to Sydney Light Rail.

8.1 Impacts to Incidence and Emergency Services Access

Access to the demolition site and neighbouring sites by emergency vehicles will not be affected by the works as the road and footpath frontage will be unaffected. Emergency protocols on the site will include a requirement for suitably accredited site personnel to assist with emergency access from the street.

Consequently, any potential impacts on emergency access will be effectively managed throughout the works.

Liaison will be maintained with the police and emergency services agencies throughout the construction period and a 24-hour contact will be made available for 'out of hours' emergencies and access.

Metropolitan will assist with emergency access along Castlereagh Street as part of the emergency protocols on-site.

Thus, there will be no adverse impacts on the provision of existing emergency vehicle access to other neighbouring properties as a result of the proposed demolition activities.

8.2 Impacts to Special Events

Table 12 provides a summary of the scheduled major special events that will be held in the Sydney CBD between May 2017 and April 2018 during which the site establishment and demolition works will take place within the site.

Table 12: *Scheduled Special Events Surrounding the Subject Site*

Special Events	Month	Affected Streets Surrounding the Subject Site
April	Anzac Day Parade	Martin Place, Elizabeth Street
May	Mothers' Day Classic	Martin Place
May / June	Vivid Sydney	Sydney CBD
June	Sydney Half Marathon	Elizabeth Street, Castlereagh Street
July	Reserve Forces Day	Macquarie Street
September	Sydney Marathon	Circular Quay, Macquarie Street, Phillip Street
October	Sydney Spring Cycle	Cahill Expressway

The RMS special events management guidelines identify the following classes of special events:

- Class 1: an event that impacts major traffic and transport systems and there is significant disruption to the non-event community.
- Class 2: is an event that impacts local traffic and transport systems and there is low scale disruption to the non-event community.
- Class 3: is an event with minimal impact on local roads and negligible impact on the non-event community.
- Class 4: is an event conducted entirely under Police control (but is not a protest or demonstration).

The above are Class 1 and 2 events mostly occur on Sundays and public holidays and do not coincide with demolition activities that are scheduled to occur on Monday to Saturday (i.e. non-public holidays). The only exception is the annual Vivid Sydney event that typically lasts three weeks in May and June. The RMS traffic management measures that took place in 2016 involved Clearway operations between 3pm and 11pm in both sides of Elizabeth Street, Castlereagh Street and Hunter Street.

Assuming similar Clearways arrangements are in place for Vivid Sydney 2017, the material haulage operation will not affect the clearway operation in any way as the trucks will not stop or queue in any public roads within the CBD. Furthermore, the haulage works will ease by 3pm before the bus zone becomes operational in Castlereagh Street.

Based on the special event traffic management protocol in 2017, Castlereagh Street was closed between Hunter Street and King Street between 3am and 4pm for the Anzac Day Dawn Service and March that took place along Elizabeth Street.

In addition, a number of CBD roads including Hunter Street, King Street, Market Street, Park Street, Bent Street, Bathurst Street, Liverpool Street, Pitt Street, Phillip Street, Elizabeth Street were closed between 6am and 4pm. Similar event traffic management measures are expected to be used in the next year's event. It is noted that no demolition and haulage activities will take place on Anzac Day given it is a public holiday.

A review of City of Sydney's registered events (as of April 2017) indicate no other events are anticipated to occur in the vicinity that will be impacted by the haulage operation nor site access.

It is understood City of Sydney has a policy of not permitting works that will cause disruption to the retail core of the city during December, in order to minimise impact on pedestrian paths and station access in the lead up to Christmas and post-Christmas period. Given the subject site is not located within the retail core, it is anticipated the demolition activities and the haulage operation will not impact on the traffic operations within the retail core during this busy shopping period. It is also acknowledged that retail trading hours are extended during this period, thus construction activities from 11 December 2017 (Monday) to 2 January 2018 (Tuesday) will be considered on a case by case basis.

It is acknowledged that ad hoc events may occur with minimal notice, including marches, protests and other public events. Impacts of special events in the CBD are not limited to the event area and immediate side streets. Many events involve relocating transport services such as buses and taxi zones temporarily. Metropolitan will continue to identify special events that might be impacted by the proposed haulage activities during the course of the demolition

activities between May 2017 and April 2018, and subsequently incorporating the known special events into the construction program and to detail responses and contingencies in the CTMP. This coordination will occur through the Sydney Coordination Office, approved event registers of Councils, the TCG and the TTLG.

Demolition works of the subject site will be scheduled outside special event periods where possible, given a majority of the special events occur on Sundays and public holidays as listed in Table 12 (except for the Vivid Sydney event). Where unavoidable, liaison will occur with event organisers of Class 1 and 2 events, and the Sydney Coordination Office, RMS and the organisers of the event to provide appropriate management of construction vehicle movements to manage potential impacts to event goers, the general public and the construction works. This may involve measures such as temporary adjustment to haulage routes, working hours or potentially stopping works for the duration of the event.

8.3 Impacts to Unplanned Events

Metropolitan will provide support to emergency service agencies and road authorities in the management of emergencies and unplanned incidents on roadways approaching and within the demolition area, and will assist in the restoration of normal traffic conditions.

The types of emergencies or unplanned incidents that may occur include, but not limited to:

- Traffic crashes
- Hazardous material spillage
- Chemical spills and leak
- Power failure and bomb threats
- Terrorist attack
- Inclement weather conditions, including flooding and major storm events
- Fire
- Police operations
- Anti-social behaviour
- Structural damage to a rail line, building, road tunnel or bridge
- Construction type incidents involving closure of a lane, or footpaths.

The Safety Manager will develop an Incident Management Plan, which will incorporate standard operating procedures for managing emergencies and unplanned incidents.

In the event of a traffic and transport related incident the primary point of contact for incident management is the Transport Management Centre. The Sydney Coordination Office will also be informed of the incident.

In case of flammable or hazardous substances, Metropolitan will instruct the site personnel not to approach these substances until NSW Fire and Rescue have declared the site safe. Metropolitan will close the roadway at a safe distance until Fire and Rescue arrives and issues appropriate instructions.

The contractor will also co-ordinate with the TMC and Sydney Coordination Office should incidents occur.

8.4 Impacts to Pedestrians and Cyclists

During the demolition period, pedestrian access adjacent to the site along Elizabeth Street, Hunter Street and Castlereagh Street will be maintained and all footpaths will be kept clear and trafficable at all times.

There will be no vehicular access to the site on the Elizabeth Street and Hunter Street frontages. Elizabeth Street will only be used for deliveries such as hoardings and scaffolding during the early stages of work, subject to separate applications to City of Sydney.

The footpath width in Castlereagh Street, Hunter Street and Elizabeth Street will reduce by some 600mm to accommodate site hoardings. The residual widths are at least 3.4m and is sufficient to accommodate two passing wheelchairs.

Qualified traffic controllers will be placed at the proposed site access to separate pedestrian and vehicle movements. No negative impacts are anticipated to be imposed on pedestrians.

Cycle access will be maintained in Castlereagh Street. Haulage vehicles will not impose adverse impacts on cyclists travelling along the on-road cycle route in Castlereagh Street, nor any other frontage streets.

8.5 Impacts to Bus Zone and Bus Services

The bus operation in Elizabeth Street, Hunter Street and Castlereagh Street will not be impacted by the demolition vehicles. The proposed driveway in Castlereagh Street is some 40m north of an existing bus stop. The bus stop will remain at its existing location and access to the bus stop and the queue area will remain unchanged as per the existing conditions.

On balance, the existing part time bus zone along Castlereagh Street will not reduce in capacity. Notwithstanding this, buses can still queue or layover in the bus zone as usual because no demolition vehicles will enter or leave the site after 3pm on weekdays when the bus zone becomes operational.

This safety measure is to eliminate any bus and truck interactions at proposed site access, as such, the bus operation will not be affected by the proposed demolition works and will be maintained as per the existing condition.

8.6 Impacts to Taxis

The demolition works are not expected to impact on the operation of taxis and nor the taxi rank located in the western kerbside lane of Castlereagh Street (lane 4).

8.7 Impacts to On-Street Parking and Loading Zone

The construction of the proposed vehicular crossing in Castlereagh Street will require one parking space to be temporarily relocated to facilitate a No Parking zone including a vehicular crossing and layback.

Metropolitan will reinstate the the existing redundant driveway as a parking space/ loading space such that there are no impacts to loading and parking in Castlereagh Street. It is understood that any changes to parking requires endorsement from the City of Sydney's Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC). Metropolitan will continue to liaise with City of Sydney regarding the parking changes in the ongoing consultation process.

The existing parking demand and the loading activities associated with the four existing buildings which are to be demolished will be eliminated during the demolition period. As a result, the demand for parking and loading is expected to reduce accordingly in Castlereagh Street.

Furthermore, paid off-street car parks are located in close proximity at various locations including Castlereagh Street at Martin Place, as well as Pitt Street south of Hunter Street.

8.8 Impacts to Adjacent Properties

Access to adjacent properties will be maintained at all times for both pedestrians and vehicles as per existing conditions.

8.9 Cumulative Impacts to Surrounding Road Network

As shown in Section 7.6, the anticipated traffic generation associated with the demolition activities is up to 3-4 movements during per peak hour (including staff, light and heavy vehicles), which is less than the traffic generation (fifteen vehicle movements per hour) of the existing car park that will be demolished. As such, the net change is a reduction of 11 movements per peak hour and is considered a positive impact on the road network.

In terms of cumulative impacts, Table 13 shows the common haulage routes that are likely to be used by the subject site and the surrounding major project sites. The haulage routes associated with the 33 Bligh Street project are based on its construction traffic management details shown in the Environmental Assessment, however, the haulage routes and the site access locations for the 60 Martin Place and 50 Bridge Street projects are only an assumption in the absence of the CTMP.

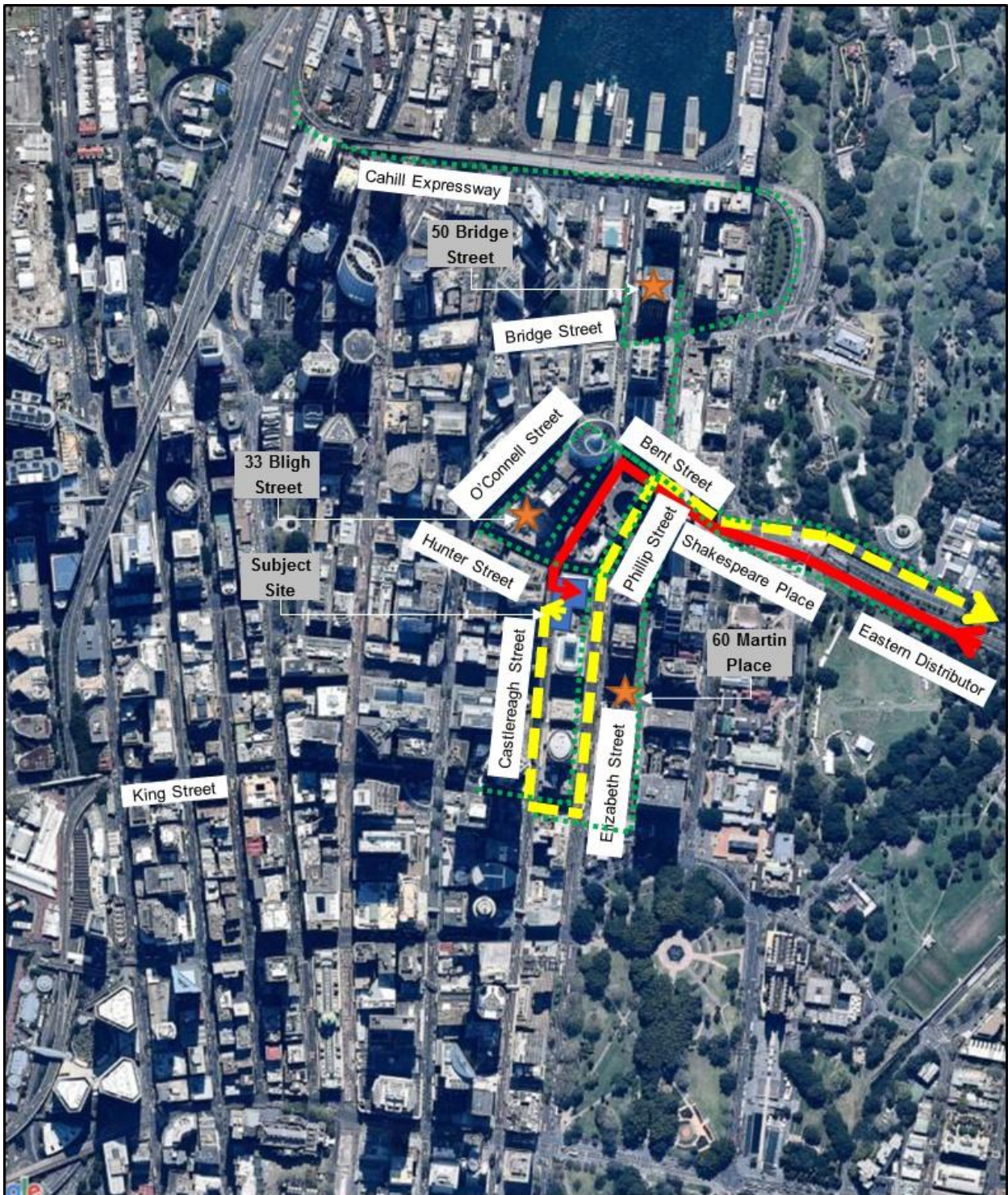
It is noted that the project at 33 Bligh Street does not appear to be progressing based on the latest aerial photo since the demolition took place in 2016. It is assumed conservatively in Table 13 that the project will proceed and its

construction activities will generate the associated traffic movements as anticipated in the Environmental Assessment.

Table 13: Traffic Generation of Other Major Project Constructions

Project	Common Haulage Route Sections (Local Roads)	Traffic Movements	
		AM Peak	PM Peak
33 Bligh Street Substation and Commercial Office Development (2009-18)	<ul style="list-style-type: none"> • Bligh Street • Phillip Street • Bent Street • Elizabeth Street • King Street 	34 vehicles/ peak hour	34 vehicles/ peak hour
60 Martin Place Commercial Office Development (2016-19)	<ul style="list-style-type: none"> • Phillip Street • Bent Street • Elizabeth Street • King Street 	34 vehicles/ peak hour	34 vehicles/ peak hour
50 Bridge Street Commercial Office Development (2017 – 2020)	<ul style="list-style-type: none"> • Phillip Street • Bent Street • Elizabeth Street 	34 vehicles/ peak hour	34 vehicles/ peak hour
Cumulative traffic volumes (subject site plus other sites)	Primary routes only	Subject site: 4 movements Adjacent developments: 102 movements Total: 106 movements	Subject site: 4 movements Adjacent developments: 102 movements Total: 106 movements

Figure 9: Possible Common Haulage Routes



The only overlapping routes with the proposed primary route of the subject site will be a short section of Elizabeth Street, Phillip Street, Bligh Street and Bent Street. Notwithstanding this, the anticipated 106 two-way construction vehicle movements per peak hour are likely to be less than the site's existing traffic generation. As such, this level of construction traffic is not expected to result in adverse traffic implications in the affected road sections to and from the arterial road network (i.e. Eastern Distributor). It should be acknowledged that some of these movements will occur in different directions in the common haulage routes, but at this stage they cannot be verified due to unknown site access locations associated with the 60 Martin Place and 50 Bridge Street projects.

8.10 Impacts to Light Rail

The proposed haulage routes do not utilise George Street where the CBD South East Light Rail construction is currently taking place with road closures in various sections to accommodate site compounds.

Consultation with SYDTRAC Design and Construction Joint Venture indicates that a number of intersections along George Street are subject to closure over a number of weekends (generally from 10pm Friday to 4am Monday) to facilitate the light rail construction works. The sequence of the closures will allow alternative one-way roads to remain operational.

In light of this, these closures will not affect the proposed material haulage operations along the east-west running roads such as King Street, where the 5% of the material will be delivered to designated landfill facilities in Western Sydney.

9 Mitigation Measures

Section 8 has identified a number of traffic impacts associated with the demolition activities at the subject site and are summarised as follows:

- Pedestrian and vehicle interaction at the access points in Castlereagh Street.

Metropolitan acknowledges that the effective management of traffic and the provision of a safe road environment are paramount to the success of this project. Measures that can be applied to minimise traffic disruptions are generally divided in four categories: design, isolation of work areas, work methods and road occupancy planning. To achieve these objectives, various measures will be applied and are discussed in this Section.

9.1 General Traffic Management Mitigation Measures

Table 14: Site Establishment

Management & Mitigation Measures	Person Responsible
Approval to operate cranes or other construction vehicles which occupy the road reserve will be obtained under Section 186 of the Law Enforcement Power and Responsibilities Act, if required.	PM
The Demolition Management Plan outlines the specific consultation activities required to communicate expected changes in relation to traffic and access arrangements as a result of the demolition work.	PM & Community consultation officer
Dilapidation reports will be prepared for the sections of Elizabeth, Hunter and Castlereagh Streets that are likely to be used by demolition traffic. Any road/footpath damage, aside from that resulting from normal wear and tear, will be repaired to the pre-existing standard at project completion.	PM
Proposed changes for the affected bus stop in Castlereagh Street will be discussed with the CBD Transport Taskforce and the bus operator (Sydney Buses) before any changes to the bus stop are made. No changes are to be made until all approvals have been received.	PM & Communication Consultation Officer
An event specific traffic management plan will be prepared if there are any special events in the CBD that will potentially be impacted by traffic movements associated with the project. The time and duration of these events will be clearly noted and demolition delivery processes will be rearranged to cater to the affected days.	PM & Community Consultation Officer
Consult with Council regarding management measures to be implemented during works that will impact on Council controlled roads.	PM
Barriers approved by the RMS and/or City of Sydney Council will be provided between the demolition site and trafficable areas. Pedestrian and cycle diversions will be implemented during the site establishment works subject to separate applications.	PM & Site Supervisor
Maintain pedestrian and cyclist thoroughfares and road surfaces are kept safe for pedestrians, cyclists and traffic. Any potholes or other failures must be repaired without delay and within 2 days of the occurrence of the pothole or failure.	PM & Site Supervisor
Develop and prepare Security Management Plans based on the site specific security threats (hazards) identified in accord with SM PS-ST-221 Sydney Metro Principal Contractor Health and Safety Standard.	PM

Table 15: Demolition

Management & Mitigation Measures	Person Responsible
Traffic Controllers with approved clothing will be provided to guide and control pedestrians on the footpath while trucks are entering or exiting the site.	PM & Site Supervisor
Pedestrian gates will be used to close the footpath on either side of the driveway to control pedestrian movements whenever a truck is entering or leaving the site.	Site Supervisor & Traffic Controllers
Designated heavy vehicle routes will be identified and monitored to minimise impacts on the road network and vehicle kilometres travelled and these routes will be communicated to truck drivers. Where practicable, these routes will involve using arterial roads such as the Eastern Distributor in preference to city streets.	PM & site Supervisor
The arrival of trucks will be staggered to prevent queuing in Castlereagh Street.	Site Supervisor
Transportation of demolition materials will be managed to maximise vehicle loads and minimise vehicle movements, where practicable.	Site Supervisor
In addition to relevant Australian Standards and RMS guidelines, all traffic management will also conform to WorkCover NSW Code of Practice for Working Near Traffic and Mobile Plant.	PM & Environmental Officer
All traffic control plans will comply with AS1742.3:2002 Traffic Control Devices for Works on Roads and the RMS's Traffic Control at Work Sites.	Environmental Officer & PM
General signposting will be displayed on the hoardings with the appropriate demolition warning signs.	Site Supervisor
Clean-up crews, including street sweepers, will be available to manage material spills.	Site Supervisor
Dust suppression measures will be used to control dust levels when trucks are being loaded at the two loading zones off Castlereagh Street.	PM & Site Supervisor
If required a wheel wash will be set up at the egress points from the site.	Site Supervisor
All loads except loads carrying metals (steel reinforcement, black iron, heavy steel, etc.) will be covered prior to leaving site.	Site Supervisor
Maintain pedestrian and cyclist thoroughfares and road surfaces are kept safe for pedestrians, cyclists and traffic. Any potholes or other failures must be repaired without delay and within 2 days of the occurrence of the pothole or failure.	PM & Site Supervisor

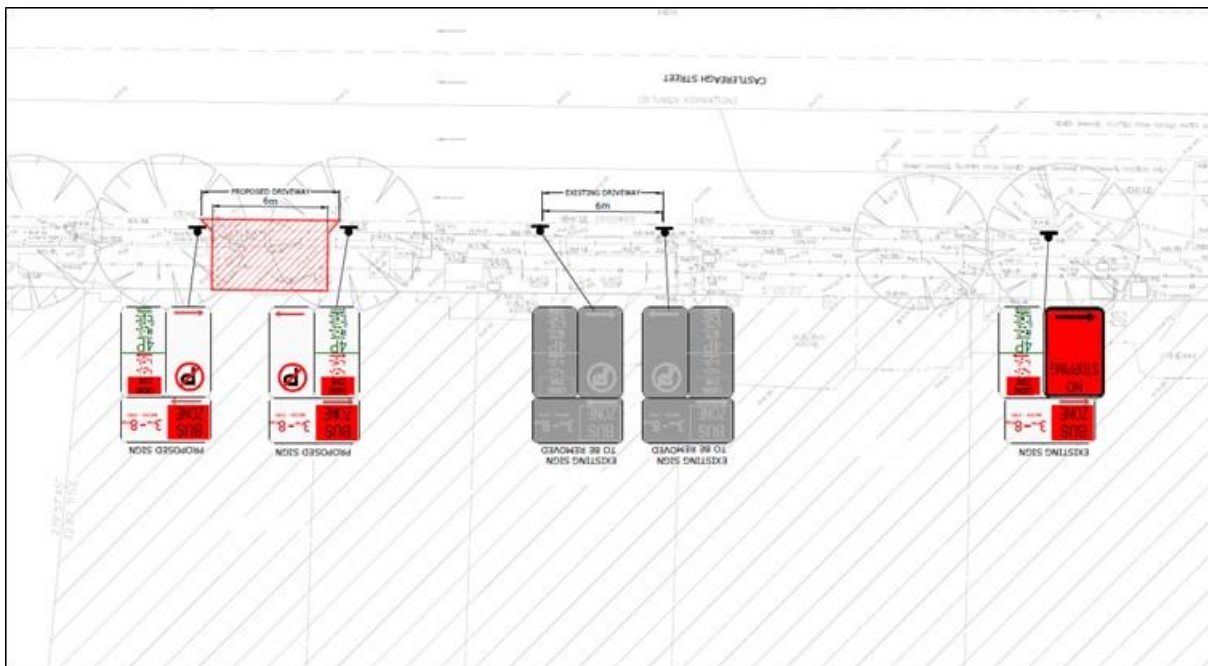
Table 16: Pedestrian & Cyclist Management

Management & Mitigation Measures	Person Responsible
Pedestrian management measures to be implemented to minimise impacts on pedestrian movement and maintain pedestrian safety (refer to TCP).	PM
General public access to surrounding areas including commercial, retail and residential properties will be maintained during demolition works.	PM & Site Supervisor
Hoardings will be utilised to separate pedestrians and site vehicle movements and to provide overhead protection.	PM & Site Supervisor
Constant traffic control will be provided at the site entry and exit points to manage the interface between pedestrians and cyclists and site vehicle movements.	PM & Site Supervisor
Appropriate signage and hoarding will be installed to guide pedestrians and cyclists across the site temporary driveway.	PM & Site Supervisor
To provide for the safe movement of cyclists, project boundaries will be clearly defined through hoarding and/or fencing to separate site activities from cyclists. Cyclists are to travel as per the existing conditions in the general traffic lane in Castlereagh Street.	PM & Site Supervisor
Maintain pedestrian and cyclist thoroughfares and road surfaces are kept safe for pedestrians, cyclists and traffic. Any potholes or other failures must be repaired without delay and within 2 days of the occurrence of the pothole or failure.	PM & Site Supervisor
Upon completion of the demolition works the vehicular crossing will be removed and footpath restored to at least the state which existed prior to the commencement of the demolition activities.	PM & Site Supervisor

9.2 Parking/ Loading/ Bus Zone Signage

“No Parking” signs will be in place at both sides of the proposed vehicular crossing in Castlereagh Street, as such the existing parking/ loading / bus zone will be relocated (refer to Figure 10 and Appendix D).

Figure 10: Proposed Parking/ Loading Zone and Bus Zone Signage



9.3 Traffic Control Plan

TCPs indicate the road worksite arrangements to protect the safety of all road users as well as the workers at site. The preparation of the TCP has considered the following:

- Warning signage for vehicles and pedestrians at site access to alert them to the presence of construction traffic (despite low usage), to warn/ inform drivers of changes to the usual road conditions, and to guide drivers through the work site.
- Qualified traffic controllers to manage pedestrian and control activity at the proposed site access.
- The movement of trucks to/ from the site access will be under normal traffic conditions.
- Pedestrians and all passing vehicles will maintain priority at all times.
- Clear definition of the work site boundary to be provided by erection of construction hoarding/ fencing around site boundaries adjacent to roads.
- Traffic controllers will be present to control interaction between construction vehicles and pedestrians.
- All signage will be clean, clearly visible and not obscured.
- All construction vehicle activity will be minimised, where possible, during peak periods.

The TCP has been developed as per AS1742.3 and the RTA traffic Control at Work Sites Manual for the demolition works. It has been designed by qualified personnel with current "Select/Modify Traffic Control Plans", "Design & Inspect Traffic Control Plans" license, and/or possess the "prepare work zone traffic management plan" certification for the purpose of lodging a ROL.

During the course of demolition it is anticipated that trucks will be able to drive in from Castlereagh Street and drive out of the site into Castlereagh Street in a forward direction only. To achieve this the following traffic management measures will be undertaken:

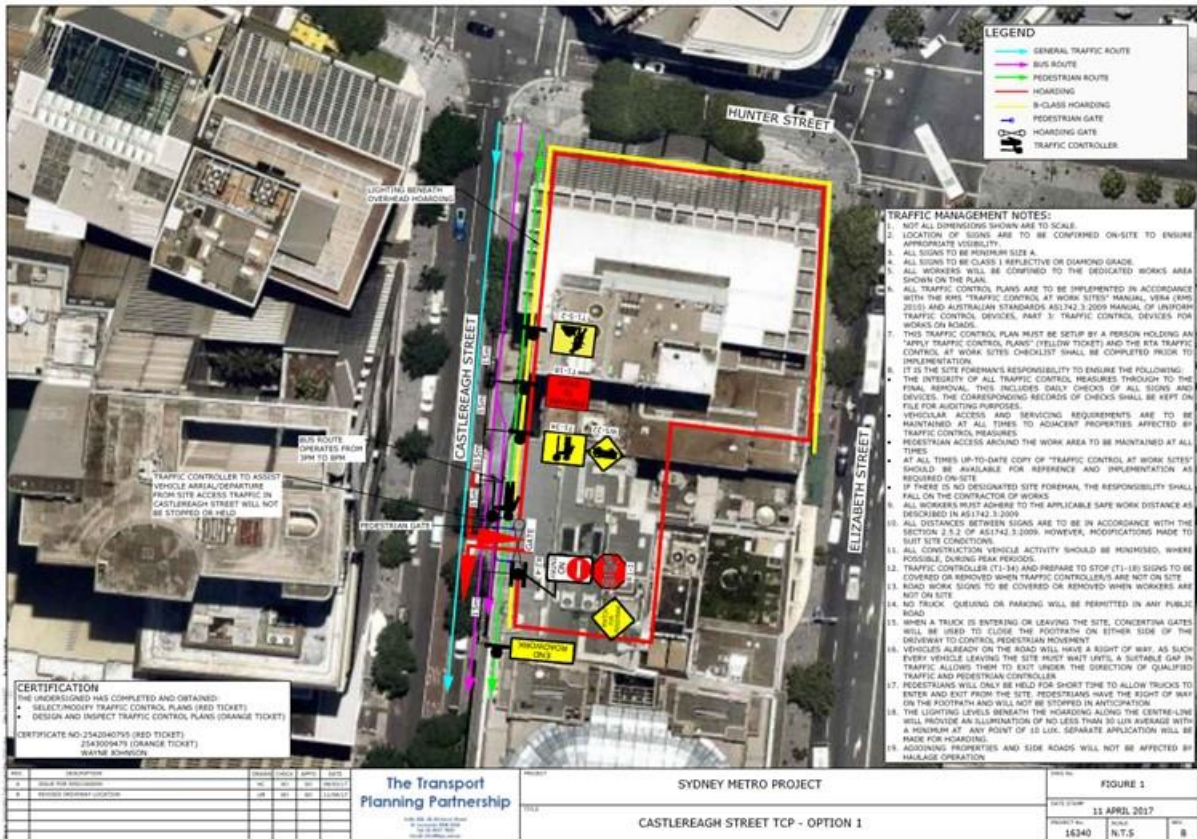
- No queuing or parking will be permitted in any public road.
- Qualified traffic controllers be located at the site access points.
- When a truck is entering or leaving the site, pedestrian gates will be used to close the footpath on either side of the driveway to control pedestrian movements.
- Vehicles already on the road will have the right of way. As such every vehicle leaving the site must wait until a suitable gap in traffic allows them to exit under the direction of qualified traffic and pedestrian controllers.
- Pedestrians will only be held for short periods of time to allow trucks to enter and exit from the site. Pedestrians have the right-of-way on the footpath and will not be stopped in anticipation.

These measures will minimise impacts on traffic both vehicular and pedestrian in Castlereagh Street. It is predicted a peak of 44 truck movements per day or approximately 4 truck movements per peak hour will be involved.

The arrival of trucks on-site will be staggered to prevent queuing of trucks at any time in Castlereagh Street.

Advanced warning signs will be installed in Castlereagh Street on the approach to the site. All signs will be placed in accordance with relevant guidelines and standards. Messages shall be clear and easily interpreted by drivers, and should not create a safety hazard. The proposed traffic control plan is shown in Figure 11 and in Appendix E.

Figure 11: Traffic Control Plan



Metropolitan will supply and install regulatory traffic control devices, and remove them when the devices are no longer required. Metropolitan will advise the Principal’s Representative of the names of proposed traffic controllers and their traffic controllers’ certificate numbers and expiry dates.

9.4 Pedestrian Access Management

Pedestrian access will be maintained at all times along the frontage streets.

Existing transverse pedestrian movements are to be maintained at the pedestrian crossing facilities at the Castlereagh Street/ Hunter Street intersection, and the mid-block locations in Castlereagh Street.

B class hoardings will be used for overhead protection where materials will be lifted over pedestrian footpath on Elizabeth Street during the site establishment period. B class hoardings will also be provided along the Hunter Street and Castlereagh Street frontages. All B class hoardings will feature lighting to ensure pedestrians safety at night.

Footpath widths under the B Class hoardings will allow two-way pedestrian traffic in compliance with Austroads requirement to provide sufficient space to accommodate prams, strollers and wheelchairs.

Suitable signage including the “Watch for Pedestrians” signs will be provided to maintain pedestrian safety when pedestrians travel across the proposed vehicular crossing.

Figure 11 presents the location of traffic controller in the TCP for the demolition site. Based on NSW Road Rule drivers must give way to pedestrians crossing the road into which their vehicles are turning. Qualified traffic controllers with a “Stop-Slow” bat will manage and control vehicle movements at the driveway locations in Castlereagh Street.

Traffic controllers located at the site access point will be notified by two-way radio whenever there is a construction vehicle approaching and leaving the construction site. The traffic controllers will ensure the safe and efficient movement of all pedestrians at the site access points.

Cyclist access and safety will be managed as will general traffic along the frontage streets.

9.5 Additional Enhancement for Road User Safety

Additional enhancements for pedestrian, cyclist and motorist safety in the vicinity of the construction site are to be implemented during construction. These measures include:

- 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.

9.6 Road Safety Audits

A Road Safety Audit has been conducted independently on the TCP in accordance with the RMS 'Guidelines for Road Safety Audit Practices (2011), with reference to current practices outlined in Austroads Guide to Road Safety Part 6 Road Safety Audit (2009) and the Sydney Metro Principal Contractor H&S Standard. Road safety audit has been undertaken with due consideration to the high levels of pedestrian activity in the Sydney CBD environments.

The Road Safety Audit is shown in Appendix F. Post-implementation audits are in addition to the daily inspections by the site staff. Particular 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.

It is also understood that road safety audits must be prepared in consultation with the TTLG before the completion and use of the subject infrastructure and must be made available to the Secretary upon request.

9.7 Contingency Plans

Metropolitan will develop contingency plans for all traffic control operations, which will be incorporated within the Demolition Management Plan to be implemented on site. Incidents may include: late finishing road work, equipment breakdowns, poor weather conditions, and unplanned incidents. The table below briefly outlines the various actions, in respect to traffic management, which will be applied for these types of incidents.

Table 17: Contingency Plans

Incident	Action
Late Finishing Road Work	<ul style="list-style-type: none"> • In the event of late finishing road works, priority will be to make the road trafficable and then to remove all controls as soon as possible. The TMC is to be notified as soon as the possibility of late finishing work has been identified, and updated accordingly. • Where possible, cease work, remove restrictions and reprogram activity. Where works cannot be removed, monitor traffic flows and modify traffic controls / resources. • Expedite completion of works.
Equipment Breakdown	<ul style="list-style-type: none"> • Notify the TMC immediately, and update accordingly. • Where possible, cease work and remove restrictions. • Where works cannot be removed, source replacement equipment, make safe, or utilise another work method. • Modify traffic control and monitor traffic flows. • Consider use of Variable Message Sign (VMS) in consultation with City of Sydney.
Poor Weather Conditions	<ul style="list-style-type: none"> • Assess risk / hazards, if necessary postpone and reprogram works. • If works proceed, modify traffic control and source additional equipment to enhance safety. • Notify the TMC immediately, and update accordingly. • Continue to monitor conditions, and if necessary cease work and remove restrictions.

Incident	Action
Unplanned Incidents	<ul style="list-style-type: none"> • Notify the TMC immediately, update accordingly. • Where possible, cease work and remove restrictions. • Modify traffic control and manage site until emergency services / RMS arrive. • Support emergency services / RMS, as required. • When instructed by TMC, recommence works.

Further, if the demolition results in a worsening of the traffic conditions, Metropolitan will review the measures identified in the CTMPs in consultation with the TTLG where relevant. Any changes to the CTMP will be submitted to RMS for approval following Sydney Coordination Office endorsement.

9.8 Consultation and Communications

In association with TfNSW, Metropolitan will undertake proactive consultation and communication with the community, road authorities, City of Sydney, emergency service agencies and key stakeholders in regard to traffic management. The Demolition Management Plan outlines ongoing consultation activities that will be undertaken during the works.

All external communication with the community including businesses will follow the guidelines set out in the Sydney Metro Community Consultation – Early Works. The community must be notified of any current and upcoming demolition works and traffic arrangement that have the potential to impact on stakeholders and the community, prior to them occurring. A Community Communication Strategy will be developed by Metropolitan to notify stakeholders that may be affected by changes to transport, access and local traffic arrangements.

For example, owners and operators of the neighbouring properties and businesses will be notified in advance of the demolition by means of letterbox drop to the relevant operators.

9.9 Any comment, feedback, complaint can be made to the project manager and site supervisors via the contact details listed in Section 3.4 and 3.5. Implementation of Corrective Actions

Corrective actions will be implemented when inspections or audits indicate a non-conformance with the objectives of this Traffic Management Plan. The specific type of action undertaken will relate to the issue causing non-conformance with respect to the desired management outcomes.

These corrective actions will be determined in consultation with City of Sydney, Metropolitan Project Manager, Senior Environmental Officer and the TfNSW appointed representative. Where regulatory authorities are involved they will also be included in any consultation.

To ensure the rectification of any non-conformance is completed within an appropriate time frame, the procedure detailed in the DMP will be followed. This procedure involves ceasing the activity until the situation is under control, or reappraisal of the action plan is completed and additional control measures introduced.

9.10 Site Inspections and Record Keeping

The following inspections will take place to ensure that conditions accord with those stipulated in the plan and there are no potential hazards:

- Pre-start and pre-close down inspections of short term traffic control.
- Weekly inspections of long term traffic control (i.e. more than one shift).
- Night inspections of long term traffic control.

Any possible adverse impacts will be recorded and dealt with if they arise.

9.11 Staff Training

9.11.1 Site Induction

All staff employed on the site by the Metropolitan Demolitions (including sub-contractors) will be required to undergo a site induction.

The induction will include approved access routes to and from the construction site for site staff and delivery vehicles as well as standard environmental, WH&S, driver protocols and emergency procedures.

All personnel employed on the Sydney Metro City & Southwest demolition phases will perform their duties in accordance with the requirements of this CTMP and in compliance with the manuals and procedures outlined, and any specific Project Plans or instructions.

9.11.2 Driver Training

Heavy vehicle drivers will be made fully aware the worksite traffic management arrangements and site access requirements including 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. Driver training will take into account current best practice and information including Cycle Awareness Training.

Daily briefings will be provided to drivers on routes, potential changes and impacts on the routes in the form of toolbox talks.

All drivers will take the mandatory Sydney Metro City & Southwest project specific Heavy Vehicle Driver Introduction Training.

10 Complaint Management

The ROL register will maintain records of traffic accidents and incidents reported at work sites. Any complaints received regarding traffic delays at work sites will be referred to Metropolitan. Metropolitan will be required to table the register, upon request, at meetings with Traffic Control Groups. The person in charge of the work site will 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 Metropolitan.

Please also refer to The Community Consultation Management Plan for Complaint Management.

11 Signature of Employees

Project No: MD1968
 Project Name: Sydney Metro City & Southwest
 Client: TfNSW
 Location: Package B –8-12 Castlereagh Street, 5-7 Elizabeth Street, and 55 Hunter Street
 Date: _____
 Induction Presenter: _____

Note: You are signing to say you understand and will work to this Traffic Management Plan in entirety. Do NOT sign if you are not comfortable, do not understand or are unqualified / untrained to undertake the works outlined in this Traffic Management Plan, if you feel you cannot sign then talk to the site supervisor and he will find alternative tasks for you.

Name:	Company:	Signature:	Date:

12 Conclusions

This report has been prepared to document the proposed demolition activities and associated traffic management measures to facilitate the demolition works at Martin Place prior to the Station Tunnelling Excavation works of the Sydney Metro City and Southwest project. The preparation of this CTMP is in compliance with the requirements set out in various Sydney Metro documents and City of Sydney Guideline.

Based on the findings of the report, it is concluded that:

- A new vehicular crossing is proposed to be used as a site access in Castlereagh Street to facilitate both ingress and egress movements to and from the demolition site.
- There are no impacts to parking/ loading/ bus zone because:
 - Haulage operation will end by 3pm on weekdays before the bus zone becomes operational.
 - The parking and loading demands in Castlereagh Street are anticipated to reduce as a result of the demolition of the four commercial buildings.
- The low traffic volume as a result of the demolition activities will not impose adverse impacts on general traffic along the frontage road and the wider road network in conjunction with the adjacent major construction works.
- Construction vehicle movements to and from the site can be satisfactorily accommodated by the surrounding road network.
- Construction activities are to be scheduled so the traffic generated by the project will be minimised during the morning, noon, and afternoon pedestrian peak hours and rescheduling of haulage activities would be considered to minimise impacts to the special events in the CBD and near Martin Place.
- The proposed site access will be managed by qualified traffic controllers to ensure safe and efficient movement of all road users including pedestrians and cyclists.
- The majority of vehicles associated with the demolition activities on the subject site will travel to and from the St Peters Recycling Yard via Eastern Distributor, Bent Street, Bligh Street and Phillip Street.
- The site is located within easy walking distance to public transport hence demolition personnel will be encouraged to utilise the proposed tool drop facility and the public transport system to minimise traffic impacts on the surrounding road network.
- A number of driver protocols will be established as part of the site induction procedure for drivers to ensure the safety of road users.

Overall, the demolition traffic arrangements are considered acceptable for this project.

Ongoing consultation will be held with TTLG and other relevant authorities to ensure that this CTMP, subject to approval, is implemented in accord with the requirements.

Appendix A – Stakeholders Comments to Earlier Version of this CTMP

Appendix B – Minutes of TTLG Meeting

Appendix C – Swept Path Analysis

Appendix D – Proposed Signage Plan

Appendix E – Traffic Control Plan

Appendix F – Road Safety Audit

From: RAMIREZ Giovanni [mailto:Giovanny.RAMIREZ@tmc.transport.nsw.gov.au]
Sent: Monday, 8 May 2017 5:24 PM
To: Bert Musch <bert@metrodemo.com.au>; O'Leary, Peter <Peter.OLeary@transport.nsw.gov.au>
Cc: ISSA Steven C <Steven.ISSA@tmc.transport.nsw.gov.au>; SCHNEIDER Shane J <Shane.SCHNEIDER@rms.nsw.gov.au>
Subject: RE: Package B - Martin Place North - Construction Traffic Management Plan - Issue 002

Bert / Peter

In accordance with clause 2.3 (c) of the General Conditions, Schedule E3-Project Planning Approval and Conditions & the SMR E – Sydney Metro City and Southwest Demolition Contract the Roads and Maritime Service of NSW and the Sydney Coordination Office approve the Construction Traffic Management Plan (CTMP) Sydney Metro City & Southwest – Demolition Works – Package B Martin Place – Project/Plan No:MD1968/14 for Transport for NSW Rev 02 for demolition and related removal works for Martin Place Station Construction in preparation of the Sydney Metro subject to the following requirements:

- Obtaining Road Occupancy Licences from the Transport Management Centre as required
- Obtaining an approved hoarding installation certificate from City of Sydney Council
- Addressing any safety issues identified within the Road Safety Audit (V02-F) review of this CTMP
- Addressing any issues raised by Council, STA, Taxi Council, residents, businesses and/or Emergency Services that may arise in the TMP approval process
- The Construction Traffic Management Plan being updated as required prior to construction commencing to ensure consistency with the final Construction Traffic Management Framework when it is approved
- Promptly addressing any CBD Taskforce and/or TMC and/or RMS issue that eventuates during the works

Regards

Giovanny Ramirez
Principal Manager Taskforce Operations
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Transport for NSW
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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

9 May 2017

Ref: 170108_CMTP-Martin PI

Dear Stuart

**RE: Endorsement of Metropolitan Construction Traffic Management Plan –
Demolition Works – Package B Martin Place, Sydney Metro City & Southwest**

Thank you for providing the following documents for Environmental Representative (ER) review and endorsement as required by the Condition of Approval E82 of the Sydney Metro City & Southwest project (SSI – 15_7400 January 9 2017).

- Construction Traffic Management Plan - Construction Traffic Management Plan – Demolition Works – Package B Martin Place, Sydney Metro City & Southwest, (Revision C-03 dated 11 April 2017).
- Email from the Sydney Coordination Office dated 8 May 2017 stating *“the Roads and Maritime Service of NSW and the Sydney Coordination Office approve the Construction Traffic Management Plan (CTMP) Sydney Metro City & Southwest – Demolition Works – Package B Martin Place – Project/Plan No:MD1968/14 for Transport for NSW Rev 02”*

It is noted that the Roads and Maritime Service of NSW and the Sydney Coordination Office approval above is conditional on the following:

- Obtaining Road Occupancy Licences from the Transport Management Centre as required
- Obtaining an approved hoarding installation certificate from City of Sydney Council
- Addressing any safety issues identified within the Road Safety Audit (V02-F) review of this CTMP
- Addressing any issues raised by Council, STA, Taxi Council, residents, businesses and/or Emergency Services that may arise in the TMP approval process
- The Construction Traffic Management Plan being updated as required prior to construction commencing to ensure consistency with the final Construction Traffic Management Framework when it is approved
- Promptly addressing any CBD Taskforce and/or TMC and/or RMS issue that eventuates during the works



As an approved ER for the Sydney Metro City & Southwest project, I have reviewed the above documents. The review did not comprise a technical review, as the ERs are not traffic experts.

It is considered that the plan is consistent with Condition E82 and the Sydney Metro Construction Traffic Management Framework (CTMF) as referenced in Condition E81 of the Project Approval (subject to the above conditions being complied with).

Yours sincerely

Michael Woolley

Environmental Representative – Sydney Metro – City and South West