AW EDWARDS

**PROJECT:** Site C OSD Crows Nest

**DATE**: 06/09/2022

**DA Application Number:** SSD-13852803

**DA CONDITION:** B28 and B40

Please find attached the CPTMP which should close out Condition B28 and B40,

Refer to the table below for location of the information required in the CPTMP for Condition B40,

| Item No | The CPTMP needs to specify matters including, but not limited to, the following | Page in CPTMP |
|---|---|---|
| I | A description of the development | Page 81 |
| ii | Location of any proposed work zone(s) | Page 81 |
| iii | Details of crane arrangements including location of any crane(s) and crane movement plan | Page 82 & 83 |
| iv | Haulage routes | Page 53 |
| V | Proposed construction hours | Page 28 |
| vi | Predicted number of construction vehicle movements, detail of vehicle types and demonstrate that proposed construction vehicle movements can work within the context of road changes in the surrounding area, noting that construction vehicle movements are to be minimised during peak periods | Page 37 & 38 |
| vii | Construction vehicle access arrangements | Page 45 to 48 |
| viii | Construction program and construction methodology, including any construction staging | Page 14 to 17 |
| ix | A detailed plan of any proposed hoarding and/or scaffolding | Page 83 |
| X | Measures to avoid construction worker vehicle movements within the precinct | Page 37 & 38 |
| xi | Consultation strategy for liaison with surrounding stakeholders, including other developments under construction and Sydney Metro City and Southwest | Page 78 to 80 |
| xii | Identify any potential impacts to general traffic, cyclists, pedestrians, bus services within the vicinity of the site from construction vehicles during the construction of the proposed works. Proposed mitigation measures should be clearly identified and included in the CPTMP; and | Page 35 to 38 and 41 to 45 |
| xiii | Identify the cumulative construction activities of the development and other projects within or around the development site, including the Sydney Metro City and Southwest and private development. Proposed measures to minimise the cumulative impacts on the surrounding road network should be clearly identified and included in the CPTMP. | Page 37 |

Regards,

AW EDWARDS PTY LIMITED
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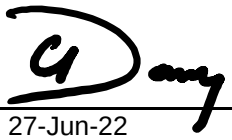
AW EDWARDS

# Construction Traffic Management Plan (CTMP)

## DOCUMENT INFORMATION

| | | | |
|---|---|---|---|
| **PROJECT** | Sydney City and Southwest Metro – Crows Nest Station | **REVISION** | 08 |
| **DOCUMENT NUMBER** | SMCSWSCN-AWE-SCN-TF-PLN-000026 | **DATE** | 07/07/2022 |
| **CLIENT** | Sydney Metro | **STATUS** | For Approval |

## DOCUMENT APPROVAL

| | PREPARED BY | REVIEWED BY | APPROVED BY |
|---|---|---|---|
| Name | Ashish Modessa | Brett Maynard | Colin Danby |
| Company | GTA Consultants | GTA Consultants | A W Edwards Pty Ltd |
| Project Role | Senior Consultant | Director | Project Director |
| Signature |  |  |  |
| Date | 27-Jun-22 | 27-Jun-22 | 27-Jun-22 |

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## REVISION

| REVISION | DATE | STATUS | AUTHOR | APPROVED BY | COMMENTS |
|---|---|---|---|---|---|
| A | 12 Nov 2020 | For Review | Ashish Modessa | Colin Danby | |
| 00 | 12 Nov 2020 | For Review | Ashish Modessa | Colin Danby | Revision figure updated from A to 00 |
| 01 | 14 Dec 2020 | For Review | Ashish Modessa | Colin Danby | Update in response to NSC Comments |
| 01 | 5 Jan 2021 | For Review | Ashish Modessa | Colin Danby | Revised in response to Sydney Metro review* |
| 02 | 08-Feb-2021 | For Review | Ashish Modessa | Colin Danby | For Approval |
| 03 | 21-Jun-2021 | For Construction | Ashish Modessa | Colin Danby | Update Contact Details |
| 04 | 15/10/2021 | For Review | Samanth Jadala | Colin Danby | 6-month update |
| 05 | 10/11/2021 | For Review | Samanth Jadala | Colin Danby | 6-Months Update |
| 06 | 26/05/2022 | For Review | Samanth Jadala | Colin Danby | 6-Months Update |
| 07 | 07/07/2022 | For Review | Samanth Jadala | Colin Danby | 6-Months Update- Revised comments from Tfn, SCO |
| 08 | 23/08/2022 | For Review | Samanth Jadala | Colin Danby | Revised comments & for approval |

*Note Management Plan number has changed from SMCSWSCN-AWE-SCN-TF-PLN0000026 to SMCSWSCN-AWE-SCN-TF-PLN-000026 to align with TeamBinder document numbering, at Rev 01.

This CTMP was created in line with Section 3 and Section 9 of the Crows Nest Construct Only Deed – contract number 505 Deed and Section 2.10 of the GSMoP, relevant Conditions of the Project Planning Approval and the Construction Traffic Management Framework (CTMF).

DOCUMENT CHANGES/ UPDATES

Document Changes/Updates (between Version 01 and (this current) Version 02)

| DATE | SECTION | CHANGE MADE |
|---|---|---|
| 1/02/2021 | 4.1 | Additional text added regarding Traffic Controllers, PPE, and night works |
| 1/02/2021 | 6 | Additional text added regarding footpath closure and associate signage and management |
| 1/02/2021 | 15 | Text from CSMP added to CTMP regarding Incident Reporting and Emergency Response and Incident Management |
| 1/02/2021 | Annexure B | Pedestrian/ cyclist and construction vehicle interaction added to Risk Register |
| 1/02/2021 | 4.1 | Additional text added regarding Traffic Controllers, PPE, and night works |
| 15/10/2021 | Contacts | Contacts Updated |
| 14/10/2021 | Acronyms and definitions | Updated. |
| 14/10/2021 | 2.5.3 | TGS wording updated |
| 14/10/2021 | 2.11 | Updated organisation and responsibilities |
| 14/10/2021 | 12 | Wording updated |
| 14/10/2021 | Annexure D | TGS plan updated. |
| 10/11/2021 | Annexure B | Updated. |
| 26/05/2022 | Contacts | Updated. |
| 26/05/2022 | Table 3 | Updated to suit Site C – OSD Works. |
| 26/05/2022 | 19 | Updated to suit Site C – OSD Works. |
| 27/06/2022 | Annexure B | Updated. |
| 27/06/2022 | 19 | Wording updated as per TCG presentation on 07/06/2022. |
| 30/06/2022 | Section 11.7 | Section updated to suit TCAWS technical manual. |
| 07/07/2022 | Annexure B | Updated to suit mobile plant operations. |
| 23/08/2022 | Section 19 | Updated to suit site C-OSD works includes pedestrian access management. |

**AW EDWARDS** acknowledges the Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities.
We pay our respect to Aboriginal and Torres Strait Islander people and culture, and to their Elders past and present.

*"COMMUNITY"*
*Artwork by Raechel Saunders*

## CONTACTS

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| Independent Environmental Representative | Rui Henriques | rui.henriques@hbi.com.au |
| Sydney Metro Engineering Assurance Manager | Daniel Rama | daniel.rama@transport.nsw.gov.au |
| Sydney Metro Safety Assurance Manager | Alex Chew | Alexander.Chew@transport.nsw.gov.au |
| SESA Manager | Jonathan Luey | Jonathan.luey@archservices.com.au |
| ISA Coordinator | Teona Whealing | teona.whealing@networkrailconsulting.com |
| North Sydney Council | | (02) 9936 8100 |
| EPA pollution hotline | | 131 555 |
| SafeWork NSW | | 131 050 |
| NSW Health | | (02) 9391 9939 (office hours) or 0491 227 423 (after hours) |
| Fire and Rescue NSW | (or 000 if an emergency) | 1300 729 579 |
| WIRES Wildlife Rescue | | 1300 094 737 |

## CONTENTS

**Acronyms/Definitions**

| ACRONYM | DEFINITION |
|---|---|
| AS/NZS | Australian Standard/New Zealand Standard |
| CEMP | Construction Environment Management Plan (not finalised until 6 months after contract award) |
| CIP | Community Involvement Plan (not finalised until 6 months after contract award) |
| COP | Construct Only Project |
| Council | North Sydney Council (unless otherwise stated) |
| CSES | Community and Stakeholder Engagement Strategy (not finalised until 6 months after contract award) |
| CTMF | Construction Traffic Management Framework (Sydney Metro Document) |
| EB | East bound |
| EPL | Environment Protection Licence (not finalised until 6 months after contract award) |
| GSMoP | General Specification Management of the Project (Section 2.10) |
| Heavy Vehicle | Truck and dogs, concrete agitators, most cranes and semi or flatbed trucks. All these vehicles currently use the road network and operate within road rules and requirements. Vehicles that operate outside current conditions are considered over dimensioned: see Section 5 |
| Long Term | For more than one shift, installed on one day/night and remains in place for weeks or months but is removed on completion of the project or that specific piece of work, e.g. signage |
| NB | North bound |
| OPLINC | Online Planned Incident System (ROL application system) |
| OSD | Over Station Development |
| RMS | Roads Maritime Service - Now Transport for New South Wales (TfNSW) |
| ROL | Road Occupancy Licence |
| SB | Southbound |
| SCO/CJP | Sydney Coordination Office - Now Customer Journey Planning |
| Short Term | For one shift only, work may return the next day/night, but it is set-up and packed-up entirely in one shift, e.g. cones and signs for a lane closure |
| SWMS | Safe Work Method Statement |
| SZA | Speed Zoning Authorisation |
| TCG | Traffic Co-ordination Group |
| TGS | Traffic Guidance Scheme |
| TCS | Traffic Control Signal (traffic lights) |
| TMP | Traffic Management Plan |
| TTLG | Traffic and Transport Liaison Group |
| VMS | Variable Message Sign (portable or permanent) |
| Work site | Site A, Site B and/or Site C unless short term work away from one of these sites; in this case, it is where the work occurs. |
| WB | Westbound |

## Traceability Tables – CTMF and GSMoP

*Table 1:* ***Construction Traffic Management Framework (CTMF)***

| CONSTRUCTION TRAFFIC MANAGEMENT FRAMEWORK (CTMF) | THIS CTMP REFERENCE |
|---|---|
| 2. Traffic Management Objectives | |
| 2.1. General Traffic Management Approach | The principles, procedures outlined throughout this CTMP |
| 2.2. Traffic management strategy | |
| 2.3. Hierarchy of access | |
| 3. Implementation Framework | |
| 3.1. Construction Environmental Management Framework (CEMF) | Section 2.5, 2.5.7, 2.10, 8.3.1 and Section 17, |
| 3.2. Construction traffic management task | This CTMP |
| 3.3. Implementation process | Section 2.5 and sub-sections |
| 3.3.1. Construction Traffic Management Framework | Does not apply, just a description of the CTMF |
| 3.3.2. Construction Traffic Management Plans | Section 2.5 and sub-sections |
| 3.3.3. Site-specific CTMP | Section 2.5 and sub-sections |
| 3.3.4. Traffic Control Plans and other plans | Section 12, Section 2.5 and sub-sections |
| 4. Consultation Groups | |
| 4.1. Traffic and Transport Liaison Group | Section 17.2 and Section 18 |
| 4.1.1. Other organisations | Section 17 |
| 4.2. Traffic Control Group | Section 17.3 |
| 4.3. Government stakeholders | Does not apply, references groups spoken to in development of the CTMF |
| 5. Communication | |
| 5.1. Existing businesses and residents | Section 3.1.2, Section 6, section 8.5.1 and Section 17 |
| 5.2. Notification of traffic changes or disruptive works | |
| 5.3. Responsibilities | |
| 5.4. Roadside Messaging | Section 11.3 and Section 17 |
| 6. Approvals | |
| 6.1. Policy Context and Legislative Backing | Section 2.6, 2.7 |
| 6.2. Stakeholders | This CTMP is for stakeholders, also Section 3, 5, 6, 8 |
| 6.3. Construction Traffic Management Plans Approvals Process | Figure 3 |
| 6.4. Road Occupancy Licence Process | Section 9 and 10 |

| CONSTRUCTION TRAFFIC MANAGEMENT FRAMEWORK (CTMF) | THIS CTMP REFERENCE |
|---|---|
| 6.5. Speed Zone Authorisation | Section 10 |
| 6.6. Special Event Coordination | Section 16 |
| 6.7. Adjustments to Traffic Signals | Section 11.5 and 11.6 |
| 6.8. Over-size or Over-mass Vehicle Permits | Section 4 and Section 8.5.2 |
| 6.9. Adjustments to Bus Routes and Stops | Section5 |
| 6.10. Adjustments to Australia Post Boxes or Other Roadside Furniture | Section 3.1.1 |
| 6.11. Council Traffic Committees | Section 9.1 |
| 6.12. Requirements under the approval | Section 8.2 |
| 6.12.1. Dilapidation surveys | |
| 7. Management of Construction Traffic | |
| 7.1. Haulage routes | Section 4 and Section 8 (incl sub Sections, especially 8.5) |
| 7.2. Management of Heavy Vehicle Movements | |
| 7.3. Work Zones and Heavy Vehicle Marshalling | Section 9.1 and 8.5.1 for state roads |
| 7.4. Construction/Demolition Vehicle Types | Figure 8 |
| 7.4.1. Worker Access and Parking | Section 8.4 |
| 7.4.2. Construction Consolidation Centre/Depot | Does not apply. |
| 7.4.3. Driver training | Section 2.5.5 and 2.9 and 2.11.3 and 4.3 |
| 7.4.4. Chain of Responsibility and Heavy Vehicle National Law | Section 4.2 |
| 8. Operational Requirements | |
| 8.1. Traffic Control at Work Sites | The principles, procedures outlined throughout this CTMP |
| 8.1.1. Policy and Responsibilities | Section 2.5.3, 2.5.5, 2.5.6, Section 2.11.2, Annexure A, |
| 8.1.2. Traffic Control Techniques | Section 2.5.3, 2.5.5, 2.5.6 and Section 11 |
| 8.1.3. Approved Clothing for Work Personnel | Not within remit of this document. Will be outlined in relevant Safety Plan |
| 8.1.4. Plant and Equipment | Section 11 |
| 8.2. Frequency of Inspections | Section 2.11, Section 13 and Section 14 |
| 8.2.1. Inspections of Roadwork Traffic Management Schemes | |
| 8.3. Emergency Incident Planning | Section 15 |
| 8.3.1. Accidents/Incidents and Complaints | |
| 8.3.2. Chemical Spills and Leaks | Section 8.3.1 |
| 8.4. Traffic Controllers and Temporary Traffic Signals | Section 2.11.2 and Section 11.6 |

| CONSTRUCTION TRAFFIC MANAGEMENT FRAMEWORK (CTMF) | THIS CTMP REFERENCE |
|---|---|
| 9. Management of Worksites | |
| 9.1. Worksite Boundaries | Annexure C |
| 9.2. Hoardings | Annexure C |
| 9.3. Site Security, Site Access and Signage | Annexure C |
| 9.4. Pedestrian Security/Safety/Lighting | Annexure C |
| 9.5. Management of Risks to Vulnerable Road Users | Section 2.9 and Annexure B |
| 10. Road Safety Audits | |
| 10.1 Purpose and Benefits | Section 14 |
| 10.2 Stages When Road Safety Audits Are Undertaken | |
| 10.2.1 Detailed Design Stage | |
| 10.2.2 Pre-opening Stage | |
| 10.2.3. Road Safety Audits of temporary work/Construction Traffic Management Plans | |
| 10.2.4. Road Safety Audit Procedure | |

*Table 2: General Specification Management of the Project (GSMoP)*

| GENERAL SPECIFICATION MANAGEMENT OF THE PROJECT (GSMOP) | THIS CTMP REFERENCE |
|---|---|
| 16. Traffic Management | |
| 16.1 Construction Traffic Management Plan | This CTMP (note: this spec does distinguish CTMP and TMP) |
| 16.2 Traffic Guidance Schemes | Section 12 |
| 16.3 General | This CTMP |
| 16.4 Community Notification | Section 3.1.2, Section 6, section 8.5.1 and Section 17 |
| 16.5 Traffic and Transport Liaison Group | Section 17.2 and Section 18 |
| 16.6 Traffic Control Group | Figure 3 and Section 17.3 |
| 16.7 Traffic and transport representative | Section 2.11.1 |
| 16.8 Road Conditions | Section 8.2 |
| 16.9 Road, footpath and shared path occupancies, detours and closures | Section 2.1, Section 3.1, Section 6, Section 8.3, Section 8.5.1, Section 12, Section 17.2 |
| 16.10 Compliance with traffic instructions during construction | Section 2.6 |
| 16.11 Pedestrian and Cyclist provisions | Section 6 and Section 7 |
| 16.12 Train Station Provisions | N/A |
| 16.13 Bus Provisions | Section 5 |
| 16.14 Traffic Control | Section 2.5.4, 2.5.2, Section 6 and Section 11 |
| 16.15 Special Events | Section 16 |
| 16.16 Emergency / Incident Management | Section 15 |
| 16.17 Chain of Responsibility | Section 4.2 |

# 1 INTRODUCTION

The Crows Nest Station Contract (October 2020 until December 2023) is a Construct Only Project (COP), A W Edwards' is responsibility for obtaining relevant approvals and delivering the project. Sydney Metro produced and owned this CTMP until the contract was awarded, to allow the project to continue without significant lead time needed after contract award for the successful contractor to plan and produce the document and methodology. This CTMP is in its final form, having already addressed one round of stakeholder comments and is now ready for approval by relevant stakeholders with changes made following contract award.

Any changes made to this CTMP would be tabled at the TCG and managed through the approval process outlined in this CTMP.

This Construction Traffic Management Plan (CTMP) details the principals and methods A W Edwards will use to safely manage vehicular, cyclist and pedestrian traffic during construction of the Crows Nest Station.

This CTMP addresses the relevant requirements of the General Specification Management of the Project (GSMoP), Baseline Conditions of Approval and all applicable guides and standards as referenced in the Deed. All other requirements and applicable guides and standards are detailed in (Annexure A) and how they are met in this Plan.

A W Edwards acknowledges the safety of road users and the effective management of traffic is paramount to the successful day-to-day activities during construction. This CTMP seeks to ensure the certainty of the delivery of GSMoP prescribed road user requirements including provision of a safe environment for workers and the travelling public and minimising impacts on the road network.
The strategies identified in this CTMP address the GSMoP and CTMF: Traffic management objectives and targets:

- Constraints and risks
- Potential road network impacts and the mitigation and management of them, e.g. development of a TMP
- Organisation and responsibilities
- Management process tools
- Describe the controls and measures being used
- Specific community / stakeholder consultation process and community relations strategies
- Auditing, inspections and monitoring
- Obtaining relevant approvals, e.g. road occupancy licences
- Unplanned incidents

The Crows Nest Station COP itself fits between, but is separate to, the TSE Contract and the Over Station Contract as explained in the diagram below:


A W Edwards commits to implementing and maintaining their Quality Management Systems, in accordance with the Project Agreement, throughout the duration of the Work. A W Edwards' Management System is committed to providing the services it offers in a manner which conforms to the deed requirements of the Metro Project, all applicable regulatory authorities and to implement "best practice" standards.

The Crows Nest site is divided into three areas (Figure 1). Traffic associated with each area will be managed based on the principles of this CTMP and in accordance with relevant guides, standards and conditions.

Table 3 outlines the construction (that affects traffic) time frames (specific construction only information can be found in the block program in Annexure G). Site specific details are in Annexure C.

**Overview of Construction Activities**

The Crows Nest COP footprint is spread over three separate Sites: A, B and C as shown in Figure 1. Sites A and B will contain enabling works for future OSDs above the OSD Transfer Level, and Site C OSD will be fully constructed by A W Edwards (subject to planning approval and Sydney Metro exercising an option).

Crows Nest Station is a cut and cover station and the main box (Site A and B in Figure 1) is approximately 220m long and 25m below street level, with a shallower rectangular box at Site C. The works for the new underground metro station (in Areas A, B and C in Figure 1) involve:

| | |
|---|---|
| Station Works | ▪ Detailed excavation and drilling required for sumps, on-site detention tanks and foundations to support the structural works;<br>▪ All structural works including station box, station entrance, concourse, platform and over-track exhaust;<br>▪ All station fit-out, including cladding, façade and external skin up to the OSD Transfer Level;<br>▪ Structure drainage system and waterproofing;<br>▪ Permanent road deck reinstatement on Hume Street;<br>▪ Track invert slab including underline crossings, earthing mats and drainage;<br>▪ Plant and equipment rooms;<br>▪ Public and staff toilets;<br>▪ Architectural fit-out;<br>▪ Low-voltage electrical, earthing, fire, hydraulics, lighting and mechanical systems;<br>▪ Building management control system;<br>▪ Provisions for works by Interface Contractors;<br>▪ Provisions for advertising, ATMs and vending machines;<br>▪ Lifts and escalators;<br>▪ Signage and wayfinding;<br>▪ External façade to the OSD Transfer Level including over street awnings;<br>▪ Landscaping (hard and soft), public plaza and precinct activation works;<br>▪ Bicycle parking facilities;<br>▪ Public art; and<br>▪ Loading dock and waste collection facility. |
| OSD Enabling Works | ▪ Foundations and structures to support the OSDs for Sites A, B and C;<br>▪ The OSD lobbies;<br>▪ The OSD Site A loading dock, OSD Sites A and B vehicular and pedestrian access enabling;<br>▪ Space allocation for OSD plant rooms;<br>▪ The required structures, including columns, slabs, penetrations, set downs, retaining wall and deflection structures space;<br>▪ Temporary structures and waterproofing, should the OSD be completed after completion of the Crows Nest COP and commencement of station operations;<br>▪ Storm water and drainage requirements (including temporary connections and diversions);<br>▪ All utilities connections, services ducts and risers (including temporary connections and diversions);<br>▪ Activation or hoarding of unoccupied facades; and<br>▪ Egress and any other Building Code of Australia compliance required to support the OSD Works. |
| Local Area Works (Third Party Works) | Resurfacing or reconstruction of affected roads, footpaths, cycle ways or other public amenities, signage, traffic control signals, street lighting and traffic and transport management adjacent to the station site. |
| Utility Service Works (Third Party Works) | Identification, protection, diversion, reconstruction or repair of affected utility services and new utility service connections. |

| | |
|---|---|
| Property Works (Third Party Works) | Protection and adjustments to affected existing buildings and property, including demolition of built features. |
| Temporary Works | Temporary works (within on and around the Construction Site) include:<br>▪ Temporary arrangements (including wayfinding and signage) to divert, guide and control pedestrians, public transport users, cyclists, traffic and to provide public access, public amenity, security and safety;<br>▪ Temporary arrangements for emergency services to access adjacent properties and the development;<br>▪ Temporary arrangements for people and vehicles to safely access the Construction Site;<br>▪ Temporary access stairs, walkways and platforms within the Construction Site;<br>▪ Temporary construction hoardings, fencing, noise walls, access gates and barriers;<br>▪ All environmental safeguards and measures necessary to mitigate environmental effects;<br>▪ Cleaning, maintenance, repair, replacement and reinstatement, as required, of all areas impacted by the Contractor's Activities;<br>▪ Temporary site facilities required for the construction of the Crows Nest COP;<br>▪ Temporary infrastructure, safety screens and ground support installed or erected;<br>▪ Temporary arrangements for Utility Service Works; and<br>▪ Temporary groundwater and stormwater collection, treatment and discharge systems and measures required to achieve discharge water quality required by all relevant Authorities and Approvals. |
| Site C (OSD Works) | Subject to planning approval, construction of the 9-level structure and services including completion of façade and cold dark shell fitout of Site C OSD (above the OSD Transfer Level) and cold dark shell fitout of all the structures and spaces below the OSD Transfer Level. This includes the services, plant commissioning and back-of-house scope in station space for the OSD. |

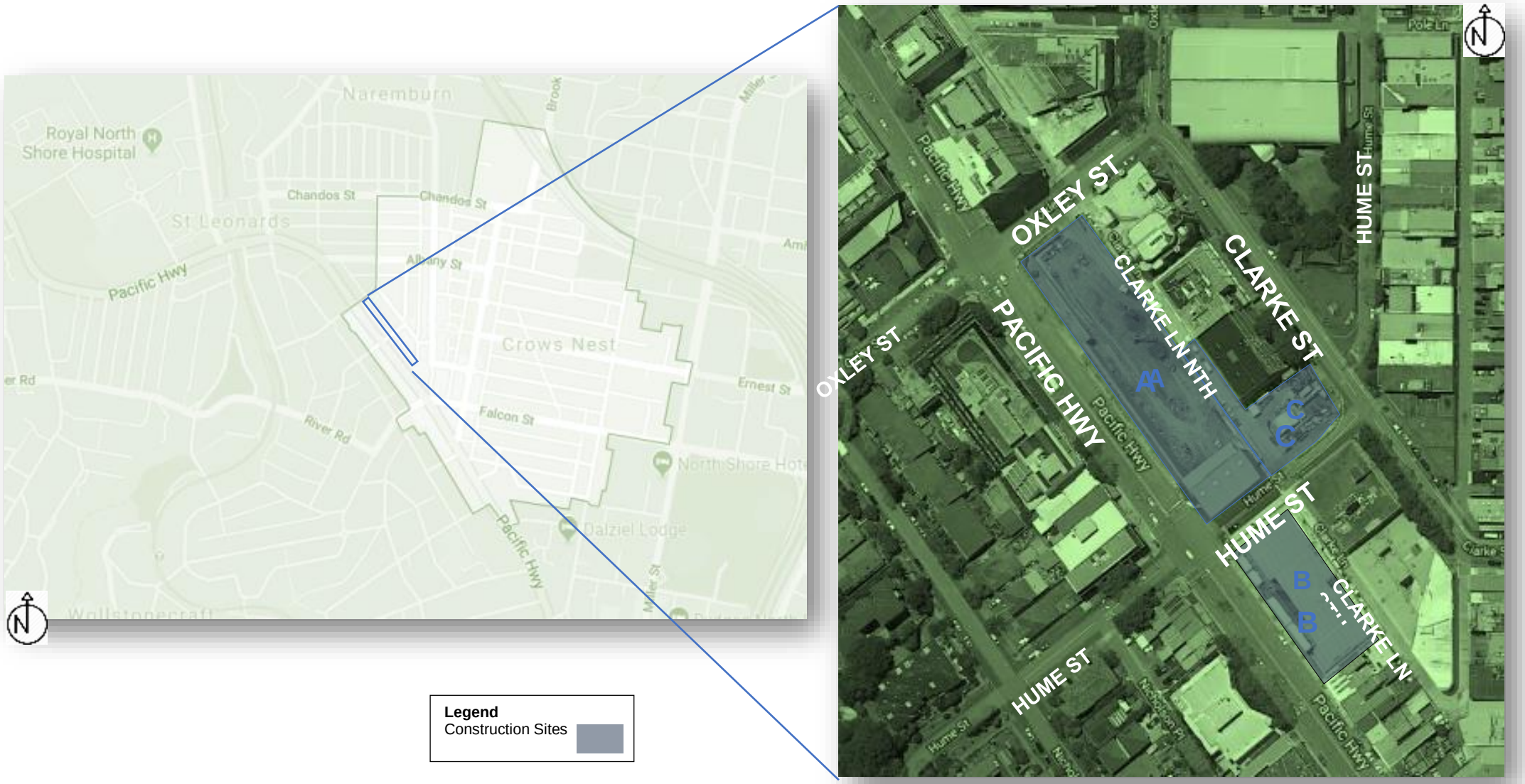



*Figure 1: Overview of construction site locations*

*Table 3: Indicative Construction Timeframes – subject to change as construction progresses*

| CROWS NEST STATION | LIKELY TRAFFIC MANAGEMENT | 2019 | | | | 2020 | | | | 2021 | | | | 2022 | | | | 2023 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Installation of Logistics Lane (on Pacific Highway) | | | | | | | | | | | | | | | | | | | | | |
| · Demolition of footpath and kerb and gutter | Footpath closures with detour, slow lane closures as required, e.g. car space line marking removal | | | | | | | ■ | | | | | | | | | | | | | |
| · Remove of car parking along Pacific Hwy | | | | | | | | ■ | | | | | | | | | | | | | |
| · Removal of bus stop | | | | | | | | ■ | | | | | | | | | | | | | |
| · Reinstatement of kerb and gutter for construction vehicles and pedestrians | | | | | | | | | | | | | | | | | | | | | |
| · Install signs and posts for logistics lane including speed signs | | | | | | | | | | | | | | | | | | | | | |
| · B-Class hoarding installation (with lighting) | | | | | | | | ■ | | | | | | | | | | | | | |
| Realignment of existing perimeter site hoardings | | | | | | | | | | | | | | | | | | | | | |
| · Including vehicle and personnel access gates | Slow lane closure, footpath open | | | | | | | ■ | | | | | | | | | | | | | |
| Installation of two tower cranes | 2-week closure of Hume St | | | | | | | ■ | | | | | | | | | | | | | |
| Construction of A-Class and B-class pedestrian hoarding | | | | | | | | | | | | | | | | | | | | | |
| · Hume St | Footpath closures with detour | | | | | | | ■ | | | | | | | | | | | | | |
| Installation of site accommodation buildings including installation of steel support structures | | | | | | | | | | | | | | | | | | | | | |
| · Site C | Footpath closures with detour | | | | | | | ■ | | | | | | | | | | | | | |
| Installation of concrete static lines in Clarke Lane and Logistics Lane | | | | | | | | | | | | | | | | | | | | | |
| - Clarke Ln and Logistics Ln | Footpath closures with detour | | | | | | | ■ | | | | | | | | | | | | | |
| **SITE ESTABLISHMENT – AREA C** | | | | | | | | | | | | | | | | | | | | | |
| Construction of A-class and B-class pedestrian hoarding | | | | | | | | | | | | | | | | | | | | | |
| · Clarke Lane, Clarke Street and Hume St | Footpath closures with detour | | | | | | | ■ | | | | | | | | | | | | | |
| **SITE OPERATIONS – AREA A, AREA B AND AREA C** | | | | | | | | | | | | | | | | | | | | | |
| Install traffic control, daily, to facilitate Logistics Lane Operations (uncover signs, install cones) | Slow lane closure on Pacific Hwy | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| OSOM deliveries to Logistics Lane (nights) | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| Semi-trailer (19m flat beds) deliveries to Logistics Lane | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| General site deliveries – rigid trucks | | | | | | | | | | | | | | | | | | | | | |
| · Logistics Lane | Slow lane closure on Pacific Hwy | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| Concrete pumping activities - concrete agitators | | | | | | | | | | | | | | | | | | | | | |
| · Logistics Lane | Slow lane closure on Pacific Hwy | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | |
| Hume St bridge replacement includes: | | | | | | | | | | | | | | | | | | | | | |
| · site shed relocation | Hume St closed, with vehicle and pedestrian detours, for 26 months | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| · temporary TfNSW traffic signal phasing changes (TfNSW responsibility) | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| · utility relocation and installation | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| Clarke Lane bridge replacement | | | | | | | | | | | | | | | | | | | | | |
| · Demolition of existing bridge and replace | Southern end of Clarke Ln closed, with vehicle and pedestrian detours, permanently | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| ISD utilities installation | | | | | | | | | | | | | | | | | | | | | |
| · Oxley St and Clarke Lane | | | | | | | | | | | | | ■ | | | | | | | | |
| Demolition of pile cap to building perimeters | Slow lane closure on Pacific Hwy<br>Stop/slow on Clarke Ln | | | | | | | | | | | | ■ | | | | | | | | |
| Installation of building facades | Slow lane closure on Pacific Hwy<br>Stop/slow on Clarke Ln<br>Slow lane Closure on Oxley St | | | | | | | | | | | | ■ | ■ | | | | | | | |

| CROWS NEST STATION | LIKELY TRAFFIC MANAGEMENT | 2019 | | 2020 | | | | 2021 | | | | 2022 | | | | 2023 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Slow lane closure on Hume St | | | | | | | | | | | | | | | | | | |
| **END STATE WORKS** | | | | | | | | | | | | | | | | | | | |
| Hume St and Pacific Highway works, includes: | | | | | | | | | | | | | | | | | | | |
| Re-phasing of traffic signals (TfNSW to action) | N/A | | | | | | | | | | | | | | | | | | |
| · Bike lane installation | Footpath closures with detour, slow lane closures as required. Occasional stop/slow on Hume St | | | | | | | | | | | | | | | | | | |
| · Footpath and frontage upgrade | | | | | | | | | | | | | | | | | | | |
| o utility installation | | | | | | | | | | | | | | | | | | | |
| o street furniture | | | | | | | | | | | | | | | | | | | |
| o errant vehicle incursion protection barriers | | | | | | | | | | | | | | | | | | | |
| o bus stop | | | | | | | | | | | | | | | | | | | |
| o landscaping | | | | | | | | | | | | | | | | | | | |
| o road markings | | | | | | | | | | | | | | | | | | | |
| o car spot markings | | | | | | | | | | | | | | | | | | | |
| o kerb and gutters, crossovers | | | | | | | | | | | | | | | | | | | |
| · Line marking | | | | | | | | | | | | | | | | | | | |
| Oxley St and Pacific Highway intersection upgrade works, includes: | | | | | | | | | | | | | | | | | | | |
| · Re-phasing of TfNSW traffic signals (TfNSW to action) | Slow lane, slow/middle lane and middle/fast lane closures on Pacific Hwy | | | | | | | | | | | | | | | | | | |
| · Upgrade to kerb and gutters | | | | | | | | | | | | | | | | | | | |
| · Line marking for new pedestrian crossing on the northern side of intersection | Lane closure and stop/slow on Oxley St | | | | | | | | | | | | | | | | | | |
| Clarke St Kiss and ride construction | Footpath closures with detour, slow lane closures as required. | | | | | | | | | | | | | | | | | | |
| **SITE DEMOBILISATION** | | | | | | | | | | | | | | | | | | | |
| Removal of tower cranes | Closure of Hume St | | | | | | | | | | | | | | | | | | |
| Removal of A-Class and B-Class hoardings | Slow lane and Footpath closures | | | | | | | | | | | | | | | | | | |
| Removal of shed and offices including installation of steel support structures | | | | | | | | | | | | | | | | | | | |
| Waste water treatment plant removal (was installed by TSE Contractor) | | | | | | | | | | | | | | | | | | | |
| **SITE C – OVER STATION DEVELOPMENT (OSD)** | | | | | | | | | | | | | | | | | | | |
| Existing Work-Zone on Hume Street | Northern side of Hume Street closed between Pacific Highway and Clarke Street | | | | | | | | | | | | | | | | | | |
| Existing Work-Zone on Clarke Lane | Section of Road Closure between Hume Street and Oxley Street | | | | | | | | | | | | | | | | | | |
| Hoarding installation on Clarke Street for pedestrian safety | Along the site boundary on western side hoarding installation required for safe pedestrian movements. | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

# 2 VALUES, OBJECTIVES, TARGETS AND INPUTS

## 2.1 VALUES

The traffic and transport management principles to be applied to the Works will ensure:

- The provision of a safe environment for road users, pedestrians, cyclists and workers
- Any impact on road users and asset operation is kept to a minimum
- Access is maintained for the local community, transport operators, (including over-dimension load movements) and commercial developments
- Road users, local businesses, Local Councils, Emergency Services, stakeholders and local communities are regularly informed in relation to changed traffic conditions, and
- There is sufficient advance warning of changes to normal traffic conditions.

## 2.2 OBJECTIVES

A W Edwards recognises that the effective management of construction impacts on the road network is critical to the success of the Works. A W Edwards gives the utmost consideration to the needs of road users, not only by providing safe environments but by minimising impacts on the road network. This CTMP provides direction on the controls to be applied and demonstrates how A W Edwards will conform to the contractual requirements and the requirements of SCO, TfNSW, Council and stakeholders. The main road safety and traffic and transport management objectives to be applied are:

- Ensuring road users are given consideration during the Works
- Maximise the safety for the workers, by isolating work areas from traffic flows, applying low exposure work methods and the installation of appropriate traffic control
- Provision of a safe environment for road users through the installation of a high standard of traffic controls, which effectively warn, inform, guide and that comply with the best practice, TfNSW requirements/guides and the Australian Standard/s
- Minimise disruption to traffic operation, road users, pedestrians, cyclists and access to adjoining properties (private and public)
- Maintain the road network functionality
- Plan all works to effectively minimise road occupancy, avoid potential impacts and minimise conflict points on the existing road network
- Implement traffic control operations that minimise delays to road users
- Limit obstructions and restrictions, and when required, provide alternatives to maintain access for local community, transport operators (buses) including over-dimension load movements and commercial developments
- Implement and maintain environmental controls to suppress dust and prevent debris deposits on the road network
- Actively liaise with key stakeholders including TfNSW, Local Councils, emergency service agencies and transport operators to ensure they are informed about proposed changes to the road network
- Management of complaints in accordance with the Community Communications Strategy and Business Management Plan (SMCSWSCN-AWE-SCN-AN-PLN-0000010) prepared by A W Edwards
- Plan works to allow for effective emergency services access for response.

## 2.3 TARGETS

The road safety and traffic and transport management targets are as follows:

- No roadwork related crashes during construction (including work site personnel)
- No injuries to road users (including pedestrians) moving through or around the site operations
- Maintain effective and efficient operation of the road network as per GSMoP requirements

### 2.3.1 Key Performance Indicators

The following key performance indicators (KPIs) will be measured by A W Edwards and reported to the Metro Representative (on a basis as set-out by the Deed/Contract):

- To respond to community complaints on traffic-related issues within two hours of notification and reply in writing within seven days
- To have no breaches of ROL conditions
- Advise SCO and TMC of all incidents within the applicable notification periods.

The following will be monitored for compliance by A W Edwards:

- Maintaining and adjusting (construction) traffic control measures to assist prevailing traffic flows
- Managing over-dimensional vehicle movements (in relation to Crows Nest Station construction).

Wherever possible, A W Edwards will develop alternative or innovative solutions to both short and long-term traffic management arrangements, to avoid interruptions to traffic flow and lane or shoulder closures.

## 2.4 INPUTS

When developing this CTMP the following was considered:

- Statutory obligations and Codes of Practice
- Applicable specifications, standards and guides.

Reference has also been made to the following in developing this CTMP:

- Project Agreement/s
- General Specification Management of the Project (GSMoP)
- Construction Traffic Management Framework (CTMF)
- Project approvals and associated environmental documents
- Project constraints – managerial and physical
- A W Edwards' policies and procedures.

## 2.5 CTMP DEVELOPMENT AND REVIEW PROCESS

The Stations contract is unlike previous contracts on the Metro project as it is construct only, not design and construct. Accordingly, this CTMP has been developed in two stages:

The first stage was by Metro, in consultation with SCO, RMS and North Sydney Council to comply with the Project Deed, GSMoP and the Environmental Documents.

The second stage is after contract award. A W Edwards has revised this CTMP, which has been submitted for approval (through the process in Figure 3).

All future revisions to this CTMP will then be coordinated and authorised by A W Edwards, in consultation with the Metro Representative and other affected stakeholders.

This CTMP will be maintained in the nominated web-based document management system used for the Works. Throughout the life of the Project and as required, this CTMP will be reviewed and updated accordingly, based on outcomes from debriefs and reviews within the A W Edwards team, with relevant stakeholders, e.g. emergency services and Local Councils; all consultation recorded in the consultation register (Annexure F). This CTMP will be reviewed and updated 12 months after commencement of substantial construction.

Notwithstanding who has developed content within this CTMP, all activities related to traffic and transport management will be controlled by this CTMP.

### 2.5.1 Plan Relationship

This CTMP is a sub-plan of the Project Management Plan but operates as the master document in a set of plans and drawings Figure 2) dealing with the safe and effective management of traffic during construction. This CTMP is what the CTMF (Section 3.3) calls a Contract Wide CTMP, to avoid confusion this Project will have one CTMP and TMPs (TMPs are what the CTMF (Section 3.3) calls a CTMP), as outlined below:

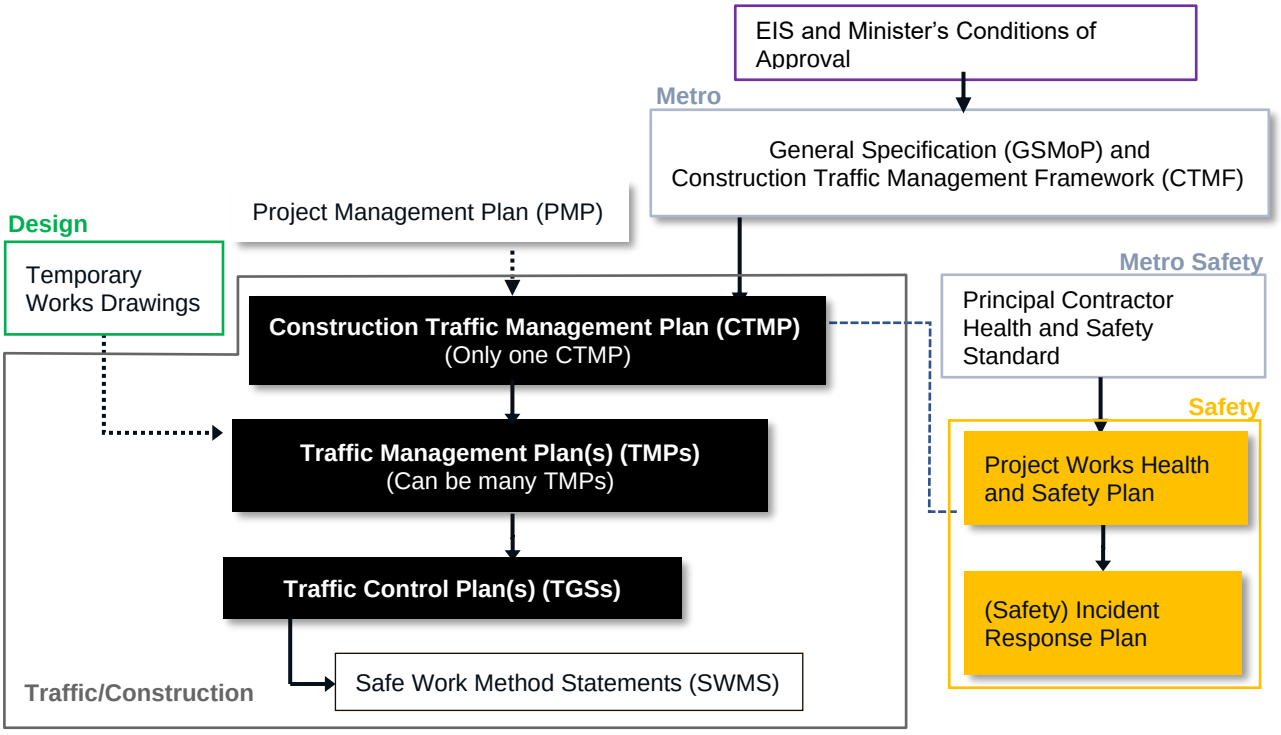



*Figure 2: Relationship between the various documents*

### 2.5.2 Traffic Management Plans (TMPs)

TMPs (site specific CTMPs in the Section 3.3 of the CTMF) detail the specific road safety and traffic management measures that will be applied whilst undertaking construction works, for example a complete road closure. The TMPs are based on the principles and strategies of this CTMP, and the obligations under the Project Deed, environmental approvals, GSMoP and the requirements of relevant road authorities and other stakeholders. TMPs will be approved as shown in Figure 3.

TMPs will be discussed, reviewed and finalised in consultation with SCO, TfNSW, Local Council and the Metro Project at the weekly TCG meeting. TMPs will generally include:

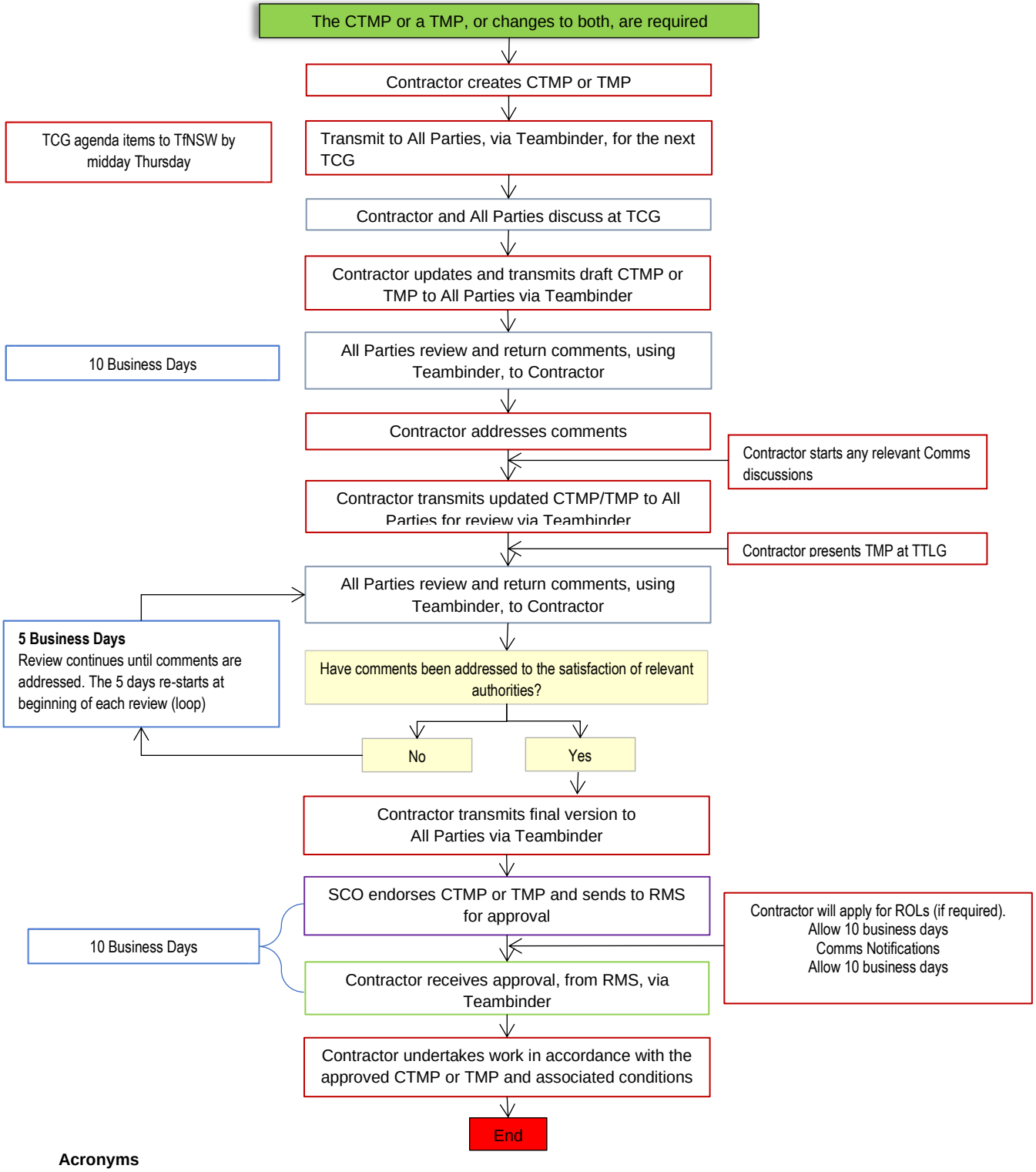
- Overview of the construction activities and traffic management requirements
- A description of how traffic management will be established
- A description of traffic management during construction
- A description of traffic management for specific construction events (e.g. full road closure)
- Traffic management measures/devices that will be implemented
- An analysis of resultant traffic conditions and impacts analysis (as required)
- Details of stakeholder consultations.

A list of likely TMPs is below:

| TMP | REASON FOR TMP |
|---|---|
| Oxley St Half Road Closure<br>EB then WB between Pacific Hwy and Clarke St | Utility relocations (near the end of the Project) |
| Hume St Closures<br>between Pacific Hwy and Clarke St | This will be one TMP for several works, as the closure is the same each time, as below.<br><br>6 months for bridge reconstruction<br><br>6 days to install tower crane number TC1<br>6 days to remove tower crane numberTC1<br><br>6 days to install tower crane number TC2<br>6 days to remove tower crane number TC2<br><br>2 separate 12hr closures to drop-in excavator<br>2 separate 12hr closures to lift out excavator<br><br>1 weekend* to install shed supports over Hume St<br>1 weekend* to install shed supports over Hume St<br><br>Total of 9 closures, of Hume St, over 3 years |
| Logistics Lane<br>Pacific Hwy, slow lane SB, north of Oxley St to end of Site B | Explain the design, installation and operations |
| Concrete Operations | Explain the operations |
| Pedestrian Traffic Management Plan | Occupying the footpath closure and PM hours Logistics Lane operations |

**weekend is defined as 7 or 8pm Friday until 5am Monday or as per approved ROL. Long weekends would be utilised where possible.*

Figure 3: CTMP and TMP Approval Process




**Acronyms**

| | |
|---|---|
| All Parties | One, some or all as required, of: Council, RMS, SCO and other relevant stakeholders |
| RMS | Roads and Maritime Services - |
| ROL | Road Occupancy License |
| SCO | Sydney Coordination Office |
| TCG | Traffic Coordination Group |
| TM | Traffic Management |
| TMP | Traffic Management Plan |
| TTLG | Traffic and Transport Liaison Group |

RMS | RMS/SCO | Contractor | All Parties

### 2.5.3 Traffic Guidance Scheme Plans (TGSs)

TGSs are detailed in Section 13.

### 2.5.4 (Traffic Related) Temporary Works Drawings

(Traffic related) Temporary Works Drawings are detailed plans of changes to roadways that are required to facilitate construction. These drawings include details of any required drainage, horizontal and vertical alignments, carriageway cross sections, lane configuration, intersection treatments, property access modifications, environmental controls, pavement, lines and sign posting, TGSs, safety barriers and roadside furniture.

Traffic related temporary works drawings have been developed by the CNDC and are listed below:

- SMCSWSCN-SMC-SCN-CE-DWG-607001 Temporary Works – Typical Cross Sections – Sheet 1
- SMCSWSCN-SMC-SCN-CE-DWG-607002 Temporary Works – Typical Cross Sections – Sheet 2
- SMCSWSCN-SMC-SCN-CE-DWG-607011 Temporary Works – Overall Site Plan
- SMCSWSCN-SMC-SCN-CE-DWG-607021 Temporary Works – Longitudinal Section – MC30 – Sheet 1
- SMCSWSCN-SMC-SCN-CE-DWG-607022 Temporary Works – Longitudinal Section – MC30 – Sheet 2
- SMCSWSCN-SMC-SCN-CE-DWG-607031 Temporary Works – Cross Section – MC30 – Sheet 1
- SMCSWSCN-SMC-SCN-CE-DWG-607032 Temporary Works – Cross Section – MC30 – Sheet 2
- SMCSWSCN-SMC-SCN-CE-DWG-607041 Temporary Works – Pavement Plan
- SMCSWSCN-SMC-SCN-CE-DWG-607042 Temporary Works – Pavement Details

### 2.5.5 Processes

Processes are instruction documents that detail how particular activities are to be carried out during the Works. Specific processes will be developed for traffic management activities as the need arises during the Project, including, but not limited to:

- Preparation of traffic control plans
- Lane closure / road occupancy and roadwork speed limit submissions (ROLs and SZAs)
- Inspecting traffic control

When approved, these processes are given to relevant construction team members, and specific training sessions, e.g. tool boxes and pre-start briefs will be conducted.

### 2.5.6 Safe Work Method Statements (SWMS)

All work undertaken, for the Works, will be under an approved SWMS.

A W Edwards will prepare SWMS/s in consultation with workers, relevant functional managers and implement before the related work starts; to ensure the issues relating to safety are appropriately addressed. The provisions for working on or adjacent to roadways, and the traffic control measures to be applied will be incorporated where necessary within the SWMS.

### 2.5.7 Environmental Management System

The environmental management system for the Project is described in the Construction Environmental Management Plan. The CEMP has been developed to comply with the requirements of:

- ISO14001:2004 - Environmental Management Systems
- RMS QA Specification G36 – Environmental Protection (Management Systems)
- General Specification Management of the Project (GSMoP)
- Minister's Conditions of Approval
- Environmental Protection Licence
- Guideline for Preparation of Environmental Management Plans (Department of Infrastructure Planning and Natural Resources, 2004)
- Environmental Management System and Guidelines (New South Wales Government, 2013)

## 2.6 LEGISLATION

This section describes the guidelines and legislation that are relevant to this CTMP. These are critical in setting the framework that this CTMP will sit in, and in defining the key organisations that have delegated authority regarding the management of traffic associated with or affected by the Works.

Key legislation and regulations of relevance to this CTMP are described below:

- Roads Act 1993 – Section 138 of the Roads Act 1993 requires that a person obtain the consent of the appropriate roads authority for the erection of a structure, or the carrying out of a work in, on or over a public road, or the digging up or disturbance of the surface of a public road. If the applicant is a public authority, the roads authority must consult with the applicant before deciding whether or not to grant consent or concurrence.

A W Edwards will, as per the GSMoP, comply with any traffic direction or instruction given by the NSW Police Force, a relevant Authority or the Metro Representative in respect of any traffic and transport management.

## 2.7 POLICIES

A W Edwards policies can be found on our website, www.awedwards.com.au, with the key policies listed below:

- WHS Management Policy
- Environmental Management
- Environmental Sustainability Policy
- Quality Management
- Injury Management Policy
- Work Place Relations Policy
- Training Management
- Drug and Alcohol Policy, and
- Equal Opportunity Policy.

These policies will be displayed in prominent locations in the Project facilities. All Project personnel, including subcontractor employees, will be made aware of these policies through the induction process. This CTMP supports these policies through the processes and activities described in this CTMP.

## 2.8 CONSTRAINTS

Constraints are those issues (contractual, regulatory, physical or social) that define the environment and conditions under which the works must be undertaken. The road safety and traffic management constraints are defined by: the Project approvals; requirements of road authorities and other stakeholders; traffic / transport legislation and technical standards. A list of the various technical specifications, guidelines and standards identified as being applicable to the Project are included in Annexure A of this Plan.

## 2.9 RISK

A W Edwards will manage the risks associated with traffic management by ensuring that no activity commences onsite that has an effect on traffic without an approved TGS (for short term works) and/or TMP (for long term work) for the site. Relevant Construction Managers will ensure that project staff are aware of the requirements of this CTMP and that work onsite occurs as required by this CTMP and TMP and/or TGS and/or ROLs.

A W Edwards will identify the risks and develop strategies (if required) for traffic safety and management by using some or all of the following measures:

- Undertake road safety audits
- Surveillance and monitoring of processes (confirming safety assessments and plans)
- Training and evaluation of competency of personnel (including inductions)
- Assessment and inspection of equipment or controls (i.e. field safety inspections)
- Introduction of additional hold or witness points as required
- Auditing of system and process (i.e. document and process audits)
- Independent audit, review or verification by third party.

The issues and control measures nominated by A W Edwards will be periodically reviewed and updated to ensure that the nominated risk controls are implemented.

A W Edwards will identify and analyse the Works major traffic and transport related safety risks (Annexure B). Additional minor assessments will be conducted to identify the potential road safety and traffic management risks associated with relevant portions of the works. Identification of these risks will require input from stakeholders including construction team members; RMS; SCO; emergency service agencies; transport agencies; and Local Council.

## 2.10 PROGRAM AND CONSTRUCTION HOURS OF OPERATION

Site establishment works are due to commence in January 2021, with project completion expected in August 2023 (refer to schedule in Annexure G).

The majority of construction works would be undertaken between the following standard construction hours:

- 7.00 am to 6.00 pm Monday to Friday
- 8.00 am to 1.00 pm Saturday
- No works on a Sunday or public holiday.

Oversize vehicle movements outside of standard construction hours associated with works (beam delivery, some concrete delivery and other truck movements) would occur via access and egress directly to all three areas of the construction site (Annexure C).

Beams and concrete would be delivered during the day where practical, and feasible and reasonable management strategies would be investigated in consultation with the Local Council and NSW Environment Protection Authority to mitigate potential impacts from night time deliveries. There is no spoil haulage as all spoil has been removed during the TSE (previous) contract.

Other works would need to be undertaken outside standard construction hours to reduce inconvenience to road users and ensure the safety of construction workers and the public. These would include activities such as:

- Widening and lengthening of existing bridge
- Traffic management, set-up and traffic switches
- Utility relocations (where the relocation is close to traffic)
- Erection of traffic signs (where erection is close to traffic)
- Use of construction compounds to support out of hours works.

Other works that would also be undertaken outside standard daytime construction hours without any further approval would include any of the following circumstances:

- Works which are determined to comply with the relevant Noise Management Level at the nearest sensitive receiver in accordance with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009)
- The delivery of oversized plant, structures and materials that the police or other authorities determine require special arrangements to transport along on public roads
- Where emergency works are to ensure the safe operation of the activity or to avoid the loss of lives or property, or to prevent environmental harm
- Where agreement is reached with affected receivers.

Out of hours work may also be undertaken where permitted by the NSW Environment Protection Authority in an approved Environment Protection Licence.

*Table 4: Approved Out of Hours Works Applications*

| APPROVALS OF OUT OF HOURS DELIVERIES | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Area A** | Evening | | | | | | Night time | | | | | | | |
| | Trucks (per hr) | Max. trucks | Truck Movements | | | EPA Approval | Trucks (per hour) | Max. trucks | Truck Movements | | | EPA Approval | | |
| | | | IN | OUT | Total movements | | | | IN | OUT | Total movements | | | |
| Beam Deliveries | | | | | | | 1 | 3 | 3 | 3 | 6 | Yes | | |
| | | | | | | | | | | | | | | |
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| APPROVALS OF OUT OF HOURS DELIVERIES | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Area B** | Evening | | | | | | Night time | | | | | | | |
| | Trucks (per hr) | Max. trucks | Truck Movements | | | EPA Approval | Trucks (per hour) | Max. trucks | Truck Movements | | | EPA Approval | | |
| | | | IN | OUT | Total movements | | | | IN | OUT | Total movements | | | |
| Beam Deliveries | | | | | | | 1 | 3 | 3 | 3 | 6 | Yes | | |
| | | | | | | | | | | | | | | |
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## 2.11 ORGANISATION AND RESPONSIBILITIES

Traffic management (includes pedestrian and cyclists) will be installed and managed by the A W Edwards construction team and appointed traffic control company, with technical advice provided by GTA Consultants.

The traffic related position and its responsibilities are outlined below in Figure 4.

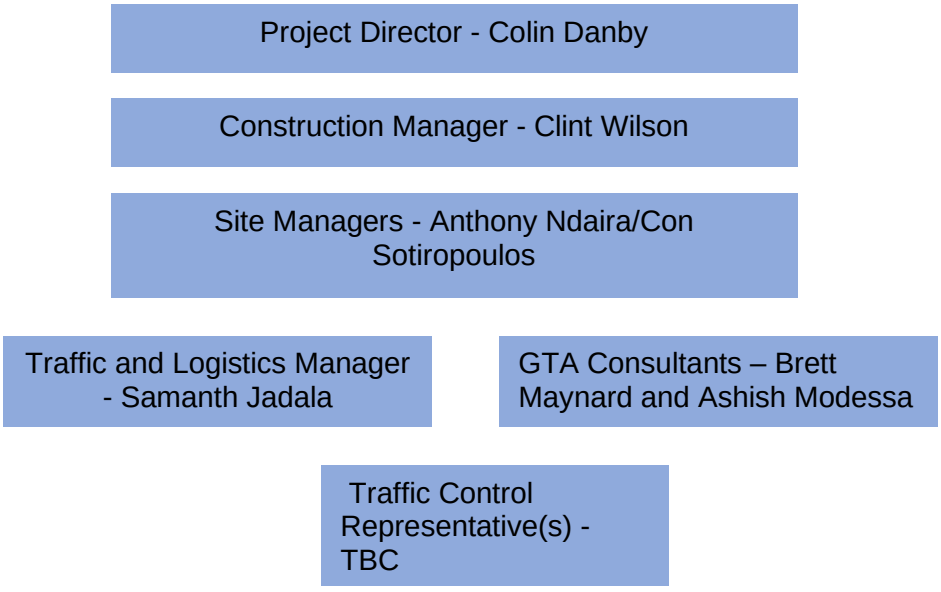



*Figure 4: Traffic Management Team Structure (hierarchy)*

### 2.11.1 Traffic Management Team (TM)

A W Edwards' approach to successfully managing the construction traffic process is to have a Traffic Management team that includes a Traffic and Logistics Manager (LM), Traffic Coordinator (TC), and Site Manager (SM) from A W Edwards, with technical support from GTA Consultants. The team includes members with more than 10-40 years' experience managing construction projects that require extensive traffic management.

The team will focus on the road safety and traffic management activities during construction. The TC and SM will be available at all times on a mobile phone. The responsibilities of the traffic management team are listed below:

- Manage the planning, development, implementation, revisions, and approvals with the relevant authorities and stakeholders (where required) of the Construction Traffic Management Plan (CTMP), Traffic Management Plans (TMPs) and Traffic Guidance Scheme Plans (TGSs) (GTA and Traffic Control Company)
- Advise construction engineers to ensure all traffic management measures are planned in accordance with the GSMoP, best practice, including all relevant safety regulations and standards (TC)
- Liaise closely with the communications and community relations team regarding traffic planning, community information initiatives, event planning, ministerial inquiries, community and stakeholder information and complaints, and stakeholder access needs (CM, SM and TC)

- Advise construction personnel to ensure all traffic management measures are planned in accordance with possible requirements of relevant stakeholders (TC)
- Liaise, generate and maintain a productive relationship with the TfNSW, SCO, Local Council, emergency service agencies and other stakeholders on traffic and incident related issues (TC, SM and GTA)
- Attend and present at TCG and TTLG meetings (TC and GTA as required)
- Advise the team to facilitate delivery of Temporary Works Drawings, in accordance with the relevant standards (TC, LM and SM)
- Monitor and evaluate the ongoing effectiveness of traffic management activities of the Project and where necessary suggest to the Construction Team corrective actions to rectify any deficiencies (TC and GTA)
- Manage the Project's road safety audit process and assist the construction team to implement resultant corrective actions and maintain detailed records (TC and GTA)
- Advise the Construction team on any issues raised as part of the Short and Long Term Traffic Management Inspections (TC and GTA)

### 2.11.2 Short Term Traffic Control – Subcontractor Traffic Control Company

Short term traffic control (includes pedestrian and cyclist management) will be managed by the construction team with technical advice provided by GTA Consultants, with actual layouts installed by the Traffic Control Company. The Traffic Control Company will be required to supply the personnel described in Table 6.

*Table 5: Roles and responsibilities of short term traffic control subcontractor*

| ROLE | RESPONSIBILITY |
|---|---|
| Shift Supervisor | ▪ Organise and manage all traffic control and traffic control crews for that day/night shift<br>▪ Pre-start brief all team members before work begins, every shift<br>▪ Ensure all teams have TGSs, ROLs, SZAs and relevant safety equipment with them and in working order<br>▪ Liaise and advise TMC of ROLs and SZAs for day or night works<br>▪ Inspect and rectify issues across all traffic control set-ups, every shift<br>▪ Obtain and keep current a RMS Traffic Controller Card, an RMS Implement traffic Card and an RMS Prepare Work Zone Traffic Management Card as a minimum<br>▪ Investigate unplanned incidents and workplace incidents and action items raised in a timely manner<br>▪ Prepare necessary reports, and maintain incident records and inspections logs.<br>▪ Discipline staff as required<br>▪ Organise and maintain vehicles and plant to a high standard of cleanliness and safety<br>▪ Enforce and adhere to all OHandS policies, guidelines and requirements of the Project<br>▪ Ensure all dockets and paperwork is correct and complete<br>▪ Assist with the planning, development, implementation and revisions of TGSs<br>▪ Any other items as directed by the Successful Contractor |
| Team Leader | ▪ Team Leader also performs the role of Traffic Controller (see below)<br>▪ Install and remove traffic control, including speed zones, in strict accordance with a Traffic Control Plan, and all relevant Guides and Manuals<br>▪ Carry out maintenance of their own traffic control devices, signage, delineation and other equipment as required<br>▪ Relocate traffic control plant, such as but not limited to portable VMS, trailer mounted arrow boards, vehicle mounted arrow boards, crash cushions, flashing beacons and vehicle mounted attenuators<br>▪ Obtain and keep current a RMS Blue Card, an RMS Yellow Card and an RMS Red Card as a minimum |
| Traffic Controller | ▪ Install and remove traffic control, including short term speed zones, in strict accordance with a Traffic Control Plan, and all relevant Guides and Manuals and/or as directed by the Team Leader<br>▪ Carry out maintenance of all traffic control devices, signage, delineation and other equipment as directed by team leader<br>▪ Obtain and keep current a RMS Blue Card and RMS Yellow Card<br>▪ Provide traffic control related assistance if directed, at incident sites, including direction from emergency services, e.g. Police |

### 2.11.3 Construction Personnel and Responsibilities

A W Edwards is responsible for all construction activities, construction personnel and their traffic and transport management responsibilities are described in Section 3.6.1 and 3.6.2. Functional managers and their staff provide support for all construction activities and their traffic management related responsibilities are also described in Table 6.

*Table 6: Roles and responsibilities of key A W Edwards personnel with respect to traffic*

| ROLE | RESPONSIBILITY |
|---|---|
| Project Director | ▪ Supports the delivery of the road safety and traffic management objectives<br>▪ Supports the principles and requirements of this CTMP<br>▪ Provide direction and support to the TM to enable effective planning of temporary traffic management arrangements<br>▪ Review and authorise relevant plans and processes<br>▪ Ensure all construction team members receive the appropriate training |
| Superintendent | ▪ Allocate field resources as required<br>▪ Support the delivery of the road safety and traffic management objectives<br>▪ Assist with the implementation of this CTMP<br>▪ Ensure relevant field team members receive the appropriate training |
| Construction Manager (and their team) | ▪ Deliver the road safety and traffic management objectives outlined in this CTMP and TMPs.<br>▪ Assist with planning all work activities to identify the required traffic management arrangements to facilitate the works<br>▪ Actively participate in the implementation of actions to mitigate, future occurrences of unplanned incidents<br>▪ Organise and directs engineers to undertake fortnightly long and short term traffic management inspections |
| Supervisor | ▪ Manage required traffic control measures and resources during every shift<br>▪ Undertake daily inspections of short term traffic control<br>▪ Install and maintains long term traffic control layouts, e.g. signs and barriers |
| Community Relations Manager | ▪ Represent the Project for all community and stakeholders' issues<br>▪ Consult stakeholders for traffic, pedestrian and bike planning issues<br>▪ Prepare and distribute changed traffic condition information to road users, transport operators, active transport groups and local communities<br>▪ Work with the Project Area Manager on the resolution of traffic complaints and stakeholder enquiries |
| WHS Manager | ▪ Represent the Project for all safety and health matters<br>▪ Develop guidelines, rules and policy for Project Safety<br>▪ Conduct inspections of Traffic Control Subcontractor in respect to safety<br>▪ Prepare toolboxes, inductions to address Project traffic and/or transport issues<br>▪ Review and approves SWMS to the minimum requirements of the Working near Live Traffic Knowledge Document<br>▪ Conduct task observations of worksite set-ups |

# 3 IDENTIFYING CONSTRUCTION IMPACTS

This section identifies the impacts of construction and how the construction team in conjunction with the WHS Manager and the TM representatives will manage the impacts of construction.

At all times, A W Edwards aims to:

- Maximise safety for workers and road users by isolating work areas from traffic flow, maintain existing capacity where possible
- Minimise road user delays, avoid major activities during peak periods and avoid restrictions on transport operators.

The effective planning of all construction activities is the key to achieving these objectives. Some of the construction activities to be undertaken during the Works are listed below, with a complete list in the Project Management Plan:

- Establishment of Sites A, B and C (Annexure C)
- Establishment of construction work area/s (e.g. installation of Logistics Lane)
- Services relocations
- Construction of temporary construction accesses and/or pedestrian paths
- Construction of permanent structures
- Deliveries of materials (e.g. steel reinforcement, concrete and quarry products)
- Station box construction (including fit out)
- Delivery and installation of pre-cast girders and girder elements
- Oversize deliveries e.g. float movements, crane movements
- Installation of temporary signage and traffic control devices
- Conducting pre-condition surveys, e.g. settlement measuring, dilapidation surveys, noise monitoring

## 3.1 IDENTIFIED IMPACTS

The construction of the Works will impact on the existing traffic flows along various roads in close proximity to the works, and, as detailed in this CTMP, A W Edwards will aim to isolate work areas, keep road user delays to an absolute minimum and maintain access for transport operators. Wider traffic implications and significant impacts that could result from construction activities, within an operation, will be avoided through pre-construction planning:

- The capacity of roads (number of traffic lanes) during peak times will be maintained, including clearway operations, in each direction to limit the potential for significant traffic delays.

Some traffic impacts are, however, unavoidable. During the construction, the potential restrictions will include:

- One lane alternate (stop/slow) operations that may result in temporary delays and increased travel times on local roads
- Delivery operations and over-dimension vehicle movements that may create temporary traffic hazards for other vehicles in the vicinity of delivery operations
- Short term contra-flow (rare and unlikely, may be used to manage oversize loads to turn) with a reduced speed to 40km/hr
- Full local road (short term) closures and several local road long term closures (of the same section of road: Hume St and Clarke Lane) that may result in temporary delays and increased travel times

- Regular stopping of pedestrians, at Site B, for up to five minutes, for unloading of deliveries on Pacific Hwy (Logistics Lane) and local roads (concrete truck turn movements). Note: Five minute holds of pedestrians will be the maximum and only then in a limited fashion – five minute holds will not be the norm. Pedestrians will be allowed to pass as soon as reasonably practical.

A W Edwards will maintain access for all vehicles, though some temporary short term road closures (crane deliveries and services relocations) may be required as well as several longer term closures (Hume St Closure).

A W Edwards proposes to retain the current partial road closure of Hume Street between Pacific Highway and Clarke Street until the time of the full road closure. This partial road closure along the Site A and C frontages will allow construction vehicles, up to 12.5-metre heavy rigid vehicles, to be loaded / unloaded throughout the approved construction hours, unaffected by the clearway restrictions along Pacific Highway and spreading construction vehicle demand across the two key locations. An overhead gantry/ hoarding will be installed over the remaining section of Hume Street between Pacific Highway and Clarke Lane to protect general traffic, pedestrians and cyclists during loading/ unloading activities.

A W Edwards proposes to maintain the closure of Clarke Lane between Site A and Site C similar to the configuration the TSE Contractor had in place for the duration of the station excavation. Refer to the Annexure C - Construction Site Layout. The benefit of this site configuration is that the majority of the concrete for the Station construction can be received, discharged and pumped from within the hoarded site as opposed to a work zone, external to the site. This will minimise the Projects impact on the businesses and residents that are situated on Clarke Lane. AW Edwards proposes to erect a 2.4m high A class hoarding secured to F type barriers behind. This will be further detailed in the Concrete Delivery Operations TMP including TGSs and swept path analysis'.

TM representatives will assess the road network directly affected by the construction activities and, where required, will include the results in the relevant TMP. Where TMPs are not required, works will be undertaken using long- and short-term TGSs - as detailed in Section 13. The assessment will assist in determining the need for specific mitigation measures. The conditions and infrastructure to be assessed will include, but is not limited to:

- Existing on-street parking, (including type and associated time limits)
- Existing traffic controls
- Traffic Control Signals (TCS) at intersections
- Existing intersection configurations
- Existing road occupancies
- Public transport (buses (includes stops and access to stops), taxis)
- Traffic generating developments, (e.g. schools, shopping centres, churches, industrial areas, hospitals)
- Temporary access arrangements or restrictions for local residents, businesses,
- Emergency vehicle access points
- Heavy vehicle movement restrictions, including over dimension vehicle loads
- Pedestrians, including disabled persons
- Cyclists.

See Section 7 for pedestrian management measures and Section 8 for cyclist management measures.

A W Edwards considers minimising the impact and maintaining the amenity of local residents in the vicinity of the construction works to be important. In this regard, various

environmental and traffic management measures will be applied, in particular those measures that maintain access to the road network. These will include:

- Considering the access requirement of adjacent properties when determining construction site access
- Using major arterial roads and regional roads wherever practicable
- Encouraging the use of public transport
- Reinforcing the need to maintain property access via awareness training as required
- Reviewing potential property access issues identified during site inspections and implementing appropriate corrective actions
- Advise of changes through the TCG and TTLG.

### 3.1.1 Local Council, Utilities Access and roadside furniture

North Sydney Council and utility providers (water, electricity, gas, telecommunications) will be permitted access to their infrastructure/property within the works, after consultation with the Project and after completing a project induction (in the case of utility emergencies, e.g. a damaged sub-station, a project induction may not be required).

Any roadside furniture (e.g. bus stops, post boxes or seating) will be relocated or removed in discussion with the relevant authority/owner.

### 3.1.2 Existing Property Access

A W Edwards will aim to maintain existing property access points. Where this cannot be achieved, A W Edwards will provide temporary, alternative access. For instance, A W Edwards proposes to temporarily close Clarke Lane, north of Hume Street, to general traffic. Clarke Lane is proposed to be two-way with all access via Oxley Street. This arrangement is currently implemented as part of the Tunnel and Station Excavation Works (TSE) contract, with the proposal to retain this arrangement for the duration of this Crows Nest COP contract.

All proposed changes to existing access arrangements will be discussed with residents and/or businesses prior to the commencement of works. Upon completion of the construction works, the original property access will be re-instated or the newly built access opened for use (if part of the approved design).

Each construction areas (Site A, Site B or Site C) and its associated access point or points (gate/s) are designed to minimise impacts on the surrounding road network and existing traffic flows. The layout of each site has also accounted for the efficient movement of construction vehicles to minimise impacts on the surrounding road network; area accesses are outlined in Annexure C.

### 3.1.3 Other (adjacent) Works

A W Edwards will plan works to reduce the impact on the road network. There are currently no major works planned to occur when Stations contracts starts, that said, A W Edwards will liaise with all nearby major construction to reduce cumulative impact wherever possible and ensure synergy in communications.

### 3.1.4 Minimise Road User Delay

The reliable and efficient operation of the state road network is vital to Sydney. Australian Standard 1742.3 Section 2.3.2 (b), states that work schedules will be arranged to minimise:

- Disruption of established traffic movements and patterns

- Interference with traffic at peak movement periods, night, weekends, holiday periods and special events
- Interference with public transport services.

A W Edwards will pursue the minimisation of delays to the extent that it does not compromise the safety of workers or road users.

## 3.2 MODELLING AND TRAFFIC ANALYSIS

Minister Condition E78 requires: “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…”.

If works, e.g. long term temporary road closures affect traffic flow or lane geometry A W Edwards will apply the appropriate modelling/analysis, which may be intersection (signalised or otherwise) analysis, e.g. SIDRA, or network analysis. Outputs from modelling (where required) will be provided as part of the relevant TMP.

# 4 OVER DIMENSIONED VEHICLES, HEAVY VEHICLES AND COR

## 4.1 OVER DIMENSIONED VEHICLES

The movement of Over Dimensioned Vehicles (intrastate) is managed and controlled by the RMS Special Permits Unit, through the issuing of permits (https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/road-access/restricted-access-vehicles/oversize-overmass/index.html).

All over dimensioned vehicles, utilised on the project, will be procured through specialist delivery sub-contractors and will abide by the permits obtained from RMS's Special Permits Unit. "Special permits for oversize and over mass vehicles and loads", (2007) document outlines the various operating restrictions and conditions.

Some permits may also require co-ordination with the NSW Police, and this will be co-ordinated by the specialist delivery sub-contractors. There will be no OSOM movements on local roads.
For the day to day operation of the Crows Nest all short term traffic control will aim to minimise the impact on the existing road network by:

- Considering the movement of heavy vehicles and over-dimension loads when developing Traffic Control Plans
- Avoiding unnecessary traffic control operations so as not to disrupt traffic flows
- Liaising with NSW Police, permit authority and operators, and provide up-to-date information of any obstructions that may impact on movement of over-dimension vehicles

When the Logistics Lane is in place Traffic Controllers will effectively co-ordinate the movement of over-dimension vehicles into the Logistics Lane. Traffic Controllers must wear high visibility clothing with trousers fitted with double-reflective stripes or reflective boot covers in accordance with Section 8 of AS 4602. Adequate traffic controllers will be allocated per shift to cover breaks. Illuminated wands are provided to traffic controllers for any night shifts.

## 4.2 HEAVY VEHICLES

All Heavy Vehicle Operators, including prime contractors, sub-contractors and owner-drivers, will be assessed and selected, as part of the procurement and pre-qualification processes, to ensure they meet the minimum requirements set out in the Sydney Metro Principal Contractor Health and Safety Standard and the Project's CoR Management Plan. The requirements of the standard apply to all levels of the supply chain, including sub-contractors and suppliers.

Subcontractor pre-qualification will include undertaking compliance assurance assessment of sub-contractors as to their competency, capacity, qualifications, training, expertise, systems and processes in place to ensure compliance with the HVNL and CoR provisions and their relevant compliance history; as a minimum Heavy Vehicle Operators will need to demonstrate a safety and compliance history and current fleet safety standards.

Drivers (including prime contractors, sub-contractors or suppliers of any tier) will not be incentivised or based on the number of, or speed in which, deliveries are made or in such a way that would result in a breach of the HVNL. A W Edwards must ensure that the safe

delivery of plant, equipment, materials and people is the overriding priority in all vehicle movements.

All Heavy Vehicle Operators (prime contractors and/or sub-contractors) engaged for major deliver contracts (e.g. concrete/aggregates delivery, steel, precast, plant transportation) will be accredited or are in the process of gaining accreditation under the relevant accreditation scheme such as the National Heavy Vehicle Accreditation Scheme (NHVAS) Maintenance Management or equivalent TruckSAFE accreditation.

Heavy vehicles will meet the Sydney Metro Principal Contractor Health and Safety Standard for:

- Design/physical requirements Section 11.17.4
- Tracking requirements Section 11.17.5
- Training requirements Section 11.17.6

A heavy vehicle is as per the RMS definition: any vehicle over 4.5 tonnes GVM (Source: https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/registration/index.html)

## 4.3 CHAIN OF RESPONSIBILITY (COR)

A CoR Management Plan will be in place which outlines systems, resources and processes to ensure compliance with Chain of Responsibility (CoR) legislation, including the HVNL (NSW) and Regulations.

At a minimum, the CoR Plan will address the requirements of:

- Section 11.17.1 of the Sydney Metro Principal Contractor Health and Safety Standard
- Section 2.11.17 of the General Specification Management of the Project (MS-GS-MP-2).

Section 7.4.4 of the CTMF would not be referenced as it refers back to the Sydney Metro Principal Contractor Health and Safety Standard.

TCAWS Manual Ver 5 and Austroads do not reference Chain of Responsibility.

# 5 MANAGING BUSES

The potential impacts to bus routes and bus stops during construction will be managed in consultation with SCO, SCO Transport Integration Team, RMS, and Local Council; in accordance with the GSMoP and through temporary works drawings and/or TGSs. The affected stop (Figure 5) and existing bus routes are in Table 7

*Table 7: Existing Bus Routes*

| EXISTING BUS ROUTES (BUS COMPANIES MAY CHANGE THIS INFORMATION AT ANY TIME) | | | | |
|---|---|---|---|---|
| Route | No. AM Peak Services (7am-9am) | Frequency (mins) | No. PM Peak Services (4pm-6pm) | Frequency (mins) |
| 143 - Chatswood to Manly | 4 | 30 | 9 | 15 |
| 144 - St Leonards to Manly | 4 | 30 | 9 | 15 |
| 252 - Gladesville to King St Wharf City | 6 | 30 | 5 | 30 |
| 254 – Riverview to King St Wharf City | 6 | 30 | 5 | 30 |
| 257 – Chatswood to Balmoral | 5 | 20 | 7 | 10 |
| 265 – Lane Cove to North Sydney | 5 | 20 | 3 | 20 |
| 286 – Denistone East to Milsons Point | 3 | 15 | No service | |
| 287 – Ryde to Milsons Point | 4 | 20 | No service | |
| 290 – Epping to City | No service | | No service | |
| 291 – Epping to McMahons Pt Wharf | 6 | 20 | 6 | 30 |
| 320 – Epping to City | 12 | 10 | 11 | 10 |
| M20 – Gore Hill to Botany | 12 | 10 | 11 | 10 |

Pedestrian access for bus stops (not being removed), including any existing disabled facilities, will be maintained during any temporary works. All temporary facilities will be developed and constructed in accordance with the requirements of STA and notifications provided to passengers. School bus services (dedicated to servicing schools, not services that school children happen to use) will operate as normal.

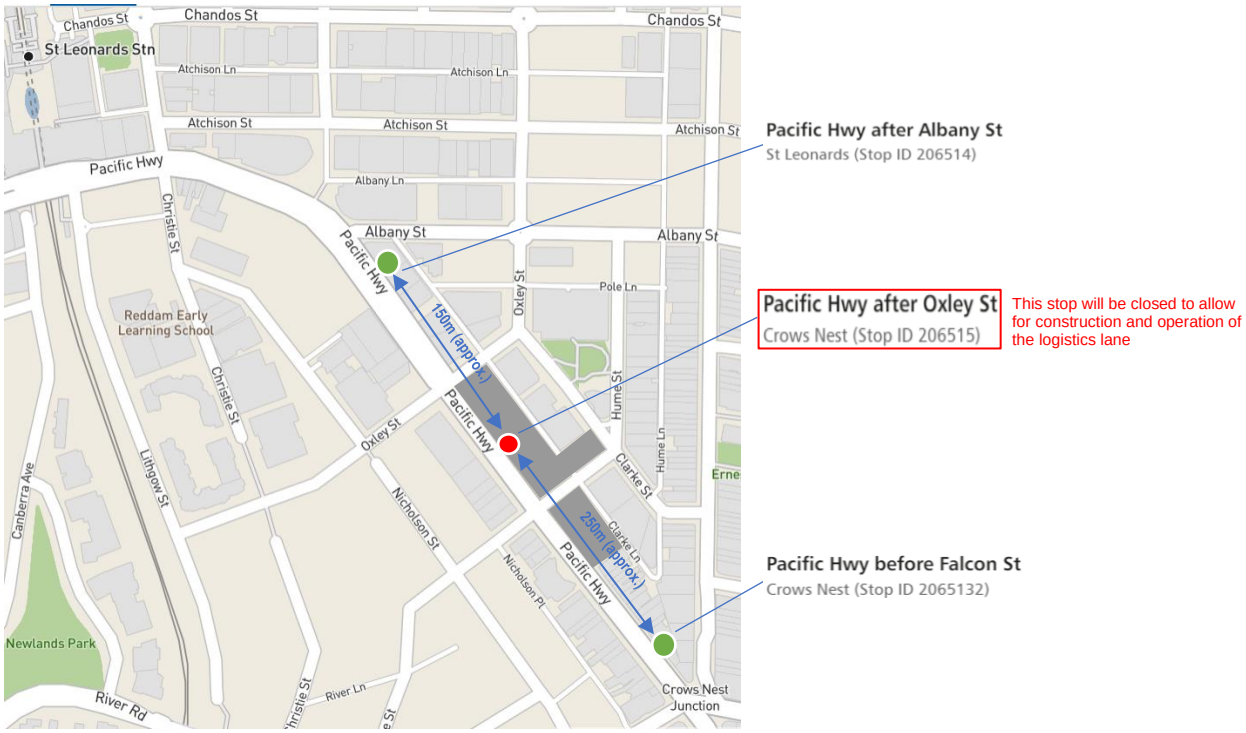

Chandos St
St Leonards Stn
Atchison Ln
Atchison St
Pacific Hwy
Albany Ln
Albany St
Christie St
Reddam Early Learning School
Oxley St
Pole Ln
Hume St
Hume Ln
Clarke St
Clarke Ln
Nicholson St
Nicholson Pl
Lithgow St
Canberra Ave
Newlands Park
River Rd
River Ln
Crows Nest Junction
150m (approx.)
250m (approx.)
Pacific Hwy after Albany St
St Leonards (Stop ID 206514)
Pacific Hwy after Oxley St
Crows Nest (Stop ID 206515)
This stop will be closed to allow for construction and operation of the logistics lane
Pacific Hwy before Falcon St
Crows Nest (Stop ID 2065132)

*Figure 5*

# 6 MANAGING PEDESTRIANS

This section describes how A W Edwards will safely manage pedestrians during construction. A W Edwards recognises the importance of giving consideration to all road users, and will identify pedestrian needs by considering the:

- Impact of construction works on existing pedestrian footways
- Number of pedestrians and their activity: office, retail, residential, school or recreational
- Origin and destination points of the pedestrians and their desired travel path
- The needs of vulnerable pedestrians: elderly, vision impaired, disabled, prams and trolleys
- Proximity of pedestrian generating developments: schools, shopping centres, bus stops/layovers,
- Requirements of the GSMoP.

The eastern footpath of the Pacific Hwy between Oxley St and Hume St will be closed (Table 8) to facilitate hoarding install and service relocations and to facilitate the logistics lane. The periodic closures will be detailed in ROL applications.

Temporary footpaths are unlikely (as this is an urban retail/commercial area with existing concrete footpaths), but in the rare case a temporary footpath is required they will be considered during the development of TMPs and TGSs. If required, A W Edwards will install relevant barriers to segregate works from pedestrian paths and/or pedestrians from traffic flows. All barriers will be maintained and appropriately secured while in use. All temporary footpaths will be in line with existing conditions in Section 9.3 of RMS's TCAWS manual, AUSTROADS Guide to Traffic Engineering Practice – Pedestrians, and, as required:

- Clearly defined and signposted appropriately
- Constructed of an all-weather surface, free of trip hazards
- Designed to accommodate the type of pedestrians likely to use the path
- Meet the minimum width specified by the RMS
- Maintained whilst in operation.

Footpath Closed signs, directional signs and traffic controllers will be positioned at the footpath closure points to guide pedestrians around the closure, manage pedestrians when trucks are entering and exiting logistics lane and prevent pedestrians entering the footpath closure.

When the footpath is opened outside logistic lane approved hours, flexible bollards will be installed to delineate the footpath and traffic lane and guide vehicles along the travel path.

A W Edwards will advise the TTLG, SCO/CJP and the relevant road authority (Local Council and/or the RMS), prior to adjusting any existing pedestrian crossing facility or the implementation of any new temporary facility.  Table 8 lists, but is not limited to, construction activities that may impact pedestrian paths.

*Table 8: Pedestrian impacts*

| CLOSURE | DURATION | REASON | PEDESTRIAN DIVERSION ROUTE |
|---|---|---|---|
| East side of Pacific Hwy, Oxley St to Hume St | One 3 week closure – footpath only | To facilitate hoarding install, service relocations and demobilisation | Alternate route SB: Cross Pacific Hwy (existing signalised intersection) at Oxley St > walk along Pacific Hwy > Cross Pacific Hwy (existing signalised intersection) at Hume St<br><br>Alternate route NB: Cross Pacific Hwy (existing signalised intersection) at Hume St > walk along Pacific Hwy > Cross Pacific Hwy (existing signalised intersection) at Oxley St<br><br>Footpath to the shops and restaurants remains open at all times. |
| | Short term - daily | | |
| | Life of project – from project start | Facilitate the Logistics Lane | |
| Hume St Closures | Various – from a 4-months closure to 26-Months | Rebuild bridge (4 month closure), install sheds over Hume St, install tower cranes and to store construction materials | The Hume St closure will be detailed in a stand-alone TMP. |

# 7 MANAGING BICYCLES

A W Edwards recognises the importance of giving consideration to all road users, including vulnerable users.

There are currently no planned activities associated with the Works that specifically and adversely impact cyclists.
Where the project implements traffic management; consideration will be given to cyclists, as per the GSMoP and by considering:

- Number of cyclists using the road
- Type of cycling activity: school children, recreational, commuter, utility, touring or sport training
- Origin and destination points of the cyclists, and the connectivity of their routes
- Needs of vulnerable cyclists, such as young children
- Proximity of cyclist generating developments, such as schools, public transport terminals and the travel speed of cyclists.

Cyclist movements (along with other road users) at and around work locations will be addressed in a TMP and/or TGSs as required.

# 8 MANAGE CONSTRUCTION TRAFFIC

This section covers the management of construction vehicle movements to/from site and throughout the road network. It includes vehicles undertaking the following activities:

- Access to construction sites, by construction personnel, at the start and end of each shift
- Regular trips (during a shift) by construction personnel in work trucks and utes
- Delivery of materials, plant and equipment to site/s
- Delivery of concrete from batching plants to site/s
- Removal of excavated spoil (tunnel and civil) from site

All drivers employed on the Works, whether direct employees or not, have a responsibility to drive safely, and comply with State road regulations, the Australian Road Rules and any other directives issued by A W Edwards, e.g. the Heavy Vehicle Driver Code of Conduct.

## 8.1 VEHICLE MOVEMENTS

A W Edwards will plan all vehicle movements to minimise the impact on the road network, they will:

- Develop a route that maximises the use of the arterial roads, and only utilises permitted roads in accordance with any relevant guidelines and specifications
- Select a route that has minimal impact, and/or, where potential impacts can be effectively managed
- As required, consult with Local Councils, road authorities, TTLG and relevant stakeholders
- Select delivery vehicles that can safely negotiate the route
- Where possible, avoid movements during peak periods
- Develop a detailed access plans and toolbox all drivers on said plans
- Ensure the deliver fleet are regularly maintained by the relevant sub-contractor (detailed in Section 4.1 and 4.2)
- Disciplinary action taken on non-compliant workers.

The types of vehicles used will include: 4WD utilities; single unit trucks; semi-trailers; cranes of varying size; and over dimension floats.

A TMP or more commonly a TGS (Annexure D) will be prepared to address the requirements for any potentially hazardous movements when:

- Entering and exiting work sites to and from adjacent travel lanes – Logistics Lane TMP
- Turning paths of single unit trucks, semi-trailers and B-Doubles
- Delivering at night, where specific conditions, e.g. lighting, may need to be addressed.

A W Edwards will apply controls and measures to mitigate the risk of these hazardous movements including, but not limited to: restrict the practice of hazardous movements (e.g. certain turning bans); the provision of permanent major traffic controls and devices, installation of temporary traffic controls; educating construction drivers and the installation of warning devices on vehicles

A W Edwards will also consider and account for the following in developing any plans;

- Comply with all relevant environmental approvals and the GSMoP

- Undertake a risk assessment to identify specific hazards and facilitate the application of mitigation measures
- Promote safe driving principles
- Provide an efficient operation and use of major roads, but minimise the impact on the local road network and local community
- Implement appropriate environmental controls
- Provide an efficient and well maintained vehicle fleet
- Determine the most appropriate hours of operation that will minimise the impact on the road network and local communities.

## 8.2 PRE-CONDITION REPORTS (DILAPIDATION SURVEYS)

A W Edwards will prepare (or have prepared by a subcontractor) road pre-condition reports for affected local roads (excludes regional, arterial and other major roads) likely to be used by construction traffic prior to commencement of construction.

The survey will investigate a pre-determined table of affected roads and take into account, but be not limited to, the following:

- Kerb and gutter (likely to be within a vehicle/s path)
- Speed humps
- Existing vegetation
- Street furniture
- Any existing damage to road pavement or road furniture
- Existing potholes/pavement damage
- Cracking and rutting
- Any existing structures
- Any existing damaged items.

The final report (supplied to Local Council and RMS) will include a written survey, photos and/or video of each road.

## 8.3 (CONSTRUCTION) SITE ACCESS

The most hazardous movement for construction vehicles occurs when the vehicle is entering or exiting the construction sites. To provide a safe entry and exit to Site A, Site B and Site C, from safe access points or gates A W Edwards will, where possible:

- Keep the number of access points to a minimum
- Ensure the new construction access points (including signalised) be designed to minimise impacts, so far as practicable, on any existing intersections, traffic facilities, traffic generating developments, adjacent properties and businesses
- Only install access points that are clearly visible, and have adequate sight distance (minimum Safe Intersection Site Distance)
- Intersections and access points in accordance with AUSTROADS Part 5 – Intersections at Grade and the RMS Road Guide and if/where required relevant standards, guides or manuals
- Ensure the intersection configuration has sufficient capacity to accommodate the traffic generated
- Ensure all access points are designed to accommodate the turning movements of the largest vehicles
- Where possible separate pedestrians from site access points
- Maintain security fences and gates to maintain clear sight lines and enable vehicles to park clear of the adjacent travel lanes

- Construct suitable all weather surface that assists with preventing debris tracked onto the travel lanes
- Ensure all access points are clearly visible to approaching traffic and signposted accordingly.
- Trim tree branches to improve site distances
- Ensure it is not possible for any vehicle to reverse onto the roadway (unless traffic management is in place)
- TGSs will be prepared, where required, for any temporary changes to the traffic environment associated with compound establishment and use
- Access for emergency vehicles and to firefighting equipment will be maintained
- Access for all utility services (water, sewer, electricity, gas, telecommunications) to all pits, yards and sub-stations.

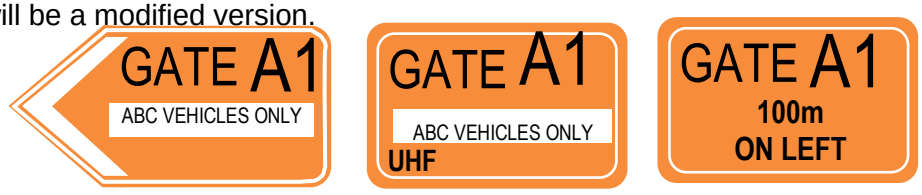
The AUSTROADS Guide to Traffic Engineering provides guidance on the design of intersections and access points. No matter the type of intersection configuration implemented, temporary traffic controls may be required from time to time to facilitate short-term major deliver and the movement of over-dimension vehicles.

The type of temporary traffic controls that may be installed by the Successful Contractor will include:

- Truck warning signs in advance of access points (in line with TCAWS Manual Ver 5);
- Traffic controllers at access points to facilitate entry and exit movements (as required);

All site access points will be appropriately sign posted on the approaches and at the access with a unique identification number as per the example shown in Figure 6. The first letter will designate the construction zone with numbering starting at 1, for each site. The shape of the sign (landscape or portrait) will depend on the available space (need to cater for existing signage, driveway sight distance and traffic signals) at each location.

Sign size will be 900mm x 900mm, where practicable, but site conditions will determine if different sized signs are required. At the time of writing this CTMP TCAWS Manual Ver 5 TGS 195 displayed a superseded sign, so while TGS 195 will be implemented as required, it will be a modified version.




| Location | ID. |
|---|---|
| Area A | A |
| Area B | B |
| Area C | C |

*Figure 6: Gate numbering example*

There will be no light vehicle movements into or between Site A, B and C, with all staff using existing public car parks (Hume St, Burlington St) or public transport to get to work. All site visits/visits to site by engineers, surveyors and workforce will be on foot due to the close proximity of each site. Occasionally light vehicles will enter the Logistics Lane and this will be done using the same processes in place for the heavy vehicles.

### 8.3.1 Potential Environmental Impacts

The Project will implement various environmental controls and measures for the deliver operations to mitigate the impacts on surrounding environment and road network. Environmental controls are outlined in the Project's CEMP.

The main measures to be applied by A W Edwards will include:

- The compulsory covering of all loads prior to leaving the site
- Provision of suitable wheel cleaning facilities at all major access points where required
- Dust suppression measures will be implemented at loading / unloading areas and along the routes where required
- Clean-up crews, including street sweepers, will be available to manage material spills.

## 8.4 PARKING

Table 9 details where public parking will be lost. Workers will be encouraged to use public transport, as shown in Figure 7, and consider other modes of transport such as car-pooling. Relevant public transport information will be provided to workers including route and timetable information as well as points of access to the public transport network.

Further, security fencing, flood lighting and an appropriate security system to restrict public access to the compound areas will be provided. The Project Management Plan addresses, in detail, site security arrangements as well as access and site specific signage, e.g. safety signs.

Removal of parking (managed by North Sydney Council) will be subject to Council's Work Zone application, fees (if applicable), and approval by North Sydney Traffic Committee.

*Table 9: Locations where parking may be lost*

| STREET | LOCATION | NO OF SPACES LOST | ALTERNATE PARKING LOCATIONS |
|---|---|---|---|
| Pacific Hwy | Approximately 70m north of Oxley St to Oxley St | 12 spaces will not be available during Logistic Lane operations. They will be available outside operations | Hume St public car park |
| | Oxley St to end of Area B | 11 spaces permanently lost, as the infrastructure to support parking (signs, signposts, line marking and ticket machines) will be removed as part of the logistics lane construction. The Logistic Lane TMP will provide specific detail | |

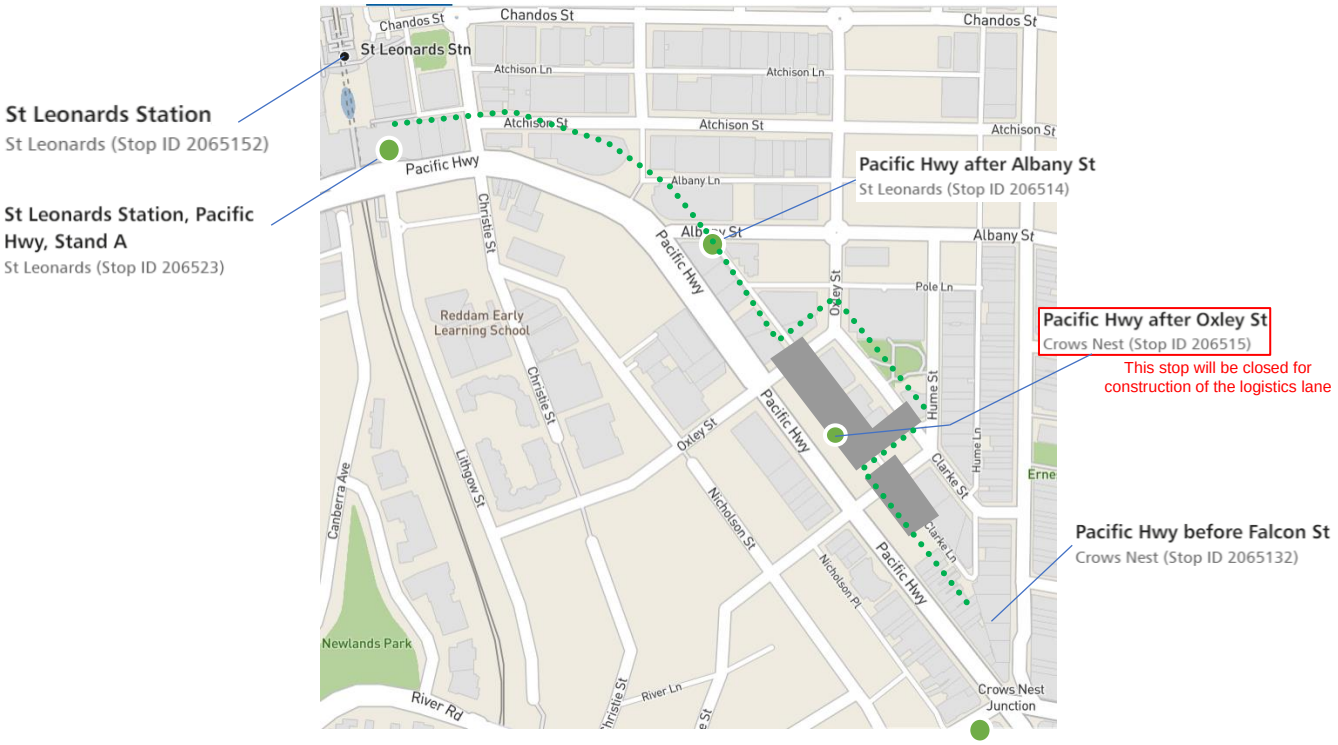



*Figure 7*

## 8.5 DELIVERY OPERATIONS

A W Edwards has identified that the effective management of deliveries of concrete, steel and beams deliveries, plus the floating of large plant and equipment to and from site, is critical to the Works.

A W Edwards also recognises its responsibility to minimise the impact on the road network and community.

The purpose of this section is to provide an indication of the volumes of traffic that will be generated at the construction site (Annexure C). It should be acknowledged that these volumes may change throughout the works in response to a variety of factors such as, but not limited to:

- Potential changes to construction hours (e.g. delivering at night)
- Potential changes to construction program
- Potential changes to parties receiving earth spoil or parties supplying construction equipment
- Machinery breakdown and inclement weather

Any out of hour and/or night deliveries will require relevant permits and authority approvals.

### 8.5.1 Logistics Lane

To facilitate construction deliveries the slow lane, SB, on Pacific Hwy between Oxley St and the end of construction Site B will be closed as well as the footpath between Hume St and Oxley St. This lane will operate (be closed) from 10am until 6pm Monday to Friday, 8am to 1pm on Saturdays and for approved out of hours work and OSOM deliveries. It will be open

to pedestrians at all other times. The specific details of the logistics lane and its operation will be detailed in a TMP.

Before any deliveries are commenced, all heavy vehicle drivers are required to read and sign onto A W Edwards' Heavy Vehicle Drivers Code of Conduct. This is a project created code and reiterates the Australian Road Rules, the site rules, and experience of each driver. The Code is outlined over the page.

## HEAVY VEHICLE DRIVERS CODE OF CONDUCT

**Purpose and Objectives**
This Heavy Vehicle Driver Code of Conduct aims to minimise the impacts of construction traffic on transport networks and adjoining properties. The purpose of this Code is to clearly define and detail acceptable behaviour for all heavy vehicle drivers operating in connection with the Works including the A W Edwards, materials supply and subcontract drivers.

**Responsibilities of Drivers**

- Drivers are to follow ALL rules and regulations required by law including:
  - Hold a current and appropriate licence for the vehicle they are operating
  - Comply with all speed limits
  - Obeying posted (road) load limits
  - Comply with all road works speed limits
  - Obey construction traffic signs and devices
  - DO NOT allow vehicles to be overloaded
  - Drivers must have appropriate PPE when entering the work site
- Drivers are to practice safe driving and behaviour which includes, but is not limited to:
  - Driving in a manner that is appropriate with road and weather conditions
  - Not operating any machines whilst fatigued or under the influence of drugs and/or alcohol.
- Drivers must behave in a professional manner at all times.
- Drivers must adhere to routes nominated by A W Edwards for each specific construction activity and they must not use roads if their weight is over the posted load limit.
- Routes passing schools and childcare centres should be avoided during school zone periods (08:00-09:30 and 14:30 – 16:00). These locations and times will be identified and confirmed by A W Edwards during planning of the work (this plan updated if required) and communicated to all drivers.
- Drivers should only park or wait in approved roadside lay-bys or hard shoulders as directed by A W Edwards (these will be agreed with the RMS and Local Councils). Do not queue at worksite gates.
- Drivers parking are to engage the park brake and leave the vehicle in gear. Never leave the vehicle with the engine running. Drivers leaving their vehicle must wear appropriate PPE (site standard).
- Vehicles must not transfer dirt or debris onto public roads. If any materials are deposited on the roads, then A W Edwards' Supervisor must be contacted immediately.
- Drivers will follow all procedures (and the direction of those who implement them) related to vehicle call-up / site access
- If approached by individuals with enquiries about the Works, drivers are not to engage with the individual beyond providing them with the community information hotline number, 1800 171 386.
- As a courtesy to individuals who may be impacted by driver behaviour, drivers will:
  - Not use compression braking where noise is likely to adversely impact on residents
  - Ensure that there is no littering
  - Remain calm and courteous when in contact with other members of the public
  - Maintain trucks in good working order and a clean and tidy condition
  - Not block residential driveways or any other access points.

### 8.5.2 Development of Delivery Routes

Delivery truck routes, to and from the construction site, were developed in line with the GSMoP and the Metro Project EIS (Figure 8) with the view to minimising impacts to local streets while maximising use of state and regional roads.

All trucks undertaking deliveries to the site are classed as general access vehicles (as defined by RMS in Figure 9 - https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/road-access/general-access-vehicles.html) and all routes were checked against were RMS's minimum vertical clearances of 4.6m (Figure 10 - https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html).

Anything outside of general access is considered an OSOM and will be managed by RMS's OSOM approval system, though the routes used will not differ from those used by the general access vehicles (unless RMS OSOM approval states otherwise).

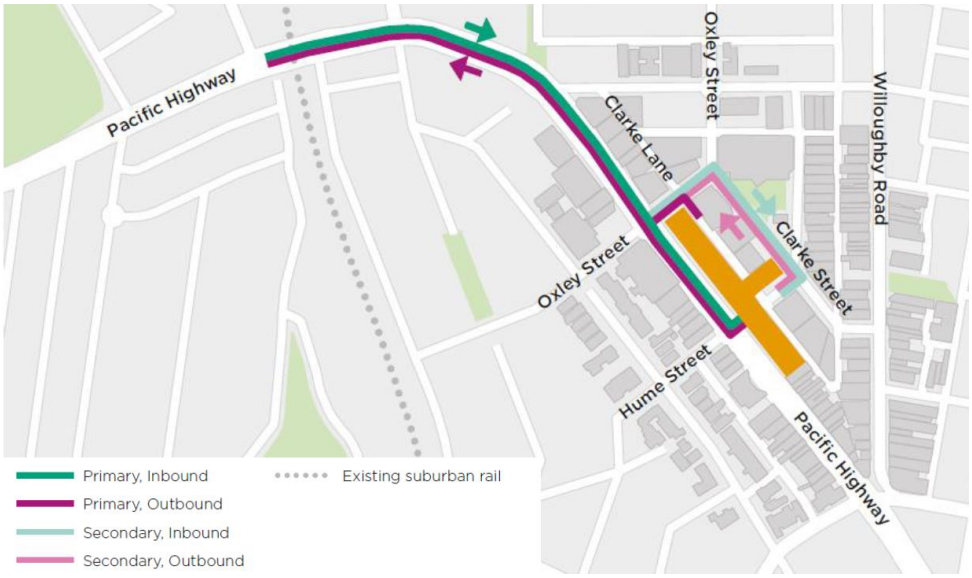
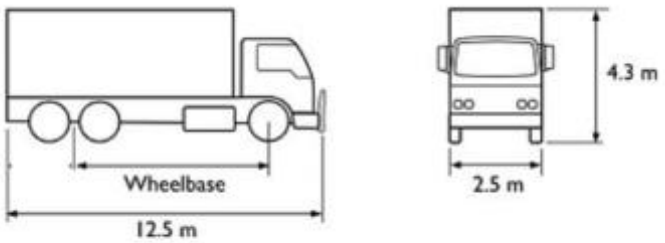



*Figure 8*




*Truck, conventional load carrying type*


*Prime mover and semi-trailer*

*Figure 9*

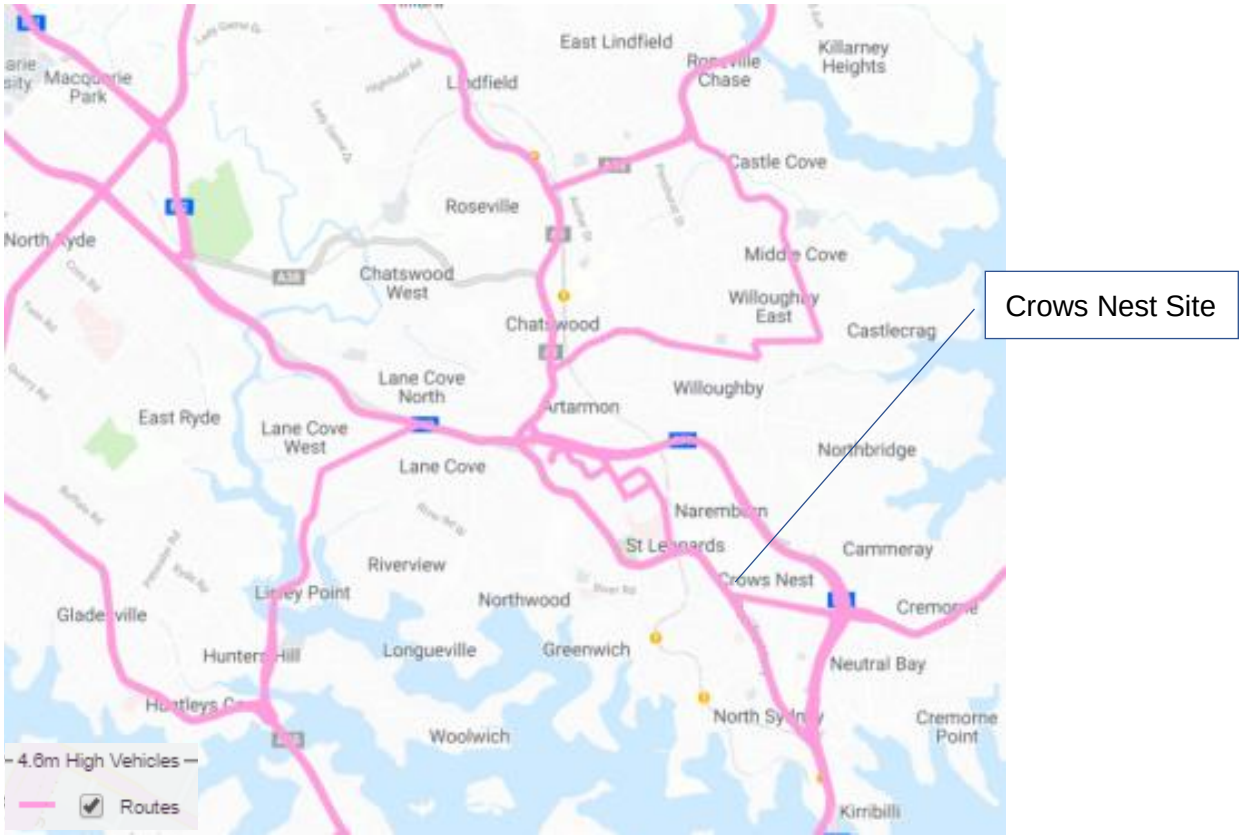



*Figure 10*

### 8.5.3 Precast, Batch and Steel Deliveries

Likely truck movements are outlined in Figure 12. These trucks will follow delivery routes based on Section 8.5.1 with deliveries split into three groups: 'Precast', 'Batch' and 'Steel'. The definition of each site is as follows:

1. **Precast** - where concrete beams are made and loaded onto semis. They are unloaded by tower cranes
2. **Batch** – batch plants, where the concrete comes from
3. **Steel** – where pile cages and reinforcing steel are made and loaded onto semis. They are unloaded by tower cranes

A W Edwards is responsible for tendering and awarding the contract to the precast, batch and steel subcontractors. Figure 11 shows the location of ALL the major sub-contractors A W Edwards is likely to request to tender. All precast is located in northern NSW, batch plants are in Artarmon, and steel is centred in Western Sydney; similar areas means whichever company is successful, the delivery routes are the same.

It is noted that destinations and routes are subject to regular change and A W Edwards will ensure that the Metro Project, RMS, SCO and North Sydney Council are informed.

All deliveries will be pre-booked and managed through Veyor, a web and app-based software tool that allows truck drivers to book a timeslot for loading/ delivery areas and receive real-time notifications. The software also allows A W Edwards to track actual vehicle arrival and departure times. Software add-ons that A W Edwards may also utilise include Driver Induction, Chain of Responsibility, Driver ETA Tracking, Exclusion Zones and Work Permits Scheduling and Plant Inspection Checklist.

**Construction Traffic Management Plan**

*Figure 11*

**Legend**

**Precast**
Company locations
Route to Site
2nd Route to Site
Route from Site

**Batch Plants**
Company locations
Route to Site
Route from Site
2nd route from Site

**Steel Suppliers**
Company locations
Route to Site
Route from Site

Construction Sites

AW EDWARDS

**A** then…

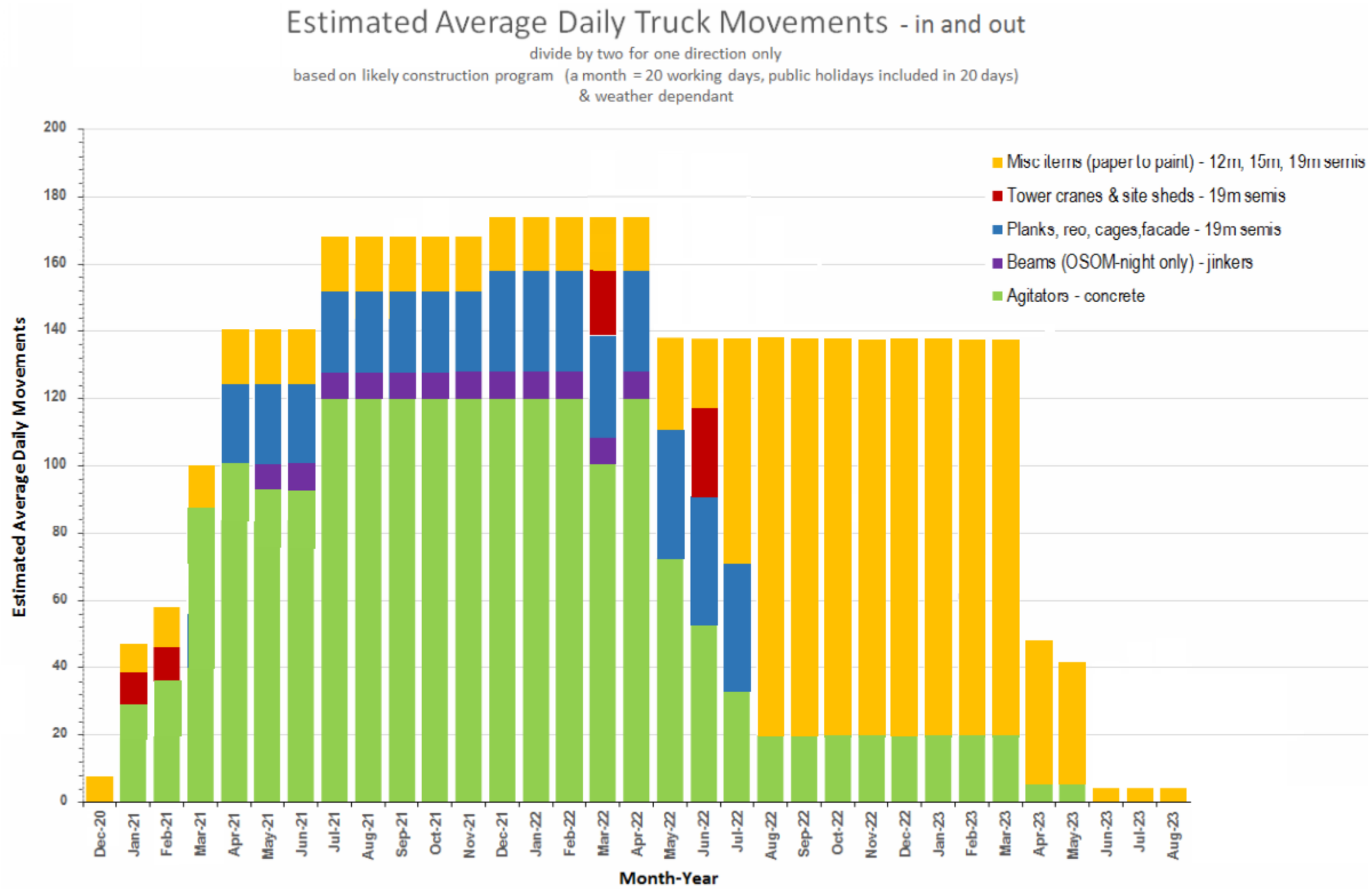
**B** then…

**C** then…

Back to Pacific Hwy at Lane Cove or on to the M2

**D**

*Figure 12: Estimated average daily truck movements. If the number is 300 then the trucks will make 150 movements into site and 150 movements out of site (i.e. there are NOT 300 trucks on the road)*



# 9 OBTAIN ROAD OCCUPANCY LICENCES (ROLS)

An ROL is a licence granted to occupy a portion of the road network, e.g. one lane of two for a set time over a set number of days. A W Edwards will obtain the necessary ROLs from TMC prior to conducting any short term works on roads.

The three specific areas of approval will include:

- Development works within the road reserve and/or any changes to existing infrastructure
- Temporary or permanent installation and/or change of any regulatory traffic control device on a road
- Road closures, occupation of the road network to conduct works, and the associated installation of temporary traffic control devices.

The road authorities responsible for roads affected by the Project include Local Councils, SCO/ TfNSW. A W Edwards will liaise with these authorities and stakeholders (if required) during construction.

A W Edwards acknowledges that a Road Occupancy Licence (ROL) scheme applies on all state roads and understands the benefits of managing the cumulative impact of delays at separate and multiple work sites (multiple works sites in this case means sites in addition to Crows Nest). TMC/SCO will be responsible for advising of conflicts with ROL approvals given to other projects.

Consequently, except in the case of an emergency, or when directed by Police or Emergency Services, A W Edwards will obtain an ROL, following internal processes, prior to the commencement of any short term works which:

- Slows, stops or otherwise delays traffic
- Diverts traffic from its normal course along the road carriageway, including lane closures, turning restrictions, detours and diversions, or
- Occupies any portion of a local road that is normally available as a trafficable lane.

An emergency is defined (by the GSMoP) as an unforeseen event, which requires urgent attention to protect life or property or an occasion when emergency services (Police, Fire Brigade, Ambulance or State Emergency Services) take control of a portion of the road network. The Successful Contractor's role in emergency events is detailed in Section 16 Incident Management.

Obtaining an ROL and/or SZA approval for, short term works, on state and regional roads will follow the existing TMC process. However, if a local road (road controlled by a Local Council) requires a lane closure the North Sydney Council approval process will be followed (Section 10.1).

A W Edwards acknowledges that all road occupancies, despite the hours of operation stated in Section 1, will be subject to the specific period of operation stated on the approved licence.

The ROL Application (with a TGS) will be submitted to TMC, who have the responsibility for processing and approving ROLs, through the OPLINC system. The TMC will be provided at least 10 working days to process and then either grant or reject application. Minor changes to an ROL application (to obtain approval) will occur within the 10-day period. All road

occupancy requests will comply with all road safety and traffic management principles, objectives and targets outlined in this CTMP.

To obtain extensions, A W Edwards will submit an extension ROL through OPLINC. If the original lane closure and road occupancy submission is to be altered or changed, (e.g. change to times, TGS or proposed occupancy, work type etc.), a new ROL submission will be submitted.

A W Edwards will ensure the validity of approved lane closures and road occupancies and will regularly monitor the expiry dates. A W Edwards will maintain a database, which will contain details of road occupancy approvals to assist with this process.

Generally, TMC will apply conditions to the approvals, which may include:

- Maximum traffic stoppage times and maximum queue lengths
- Maximum travel time delays
- Measures to provide information to road users
- Records detailing the date and time of the road occupancy, and the location of all signs, and any other relevant information associated with the traffic control, must be kept.

TMC/SCO has the power to revoke the approvals at any time for breaches of the associated conditions.

Below is a list of likely ROLs, for advice only. TMPs will be required for some of the works. TMPs were covered in Section 2.5.2.

| ROL | REASON FOR ROL |
|---|---|
| Footpath and Slow lane closures (together and separately)<br>Pacific Hwy SB, Oxley St to Falcon St | Utility relocations, street lighting adjustments and hoarding installation |
| Footpath and Slow lane closures<br>Pacific Hwy NB, Falcon St to Oxley St | Street lighting adjustments |
| Each full closure of Hume St | Facilitate bridge removal, shed install/removal, excavator drop/removal and to install and remove tower cranes |
| Logistics Lane<br>Slow lane closure Pacific Hwy SB 70m north of Oxley St to end of Area B | Daily site operations and deliveries. This would be one (6 months long) ROL renewed over life of Project. |
| Slow and middle and middle and fast lane closures<br>NB and SB at Oxley St and Pacific Hwy intersection | Near end of project; for install of new pedestrian crossing across Pacific Hwy |
| Stop/slow (would include lane closures)<br>- Pacific Hwy and Oxley St<br>Pacific Hwy and Hume St | To manage OSOM loads (at night only) |
| Slow lane closure, SB Pacific Hwy, near Artarmon | To park OSOM loads as a contingency, at night only, in case they arrive too close together or there are delays in unloading (See Section 8.6) |

Generally, in accordance with TMC's requirements, the responsibility for implementation, coordination, and compliance with the lane closure and road occupancy approvals remains with A W Edwards and specifically, the Construction Team. TMC's granting of the approval does not:

- Constitute approval by TMC, SCO or RMS of any actions that relate to traffic safety, occupational health and safety, or environmental issues and management
- Relieve A W Edwards or any person of their responsibility for compliance with legislation, regulations, or established operational procedures, or
- Change any management accountability or responsibility

## 9.1 NORTH SYDNEY COUNCIL LOCAL ROAD OCCUPANCY APPROVAL

For local roads a road/lane occupancy licence will be granted by North Sydney Council. A W Edwards will obtain the necessary permits from North Sydney Council prior to conducting any short term works on local roads.

The two specific areas of approval will include:

- Temporary or permanent installation and/or change of any regulatory traffic control device, sign, zone or arrangement on a local road, and
- Road closures, occupation of the local road network (including footpaths) to conduct works, and the associated installation of temporary traffic control devices.

North Sydney Council has the power to revoke the approvals at any time for breaches of the associated conditions.

It is understood that changes or proposed amendments to the public domain may require the relevant TMP and/or TGS to be submitted to the relevant Council, including possible referral to the Local Traffic Committee. The relevant Council's Local Traffic Committee procedures and timings will be obtained and followed as required.

Generally, in accordance with North Sydney Council's requirements, the responsibility for implementation, coordination, and compliance with the Council's approvals remains with A W Edwards and specifically, the Construction Team. Council's granting of the approval does not:

- Constitute approval by Council of any actions that relate to traffic safety, occupational health and safety, or environmental issues and management
- Relieve A W Edwards or any person of their responsibility for compliance with legislation, regulations, or established operational procedures, or
- Change any management accountability or responsibility

Below is a list of likely road occupancies on Local Roads, for advice only. TMPs will be required for some of the works. TMPs were covered in Section 2.5.2.

| LOCAL ROAD OCCUPANCY | REASON FOR OCCUPANCY |
|---|---|
| Footpath and slow lane closures (together and separately)<br>Oxley St, Pacific Hwy to Clarke St<br>Clarke St, Oxley St to Hume St<br>Hume St, Clarke St to Pacific Hwy | Utility relocations and hoarding installation<br>Signage install |
| Stop/slow<br>Hume St and Clarke St intersection<br>Clarke St and Oxley St intersection<br>Clarke St and Clarke Ln intersection | To manage OSOM loads (at night only)<br>To manage concrete deliveries |
| Each full closure of Hume St | Facilitate bridge removal, shed install/removal, excavator drop/removal and to install and remove tower cranes |

# 10 APPLY ROADWORK SPEED LIMITS

Temporary roadwork speed limits, both short and long term, are one of many traffic controls that may be implemented to manage the speed of traffic approaching and passing through and/or past the work sites.

A W Edwards acknowledges that roadwork speed zones must be logical and credible, as well as enforceable. When considering the use of a roadwork speed zone, A W Edwards will adopt the principles outlined in AS 1742.3, which state that roadwork speed zones must:

- Only be used where they are self-enforcing or will be enforced
- Not be used alone but with other traffic control signs and devices
- Not be used in place of more effective traffic controls
- Only be used while road work is in progress or where lower standard road conditions exist, and
- Meet clearance and lane width requirements of Australian Standard 1742.3.

## 10.1 LONG TERM REDUCED SPEED ZONES

There is no designated long term speed reduction, though speeds may be reduced (long term) if there are potential areas where there are existing traffic hazards, traffic hazards resulting from construction activities and/or construction vehicle movements.

## 10.2 SHORT TERM REDUCED SPEED ZONES

To provide a safe working environment during short term works e.g. during contra-flow or lane closures, 40km/hr speed zones will be installed, in accordance with AS1742.3, RMS TCAWS Manual Ver 5 and SZA.

To reinforce reduced speed zones (long or short term) A W Edwards in conjunction with RMS and SCO will conduct regular reviews of the speed limit signage and if deemed necessary consult with the NSW Police representative to obtain enhanced enforcement of the roadwork speed zones, particularly during working hours.

### 10.2.1 SZA Submission procedure

Guidance for applicants applying for Speed Zone Authorisation (SZA) is provided in the TMC Road Occupancy Manual. The manual contains a number of explanatory notes, checklists. Application is made as part of the ROL application process (Section 10).

The SZA Application will be forwarded to A W Edwards and TMC as it has the responsibility for processing an approving an SZA. The TMC generally requires at least 10 working days to process the application and will either grant or reject application within this period.

A W Edwards accepts it will be responsible for the management of records associated with the speed zone in accordance with Section 8.2.6 of the RMS's TCAWS Manual Ver 5.

### 10.2.2 Extensions to period of operation

To obtain extensions, A W Edwards will submit a SZA submission. If there are no amendments, other than dates, to the original submission, A W Edwards will only submit a completed SZA Application (via OPLINC) with a copy of the original TGS, quoting the previous SZA number.

If an original SZA submission is amended (e.g. change to a time, a TGS, a location or speed reduction etc.) a new SZA submission will be prepared and submitted.

A W Edwards will ensure the validity of each approved speed limit, thus regular monitoring of the expiry dates is essential. A W Edwards will maintain a database which will contain details of speed limit consents to assist with this process.

### 10.2.3 Speed zone conditions

It is expected that TMC will apply conditions to speed limit authorisations and are able to revoke an approval at any time for breaches of the conditions.

Typical SZA conditions include, but are not limited to:

- A copy of the SZA must be made available to the local NSW Police Highway Patrol representative, and road authority on request
- The temporary roadwork speed zone must be installed in compliance with conditions, notes, applicable dates and locations stipulated in SZA
- Specific measures required to manage adjacent speed zones, or potential conflicts with other temporary speed zones at construction sites in the immediate area
- All temporary roadwork speed limits must be installed as per the TGS and operated in accordance with the SCO/RMS requirements
- Similar to all regulatory signs, the speed limit signs are to be properly erected, and any contradictory signs or road markings are to be removed or covered, and
- Records detailing the date and time the speed limit is in operation, the speed limit displayed, and the location of all signs, and any other relevant information associated with the speed limit, must be kept.

### 10.2.4 Authorisation Limitations

Generally, in accordance with the A W Edwards' requirements, the responsibility for implementation, coordination, and compliance of the speed zone remains with A W Edwards. The TMC's granting of the approval does not:

- Constitute approval by A W Edwards of any actions that relate to traffic safety, occupational health and safety, or environmental issues and management
- Relieve the Project or any person of their responsibility for compliance with legislation, regulations, or established operational procedures, or
- Change any management accountability or responsibility.

# 11 USE TRAFFIC CONTROL DEVICES

Traffic control devices are all signs, traffic signals (permanent and temporary), road markings, pavement markers, traffic islands, road safety barriers and/or other devices placed or erected to regulate, inform, warn and/or guide road users. The function of any traffic control device is to promote orderly traffic flow, protect workers and motorists, regulate traffic (assign right of way, and indicate regulations in force), warn road users of hazards or regulatory controls ahead, (in particular they also warn of temporary hazards that could endanger road users or workers at roadwork sites), and guide traffic (e.g. guide signs to inform road users of directions to destinations, identify routes, and pavement markings to guide the travel path of vehicles).

Signs and road markings are an important aspect of road safety and traffic management. Regulatory signs control specific traffic movements; warning signs give advance notice of traffic hazards; road markings (and pavement markers) provide delineation and reinforce signage; and guide signs give advance guidance and advice of routes and destinations which assist all drivers to make clear, early decisions.

The aim of sign posting is to:

- Warn and inform road users of conditions ahead
- Guide and control road users to safely negotiate the road ahead
- Ensure the signs and their structures are not a hazard in themselves
- Provide drivers with sufficient information to ensure no surprises along their path of travel, and
- To provide data in a controlled and consistent way to avoid information overload.

A W Edwards recognises the value of providing road users with timely, clear, and consistent messages and will ensure all signs, road markings, barriers and devices installed during the construction of the Project are:

- Assessed for use in accordance with the appropriate RMS guidelines and/or Australian Standard/s
- Manufactured and installed in accordance with the requirements of the Australian Standard/s
- Installed in accordance with the relevant guides and standards
- Not contradictory to existing signs or markings
- When no longer required, covered or removed, and
- Regularly maintained and repaired / replaced when damaged or lose reflectivity (for signs).

All sign posting installed throughout the Project will comply with the requirements outlined in the RMS's Traffic Control at Worksites Manual, the RMS's Delineation Manual, AUSTROADS Guide to Traffic Engineering Practice, Part 8 – Traffic Control Devices and the relevant Parts of Australian Standard 1742.3.

All road safety barrier systems installed throughout the Project will comply with the relevant Parts of Australian Standard 1742.3 and Australian/NZ Standard 3845.

## 11.1 PROJECT SIGN REQUIREMENTS

In addition, to the sign posting requirements stipulated in the RMS's TCAWS Manual Ver 6.1 and the Australian Standards, A W Edwards will be applying the following sign posting parameters:

- The size of signs used on the Project will be Type A or B depending on location constraints
- Consideration will be given to the installation of short-term signs on permanent posts with secure covers, where works occur in the same location on a regular basis (e.g. the Logistics Lane), and
- All non-standard road and directional signs (not gate or project specific signs) will be submitted to RMS for approval. It is not expected there will be a large number of non-standard signs required, regardless RMS should provide a sign design, (for A W Edwards to manufacture) within 10 working days of receiving the request.

A W Edwards will conduct detailed reviews of all short and long term signage with the aim to ensure a clear and concise message is given to approaching road users, without creating sign clutter.

## 11.2 DEVELOP TRAFFIC GUIDANCE SCHEME PLANS (TGSS)

TGS Plans and their creation are outlined in Section 12.

## 11.3 UTILISE VARIABLE MESSAGE SIGNS (VMS)

During construction, A W Edwards will utilise portable and permanent VMS to provide advanced warning and changed traffic condition information. The use of VMS and the appropriate message/s will be incorporated within a TMP and/or site specific TGSs.

### 11.3.1 Permanent VMS

The TMC and SCO are responsible for the management of permanent VMS and will control what messages will appear before work begins and during work. It is understood that messages related to the project (advance warning or otherwise) are second to incident response messages and that the decision to display the appropriate messages remains with TMC/SCO.

### 11.3.2 Portable (trailer mounted, temporary) VMS

A W Edwards will coordinate and deploy portable VMS (senior and junior boards) to allow as much advance warning as possible, as well as set SCO agreed and approved messages in accordance with the RMS's VMS Policy and, as required, in line with the GSMoP. VMS devices utilised on the Project will comply with RMS's specifications.

## 11.4 UTILISE FLASHING ARROW SIGNS (FAS)

FAS are mainly used when closing traffic lanes and conducting mobile traffic control operations.

When stipulated by the TGS, A W Edwards will implement FAS in accordance with Section 3.12 of the AS 1742.3 and Annexure D of the RMS's TCAWS Manual Ver 5. Where applicable, FAS will comply with the RMS equipment requirements FAS/4 and be controlled by a trained sub-contractor traffic controller.

## 11.5 UTILISE PORTABLE TRAFFIC SIGNALS (PTS)

There is currently no need to utilise portable traffic signals for any long term works on this Project.

In the extremely rare case there becomes a need, for PTS, their use will be stipulated by a site specific TGS, Section 3.5.4 of AS 1742.3, and the RMS's TCAWS Manual Ver 6.1, TGS 43 and after discussions at the TCG.

All portable traffic signals used will comply with the RMS's equipment specification PTS/3 and be operated by a trained sub-contractor traffic control team member and monitored by the Construction Team.

## 11.6 UTILISE FIXED TRAFFIC SIGNALS – RE-CONFIGURED AND EXISTING

To facilitate Works A W Edwards will re-configure existing traffic signal sites as per the numbered list below. Any re-configurations will be undertaken in line with the RMS WAD, with the assistance of GTA Consultants.

**Reconfigured**

1. Hume St and the Pacific Hwy during closure of Hume St
2. Oxley St and the Pacific Hwy as part of end state works

**Existing**

A W Edwards may utilise 'flashing yellow' at fixed traffic signals to allow Traffic Controllers to operate an intersection under manual (human) control, specifically during contra-flow operations and/or OSOM deliveries.

When stipulated by the TGS, A W Edwards will implement 'flashing yellow' in accordance with ROL approval and in conjunction with the TMC (as only TMC can switch the lights to flashing yellow). Traffic signals may also be turned off during works but such a decision remains at the sole discretion and responsibility of the TMC and SCO.

All intersections, regardless of whether existing or reconfigured, will be constructed with the aim of ensuring that the intersections operate as close as practicable to existing levels of service.

## 11.7 SEQUENCE FOR INSTALLATION AND REMOVAL OF PROJECT TRAFFIC SIGNS

All pre-warning signs as per approved TGS Plans in accordance with site specific TMP's will be installed as per TCAWS manual Ver 6.1.

A W Edwards have installed static signs for long term operations TMP. Which will be open for traffic during approved ROL timings and closed at the end of each shift/day.

Traffic controllers on site are responsible for site traffic set-up. Before work commences, traffic controllers will use traffic control Ute with arrow board to warn traffic behind them with flashing arrow sign lights and hazard lights of vehicle during setting up and closing the signs after end of the shifts.

For short term sites traffic warning signs will be installed before work commences with traffic control vehicle using warning flashing arrows and will be secured with sand bags according to the work zone location and approved TGS plan.

# 12 TRAFFIC GUIDANCE SCHEME PLANS (TGS)

Traffic Guidance Scheme Plans are diagrams that illustrate the signs, road markings and devices that will be installed to warn traffic (including pedestrians), and guide it around or past, or if necessary through the work site or temporary hazard, for example contra-flow utilising opposing carriageways. All TGSs will be developed with the aim of:

- **Warning** drivers of changes to the usual road conditions,
- **Informing** drivers about changed conditions,
- **Guiding** drivers through the work site, and
- **Safety** for workers, motorists, pedestrians and cyclists.

The installation of home-made or non-standard traffic signs will not be permitted.

**Standard TGSs**
Standard TGSs may be adopted directly from the RMS's TCAWS Manual. However, the standard TGSs will be modified on-site; to suit site conditions. Where modifications are necessary, they made and shown clearly on the TGS by a suitably qualified person (RMS White Card Holder). Where possible, all TGSs will be prepared using computer aided software, which will provide a clear, concise, and consistent format. The aim is to avoid the use of deficient TGSs, remove the inconsistency of overlapping or adjoining TGSs, and give due consideration to the road principles.

**Develop site-specific TGSs**
Site specific TGSs have been developed for both long and short-term works, examples of which are in Annexure D in accordance with the principles and measures outlined in this CTMP, AS1742.3 – 2009, RMS's Traffic Control at Worksites Manual (TCAWS) Version 6.

Long-term TGSs are temporary arrangements that will be in place for a period longer than one shift (a shift is approximately 10-12 hours). Likely TGSs for long-term works are Logistics Lane Operations TGS.

Short-term relates to a temporary arrangement that will be applied for one (1) shift where normal operating conditions are reinstated after all temporary traffic management devices are removed from the roadway. Short-term TGSs will be installed as required to facilitate construction activities such as surveying and geotechnical activities, site deliveries, service investigations, maintenance activities, delivery operations, pedestrian or cyclist controls and/or removing and installing line marking.

**NOTE:** The TMC requires a TGS to be submitted with each ROL application, they are also required, if requested by the Independent Certifier and/or Principal's Representative, as per Section 2.11.2 of the General Specification Management of the Project (MS-GS-MP-2). This section also states: "The Contractor must provide copies to the Principal's Representative of any traffic control plans, approved and endorsed by relevant Authorities." As the relevant authorities DO NOT approve and endorse TGSs it is understood the responsibility of the drawing, managing and implementing the TGS remains with the Successful Contractor.

**Provide Safe Clearances to Work Areas**
Maintaining a safe environment for workers is critical. A W Edwards will follow the requirements specified in Section 3.6 of the RMS's TCAWS Manual Ver 5 and Section 4.2 of AS 1742.3 and they are outlined below in Table *1*.

*Table 1: Work Area Clearances (and associated speed limit requirements)*

| MINIMUM CLEARANCE (FROM A TRAFFICABLE LANE TO WORK) | TEMPORARY SPEED LIMIT |
|---|---|
| Within 1.2m | 40 km/hr |
| Between 1.2m and 3m | 60 km/hr |
| Between 3m to 6m | 80 km/hr |

The work area clearances stated in the above table are the minimum requirements for short term work or work under traffic control. Temporary road safety barrier should not be required on this Project. If they are required, their selection and installation will be in accordance with Austroad Guides, RMS's 'Safety Barrier Products Accepted for use on Classified Roads' document and the manufacturer's specifications.

# 13 CONDUCT TRAFFIC CONTROL INSPECTIONS

The aim of regular traffic control inspections is:

- to provide a safe environment for workers and road users,
- monitor compliance against the Traffic Control Plan or drawing
- identify safety hazards to implement corrective solutions.

This process details the type, frequency, responsibility, and checklists for short term and long-term inspections.

Inspections of the temporary traffic controls (both short and long term) will be conducted during construction (Table 12), focusing on monitoring compliance against the TGS and identifying safety hazards, to enable implementation of corrective solutions.

The sub-contractor traffic control company will conduct short term traffic control inspections (in accordance with the RMS TCAWS Manual Ver 6.1. Long term traffic control inspections (*Conduct Long Term Traffic Management Inspection*) will be undertaken by A W Edwards and GTA Consultants. The type, frequency and responsibility of inspections are summarised in table below:.

*Table 12: Traffic control inspections*

| INSPECTION | RESPONSIBILITY | FREQUENCY |
|---|---|---|
| Pre-start Brief | A W Edwards Traffic Coordinator | Before works start check approved TGSs, ROLs and SZAs are onsite |
| Short term traffic control/Long term traffic control inspections (day and night) | Traffic Control Sub Contractor Team Leader | As per RMS TCAWS Manual Ver 6.1 (Weekly Once) |
| Long term traffic control inspections (day and night) | Traffic Control Sub Contractors/ A W Edwards/ GTA Consultants, as required | Each area, at least once per fortnight; moving to every two months once site is fully operational for at least 3 months |

**Refers to the foreman that is responsible for the work activity*

Where traffic control deficiencies are identified through these inspections, the relevant TMPs, TGSs or subordinate documentation will be amended, as required, by A W Edwards/ GTA Consultants.

If issues, deficiencies, and improvement opportunities are identified relevant to this CTMP, this CTMP will be amended as required by GTA Consultants/A W Edwards Traffic Manager.

# 14 CONDUCT TRAFFIC CONTROL ROAD SAFETY AUDITS (RSAS)

AUSTROADS defines a road safety audit as a formal examination of a future road or traffic Project or an existing road, in which an independent, qualified auditor(s) reports on the roads crash potential and safety performance. There are various types of audits conducted, from feasibility audits through to pre-opening audits. Audits are conducted to assess the safety of existing roads and temporary long term traffic arrangements implemented for roadwork.

All Project RSAs, of long term traffic management, will be conducted in accordance with the AUSTROADS Road Safety Audit Guide, RMS Guidelines for Road Safety Audit Practices 2011, RMS Technical Direction TD 2004/RS01 – Accident Reduction Guide Part 2: Road Safety Audits and Sydney Metro Principal Contractor Health and Safety Standard.

An audit will be conducted by two suitably qualified, independent, road safety and traffic engineering auditors. The lead auditor will have Road Safety Auditor Level 3 Certification, have undergone road safety audit training and received certification under the Institute of Public Works Engineering Australia (IPWEA) Accreditation Scheme. The other auditor will be, at least, highly experienced in traffic management. Desktop audits, of TMPs only require one lead auditor with a Road Safety Auditor Level 3 Certification.

A W Edwards/ GTA Consultants will manage the Project's road safety audit program in coordination with the Quality Manager. The responsibility for and frequency of audits is summarised in Table 2.

*Table 2: Traffic Control Road Safety Audits*

| INSPECTION | RESPONSIBILITY | FREQUENCY |
|---|---|---|
| Desktop audit of TMPs | A W Edwards to engage a qualified, independent auditor | Any new (not updated or amended) TMPs. Responses to the RSA will be included in the TMP |
| Temporary (long term) traffic arrangement | A W Edwards to engage a qualified, independent auditor | Six months after site is established focusing on operations of Site A, B and C |
| | | After opening of the Logistics Lane focusing on the lane itself and its operation |

The following methodology will be applied on this Project when conducting the road safety audits:

- Hold a commencement meeting between auditor(s) and A W Edwards/ GTA Consultants. RMS will be invited but not required.
- Review relevant documents (including plans, previous audits)
- Auditor to conduct site inspections during the day and night, noting deficiencies and hazards
- Assess the inspection findings in accordance with relevant practices, guides and current standards
- Prepare a concise audit report, which includes a table detailing the deficiencies identified
- A W Edwards/ GTA Consultants provides a response to the audit findings in consultation with the Construction Team, and
- Where necessary, the Construction Team programs necessary actions to rectify deficiencies.

A W Edwards will also apply this methodology and provide feedback to any road safety audits that are conducted by SCO, RMS, or other stakeholders.

Where traffic control deficiencies are identified through these inspections, the relevant TMPs, TGSs or subordinate documentation will be amended, as required, by the Traffic Control Company.

If issues, deficiencies, and improvement opportunities are identified relevant to this CTMP, this CTMP will be amended as required by GTA Consultants.

Copies of Road Safety Audits will be supplied to the TTLG upon request.

# 15 INCIDENT MANAGEMENT

## 15.1 INCIDENT REPORTING

The Site Manager / WHS Coordinator shall ensure that all incidents and illnesses occurring in or around the site, involving A W Edwards personnel, subcontractors, Interface Contractors visitors or passers-by, are reported. Incident reporting and notification is to be in accordance with section 3.26 of the Project Health and Safety Management Plan (SMCSWSCN-AWE-SCN-HS-PLN-000049).

Workers and visitors shall be informed of the need to report accidents and incidents via the site induction process and the MTA daily access authorisation / access control system.

The relevant quality, safety or environment manager shall be immediately advised by phone or text message of any incident or near miss event.

Emergency services (Police, Fire, and Ambulance) should also be contacted as a result of a serious incident. In accordance with the Incident, Emergency and Crisis Management Plan (SMCSWSCN-AWE-SCN-SM-PLN-000057).

Details of the incident shall be recorded on First Aid & Register of Injuries (SE6204) by the Site First Aider.

An Investigation Report (SE5101) shall be completed by the Site Manager for all incidents that result in or potentially could result in medical treatment, lost time or death.

All incidents shall be logged on Sydney Metro's Incident Reporting and Investigation Database. The Incident Report shall include a reference to the Sydney Metro's incident classification, notification, reporting and investigation requirements.

The Investigation Report (SE5101) shall be reviewed by the WHSE Manager and Group WHSE Manager. The WHSE Manager and/or Group WHSE Manager shall carry out a further investigation if required. The site WHS Committee shall be consulted as required. The WHSE Manager/Group WHSE Manager are responsible for closing out the Investigation Report (SE5101) once satisfied that actions taken adequately address the root cause and all preventive actions have been closed out.

Investigations shall be carried out by person's competent in incident investigation. The investigation team shall comprise the Lead Investigator, project team representatives, subcontractor representatives where applicable, members of the WHS Committee, external specialists as required. The Lead Investigator for all Incidents shall have completed ICAM Lead Investigator Training or Equivalent.

The Investigation Report (SE5101) shall include as applicable:

- The nature of the injury/incident
- Treatment administered
- Witness statements
- Influencing factors
- Photographs etc. as required
- Root cause
- Preventive action and person responsible for carrying it out

Major investigation reports shall be provided to the Principal's Representative in draft form for review prior to finalisation. All (minor and major) investigations reports must be issued to the Principal's Representative within 14 business days of the occurrence of the relevant incident or near miss.

Upon request by Sydney Metro, a preliminary report may be requested within 5 days of the incident occurring.

If changes are required to risk assessments, procedures, SWMS, site rules, etc., the requirements for such changes shall be nominated on the Investigation Report (SE5101).

Corrective actions and close out of corrective actions shall be managed on the shall be documented on the Investigation Report (SE5101) including:

- Specified target completion dates
- Responsibility for addressing corrective actions
- Closure of corrective actions by the specified completion date.

Incident and First Aid report forms are appended to the PHSMP.

## 15.2 EMERGENCY RESPONSE AND INCIDENT MANAGEMENT

An Incident, Emergency and Crisis Management (SMCSWSCN-AWE-SCN-HS-PLN-0001008) has been developed for the Crows Nest Metro Station Project, to align with Sydney Metro Principal Contractor Health and Safety Standard (SM PS-St-221).

The aim of this emergency plan will be to document the organisational arrangements, systems, strategies and procedures relating to the response and management of emergencies.

An Emergency Planning Committee (EPC) will be established and will determine which types of emergencies warrant specific procedures within this plan.

The EPC, Chief Warden, site team, and nominated workers shall participate in the implementation and maintenance of the emergency plan, as appropriate to their role.

The Emergency Plan shall include the following:

- Emergency Preparedness
- Emergency Mitigation
- Activities for, and prevention of emergencies, such as training and maintenance
- Overall control and co-ordination arrangements for emergency response including evacuation strategies for site workers with a disability
- Roles and responsibilities.

This Emergency Plan will be discussed during all site inductions, and the specific emergency response plans will be displayed on the site noticeboard and posted in the site induction room.

Development of this plan will occur with consultation with Sydney Metro and Interface contractors to ensure that our emergency response objectives are aligned.

# 16 MANAGE PUBLIC (SPECIAL) EVENTS

The SCO defines a special /major event (in traffic management terms) as any planned activity that is wholly or partially conducted on a road, requires multiple agency involvement, requires special traffic management arrangements and may involve large numbers of participants and / or spectators. Major events generally attract crowds in excess of 30,000 people.

In 2003, the NSW Government published "*The Guide to Traffic and Transport Management for Special Events*" regarding the organising, managing and controlling of special events. This guide was developed in consultation with the NSW Premier's Department; SCO, RMS, Local Government Association, numerous Local Councils, NSW Police Force and the events industry.

SCO has the ultimate responsibility for road safety and traffic management of the road network. SCO is responsible for the assessment and coordination of special events, in consultation with event organisers, NSW Police and Local Council.

**Role of the A W Edwards**
A W Edwards acknowledges considerable planning is required to successfully move large volumes of people in an efficient manner to minimise disruption to normal transport patterns.

A W Edwards (as per the GSMoP) will openly and actively participate in regular forums, communicate and cooperate in the management process with the SCO, event organisers and relevant project members and clients as required.

There are currently no known major events in the vicinity of the Crows Nest site.

**Classes of special events**
Special / major events are generally categorised based on the potential disruption to traffic and transport systems, and the disruption to the non-event community. The four broad categories are generally as follows:

**Major** – is an event that impacts major traffic and transport systems and there is significant disruption to non-event community. For example: an event that affects a principal transport route, or one that reduces the capacity of the main highway through a country town.

**Minor** – is an event that impacts local traffic and transport systems and there is low scale disruption to the non-event community. For example: an event that blocks off the main street of a town or shopping centre but does not impact a principal transport route or a highway.

**Local** – is an event with minimal impact on roads and negligible impact on the non-event community. For example: an on-street neighbourhood Christmas party.

**Police Controlled** – is an event that is conducted entirely under police control (but is not a protest or demonstration). For example: a small march conducted with a police escort.

# 17 CONSULTATION AND COMMUNICATION STRATEGY

The Project will engage and inform community and stakeholders in a constructive and transparent process. Details of A W Edwards' commitment to community consultation are described in the Community Communications Strategy and Business Management Plan (SMCSWSCN-AWE-SCN-AN-PLN-0000010)

- The CIP describes the community engagement objectives, guiding principles, delivery and issues management approach. The communication tools and protocols are described. A sub-plan is developed for each large scale event that requires detailed communications planning: Pre EIS Sub Plan
- EIS Exhibition Sub Plan
- Property Condition Surveys Sub Plan
- Business Management Sub Plan

The CIP considers and incorporates the outcomes, best practice and expectations identified by the community and stakeholders during the planning and environmental assessment phases of the project.

The plan provides the project team with an understanding of the issues that may arise during the project, and strategies to ensure the effective management of these issues. It identifies opportunities to build positive engagement, providing the Metro Project an opportunity to enhance existing relationships.

The approach to community and stakeholder engagement has been tailored to the Project through the development of a plan. This plan enables consideration of the particular construction and stakeholder issues for each locality.

Area Communication Actions Plans describe local stakeholders, engagement undertaken since the announcement, the issues being raised, mitigation measures, local events and communication tools and protocols.

A list of identified stakeholder groups is provided in the CIP and the project communications database (Consultation Manager). The traffic and transport stakeholders are listed in Table 3. A W Edwards will consult with relevant stakeholders on the project Traffic and Transport Liaison Group (TTLG), see Section 18.2.

*Table 13: Project Traffic Stakeholders*

| STAKEHOLDERS AND TARGET AUDIENCES | INTEREST |
|---|---|
| Affected Landholders and Community Stakeholders | |
| See the CIP and Consultation Manager for complete list of landholders | High |
| Local Government Authorities | |
| North Sydney Council | High |
| Road User Groups and Service Providers | |
| Private road users | High |
| NRMA | Low |
| Bicycle NSW and Bicycle Network | Medium |
| Transport NSW/ SCO | High |
| State Transit | High |
| Bus and Coach Association | Medium |
| NSW Taxi Council | Medium |
| Freight and logistics industry incl Australian Trucking Association | Medium |
| Utility Providers | Medium |
| Emergency Services: NSW Police Force, NSW Ambulance Service, NSW Fire and Rescue | High |

**Notification to emergency services**
Emergency service agencies provide a vital service to the community, and they need to have up to date information about changed traffic conditions and potential delays they may experience throughout the road network. A W Edwards will ensure all emergency service agencies are regularly consulted, through the fortnightly Emergency Services Meeting (chaired by SCO), about proposed changed traffic conditions.

## 17.1 DISSEMINATION OF INFORMATION TO THE COMMUNITY

The TM representatives in conjunction with the A W Edwards' Community Relations Manager, SCO and RMS will disseminate changed traffic condition information as per Table 14. The CIP describes wider project communications.

*Table 14: Channels to disseminate information to the community*

| TOOL | PURPOSE | FREQUENCY | RESPONSIBILITY |
|---|---|---|---|
| Information on Live Traffic website/app | Driver information | Ongoing as per major traffic changes and incidents | Transport Management Centre and A W Edwards to assist in providing content |
| Static road user signposting | Information signage at the location of the traffic change to give advice to road users and pedestrians (including vulnerable pedestrians) on alternate paths and their duration. | At least 7 days prior to the change | A W Edwards |
| Variable Message Signs (VMS) | Electronic variable message sign to provide advanced notice to road users of major traffic changes. | At least 7 days prior to the change | SCO and A W Edwards in joint planning |
| Community signage | Advise community and stakeholders of construction activities no later than five days before works or changes, including any changes to footpaths, cycle ways or bus stops | At least 5 days before the change | A W Edwards |
| Project website | Relevant information about the construction activities will be placed on the Metro website. | As required | Sydney Metro |
| Advertisements | Advertisements in local newspapers prior to significant traffic changes, detours and traffic disruptions, to notify of events and announce project milestones. Depending on size, publications will include Sydney Morning Herald, Daily Telegraph and local newspapers | At least 5 days prior to the proposed change | SCO undertakes major event transport advertising – noted any project advertising must work in appreciation of wider activities. Otherwise A W Edwards. |
| Radio advertising | Changes likely to cause delays of 10 or more minutes on four leading radio stations in the days leading to a significant traffic change. | As required | |
| Meetings with individual groups, e.g. local schools | To discuss project activities including work in progress or upcoming work, including potential traffic issues | As required | A W Edwards in liaison with Metro |
| Community updates/ newsletters | Quarterly project newsletter for all project stakeholders | Quarterly or as per conditions of approval | A W Edwards to provide content and illustrations to print and distribute |
| Letterbox notifications | Notification letters to inform local residents and businesses affected by | At least 5 days prior to change | A W Edwards |

| TOOL | PURPOSE | FREQUENCY | RESPONSIBILITY |
|---|---|---|---|
| | changes to road network and traffic conditions | | |
| Traffic alert email | Communication to transport authorities, operators and emergency services to advise of traffic changes including road or lane closures and detours | 5 to 7 days prior to the change | A W Edwards in liaison with SCO communications |
| Community information line (1800 171 386) | 1800 number allows access to project team during construction hours with message service after hours. Number to be publicised on all communication materials | N/A | A W Edwards in liaison with Sydney Metro |
| A W Edwards contact email address Info@crowsnest metrostation.com.au | Allows communication with the Project team. Email address to be publicised on all communication materials | N/A | A W Edwards |

**Training and awareness info@crowsnestmetrostation.com.au**
As stated in the CEMP, all construction personnel, sub-contractors and consultants will receive training and be informed of their environmental and community obligations during their project induction, ongoing toolbox talks and specific training.

All construction personnel will undergo a general Project induction prior to commencing work with the Project. This will include a traffic component to reinforce potential impacts and responsibilities relating to traffic management.
Ongoing toolbox talks will highlight the specific mitigation measures for activities being undertaken in each work area. These will include site-specific briefings for relevant personnel and will cover all measures outlined in the relevant SWMS and environmental sub-plans.

## 17.2 TRAFFIC AND TRANSPORT LIAISON GROUP (TTLG)

Sydney Metro has established a Traffic and Transport Liaison Group (TTLG) for the Project. A W Edwards will be a member of the TTLG and will act as the authorised representative for the Project in matters related to traffic and transport. A W Edwards will provide the following information relating to the Works, to the group, to assist the group to meet its Terms of Reference:

- Traffic operations, including changes in regulatory traffic controls
- Community concerns and comments or feedback
- Impacts on road-based transport operations
- Issues related to pedestrians and cyclists or mobility impaired road users
- Communication strategies and actions to be taken (in consultation with Community Relations Manager)

A member of the A W Edwards Community Relations Team may attend TTLG meetings to discuss and provide input regarding:

- Community and other stakeholder concerns, comments or feedback
- Communication strategies and actions to be taken

- Cumulative impacts with other adjacent major projects.

If required relevant construction personnel will be available to attend TTLG to discuss any specific and/or technical matters that may arise. The TTLG is not a forum to obtain approval/s.

## 17.3 TRAFFIC COORDINATION GROUP (TCG)

Sydney Metro has established a Traffic Coordination Group (TCG) for the Project. It is chaired by SCO and administered by Metro. The TCG members meet fortnightly.

The TCG will debate, discuss and agree on any and all traffic and transport related issues. It is the TCG where decisions and changes will be made on TMPs, any other, project wide, traffic and transport related issues. The TCG is not a forum to obtain approval/s but does assist in approvals facilitation.

## 17.4 COORDINATION OF INFORMATION

A cooperative and coordinated approach between A W Edwards, the TTLG, and SCO will enable the public to receive timely and accurate information relating to the Works.

It is noted the major Sydney transport spokespersons are SCO. In consultation with the SCO, the A W Edwards Community Relations team will develop protocols and procedures in accordance with mutually agreed public information objectives.

All information to be released to the community must be approved by the Metro Representative prior to its distribution or publication in accordance with the timeframes for review and approval as outlined in the Community Involvement Plan. The Metro Representative will be informed immediately of any changes to information previously provided to the public.

# 18 CONDUCT REPORTING

A W Edwards will report to Sydney Metro, the TTLG and other stakeholders on all traffic and transport management issues as they relate to the project work. The content of these reports will be as follows.

**Monthly Reporting**
A W Edwards will report to Sydney Metro and other relevant stakeholders, via the TTLG, on all traffic and transport management issues on the road networks and traffic and transport operations that relate to the project works

A monthly report will also be submitted to the Metro Representative in accordance with the requirements of the Project Management Plan

**Weekly Reporting**
The Traffic Coordinator will provide a schedule of pending and approved road occupancy licences to the Metro Representative on a weekly look ahead basis, running from Monday to Sunday. The forecast schedule will contain full details on locations and timing of all proposed road occupancies for the following week and be submitted by close of business each Wednesday of the preceding week or on a day mutually agreeable to all.

**Immediate Reporting**
A W Edwards TM representatives will contact the Metro Representative and SCO (a phone call) on any unplanned incidents having a negative impact of the regular flow of traffic on the road network in close proximity to the Works. The TM representatives will also contact the relevant Construction Manager/Director.

This includes incident categories such as:

- Unplanned motor vehicle accidents
- Breaches of any ROL conditions of approval, and
- Impacts to the regular operation of public vehicles, cyclists or pedestrians from construction traffic

# 19 SITE C – OVER STATION DEVELOPMENT (OSD)

On 1st of April 2022 Sydney Metro awarded the Site C – OSD to A W Edwards. The OSD is a 9 storey Grade A commercial office building with a gross building area of 4,328m2. Completion of the OSD is to align with completion of the station.

*Figure below: Site C-OSD Location.*

## 19.1 SITE OPERATIONS

Duration: Approx. 17 Months.
Timing: Award date: 01st April 2022 to Expected completion date: 01st September 2023.

## 19.2 WORKS REQUIRED

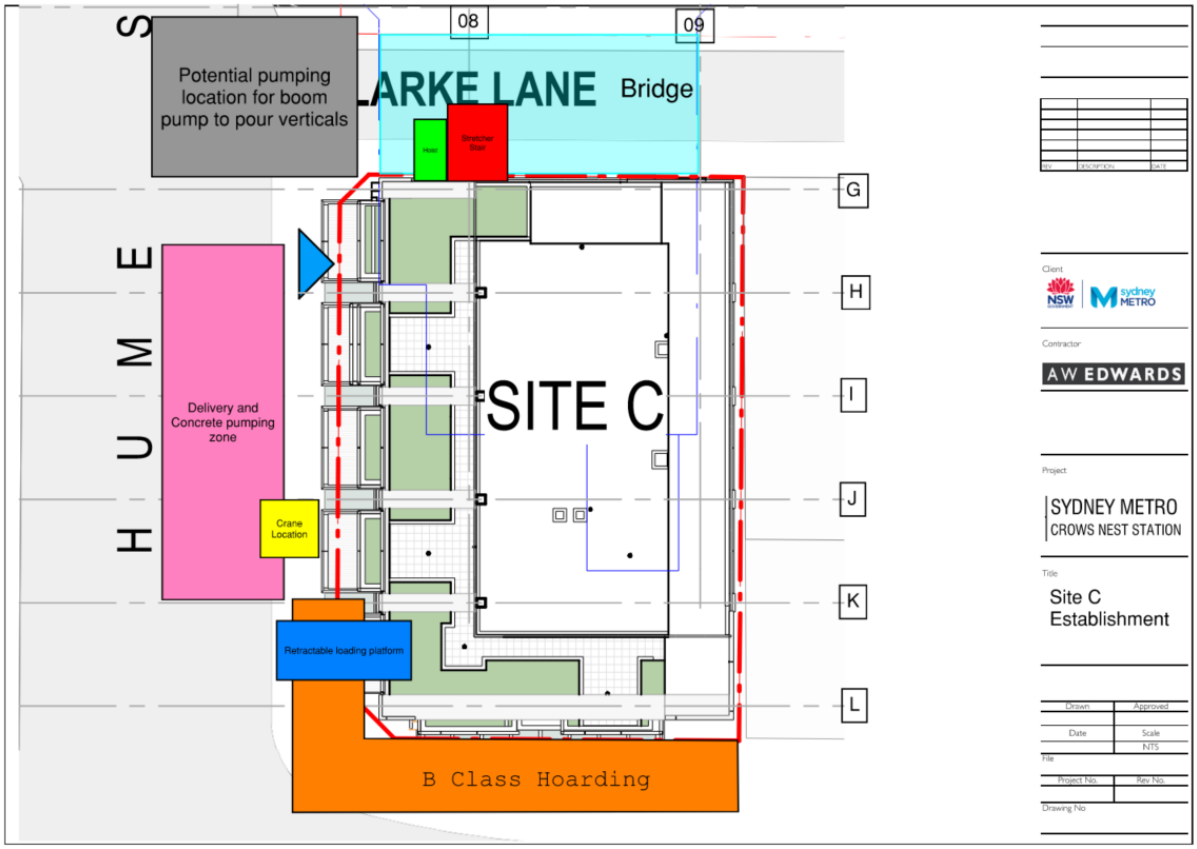
Site C – OSD - Scope of works:

- Nine storey commercial office building (above Station ground and first levels) with a building height of Reduce Level (RL) 127 metres
- Gross Floor Area (GFA) of approx. 3,100m2
- Two lifts and 2 fire stairs
- Structure and services including completion of façade and warm shell fit out
- Level 1 end of trip facilities and plant rooms
- Level 2-8 commercial office space of approx. 400m2
- Level 9 roof op terrace and plant rooms
- Rooftop open to sky plantroom
- Partially landscaped trafficable roof with maintenance access
- Post tensioned concrete structure
- Curtain wall and precast façade with façade planter boxes

Site Establishment & Materials Handling – see attached below

- M380D Luffing tower crane on Hume St inside Site C compound
- Existing structural steel gantry to be used for materials handling
- Scaffold to be used for east, west and south of building for edge protection
- Hoist and stretcher stair at west elevation
- Retractable loading platform at northern elevation on Hume Street
- B Class hoarding along Clarke Street for pedestrian safety.

*Figure below (current): shows the scope of works and location of concrete pumping zones, luffing crane location to lift approx. 12Tonne at 35m, retractable loading platform for construction materials, class B hoarding for pedestrians' safety.*




## 19.3 B CLASS HOARDING INSTALLATION ON CLARKE STREET AND PEDESTRIAN MANAGEMENT.

During the construction process of Site C-OSD works. A W Edwards will install B-Class hoarding along Clarke Street along with container access for workers and storage for construction materials when needed as per above figure.

Footpath will remain open for pedestrian access under B-Class hoarding with required safety protection from live traffic. Hoarding will be installed approx. 20-25m on Clarke Street.

During installation of B-Class hoarding we require to close footpath on western side of Clarke Street and require northbound section closer and traffic will be managed by intermittent stop/slow with traffic controllers on site. Relevant TGS Plans for these works is below figures.

A W Edwards will be responsible for NSC hoarding permit approvals and process.

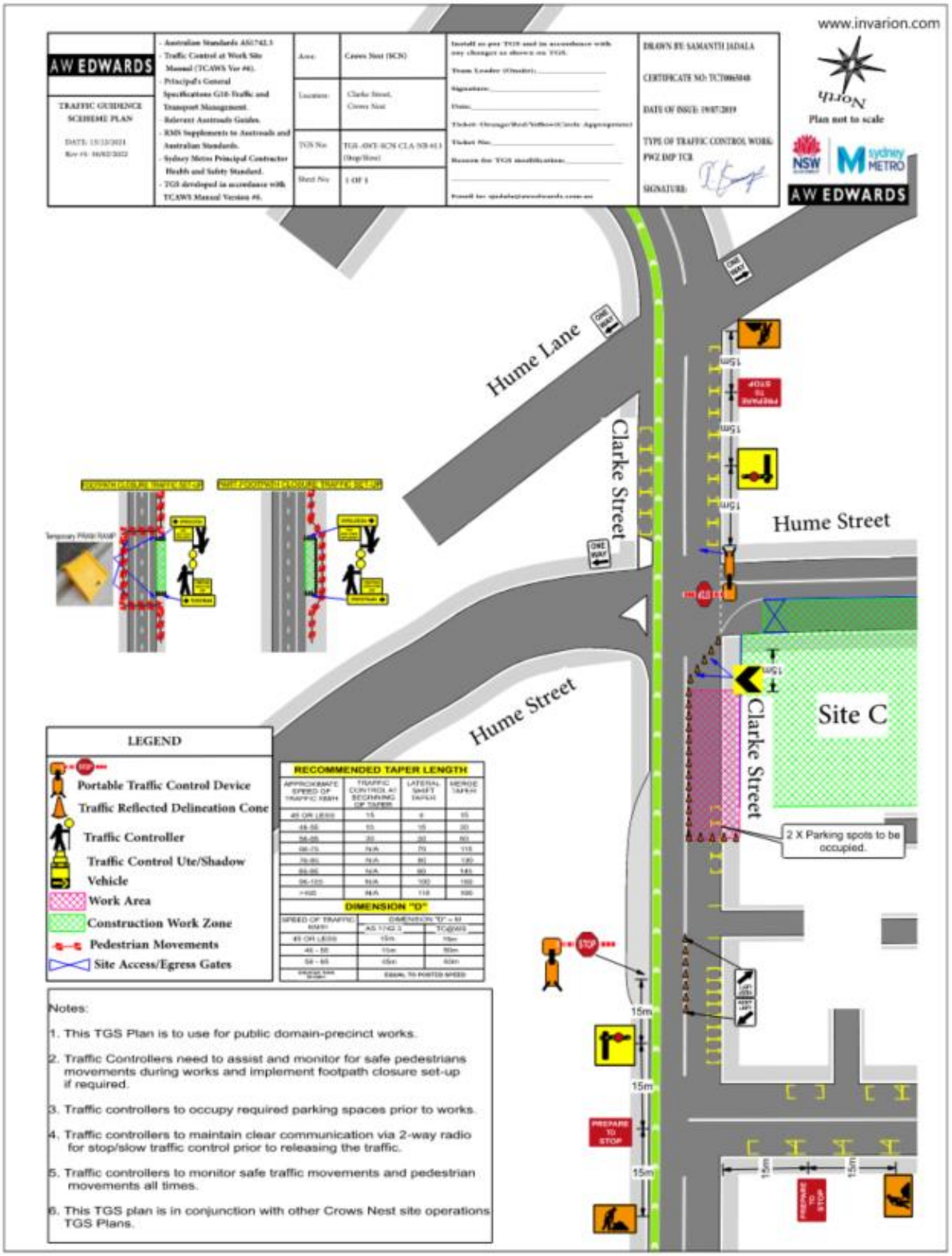



*Figure: TGS Plan above for B-Class hoarding on Clarke Street and during installation pedestrians will be diverted to eastern side of Clarke Street at the kerb ramp intersections.*

## 19.4 OPERATING CONDITIONS

All operating conditions involved in Site C – OSD works are in conjunction with below associated Traffic Management Plans (TMPs).

- SMCSWSCN-AWE-SCN-TF-PLN-000095 Concrete Delivery Operations TMP (current revision version).
- SMCSWSCN-AWE-SCN-TF-PLN-000033 Logistics Lane TMP (current revision version).
- SMCSWSCN-AWE-SCN-TF-PLN-001214 Hume Street Closure TMP (current revision version).

## ANNEXURE A: SPECIFICATIONS, STANDARDS AND GUIDES

- Australian Road Rules
- Australian Standard 1742.3-2009 Traffic control devices for works on roads
- Australian Standard 1742 Parts 1 to 14, Manual of uniform traffic control devices (as required)
- AGTM 02-08 Guide to Traffic Management Part 2: Traffic Theory
- AGTM 06-07 Guide to Traffic Management Part 6: Intersections and Crossings – General
- AGRD 04-09 Guide to Road Part 4: Intersections and Crossings – General
- General Specification Management of the Project (MS-GS-MP-2)
- RMS Traffic Control at Worksites Manual Ver 5
- RMS Delineation Manual March 2008
- RMS Road Safety Audit Technical Direction TD2003/RS03, Version 2 – August 2005
- RMS Road Occupancy Manual
- RMS Regulatory Signs Guide
- RMS's VMS Policy - Technical Directions TDT 2002/11 and TDT2005/02A
- RMS equipment specification P3074A
- RMS equipment specification FAS/4
- RMS equipment specification PTS/3
- R141 Pavement Marking
- R142 Retro Reflective Raised Pavement Markers
- R3351 Road Marking Paint
- R3353 Glass Beads
- R3354 Adhesives for RRPM Installation
- R3357 Thermoplastic Road Marking Material
- R3359 Profile Thermoplastic Road Marking Material
- Relevant RMS Technical Directions and Guide updates
- SI/TCS/8 Installation of traffic light signals
- SCO Guide to Traffic and Transport Management for Special Events
- RMS Supplements to Australian Standards and AustRoads

## ANNEXURE B: TRAFFIC SAFETY RISK REGISTER

Note: Traffic control plans will be prepared considering the risk identified in this register and as such, this register will not be updated.

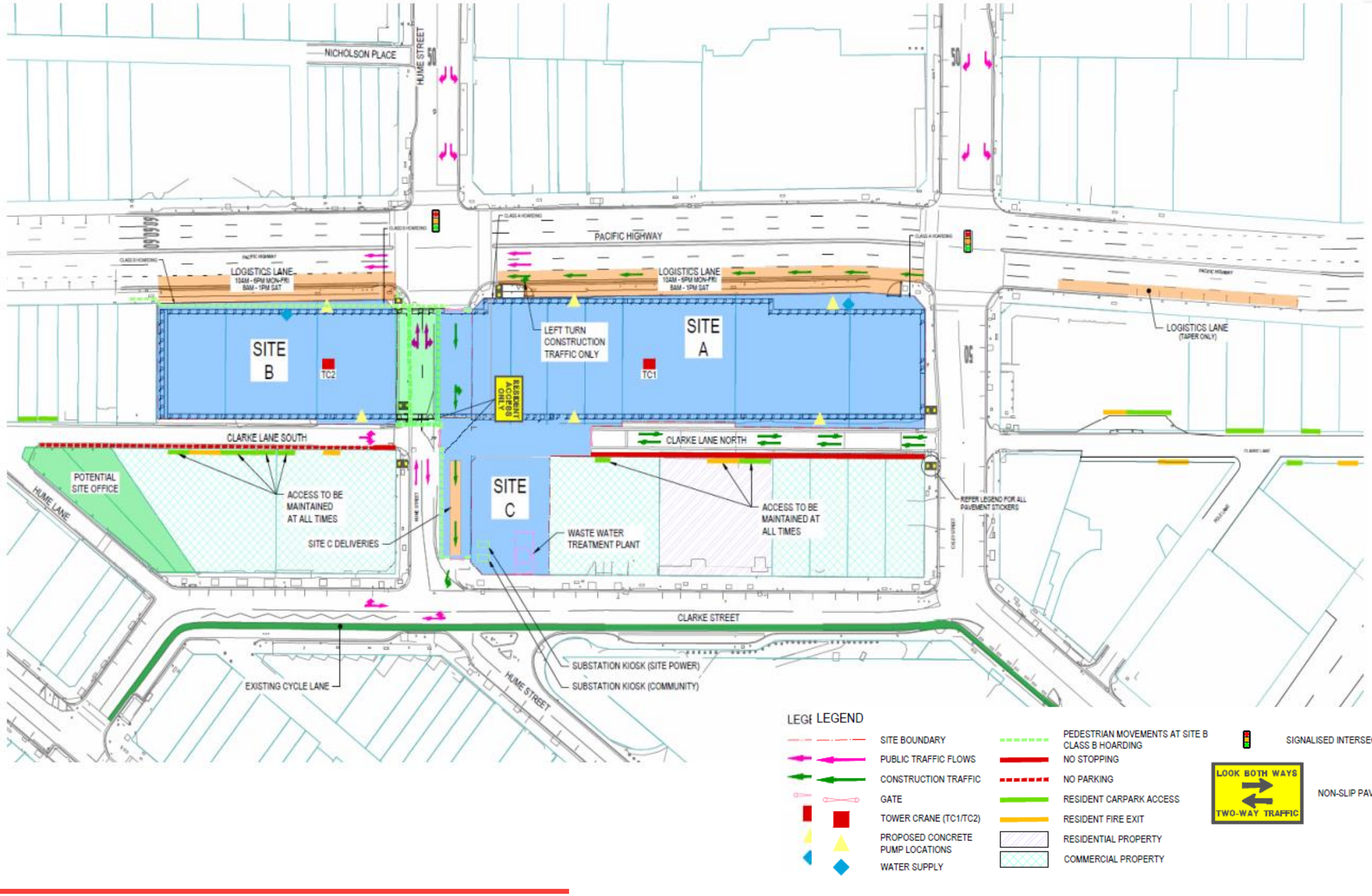
| HAZARD EVENT | POTENTIAL CAUSES | POTENTIAL CONSEQUNCE(S) | RISK CONTROLS CURRENTLY IN PLACE (WHICH ARE CONSIDERED WHEN DETERMINING THE RISK RATING) | CONSEQUENCE | LIKELIHOOD | RISK RATING | DESCRIPTION OF TAKS REQUIRED TO ACHIEVE SPAIRP | CONSEQUENCE | LIKELIHOOD | RISK RATING |
|---|---|---|---|---|---|---|---|---|---|---|
| Traffic congestion | Congestion in the local area<br><br>Increase in traffic volume<br><br>Vehicle breakdowns<br><br>Deliver operations<br><br>Coinciding RMS or other project works | Reduced travel times<br><br>Affect on school bus routes | Where possible, minimise lane closures and speed limit reductions<br><br>Plan works during low traffic volume periods where possible<br><br>Notify road users about expected delays in advance<br><br>Deliver at night and/or over 24hrs<br><br>Communicate regularly with nearby works or projects | S4: Moderate | L3: Possible | 3 - Tolerable | Monitor road network for congestion, review traffic management measures as required<br><br>Successful Contractor coordinate and plan works to reduce need for road occupancies | S5: Minor | L3: Possible | 3 - Tolerable |
| Impacts to Emergency Service Response Within Road Network | Congestion in the local area created by increase in traffic volume | Fatality | Design and implement emergency service accesses during construction<br><br>Inform and regularly update emergency services in regards to the site gates and accesses<br><br>Minimise traffic impacts on the road network in accordance with CTMP | S2: Severe | L3: Possible | 2 - Undesirable | Consult with emergency services on access restrictions and alternative arrangements<br><br>Provide 24hr contact number to all emergency services<br><br>Use the TTLG to advise of changes | S3: Major | L4: Unlikely | 3 - Tolerable |
| Special events (on road) | Increase in traffic volume | Reduced travel times | Support RMS, SCO, Local Council in managing special event/s | S5: Minor | L2: Likely | 3 - Tolerable | Where possible, schedule road occupancy works to avoid conflict with special event traffic<br><br>Coordinate and maintain regular contact with SCO and Local Council | S6: Insignificant | L2: Likely | 3 - Tolerable |
| Major motor vehicle crashes | Driver inattention<br><br>Speeding<br><br>Alcohol and drugs | Fatal Motor Vehicle Accident | Provide a high standard of traffic controls to warn, inform and guide motorists, through the work areas, that comply with the RMS's TCAWS Manual Ver 5, Australian Standards, and provide a safe road environment.<br><br>Roads Safety Audits of Roadworks Traffic Scheme<br><br>Heavy Vehicle Driver Code of Conduct | S3: Major | L3: Possible | 2 - Undesirable | Where possible, provide initial response and install traffic controls to make site safe<br><br>If an unplanned incident occurs, notify emergency services immediately, then SCO<br><br>Support emergency services and SCO as requested<br><br>Coordinate other planned construction activities to avoid the incident scene and minimise impact on adjacent road network<br><br>Cancel non-essential construction deliveries | S4: Moderate | L3: Possible | 3 - Tolerable |
| Minor vehicle crashes | Reduced visibility (fog or smoke)<br><br>Poor traffic control set-up | Serious Injury Motor Vehicle Accident | | S5: Minor | L2: Likely | 3 - Tolerable | | S5: Minor | L3: Possible | 3 - Tolerable |
| Transportation of oversize load transport (project and others) | Inadequate planning | Reduced travel times | Prepare all temporary works drawings within wide loads in mind<br><br>Assist the RMS / SCO to coordinate the movements of over dimension loads along the highway.<br><br>Notify the RMS / SCO when proposed construction works may restrict the movement of over dimension loads | S5: Minor | L3: Possible | 3 - Tolerable | Prepare TGSs that can accommodate the movement of over dimension loads, with minimal inconvenience<br><br>Instruct all staff to be on the lookout for over dimension loads approaching the work area, and where required modify the travel paths accordingly | S5: Minor | L4: Unlikely | 4 - Broadly Acceptable |

| HAZARD EVENT | POTENTIAL CAUSES | POTENTIAL CONSEQUN CE(S) | RISK CONTROLS CURRENTLY IN PLACE (WHICH ARE CONSIDERED WHEN DETERMINING THE RISK RATING) | CONSEQUEN CE | LIKELIHOOD | RISK RATING | DESCRIPTION OF TAKS REQUIRED TO ACHIEVE SPAIRP | CONSEQ UENCE | LIKELIH OOD | RISK RATING |
|---|---|---|---|---|---|---|---|---|---|---|
| Tracking debris onto travel lanes | Poor environmental controls<br><br>Inadequate supervision | Motor Vehicle Accident | Install primary environmental controls (e.g. wheel washers, sealed driveways, shaker grates etc.) to prevent tracking onto roadways<br><br>Daily inspections of short term traffic control measures | S3: Major | L3: Possible | 2 - Undesirable | When required, apply secondary controls (such as water carts and street sweepers) to remove debris from the road surface<br><br>Foreman to conduct daily inspection and monitoring of road surface conditions, if necessary to assist installing traffic control to make safe until debris cleared<br><br>Report on incident (internally) for input into review process (preventive action) | S4: Moderate | L3: Possible | 3 - Tolerable |
| Unsafe traffic control | Inadequately trained personnel<br><br>Inadequate implementation of TGS<br><br>Unplanned changes by construction works | Motor Vehicle Accident | Develop TGSs in accordance with RMS TCAWS Manual V5 and Australian Standard 1742.3 requirements | S3: Major | L2: Likely | 2 - Undesirable | Regular inspections of traffic control lay outs<br><br>Toolboxes and team talks to re-iterate critical issues<br><br>Plan and work to negate the need for traffic control<br><br>Where possible, work during lowest traffic volume periods | S4: Moderate | L3: Possible | 3 - Tolerable |
| Worker hit by traffic | Inadequate supervision<br><br>Driver inattention<br><br>Speeding driver<br><br>Drivers on alcohol and drugs | Fatality<br><br>Serious injury | Ensure all workers are site inducted<br><br>SWMS are in place<br><br>Regular checking of traffic control layouts | S2: Severe | L2: Likely | 1 - Unacceptable | Use shadow vehicles for all works near roads<br><br>Install barriers where possible<br><br>Change construction method/site layout to reduce or remove need to be near road. Seek dispensation and/or approval from RMS, SCO or Council as required. | S4: Moderate | L3: Possible | 3 - Tolerable |
| Pedestrian and cyclist being struck by a construction vehicle | Pedestrian or cyclist entering roadway when construction vehicles are entering/ exiting logistics lane | Fatality<br><br>Serious injury | Regular inspections of pedestrian control layout<br><br>Regular checking of traffic control layouts | S2: Severe | L3: Possible | 2 - Undesirable | Regular inspections of traffic control lay outs<br><br>Toolboxes and team talks to re-iterate critical issues<br><br>Closure of footpaths to pedestrian access<br><br>Traffic Controllers will be present at high risk locations for pedestrian safety and regular monitoring. | S2: Severe | L3: Possible | 2 - Undesirable |
| Mobile Crane activities/movements close to traffic and residents | Workers and others being stuck by vehicles in adjacent road or traffic corridor<br><br>Vehicles in adjacent road | Fatality<br><br>Serious Injury | Ensure all workers are site inducted.<br><br>SWMS are in place.<br><br>Provide a high standard of traffic controls to warn, inform and guide motorists, through the work areas, that comply with the RMS's TCAWS Manual Ver 6.1, Australian Standards, and provide a safe road environment. | S2: Severe | L3: Possible | 2 – Undesirable | Regular inspections of traffic control lay outs<br><br>Toolboxes and team talks to re-iterate critical issues<br><br>Use temporary safety barriers for control traffic flow<br><br>Closure of footpaths to pedestrian access<br><br>Traffic Controllers will be present at high risk locations for pedestrian safety and regular monitoring. | S2: Severe | L3: Possible | 2 - Undesirable |

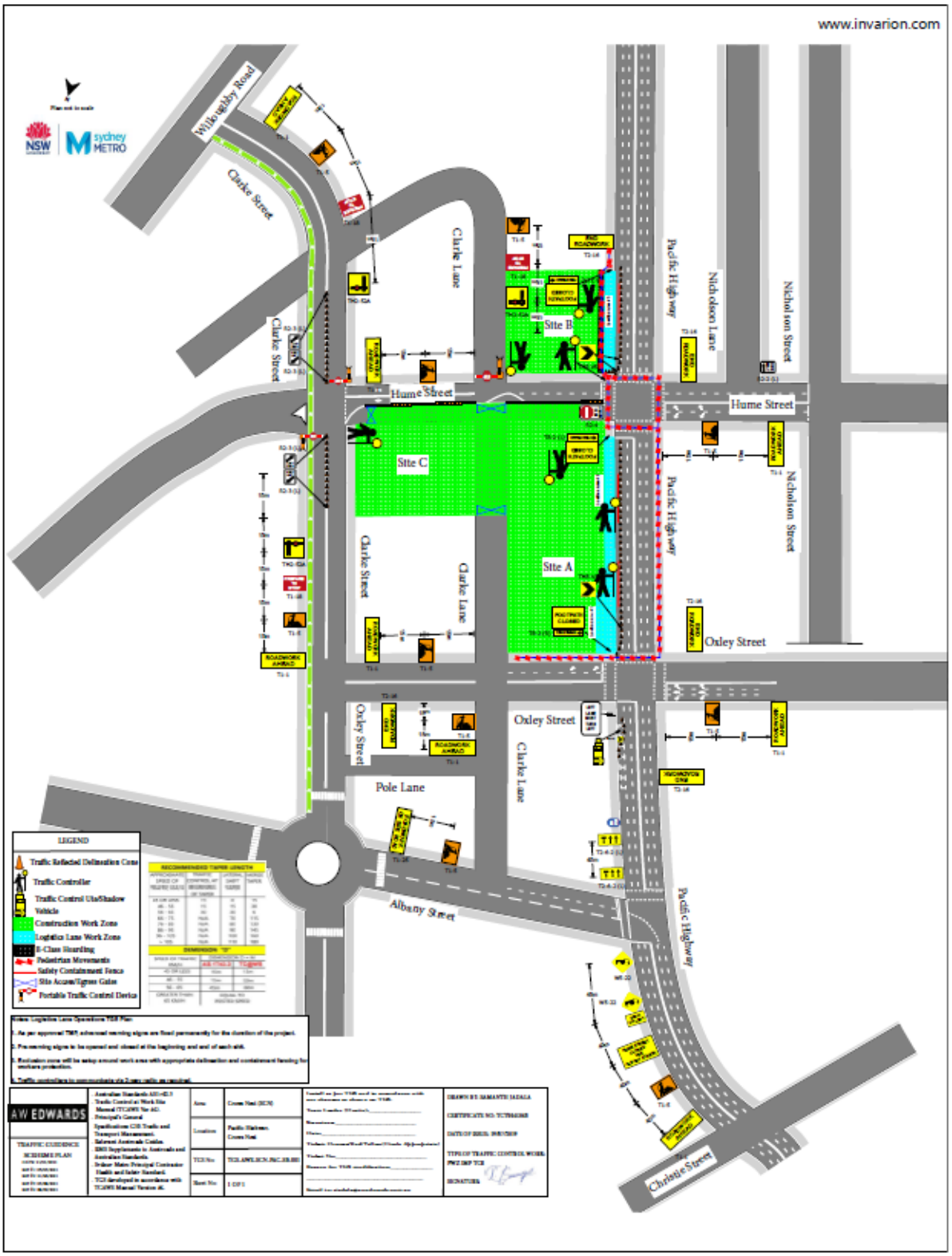
| HAZARD EVENT | POTENTIAL CAUSES | POTENTIAL CONSEQUN CE(S) | RISK CONTROLS CURRENTLY IN PLACE (WHICH ARE CONSIDERED WHEN DETERMINING THE RISK RATING) | CONSEQUEN CE | LIKELIHOOD | RISK RATING | DESCRIPTION OF TAKS REQUIRED TO ACHIEVE SPAIRP | CONSEQ UENCE | LIKELIH OOD | RISK RATING |
|---|---|---|---|---|---|---|---|---|---|---|
| | or traffic corridor being struck by falling objects<br><br>Vehicles in adjacent road or traffic being struck during slewing movements. | | | | | | Where possible, work during lowest traffic volume periods | | | |

## ANNEXURE C: CONSTRUCTION SITE LAYOUT

Site layout may be adapted to any changes in the construction works/method.


NICHOLSON PLACE
HUME STREET
PACIFIC HIGHWAY
LOGISTICS LANE
10AM - 6PM MON-FRI
8AM - 1PM SAT
SITE B
TC2
SITE A
TC1
LEFT TURN CONSTRUCTION TRAFFIC ONLY
RESIDENT ACCESS ONLY
LOGISTICS LANE (TAPER ONLY)
CLARKE LANE SOUTH
CLARKE LANE NORTH
POTENTIAL SITE OFFICE
HUME LANE
ACCESS TO BE MAINTAINED AT ALL TIMES
SITE C DELIVERIES
SITE C
WASTE WATER TREATMENT PLANT
ACCESS TO BE MAINTAINED AT ALL TIMES
REFER LEGEND FOR ALL PAVEMENT STICKERS
CLARKE STREET
SUBSTATION KIOSK (SITE POWER)
SUBSTATION KIOSK (COMMUNITY)
EXISTING CYCLE LANE
HUME STREET
LEGEND
SITE BOUNDARY
PUBLIC TRAFFIC FLOWS
CONSTRUCTION TRAFFIC
GATE
TOWER CRANE (TC1/TC2)
PROPOSED CONCRETE PUMP LOCATIONS
WATER SUPPLY
PEDESTRIAN MOVEMENTS AT SITE B CLASS B HOARDING
NO STOPPING
NO PARKING
RESIDENT CARPARK ACCESS
RESIDENT FIRE EXIT
RESIDENTIAL PROPERTY
COMMERCIAL PROPERTY
SIGNALISED INTERSECTION
LOOK BOTH WAYS
TWO-WAY TRAFFIC
NON-SLIP PAVEMENT STICKER

# ANNEXURE D: TRAFFIC GUIDANCE SCHEME PLANS (TGSS)



## ANNEXURE E: NOT USED

## ANNEXURE F: CONSULTATION REGISTER

This plan was provided, for review and comment to: North Sydney Council, RMS and SCO and Metro Responses to comments are outlined in the table below.

| Item No | Doc Rev | Stakeholder (RMS,SCO, Council) | Reviewer (initials) | Date (of review) | Comment Location/ Description | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) | Stakeholder Response (date) | Metro/Contractor Response | Stakeholder Status comment (Open or Closed) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **A** | SCO | SB | 19-Nov-2019 | 1. - Introduction | More details should be provided in the introduction as to the specific works to be undertaken under the contract. Better reference and explanation could also be provided to Figure 1 on p3. | Construction Activities added and reference made to Figure 1 | 21-Nov-2019 | **C** | | | |
| **2** | **A** | SCO | VH | 19-Nov-2019 | Table 3 and Section 8.1 | The EIS mentions that during the closure of Hume St, an additional signal phase would be added to the Pacific Hwy / Oxley St intersection to allow a right turn movement from Oxley St to the Pacific hwy northbound". Is this what is meant by "*Re-phasing of traffic signals (RMS to action)"* From EIS technical paper 1 its appears this change would be for construction only. | The EIS might mention this but Crows Nest COP will continue to use Hume St to turn right to head north on Pacific Hwy, hence no mention of it in the CTMP (TSE is currently doing the same).<br><br>Re-phasing of traffic signals (RMS to action) is related to any phasing changes required as part of the end state works. Only RMS can action such changes.<br><br>End state works are construction. Hume St is closed in one direction and will be re-opened to two directions (how it used to be before construction) | 21-Nov-2019 | **C** | | | |

| Item No | Doc Rev | Stakeholder (RMS,SCO, Council) | Reviewer (initials) | Date (of review) | Comment Location/ Description | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) | Stakeholder Response (date) | Metro/Contractor Response | Stakeholder Status comment (Open or Closed) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | **A** | SCO | VH | 19-Nov-2019 | 2.3.1 - Incident notification period | Please ensure the notification times and contacts are detailed / defined in the Contract. Incidents are to be immediately notified to TMC and SCO Associate Director. | 'SCO and TMC' added to third dot point | 21-Nov-2019 | **C** | | | |
| **4** | **A** | SCO | VH | 19-Nov-2019 | 2.5.2 - Weekend hours | ROLs granted for weekend periods may not commence at 7-8pm as suggested, dependant on the proposed configuration. | "or as per approved ROL" added to note at bottom of table | 21-Nov-2019 | **C** | | | |
| **5** | **A** | SCO | VH | 19-Nov-2019 | 2.5.2 Figure 3 - TMP review time | All parties to have at least 20 business days to review and return comments. | The review process is 25 days, and can be longer if comments are not addressed properly, as shown by the 5 day loop marked by the yellow boxes | 21-Nov-2019 | **C** | | | |
| **6** | **A** | SCO | SB | 19-Nov-2019 | 3.1 Identified Impacts | One of the traffic impacts described mentions "regular stopping of pedestrians for unloading of deliveries on Pacific Hwy". Does this refer to the logistics lane set up or some other arrangement, it is understood that the intention of the logistics lane was to avoid such arrangements. | Unclear on this comment is there a concern about stopping pedestrians or the logistics lane?<br><br>The dot point was updated to say "Regular stopping of pedestrians, at Site B, for up to five minutes, for unloading of deliveries on Pacific Hwy (Logistics Lane) and local roads (concrete truck turn movements)" | 21-Nov-2019 | **O** | The current understanding of the Logistics lane is that the closure of the Pacific Highway footpath between Oxley and Hume removes the pedestrian conflict. Five minute holds of pedestrians should be maximum, given the number of pedestrian on the Pacific highway footpath south | The following was added to the last dot point in Section 3.1 "Note: Five minute holds of pedestrians will be the maximum and only then in a limited fashion – five minute holds will not be the norm. Pedestrians will be allowed to pass as soon | **C** |

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| | | | | | | | | | | of Hume it would be reasonable for pedestrians to be let through as soon as reasonable practical, rather than stopping pedestrians for 5 minutes. | as reasonably practical" | |
| **7** | **A** | SCO | SB | 19-Nov-2019 | 3.1 - TM team | The last paragraph on p19 mentions the "TM team". On p16, there are separate references to "Traffic Team" and "Traffic Manager (TM)". For consistency on p19, maybe just refer to the "TM". | All changed to TM | 21-Nov-2019 | **C** | | | |
| **8** | **A** | SCO | VH | 19-Nov-2019 | 5 - Managing buses | SCO Transport Integration team must also be consulted with re any impacts to buses and bus stops. | The first paragraph of Section 5 states "The potential impacts to bus routes and bus stops during construction will be managed in consultation with SCO…" Does SCO need to be changed to "SCO Transport Integration Team" | 21-Nov-2019 | **O** | Yes this would sufice. | "SCO Transport Integration Team" added to the sentence | **C** |
| **9** | **A** | SCO | SB | 19-Nov-2019 | 8.4 | The First sentence of first paragraph is incomplete. | "to the" was removed | 21-Nov-2019 | **C** | | | |
| **10** | **A** | SCO | VH | 19-Nov-2019 | 8.4 - Table 9 - Parking loss | The Logistic Lane as detailed in this TMP is proposed to operate from 10am - 6pm Mon - Fri and from 8am-1pm Sat. Please detail why 11 spaces will be permanently lost on | this text was added to the table: "...as the infrastructure to support parking (signs, signposts, line marking and ticket machines) will be removed as part of the Logistics Lane | 21-Nov-2019 | **C** | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Pacific Hwy between Oxley St and end of Area B as vehicles can still park on Pacific Hwy as per the signs after 6pm Mon-Fri and after 1pm Sat. | construction. The Logistic Lane TMP will provide specific detail" | | | | | |
| **11** | **A** | SCO | JC | 19-Nov-2019 | 8.5.1 Logistics Lane | Although mentioned frequently in this document approval for operation of the Logistics lane will be covered by that specific CTMP/TMP only. | Noted | 21-Nov-2019 | **C** | | | |
| **12** | **A** | SCO | VH | 19-Nov-2019 | 9 - ROL times | In addition to checking conflicts with ROLs, SCO and TMC will determine the appropriate times of work according to the site set up and in consultation with bus operators. | The following is currently stated in this section of the CTMP:<br><br>"The Successful Contractor will obtain the necessary ROLs from TMC prior to conducting any short term works on roads"<br><br>"The Successful Contractor acknowledges that all road occupancies, despite the hours of operation stated in Section 1, will be subject to the specific period of operation stated on the approved licence"<br><br>"The ROL Application (with a TCP) will be submitted to TMC, who have the responsibility for processing and approving ROLs" | 21-Nov-2019 | **C** | | | |

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| | | | | | | | These statements appear to address this comment. | | | | | |
| **13** | **A** | SCO | VH | 19-Nov-2019 | 11.6 - Lead time for reconfiguring traffic signals | Note that approval lead time is 3-6 months for any changes to traffic signals. | Noted | 21-Nov-2019 | **C** | | | |
| **14** | **A** | SCO | VH | 19-Nov-2019 | 14 - Road Safety Audit Comments | Note that the various CTMP/ TMP will need to include the responses to the RSA findings by the contractor for review by RMS/SCO. | "Responses to the RSA will be included in the TMP" was added to Table 12 | 21-Nov-2019 | **C** | | | |
| **15** | **A** | SCO | VH | 19-Nov-2019 | TCPs | The TCPs show that closure of Pacific Hwy northbound, if thi sis required please include in the body of the CTMP. | There are no TCPs closing the Pacific Hwy NB, there are lane closure TCPs for the Pacific Hwy NB. These TCPs are included as it is requested that ALL TCPs be provided.<br><br>These TCPs are for possible utility work and if used, will be done so, as per this CTMP, for example Section 9 ROLs | 21-Nov-2019 | **C** | | | |

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|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | SM | PAB | 21-Nov-2019 | Table 3 | Table 3 is a useful summary of the works covered under the CTMP. Are there works that should be added to the list (eg: changes to bus stops/infra on the other side of the highway) to avoid the need for submission of CTMP addendums? | At this time, this table, takes into account all known construction works, that said once a contractor is chosen there may be changes | 22-Nov-2019 | C | agreed closed |
| 2 | A | SM | PAB | 21-Nov-2019 | Section 2.5 | Section 2.5 - I don't understand why we refer to the department of planning (not the correct name now) in paragraph 2. We don't need separate DPEI approval of the CTMP under our CSSI approval? Is that what this section suggests? | Agreed. Dept of Planning removed and North Sydney Council added | 22-Nov-2019 | C | agreed closed |
| 3 | A | SM | PAB | 21-Nov-2019 | Section 2.5.2 | You refer to TMPs. CSSI approval and CTMF make no reference to TMPs and you may be creating an approvals issue for the contractor. | Noted, but the detail of Figure 2 makes this clear. Plus a CTMP and TMP approach makes it easier to obtain Council approval as the detail Council need for "their RMS TMP" is within the TMP meaning only one plan is required not two | 22-Nov-2019 | C | agreed closed |
| 4 | A | SM | PAB | 21-Nov-2019 | Figure 3 | Suggestion - may be worth acknowledging that RMS and SCO can and often do better these 10 days turn around times | Noted, but don't want to create expectations | 22-Nov-2019 | C | agreed closed |

| Item No | Doc Rev | Stakeholder (RMS,SCO,Council) | Reviewer (initials) | Date (of review) | Comment Location/Description, (Page, Para, Drg ref) | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) | Stakeholder Response (date) |
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| **5** | **A** | SM | PAB | 21-Nov-2019 | Section 2.6 | I don't know whether the legislative changes referred to in the Secretary's email of 20 Nov 2019 have a bearing on what is written here? | Great point, but as we don't know yet we will run with the existing. CTMP can be updated once changes are confirmed | 22-Nov-2019 | **C** | agreed closed |
| **6** | **A** | SM | PAB | 21-Nov-2019 | Section 2.10 | Sentence beginning "Beams and concrete ….". You may want to acknowledge consultation with Council as well as EPA re any night time works. Same paragraph says there is no spoil haulage - I think you mean there is no TBM spoil haulage. | There is no spoil haulage, all taken by TSE.<br><br>Local Council added to the sentence | 22-Nov-2019 | **C** | agreed closed |
| **7** | **A** | SM | PAB | 21-Nov-2019 | Section 2.11 | Will the Contractor want to employ some of these positions/consolidates tasks under one person etc. | Agreed, this was added: Note: that the Successful Contractor would determine their company's operating structure and hence Figure 4 may need to be updated. | 22-Nov-2019 | **C** | agreed closed |
| **8** | **A** | SM | PAB | 21-Nov-2019 | general | Terminology - Is there a difference between work site and site compound? | Reference to site compound has been removed. Work site added to definitions as Site A, Site B and/or Site C | 22-Nov-2019 | **C** | agreed closed |
| **9** | **A** | SM | PAB | 21-Nov-2019 | Section 14 | Why do you refer to traffic control RSAs specifically? The contractor will be required to meet the requirements of the CTMF and the Gen Spec Traffic with regards to RSAs - they | Not sure what you mean by traffic control RSAs? Regardless of what the documents say the site and the logistic lane should undergo an RSA once they are set-up and operational | 22-Nov-2019 | **C** | agreed closed |

| Item No | Doc Rev | Stakeholder (RMS,SCO,Council) | Reviewer (initials) | Date (of review) | Comment Location/Description, (Page, Para, Drg ref) | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) | Stakeholder Response (date) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | don't refer to traffic control RSAs | | | | |
| **10** | **A** | SM | PAB | 21-Nov-2019 | Section 16 | As above, our two documents (CTMF and Gen Spec) don't refer to public events, simply special events | The term 'public' is just added to ensure it is understood that these are not incidents, not events that are special to the job (like oversize movements) or special to TfNSW (contractually). Past experience has shown it needs to be clear these are festivals, shows, events for the public. | 22-Nov-2019 | **C** | agreed closed |
| **11** | **A** | SM | PAB | 21-Nov-2019 | Table 13 | State Transit not STA | Updated to State Transit | 22-Nov-2019 | **C** | agreed closed |
| **12** | **A** | SM | PAB | 21-Nov-2019 | Section 17.1 | Have these comms requirements been checked? | The TfNSW Comms representative reviewed this CTMP and this section is the result of that review | 22-Nov-2019 | **C** | agreed closed |
| **13** | **A** | SM | PAB | 21-Nov-2019 | Appendix A | Refers to G10 - Check with Mark Delacey if this is Metro policy. I don't have a G10 document but I do have a draft Gen Spec traffic which SCO and RMS are due to comment on. If you insist on G10 you will need to draft one for the contract or rely on RMSs. None of our metro contracts have relied on the RMS one. | Reference to G10 removed. General Specification Management of the Project (MS-GS-MP-2) will be used | 22-Nov-2019 | **C** | agreed closed |

# RMS conditions (as per the email below, no further comment was made)

From: Carl Mella
To: Berin Gordon
Cc: Quac minh La; Anthony Mcmahon
Subject: RE: Comments on CTMP for Crows Nest COP
Sent: Wed 27/11/2019 2:54 PM

Berin,

RMS provides the following comments to the Crows Nest Construct Only Project overarching CTMP –

Approval of this CTMP would be considered under the following conditions being met:

- There is no designated long term speed reduction. Short term works e.g. during contra-flow or lane closures, 40km/hr speed zones are to be approved separately and installed, in accordance with AS1742.3, RMS TCAWS Manual Ver 5 and SZA.
- Traffic controllers are NOT to stop or control any traffic on Pacific Highway or any other state roads.
- 60km/h speed limit is to be maintained on Pacific Highway.
- The middle and fast lanes of Pacific Highway are to be operational at all times.
- Large construction vehicles to straddle when possible to make safe turning movements on State roads.

Regards,

Carl Mella
Sydney Metro Integration Leader
Greater Sydney
**T** 02 8843 3027 **M** 0429 505 970
www.rms.nsw.gov.au
***Every journey matters***

**Roads and Maritime Services**
Level 44, 680 George Street, Sydney NSW 2000

| Item No | Contract | Doc Rev | Stakeholder (RMS,SCO, Council) | Reviewer (initials) | Date (of review) | Comment Location/ Description, (Page, Para, Drg ref) | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Section 4 - Heavy and Over Dimensioned Vehicles | Heavy and over dimensioned vehicle permits are now overseen by the National Heavy Vehicle Regulator. The NHVR consults with the relevant road manager(s) including RMS and Council for heavy and oversize vehicles on roads under their respective control.<br><br>This section needs to be updated to reflect the current approval process.<br><br>Heavy and oversize vehicle operators should refer to and comply with the approved CTMP prior to submitting their application with the NHVR | Intrastate OSOM movements are managed and approved by RMS as stated on their website (https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/road-access/restricted-access-vehicles/oversize-overmass/index.html)<br><br>If the OSOM is to travel on Local Roads, Local Council approval is required (details at same web link above). All OSOM loads will remain on the Pacific Hwy (a state road).<br><br>Wording of the Section altered to reflect the above | 13-Dec-2019 | C |
| 2 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Section 5 - Managing Buses | STA must also be consulted with regard to any changes to bus stops or routes. Current contact at STA is Egwin Herbert - P: 9941 6885 I M: 0400 185 292<br>Email: egwin_herbert@sta.nsw.gov.au | Thank you for the contact. The CTMP is high level and states "The potential impacts to bus routes and bus stops during construction will be managed in consultation with SCO, SCO Transport Integration Team, RMS, and Local Council…" | 13-Dec-2019 | C |
| 3 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Section 5 - Managing Buses | Costs for removal, storage and reinstatement of any street furniture associated with the bus stops must be borne by Sydney Metro or their contractor. | Noted. Detail in Logistics Lane TMP | 13-Dec-2019 | C |
| 4 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Section 8.4 - Parking | First sentence is incomplete. | Sentence has been completed | 13-Dec-2019 | C |
| 5 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Section 8.4 - Parking | Removal of parking managed by North Sydney Council required as part of the Station Construction (either for a Work Zone or No Stopping Zone) will be subject to Council's Work Zone application, | Section updated, to reflect this comment, with "Removal of parking (managed by North Sydney Council) will be undertaken in conjunction with North Sydney Council." | 13-Dec-2019 | C |

| Item No | Contract | Doc Rev | Stakeholder (RMS,SCO, Council) | Reviewer (initials) | Date (of review) | Comment Location/ Description, (Page, Para, Drg ref) | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | applicable fees, and approval by North Sydney Traffic Committee | | | |
| 6 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Table 9 | Change "11 spaces permanently lost" to "15 spaces lost for the duration of this CTMP"<br><br>(NB - the existing Bus Zone in front of Site A was temporarily relocated to its current position and temporarily replaced 6 metered parking bays - refer to supplied NSC parking plan dated Dec 2019 - continued loss of these parking bays due to Metro Construction will be handled through a simliar Work Zone application) | See response above. The CTMP is not a Commercial document, it's is traffic and transport only | 13-Dec-2019 | C |
| 7 | Crows Nest Station COP | A | Council | MK | 26-Nov-2019 | Figure 11 D - truck route |  <br>Route shown in green in Figure 11D - via Oxley Street,<br>Albany Street - not to be used for trucks longer than 8.8m<br><br>Albany Street is also subject to a 5 Tonne truck limit. | Route altered to reflect Council request (at a TCG meeting) to use Clarke Ln between Oxley St and Albany St) | 13-Dec-2019 | C |

| Item No | Contract | Doc Rev | Stakeholder (RMS,SCO, Council) | Reviewer (initials) | Date (of review) | Comment Location/ Description, (Page, Para, Drg ref) | Stakeholder Comment | Metro/Contractor Response | Date | Metro Status comment (Open or Closed) |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Crows Nest Station COP | A | Council | MK | 12-Dec-2019 | 8.5.2 and Figure 11 | The EIS routes differ from the proposed routes shown in Figure 11. It is noted that the right turn ban from Oxley Street onto Pacific Highway prohibits this route although it would provide the most direct access to the Pacific Highway. Each alternate route has limitations and challenges.<br><br>Oxley Street/Albany Street - size limitations (5 Tonne truck limit) and increased risk of pedestrian conflicts - note roundabout has recently been reconstructed with new pedestrian crossings and design vehicle is 8.8m max.<br><br>Oxley Street/Clarke Street/Hume Street - adjacent to child care centre and may not be feasible for periods when Hume Street is closed<br><br>Clarke Lane to Albany Street - narrow two-way lane and current work zone at rear of 563-565 Pacific Highway may cause conflict/congestion - therefore this route is not considered suitable.<br><br>The Concrete Operations suggests that "the majority" of concrete agitators will load from the Pacific Highway frontage. More information is requested on the proposed proportion of trucks that will use the Clarke Lane frontage in order to determine the most reasonable truck route.<br><br>Can consideration be given to allowing right turn exception at Oxley Street/Pacific Highway for Metro construction vehicles only? | See response above<br><br>This route is not suggested in this CTMP<br><br>This is covered in the Concrete Delivery TMP<br><br>This is a comment for the Concrete Delivery CTMP<br><br>RMS has advised, as part of an earlier Sydney Metro contract, that this would not be approved | 13-Dec-2019 | **C** |

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| 9 | Crows Nest Station COP | A | Council | MK | 13-Dec-2019 | Logistics Lane generally | Refer to Council's comments on the Logistics Lane TMP | Will address this comment as part of the comment response in the Logistics Lane MP | 13-Dec-2019 | C |
| 10 | Crows Nest Station COP | A | Council | MK | 13-Dec-2019 | Concrete Operations generally | Refer to Council's comments on the Concrete Delivery Operations TMP | Will address this comment as part of the comment response in the Concrete Delivery Operations TMP | 13-Dec-2019 | C |
| 11 | Crows Nest Station COP | A | Council | MK | 13-Dec-2019 | General conditions | Please attach Council's standard conditions to the CTMP | Sydney Metro notes NSCs position on permits, fees and traffic conditions | 16-Dec-2019 | C |

## ANNEXURE G: HIGH LEVEL CONSTRUCTION PROGRAM