Appendix B1

Traffic, Transport and Access Management Sub-plan

Infrastructure Works (Package 4)

Parramatta Light Rail – Stage 1

November 2019

PLR1INF-CPBD-ALL-TF-PLN-000001 REV 7

NSW GOVERNMENT

Construction Environment Management Plan Appendix B1

Traffic, Transport and Access Management Sub-plan

Project Name: Parramatta Light Rail Stage 1
Infrastructure Contract

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Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to the project, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision	Details
Rev A	CPBD JV internal review
Rev 0	First draft submitted to TfNSW and ER. Revision issued for external stakeholder consultation.
Rev 1	Second draft submitted to TfNSW and ER for consultation.
Rev 2	Incorporation of external stakeholder consultation comments. Issued to ER for endorsement.
Rev 3	Incorporation of ER comments and issued to ER for endorsement.
Rev 4	Incorporation of ER endorsement and submission to the DPIE for information.
Rev 5	Incorporation of DPIE feedback and submitted to the DPIE for information.
Rev 6	Incorporation of stakeholder comments and submitted to the DPIE for information.
Rev 7	Incorporation of DPIE feedback and submitted to the DPIE for information.

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Glossary / Abbreviations

Abbreviation	Expanded text
AEO	Authorised Engineering Organisation
BUG	Bicycle User Groups
CAP	Construction Area Plan
CEMP	Construction Environmental Management Plan
CoA	Condition of Approval
CoPC	City of Parramatta Council
CSSI	Critical State Significant Infrastructure
CTTMP	site specific Construction Traffic and Transport Management Plan
DPIE	Department of Planning and Environment (NSW Department of Planning, Industry and Environment or DPIE as at 1 July 2019)
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPO	Environmental Performance Outcomes
ER	Environmental Representative
ETS	Opal Electronic Ticketing System
JV, the	CPB Contractors and Downer EDI Works Joint Venture
LAP	Local Access Plan
NSW Health	Collective body incorporating Children's Hospital Westmead, Cumberland Hospital and Westmead Hospital
Project, the	Parramatta Light Rail – Stage 1
REMMM	Revised Environmental Mitigation and Management Measures
RMS	Roads and Maritime Services
ROL	Road Opening License
RVTM	Requirements Verification Traceability Matrix

Abbreviation	Expanded text
SaM	Stabling and Maintenance
SCO	Sydney Coordination Office
SOM	Supply, Operate and Maintain
TCG	Traffic Coordination Group
TCP	Traffic Control Plan
TfNSW	Transport for NSW
TMC	Traffic Management Centre
TSP	Traffic Staging Plan
TTAMP	Traffic, Transport and Access Management Sub-plan
TTLG	Traffic and Transport Liaison Group
VMP	Vehicle Movement Plan
VMS	Variable message sign
WP	Work Pack

1 Introduction

1.1 Context

This Traffic Transport and Access Management Plan (TTAMP or Sub-plan) forms part of the Construction Environmental Management Plan (CEMP) and the Construction Management Plan (CMP) required under the Infrastructure Project Deed for the Parramatta Light Rail Stage 1, Package 4 Infrastructure Works (Infrastructure Works).

This TTAMP has been prepared to address the following requirements:

- Minister's Conditions of Approval (CoA) SSI-8285
- Applicable Environmental Management Measures from Project *Environmental Impact Statement* (the EIS)
    - Revised environmental mitigation and management measures (REMMMs)
    - Environmental Performance Outcomes (EPO's) listed in *Parramatta Light Rail Stage 1 Westmead to Carlingford via Parramatta CBD and Camellia* EIS as amended by the *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report)* (February 2018) (the SPIR).
- Infrastructure Contract Project Deed (ISD-17-6721) Exhibit B - Scope and Performance Requirements (SPR) Appendix H – Construction Traffic and Transport management
- RMS QA Specification G10 – Traffic Management
- RMS Collaboration Agreement
- 3rd Party Agreement Matrix - Roads Act Approval Parramatta Light Rail Off Alignment Works
- 3rd Party Agreement Matrix - Roads Act Approval Parramatta Light Rail Main Alignment Works
- 3rd Party Agreement Matrix – Roads and Maritime Services – Works Deed Authorisations
- Project Contract Requirements, including TfNSW specifications

The TTAMP describes how the JV will manage construction traffic and transport access impacts during the delivery of the Infrastructure Works for Parramatta Light Rail Stage 1.

1.2 Background

1.2.1 Parramatta Light Rail – Stage 1 description

Parramatta Light Rail is one of the NSW Government's major infrastructure projects being delivered to serve a growing Sydney.

Parramatta Light Rail Stage 1 (CSSI) will connect Westmead to Carlingford via Parramatta Central Business District (CBD) and Camellia. Stage 1 is expected to be operational in 2023.

Stage 1 will create new communities, connect great places and help both local residents and visitors move around and explore what the region has to offer. The route will link Parramatta's CBD and train station to a number of key locations, including the Westmead Precinct, the Parramatta North Growth Centre, the new Western Sydney Stadium, the Camellia Town Centre, the new Powerhouse Museum and Riverside Theatre arts and cultural precinct, the private and social housing redevelopment at Telopea, the Rosehill Gardens Racecourse and the three Western Sydney University campuses.

In summary, the key features of Stage 1 include:

- A new dual track light rail network of approximately twelve (12) kilometres in length, including approximately seven (7) kilometres within the existing road corridor and approximately five (5) kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services
- Sixteen (16) stops that are fully accessible and integrated into the urban environment including a terminus stop at each end of Westmead and Carlingford
- High frequency 'turn-up-and-go' services operating seven days a week from 5am to 1am. Weekday services will operate approximately every 7.5 minutes in the peak period between 7am and 7pm
- Modern and comfortable air-conditioned light rail vehicles, nominally 45 metres long and driver-operated, each carrying up to 300 passengers
- Intermodal interchanges with existing public transport services at Westmead terminus, Parramatta CBD and the Carlingford terminus
- Creation of two light rail and pedestrian zones (no general vehicle access) within the Parramatta CBD along Church Street (generally between Market Street and Macquarie Street) and along Macquarie Street (generally between Horwood Place and Smith Street)
- A Stabling and Maintenance (SaM) Facility located in Camellia for light rail vehicles to be stabled, cleaned and maintained
- New bridge structures along the alignment including over James Ruse Drive and Clay Cliff Creek, Parramatta River (near the Cumberland Hospital), Kissing Point Road and Vineyard Creek, Rydalmere
- Alterations to the existing road network including line marking, additional traffic lanes and turning lanes, new traffic signals, and changes to traffic flows
- Relocation and protection of existing utilities
- Public domain and urban design works along the corridor and at Stop precincts
- Closure of the heavy rail line between Carlingford and Clyde
- Active transport corridors and additional urban design features along sections of the alignment and within Stop precincts
- Integration with the Opal Electronic Ticketing System (ETS)
- Real time information in light rail vehicles and at Stops via visual displays and audio.

An overview of Parramatta Light Rail Stage 1 route is shown in **Figure 1-1**.

Figure 1-1: Parramatta Light Rail Stage 1 Route

1.2.2 Statutory Context

The Parramatta Light Rail is subject to environmental impact assessment under the *Environmental Planning and Assessment Act 1979* (EP&A Act). It is classified as Critical State Significant Infrastructure (CSSI). The EIS assessed impacts for Parramatta Light Rail Stage 1 (Westmead to Carlingford). This covered the light rail and associated works including road enabling work.

Stage 1 received Infrastructure Approval from the Minister for Planning under Section 5.19 of the EP&A Act on 29 May 2018 (Critical State Significant Infrastructure Application SSI-8285), subject to the conditions provided in the Instrument of Approval, specifically Schedule B – Ministerial Conditions of Approval (CoA).

The Infrastructure Approval was subsequently modified under Section 5.25 of the EP&A Act on 21 December 2018 and 25 January 2019.

The planning approval, modifications and related environmental assessment documents are located at: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8285.

1.2.3 Stage 1 Delivery Strategy

Delivery of Stage 1 is achieved through the following five packages of work:

- **Enabling Works (Package 1)** – Construction works encompassing relocation of underground utilities, modifications and installations of traffic lights, road widening, redirecting of traffic flows and changes to parking will be constructed to improve the capacity of existing networks therefore ensuring traffic can move in and around the Parramatta area during construction and, later, operations of the light rail network. The enabling works will be completed prior to the construction start of the Infrastructure Works. This work includes:
    - Traffic changes within Parramatta CBD include George Street becoming two-way, efficiently moving traffic through the heart of Parramatta and redistributing traffic volumes across the local road network
    - Traffic changes in North Parramatta will see widening of O'Connell Street to four lanes from Barney Street to Albert Street, consequently requiring conversion of parking to traffic lanes
    - Utility works will be undertaken on O'Connell Street within North Parramatta, including the intersections at Barney Street, Dunlop Street, Factory Street, Albert Street, Victoria Road and George Street; Barney Street, including the Church Street intersection; the intersection of Dunlop and Church Street and on Victoria Road, between O'Connell Street and Marist Place
    - Utility works will additionally take place within Parramatta CBD on George Street, including the intersections at O'Connell Street, Horwood Place, Barrack Lane, Charles Street and Harris Street; and Harris Street, between George Street and Macquarie Street.
- **Westmead Precinct Works (Package 2)** – Hawkesbury Road widening and demolition at Cumberland Hospital (east and west Campus)
- **Early Works (Package 3)** – Remediation of the SaM Facility
- **Infrastructure Works (Package 4) (the subject of this Sub-plan)** – Design and construction of civil works, public domain and light rail infrastructure up to road level/top of rail and to the top of the concrete slab at stops, including provision of utility services (excluding high-voltage power supply and cabling for rail systems), and decommissioning of the T6 Carlingford Line
- **Supply, Operate and Maintain (SOM) Works (Package 5)** – Design and construction of the light rail systems, high-voltage power supply and stops above slab level, the supply of light rail vehicles, and the design and construction of the SaM Facility, including all light rail operations, customer service and asset management.

Each package of work is to be delivered under separate contracts on behalf of the proponent Transport for NSW (TfNSW). While the packages will commence at different times under separate construction approvals, there will be periods during which the packages works will overlap. The interactions between the packages are shown in **Figure 1-2**.

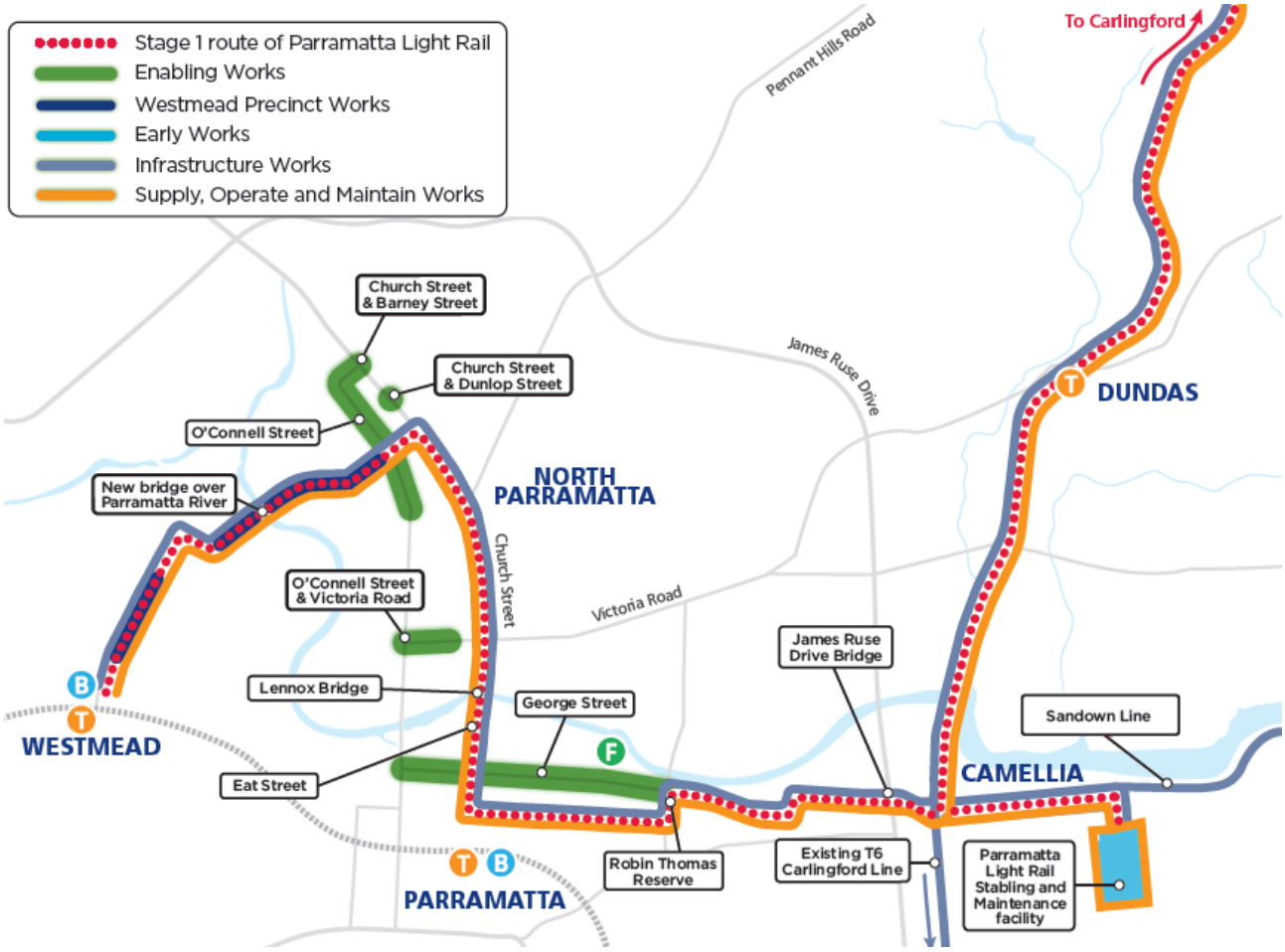

Figure 1-2: Parramatta Light Rail Stage 1 Delivery Strategy

1.3 Infrastructure Works

The CPB Contractors and Downer EDI Works Joint Venture (JV) has been engaged to deliver Package 4 – Infrastructure Works (Infrastructure Works). In summary the Infrastructure Works include:

- Utility services adjustment and relocation works (for more than minor impact)
- Property demolition to make space for the light rail tracks and ancillary facilities
- Decommissioning of the existing Carlingford T6 heavy rail line and disused Sandown Line
- Earthworks and retaining structures
- Drainage works
- Intersection signalling works
- The light rail civil infrastructure and stop slabs
- Urban and architectural design and finishes of the corridor and public domain
- Rail, track slabs, ballasted track and grass tracks
- Footpath and kerb realignment including intersection works and road upgrades to accommodate light rail and other traffic (both temporary and permanent)

- New light rail bridges carrying the light rail over the Parramatta River (at Cumberland Hospital), James Ruse Drive, Vineyard Creek and Kissing Point Road and bridge strengthening and modifications to existing bridges as required
- Provision of the Active Transport Link for pedestrians and cyclists
- Staff and passenger facilities at each light rail terminus
- Rail/road interaction including traffic signals and road sharing
- Testing and commissioning of the Infrastructure Works.

1.4 Relationship with SOM

The Infrastructure Works is closely aligned to the Package 5, SOM Works which is being delivered by the Great River City Light Rail consortium. A graphical representation of the split in scope between the two packages is depicted in **Figure 1-3**.

The reasoning for dividing this work into two stages is to ensure that suitably qualified and experienced sub-contractors are in place for each specialised component; civil infrastructure, and operational systems. The Infrastructure Works will deliver the civil infrastructure components of Stage 1 and will not trigger the operational conditions with the exception of those that relate to detailed design.

An interface between the two Joint Ventures has been established to monitor cumulative impacts and the coordination of environmental complaints management, site management controls, and the delineation of incident reporting and non-conformance management. Opportunities to share information, materials and resources will also be explored to support achievement of landscape and temporary work targets.

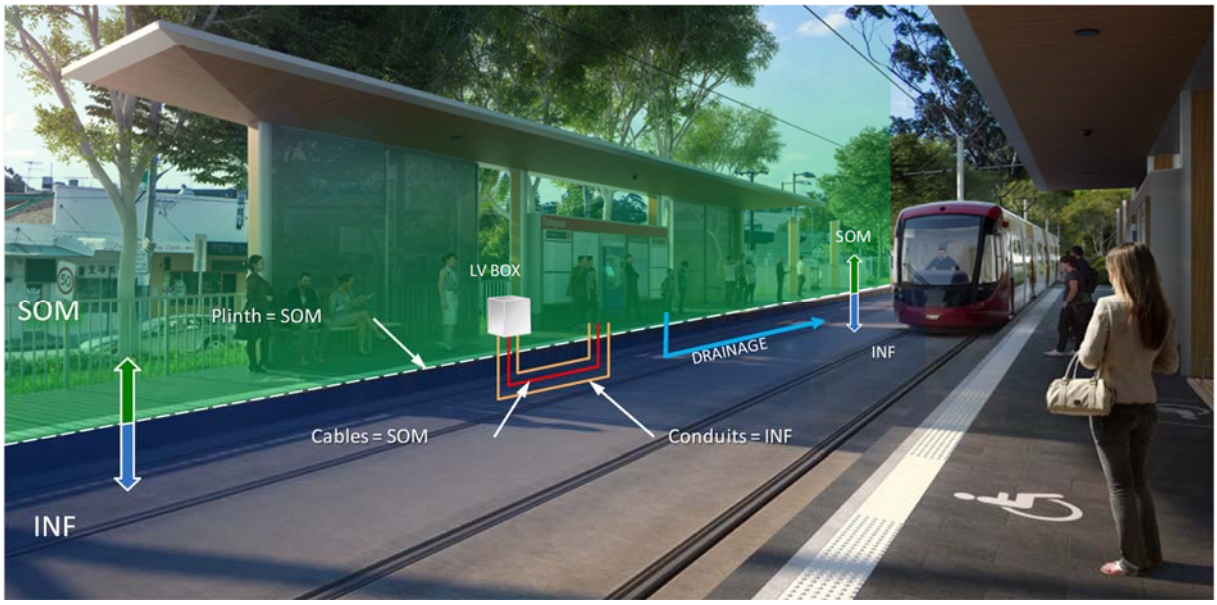

Figure 1-3 Relationship Between Infrastructure Works and the Supply, Operate and Maintain Works

1.5 Scope of the Sub-plan

This TTAMP Sub-Plan is part of a suite of project management plans that will be submitted to TfNSW to illustrate how the JV will collectively plan, deliver, monitor and continuously improve through the lifecycle of the project. **Figure 1-4** illustrates the relationships between these project

plans that will be developed and its interface with the project specific Environmental Management System (see section 1.6).

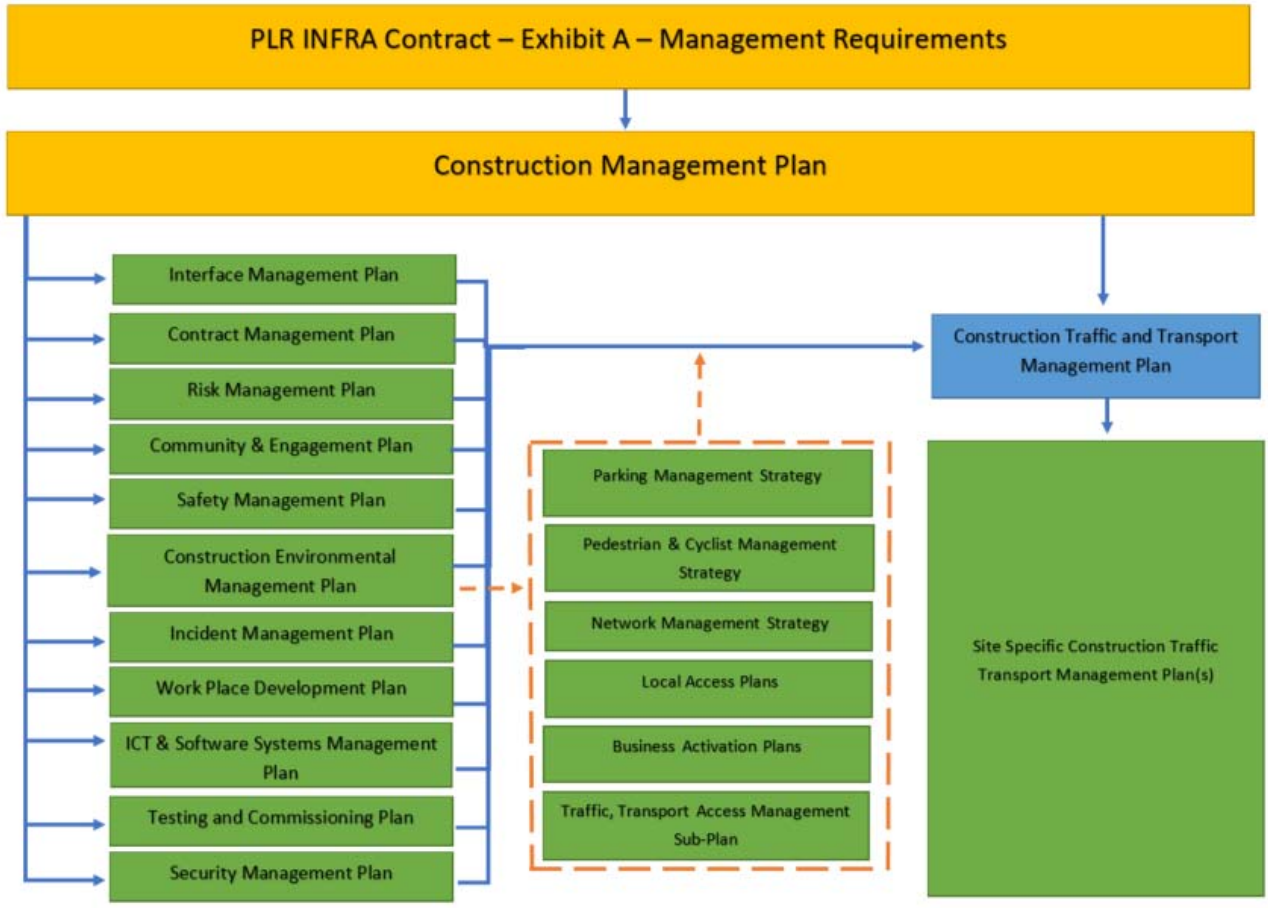

Figure 1-4 Relationship of various traffic plans

The TTAMP outlines the mitigation and management measures the CPB Contractors and Downer EDI Works Joint Venture (the JV) will use to address potential impacts arising from traffic, transport and access during design and construction of the Infrastructure Works, while complying with relevant approval, statutory and contract requirements. Sections 3.2, 3.3, 3.4 and 3.5 provide compliance tables identifying where in this Sub-plan relevant CoA requirements are addressed.

This Sub-plan is applicable to all activities during construction of the Infrastructure Works, including all areas where physical works will occur or areas that may be otherwise impacted by the construction works, and under the control of the JV. All the JV staff and sub-contractors are required to operate fully under the requirements of this Sub-plan and related environmental management plans, over the full duration of the construction program.

1.6 Environmental management systems overview

The environmental management system overview is described in Section 1.5 of the CEMP and detailed in **Figure 1-5**.

Key interactions for this Sub-plan with other environmental management plans include:

- Site Establishment Management Plan provides details of traffic and access requirements for ancillary facilities

- Air Quality and Dust Management Sub-plan details management measures to mitigate the generation of dust arising from vehicle movements
- Noise and Vibration Management Sub-plan includes management measures to mitigate the noise impacts of vehicle movements.

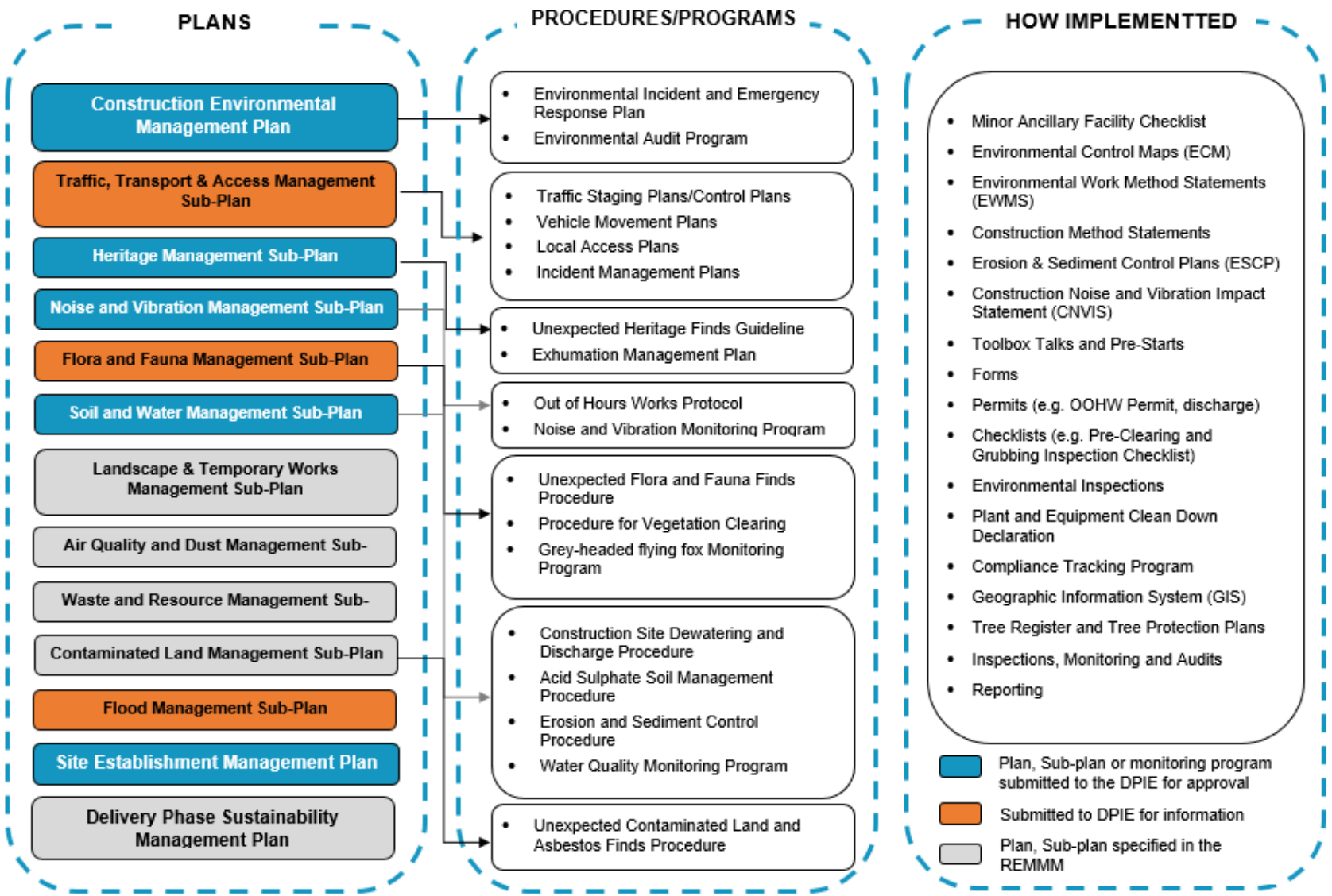

Figure 1-5 Environmental Management System

1.7 Environmental Design Review

The Environmental Design Review process has been established by the JV to ensure design documentation complies with the Planning Approval, REMMMs, EPOs and contractual requirements. The key output of the process, the Environmental Design Review Report, includes the following details:

- Process used to complete the environmental review of the design documentation
- Evidence to how environmental constraints were considered and opportunities to avoid or reduce impacts were realised
- Justification for proposed design where it has not been possible to avoid or further reduce identified impacts
- Demonstration of compliance against the Planning Approval and contractual requirements
- Recommendations of the Design Review Panel.

As part of the Compliance Tracking Program (detailed in CEMP, Section 3.9.5) the JV have established a Requirements Verification Traceability Matrix (RVTM) to provide assurance of compliance against the Planning Approval, REMMMs, EPOs and contractual obligations. Managed by the Planning Approval Coordinator, the RVTM assigns responsibility for each requirement and measures progress across all disciplines on an ongoing basis. This process ensures that design related conditions are adequately communicated to all personnel involved in the preparation of the design documentation. It is noted that the RVTM assurance framework is separate to the Compliance Tracking Program which is detailed in the CEMP (Section 3.8.5).

2 Purpose and objectives

2.1 Purpose

The purpose of this Sub-plan is to describe how the JV will manage traffic, transport and access during construction of the Infrastructure Works.

2.2 Objectives

The key objective of the TTAMP is to ensure that traffic impacts during construction are minimised and are within the scope permitted by the Planning Approval and the Project Deed. This includes minimising delays, ensuring consideration is given to the needs of all road users and maintaining safety for both workers and the general public.

To achieve these objectives, JV will undertake the following:

- Ensure appropriate controls and procedures are implemented during construction activities to address potential traffic and access impacts along the Project corridor
- Ensure measures are implemented to address the relevant CoA (Table 3-1), REMMMs (Table 3-2) and EPOs (Table 3-4)
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this Sub-plan
- Plan and stage all work activities to effectively minimise road occupancy and potential impacts on the road network
- Develop site specific CTTMPs for all precincts detailing location specific mitigation measures.

2.3 Targets

The following targets have been established for the management of traffic, transport and access impacts arising from construction activities.

- Provide advance notice to affected stakeholders of changes to traffic conditions
- Maintain vehicle access to hospitals and emergency providers at all times
- Develop agreed strategies for providing access to properties, in consultation with property owners, businesses and tenants
- Respond to issues identified by the SCO within agreed timeframes
- Ensure adequate and appropriate approvals are obtained prior to conducting traffic works.

Strategies to achieve the above targets are detailed within this Sub-plan. Performance against targets will be assessed informally through analysis of stakeholder feedback and SCO approvals processes. A formal review of performance will be undertaken annually as part of the management review process (CEMP, Section 3.11).

3 Environmental requirements

3.1 Relevant legislation and guidelines

3.1.1 Legislation and regulatory requirements

Identified regulatory requirements include:

- An approved and valid Road Occupancy Licence (ROL)
- An approved relevant Speed Zone Authorisation (SZA)
- Australian Road Rules
- *Roads Act 1993* (NSW)
- Road Transport (Safety and Traffic Management) Regulation 2000
- Road Regulation 2008 (NSW)
- *Road Transport Act 2013* (NSW)
- *Work Health Safety Act 2011* (NSW)
- Work Health Safety Regulations 2017 (NSW).

Legislation relevant to traffic management also includes the EP&A Act, under which the Project Approval was granted. Relevant provisions of the EP&A Act are explained in the register of legal and other requirements included in Appendix A2 of the CEMP.

3.1.2 Guidelines

The main guidelines, specifications and policy documents relevant to this Sub-plan include:

- Roads and Maritime Traffic Control at Worksites Manual (2010)
- AUSTROADS Guide to Traffic Management 2009 – Parts 1-13
- AUSTROADS Guide to Road Design 2009 – Parts 1-7
- AUSTROADS Guide to Road Safety 2009 – Parts 1-9, and Part 6A 2019
- Australian Standard 1742 Parts 1 to 15, Manual of uniform traffic control devices (as required)
- Australian Standard 4282 Control of the Obtrusive Effects of Outdoor Lighting
- Australian / New Zealand Standard 3845 Road Safety Barrier System
- Australian / New Zealand Standard 1743-2001 Road Sign Specifications
- Australian / New Zealand Standard 2890 Parts 1 to 6. Parking Facilities
- RMS Delineation Manual
- RMS Australian Standard Supplements
- RMS Austroads Guides Supplements
- RMS Specification G10
- RMS Traffic Modelling Guidelines
- Cycling aspects of Austroads Guide
- City of Parramatta Walking Strategy

- City of Parramatta Development Control Plans
- STA Bus Design Guidelines
- Installation of Traffic Light Signals
- Guidelines for Location of VMS
- Technical Direction for use of VMS
- Road Occupancy Manual
- Catalogue No. 45094053 – Making roads more motorcycle friendly A guide for road design, construction and maintenance
- Roads and Maritime Services Austroads Guide Supplement Publication No: Pub.11.097
- Safety Barrier Products (Temporary) accepted for use on Classified Roads in NSW.

3.2 Ministers Conditions of Approval

The CoA relevant to this Sub-plan are listed in Table 3-1 below. A cross reference is also included to indicate where the condition is addressed in this Sub-plan or other Project management documents.

Table 3-1: Conditions of Approval relevant to the TTAMP

CoA No.	Condition Requirements	Document reference	How Addressed
C3	The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan and be consistent with the CEMP referred to in Condition C1: (a) Traffic, transport and access - Relevant Council(s), Roads and Maritime Services, Emergency Services - Secretary Information	This Plan Section 4.1 Appendix A	Section 4.1 outlines the consultation requirements of this Sub-plan under the CSSI Approval in accordance with Condition C1. This Sub-plan has been provided to City of Parramatta Council (CoPC), Cumberland Council, Roads and Maritime Services (RMS) and Emergency Services for consultation. The results of this consultation have been incorporated into the Sub-plan and summarised in Section 4.1 and **Appendix A**.
C4	The CEMP Sub-plans must state how:	-	-
(a)	the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;	Section 3.5	The EPOs for the Project are outlined in Section 3.5. These were derived from the EIS to be measurable through regular inspection and monitoring.
(b)	the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Section 3.3 Section 6 Section 7.2	Table 3.2 (Section 3.3) provides a detailed summary of the REMMMs as they relate to the TTAMP and where they have been addressed. Relevant mitigation measures identified in the documents listed in Condition A1 are reflected in Section 6. These will be implemented during pre-construction and construction phases of the Infrastructure Works to

CoA No.	Condition Requirements	Document reference	How Addressed
			avoid, minimise or manage traffic, transport and access impacts. They will be communicated through the processes outlined in Section 7.2.
(c)	the relevant terms of this approval will be complied with; and	Section 3 Section 7	The terms of this approval are outlined in Section 3 and will be complied with through the preparation and implementation of this Sub-plan. Confirmation of compliance with the terms of approval will be undertaken in accordance with Section 7.
(d)	issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed.	Section 5 Section 6 CEMP	Issues that require management during construction, together with predicted impacts, are outlined in Section 5. The environmental risk register for construction activities is provided in Appendix A2 of the CEMP. The risk register is reviewed annually, at minimum, and in response to significant issues, incidents and non-compliances (CEMP, Section 1.5.1 and 3.1.1). The management of these risks is outlined in Section 6. These measures will be implemented during pre-construction and construction phases of the Infrastructure Works. In addition, a traffic incident risks register will be developed to inform the development of the incident response plan. This will include additional and site-specific detail as compared to the CEMP risk register.
C5	The CEMP Sub-plans must be developed in consultation with relevant government agencies (including Relevant Council(s)). Details of all information requested by an	Section 4 Appendix A	Section 4.1 outlines the consultation requirements of this Sub-plan under the CSSI Approval in accordance with Condition C1.

CoA No.	Condition Requirements	Document reference	How Addressed
	agency to be included in a CEMP Sub-plan as a result of consultation, including all copies of correspondence from those agencies, must be provided to the Secretary with the relevant CEMP Sub-plan.		This Sub-plan has been provided to CoPC, Cumberland Council, Sydney Coordination Office (SCO), RMS and Emergency Services for consultation. The results of this consultation have been incorporated into the final Sub-plan and summarised in Section 4.1. The results of this consultation have been incorporated into the Sub-plan and summarised in Section 4.1 and **Appendix A**. Copies of correspondence are provided in a separate report.
C6	Any of the CEMP Sub-plans may be submitted along with, or subsequent to, the submission of the CEMP but in any event, no later than one month before construction.	Section 4	This TTAMP will be submitted to the Department of Planning, Industry and Environment (DPIE) for information no later than one month before construction. Details of this and other submission requirements have been incorporated into Section 4.
C7	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of construction.	Section 4	The CEMP and relevant Sub-plans, including this TTAMP will be endorsed by the ER and submitted to the Planning Secretary for information no later than one month before construction. This requirement is reflected in Section 4.
C8	Construction must not commence until the CEMP and any CEMP Sub-plan specified in Condition C3 have been submitted to or approved by the Secretary. The CEMP and CEMP Sub-plans submitted to or approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where construction of the CSSI is staged,	This Plan Section 4.1 Appendix A	Section 4.1 outlines the consultation requirements of this Sub-plan as required by the Planning Approval. This Sub-plan has been provided to City of Parramatta Council (CoPC), Cumberland Council, Roads and Maritime Services (RMS) and Emergency Services for consultation. The results of this consultation have

CoA No.	Condition Requirements	Document reference	How Addressed
	construction of a stage must not commence until the CEMP and Sub-plans for that stage have been submitted to or approved by the Secretary. Note: The requirement to submit or have a CEMP or CEMP Sub-plan approved is specified in Condition C3.		been incorporated into the Sub-plan and summarised in Section 4.1 and **Appendix A**.
E1	The CSSI must be designed, constructed and operated so that it does not adversely impact network connectivity, or the safety and efficiency of the transport system near the CSSI in a manner which is consistent with the impacts predicted in the documents referred to in Condition A1.	Section 5 Section 6	The Infrastructure Works will be designed and constructed to ensure adverse impacts to network connectivity and the safety and efficiency of the transport system are effectively mitigated. Predicted impacts of the Infrastructure Works are outlined in Section 5. The management of these impacts is outlined in Section 6. These measures will be implemented during pre-construction and construction phases of the Infrastructure Works.
E2	In relation to new or modified road, parking, pedestrian and cycle infrastructure, the CSSI must be designed: (a) in consultation with the relevant road authority (b) in consideration of existing and future demand (c) to meet relevant design, engineering and safety guidelines, including Austroads Guides; and (d) is certified by an appropriately qualified and experienced person that the above matters have been appropriately considered.	Section 6.6.4 Section 6.8	Consultation with authorities will be undertaken through design meetings, workshops and formal RFIs. Additional consultation will occur at the Traffic and Transport Liaison Group (TTLG) meetings and Traffic Coordination Group (TCG). The design of new or modified road, parking, pedestrian and cycle infrastructure will be undertaken in line with Austroad Guides, PLR Operational Traffic and Transport Report and other appropriate protocols and design procedures. The designs will be tested against the modelling provided by TfNSW to ensure that the new

CoA No.	Condition Requirements	Document reference	How Addressed
			infrastructure considers and is adequate for existing and future demand. The process by which the Pedestrian and Cyclist Management Strategy and Parking Management Strategy will be developed is outlined in Section 6.6.4 and Section 6.8, respectively. All designs will be prepared and checked by appropriately qualified people as verified by the AEO process and designs will be reviewed and certified by an Independent Certifier as required.
E3	An independent Road Safety Audit(s) must be undertaken by an appropriately qualified and experienced person in accordance with *Guidelines for Road Safety Audit Practices* (RTA, 2011), to assess the safety performance of any new or modified local road, parking, pedestrian and cycle infrastructure provided as part of the CSSI (including ancillary facilities) to ensure that the requirements of Condition E2 are met. Audit findings and recommendations must be actioned and must be made available to the Secretary on request.	Section 6.12	The JV will engage an appropriately qualified and experienced independent Road Safety Auditor. Road Safety Audits will be conducted to assess the safety of infrastructure and the safety performance of any new or modified local road, parking, pedestrian and cycle infrastructure. Audit protocols are outlined in Section 6.12.
E4	Where bus stops are required to be temporarily closed or relocated, such closure must not occur until bus stops of equivalent capacity, of comparable stop type and which meet accessibility standards (where practicable), are relocated within 400 metres walking distance of the existing bus stop and are operating, unless agreed otherwise with the Relevant Council(s) and bus services provider(s). Closure and relocation of bus stops during construction must be undertaken in consultation with the relevant bus	Section 6.7	Where possible, existing bus facilities will be maintained. However, where this cannot be achieved, equivalent temporary facilities will be provided. All temporary facilities will be developed and constructed in accordance with the RMS, Council/s, and TfNSW requirements. All proposed changes to existing routes and bus stops facilities will be discussed with the bus operator and Council(s), prior to the commencement of works, and notifications provided to passengers.

CoA No.	Condition Requirements	Document reference	How Addressed
	service providers and relevant council(s). Wayfinding signage must be provided to direct commuters to relocated bus stops.		Protocols to be followed concerning bus facilities are outlined in Section 6.7.
E5	Construction vehicles (including staff vehicles) associated with the CSSI must:	Section 6.1.6	The JV will conduct regular monitoring of various access, egress and haulage routes of the JVs traffic plant and equipment.
(a)	minimise parking or queuing on public roads and utilise the light rail corridor for construction vehicle and staff movements to the greatest extent practicable;	Section 6.1.3	Parking or queuing on public roads will be minimised through utilising the light rail corridor for construction vehicles. This will be captured through the implementation of a VMP. Section 6.1.3 outlines the requirements that will be considered in the planning of construction vehicle movements.
(b)	not idle or queue in local residential streets;	Section 6.1.3	Idling or queuing on local roads will be prevented by using compounds as marshalling and staging areas for construction vehicles. This will be captured through the implementation of a VMP. Section 6.1.3 outlines the requirements that will be considered in the planning of construction vehicle movements.
(c)	minimise use of routes on local roads that directly pass schools or childcare centres, or where no alternative route is available, restrict heavy vehicle movements between 8:00am and 9:30am and between 2:30pm and 4:00pm Monday to Friday, during the school term;	Section 6.1.3	The use of routes on local roads passing childcare centres will be minimised or restricted during the nominated times accordance with VMPs and Environmental Control Maps (ECMs). Section 6.1.3 outlines the requirements considered in the planning of construction vehicle movements.

CoA No.	Condition Requirements	Document reference	How Addressed
			The process by which ECMs are prepared and approved is detailed in the CEMP, Section 3.1.4.
(d)	not use local roads (including residential streets) to gain access to construction sites and compounds unless no alternatives are available. Construction sites must be accessed from arterial roads and the rail corridor used for transportation of construction materials and the like to work sites to the greatest extent practicable; and	Section 6.1.3 Section 6.1.7	VMPs and ECMs will be developed to ensure access to the construction site occurs via arterial roads and the rail corridor as opposed to local residential streets where possible. Section 6.1.3 and Section 6.1.7 outlines the requirements considered in the planning of construction vehicle movements, construction sites and compounds.
(e)	adhere to the nominated haulage routes identified in the Construction Traffic, Transport and Access Management Plan required under Condition C3.	Section 6.1.3	VMPs will be developed to ensure adherence to nominated haulage routes. Section 6.1.3 outlines the requirements that will be considered in the planning of construction vehicle movements.
E6	Current condition reports for all existing roads and all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected during work must be prepared before commencement of such work. The report must state the current condition of the asset. A copy of the report must be provided to the asset owner no later than one month before the commencement of works of the CSSI.	Section 6.11	Condition reports, as outlined in Section 6.11, are being prepared progressively in advance of works where the physical condition of the property/road is likely to be adversely affected. All condition reports for roads have been completed and a copy of the reports was provided to the asset owner a minimum of one month before the commencement of works.
E7	If damage occurs to any item outlined in Condition E6 resulting from the works, aside from that resulting from normal wear and tear, the Proponent must either (at the asset owner's discretion):	Section 6.11	With the exception of damage resulting from normal usage of the road, the JV will repair any damage that has resulted from the Infrastructure Works. Repair may occur through compensation to the asset owner

CoA No.	Condition Requirements	Document reference	How Addressed
	(a) compensate the asset owner for the damage so caused. The amount of compensation may be agreed with the asset owner, but compensation must be paid even if no agreement is reached; or (b) rectify the damage so as to restore the item to at least the condition it was in pre-works. Any repairs must be completed before the commencement of CSSI operations.		or through restoring the item to its condition prior to the damage. Measures relating to repairing damage are outlined in Section 6.11.
E8	The Proponent must maintain access to all properties during construction and operation, unless otherwise agreed by the relevant property owner or occupier, and reinstate any access physically affected by the CSSI to at least an equivalent standard at no cost to the property owner, unless otherwise agreed with the property owner. The Proponent must provide copies of plans to the Secretary on request.	Section 6.9.1 Section 6.11	Various environmental and traffic management measures will be implemented to ensure resident access is maintained throughout the Infrastructure Works including Local Access Plans. Any access physically affected by the Infrastructure Works will be reinstated at no cost to the property owner. The mitigation and management measures for property access are outlined in Section 6.9.1. Pre-condition surveys are detailed in Section 6.11.
E9	Access plans must be prepared and implemented for individual properties and accesses that will be impacted by construction and operation of the CSSI. The access plans must be developed in consultation with affected parties (property owner and/or occupier, as relevant) and the Proponent must make reasonable endeavours to obtain agreement from the relevant affected parties, and evidence of consultation demonstrating this must be provided to the Secretary on request. The access plans must establish:	Section 6.9.1	Access plans will be developed in consultation with affected parties that will be impacted by construction activities. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(a)	road and access closures and provision of alternative routes;	Section 6.9.1	Access plans will be developed in consultation with stakeholder parties that will be impacted by

CoA No.	Condition Requirements	Document reference	How Addressed
			construction activities. The plans will consider road and access closures and the provision of access routes. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(b)	provision for pedestrian and cyclist access;	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider access for pedestrians and cyclists. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(c)	special event strategies;	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider special event strategies. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(d)	provision of servicing and delivery requirements for loading zones and waste disposal;	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider the requirements of loading zones and waste disposal areas. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(e)	access periods or alternative access arrangements for businesses, landowners or tenants affected by the CSSI;	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider access periods and

CoA No.	Condition Requirements	Document reference	How Addressed
			alternative access arrangements for businesses, landowners or tenants. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(f)	strategies to maintain emergency and incident response access at all times;	Section 6.9.1 Section 6.9.3	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider strategies to maintain emergency and incident response access. The factors that will be considered in the development of access plans are outlined in Section 6.9.1. Section 6.9.3 details requirements for emergency and incident response access.
(g)	potential future access strategies for the Westmead Hospital and Westmead Railway Station; and	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider potential future access strategies for Westmead hospital and Westmead Railway Station. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.
(h)	access to taxi ranks and loading zones.	Section 6.9.1	Access plans will be developed in consultation with stakeholders that will be impacted by construction activities. The plans will consider access to taxi ranks and loading zones. The factors that will be considered in the development of access plans are outlined in Section 6.9.1.

CoA No.	Condition Requirements	Document reference	How Addressed
	If access is not deemed to be adequate by the property owner and/or occupier and a dispute ensues, procedures and mechanisms must be followed in accordance with Condition B2	Section 6.9.1	If issues arise regarding access by the property owner or occupier, protocols will be followed in accordance with the dispute resolution processes outlined in the Community Communication Strategy (Condition B2).
E10	The Proponent must prepare and implement a Network Management Strategy for construction of the CSSI, in consultation with RMS, Sydney Coordination Office and Relevant Council(s) before impacts on the road network (including intersections) occur. The Strategy must determine appropriate measures to manage impacts to traffic identified in the documents listed in Condition A1, and must include: (a) details of impacts to the network from road closures, directional changes, night works and traffic diversions; (b) details of further appropriate network/intersection modelling and analysis undertaken since the EIS and/or Submissions Report was prepared; (c) consideration of cumulative impacts from other construction projects; (d) details of the required intersection upgrades and traffic management measures by precinct to minimise the impacts identified above; (e) vehicular access changes; (f) special event management; and (g) changes to bus services	Section 6.1	A Network Management Strategy (7 January 2019) was prepared by TfNSW and submitted to the Planning Secretary. The Network Management Strategy will apply to the Infrastructure Works (Package 4). The requirements of this strategy and other associated construction traffic mitigation and management measures are outlined in Section 6.1.

CoA No.	Condition Requirements	Document reference	How Addressed
	The Strategy must focus on the management of construction related traffic impacts and be provided to the Secretary for information before construction commences		
E11	A Parking Management Strategy must be prepared before permanent or long-term loss of parking i.e. greater than three (3) months. The Strategy must be implemented in consultation with the relevant road authority and Relevant Council(s) to manage car parking impacts and kerbside parking access, particularly for the Westmead, Parramatta North, and Parramatta CBD precincts, as a result of the CSSI. The Parking Management Strategy must include, but not be limited to: a) confirmation of the timing of the removal of on and off-street parking associated with the construction of the CSSI; b) comprehensive parking surveys of all parking spaces to be removed to determine current demand during peak, off-peak, school drop-off and pick-up, and weekend periods; c) assessment of the impacts of changes to on and off-street parking taking into consideration outcomes of consultation with affected stakeholders; d) identification of measures to manage any reduction in parking including staged removal, resident parking schemes, managed staff parking arrangements, and provision of alternative parking arrangements for accessible and service spaces e) replacement parking for specific impacted kerbside uses (e.g. accessible parking and loading zones) within the	Section 5.8 Section 6.8	Reflecting the scope of works detailed in Section 6.8, a Parking Management Strategy has been prepared for Section 3 of the Infrastructure Works. The document was submitted to the Planning Secretary for information on 21 October 2019. The Parking Management Strategy for the remaining sections of the Infrastructure Works will be submitted to the Planning Secretary for information in late January 2020, prior to the commencement of substantial works. The strategy will be implemented in consultation with the relevant road authority and Council(s). Monitoring on the efficacy of measures detailed in the Parking Management Strategy will be reported in the Operational Traffic, Transport and Access Performance Review.

CoA No.	Condition Requirements	Document reference	How Addressed
	local vicinity with consideration of the Disability Discrimination Act 1992 (DDA) Public Transport Standards and the DDA Access Code (2010); and f) monitoring on the efficacy of these measures, including potential unintended traffic impacts and contingencies in the event that the measures implemented are not adequate. The Parking Management Strategy must be submitted to the Secretary for information and the results of monitoring reported in the Operational Traffic, Transport and Access Performance Review required by Condition E18		
E12	Safe pedestrian and cyclist access must be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate equivalent route which complies with the relevant standards must be provided and signposted.	Section 6.6 Section 6.9 Section 6.12	Pedestrian and cycling access will be maintained during the Infrastructure Works. Where access is restricted, alternative temporary facilities will be provided in compliance with relevant aspects of Austroads Guide to Road Design and Austroads Guide to Traffic Management. The strategies and design considerations for alternative pedestrian and cyclist routes are outlined in Section 6.6. Section 6.9 outlines the alternative access strategies. Assurance is provided through road safety audits which will be conducted during the design and construction phase of the Infrastructure Works (Section 6.12).
E13	Bicycle parking/rack facilities are required to be installed at all light rail stops within the Carlingford precinct, unless these facilities already exist.	Section 6.6.3	In order to ensure cyclists are safely managed during the operation of the Project, all light rail stops within

CoA No.	Condition Requirements	Document reference	How Addressed
			the Carlingford precinct will be fitted with bicycle parking/rack facilities.
E14	A Pedestrian and Cyclist Network and Facilities Strategy must be prepared in consultation with Relevant Council(s), RMS, Pedestrian Council of Australia and Bicycle NSW. The Strategy must identify safe and accessible pedestrian and cycle paths, during construction and operation, including facilitation of future cycle paths and dedicated cycleways as identified in the documents listed in Condition A1, state and local government plans, with the objective of providing seamless, coherent, visible, and safe pedestrian and cycle access throughout and adjacent to the CSSI corridor. The Strategy must consider: a) existing and proposed local and regional pedestrian and cycle facilities and strategies; b) safety for pedestrians in pedestrianised zones; c) alternative cycle routes during construction, based on safety and efficiency, and contingencies in the event that relocated routes are found to be inadequate; d) pedestrian and cycle access, including local and regional pedestrian and bicycle connections; e) demand for pedestrian and cycle facilities with consideration of measures to encourage an increased pedestrian and cycle mode share; f) signage and way finding; g) cycle storage facilities on light rail vehicles; and	Section 6.6.4	A Pedestrian and Cyclist Network Facilities Strategy will be prepared for the Infrastructure Works. The strategy will ensure that coherent, visible and safe pedestrian and cycle access is provided throughout the area adjacent to the Project corridor. The strategy will be submitted to the Department prior to the commencement of construction of pedestrian/ cyclist permanent built works. This strategy will be developed in consultation with Council(s), RMS, Pedestrian Council of Australia and Bicycle NSW. The various components of the strategy are outlined in Section 6.6.4.

CoA No.	Condition Requirements	Document reference	How Addressed
	h) the requirements of relevant design standards, including Austroads and NSW bicycle guidelines. The Pedestrian and Cyclist Network and Facilities Strategy must be submitted to the Secretary before construction of pedestrian/cyclist permanent built works (including the Active Transport Link) commences and implemented to ensure that all works are operational no later than the commencement of CSSI operations.		
E15	The Proponent must maintain emergency vehicle access, in consultation with emergency services and NSW Health, to Westmead Hospital (along Hawkesbury Road) and between the two parts of the Cumberland Hospital site as long as patients continue to be located at each facility at all times throughout the life of the CSSI. Measures must be outlined in the relevant access plan required under Condition E9.	Section 6.9.1 Section 6.9.3	Access for emergency vehicles will be maintained as indicated in Section 6.9.3 and will be documented in Local Access Plans as per Section 6.9.1. Consultation with emergency services and NSW Health will be undertaken to ensure emergency vehicle access is maintained between the two parts of the Cumberland hospital and Westmead Hospital. These protocols will be captured in Local Access Plans.
E16	During works, the Proponent must ensure all practicable measures are implemented to maintain pedestrian and vehicular access to, and parking near, businesses and affected properties.	Section 6.9 Section 6.10.3 Community and Engagement Management Plan	Local Access Plans will be developed to ensure all practical measures are implemented to maintain access to businesses as outlined in Section 6.9. The Traffic Manager will work with the Stakeholder and Community Liaison Manager as per the Community and Engagement Management Plan and support the Business Activation Plan (Section 6.10.3) where required.
E17	Alternative pedestrian and vehicular access, and servicing arrangements must be developed in consultation with	Section 6.9	Consultation with businesses that will be impacted by construction will be undertaken in advance of

CoA No.	Condition Requirements	Document reference	How Addressed
	affected businesses and implemented before the disruption. Adequate wayfinding to businesses must be provided before, and for the duration of, any disruption in consultation with the Relevant Council(s) and/or road authority and as outlined in the Business Activation Plan required by Condition E110. The Proponent must make reasonable endeavours to obtain agreement from the relevant affected parties, and evidence of consultation demonstrating this must be provided to the Secretary on request. If access is not deemed to be adequate by the affected business and a dispute ensues, procedures and mechanisms must be followed in accordance with Condition B2.	Section 6.9.1 Section 6.10.3	scheduled disruptions. This consultation, together with Local Access Plans, will ensure alternative pedestrian and vehicular access is provided with adequate wayfinding to businesses. The Traffic Manager will work with the Stakeholder and Community Liaison Manager as per the Community Communication Strategy and support the Business Activation Plan where required. Section 6.9 details the protocols that will be followed to mitigate and manage business access impacts. If issues arise regarding access, protocols will be followed in accordance with the dispute resolution processes outlined in the Community Consultation Strategy (Condition B2).

3.3 Revised Environmental Mitigation and Management Measures

Relevant REMMMs are listed in Table 3-2 below. This includes reference to required outcomes, the timing of when the commitment applies, relevant documents or sections of the environmental assessment influencing the outcome and implementation.

Table 3-2: Revised Environmental Mitigation and Management Measures relevant to this TTAMP

Ref#	Commitment	Timing	TTAMP reference	How Addressed
GEN-1	A construction environmental management plan (CEMP) would be prepared for the construction phase of the project. The CEMP would provide a centralised mechanism through which all potential environmental impacts would be managed. The CEMP would document mechanisms for demonstrating compliance with the commitments made in the Environmental Impact Statement), the submissions report, as well as any other relevant statutory approvals (e.g. conditions of approval, licences and permits). The CEMP would outline a framework for the management of environmental impacts during construction, including further details on the following:	Pre-construction	CEMP	The CEMP provides a central mechanism for the management of all potential environmental impacts. The CEMP has been prepared and will be implemented during construction.
GEN-1	Traffic, transport and access management.	Pre-construction	This Sub-plan	The TTAMP details the framework for the management of traffic, transport and access as part of Infrastructure Works. This Sub-Plan complies with the relevant Conditions of Approval, statutory and contract requirements.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
RC-1	Coordination and consultation with the Sydney Coordination Office and the following stakeholders would occur as required to coordinate interfacing projects: • Department of Planning and Environment • Other Transport for NSW agencies (including Roads and Maritime Services; Sydney Trains and Sydney Buses) • Sydney Water • City of Parramatta Council • UrbanGrowth NSW Development Corporation • Western Sydney University • NSW Health (and its construction contractors) • Land and Housing Corporation • Emergency service providers • Utility providers • Construction contractors • Other stakeholders as required, as advised by Transport for NSW	Pre-construction, Construction	Section 7.2	Ongoing coordination and consultation will occur with the SCO and other stakeholders through the TCG and the TTLG. Additional details are provided in Section 7.2.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
RC-1	Coordination and consultation with these stakeholders would include: • Current and upcoming development applications and precinct master plans • Provision of regular updates to the detailed construction program, construction sites and haul routes • Identification of key potential conflict points with other construction projects • Developing mitigation strategies in order to manage cumulative impacts of the Parramatta Light Rail and other interfacing projects. Depending on the nature of the conflict, this could involve: - Adjustments to the Parramatta Light Rail (Stage 1) construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of other construction projects. - Coordination of traffic management arrangements between projects - Coordination of noise generating activities, such as out of hours works.	Pre-construction, Construction	Section 7.2	Ongoing coordination and consultation will occur with the SCO and other stakeholders through the TCG and the TTLG. External stakeholders will be included as required (dependent on construction activity locations and timing of interfacing works) to manage the potential cumulative impacts. Additional details are provided in Section 7.2.
SE-5	Carry out ongoing consultation and communication with local communities about changes to public transport and local pedestrian and cycle access, including through community events, signage, public notices and provision of regular updates to user groups.	Pre-construction Construction	Section 7.2	Ongoing community communication will occur as part of the Community and Engagement Management Plan to provide regular updates regarding changes to transport networks. Additional details are provided in Section 7.2.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
SE-11	Ensure planning for the temporary full or partial closure of local and regional roads in the study area considers the timing of major events within the study area, for example those at Parramatta Park, Rosehill Gardens Racecourse and Prince Alfred Square.	Pre-construction, Construction	Section 6.10	Planning for road closures will be coordinated to consider major events and minimise the disruption of construction activities. As described in Section 6.10, detailed planning and coordination to be considered in site specific CTTMPs.
SE-12	Alternate public transport access (i.e. buses) would be provided for communities along the T6 Carlingford Line.	Pre-construction,	Section 5.4	A shuttlebus service will provide access between Carlingford and Parramatta, including connections to the T1 Western and T5 Cumberland lines. Additional details are provided in Section 5.4.
NV-6	Opportunities to reduce road traffic noise during construction would be investigated during construction planning, including restricting heavy vehicle movements to standard construction hours and/or to routes with fewer sensitive receivers.	Construction	Section 6.1.3 Section 6.1.6	VMPs will be designed such that vehicle movements are restricted to standard hours and the use of local roads near schools or childcare centres is minimised or limited to strict hours. Additional details are provided in Section 6.1.3. Vehicles will be monitored to ensure they operate within noise limits as per section 6.1.6.
GG-5	Local procurement of construction services and materials would be undertaken (where feasible and cost effective) to reduce fuel consumption for transport. Where practical and reasonable, construction planning would ensure that deliveries are managed in an efficient manner to minimise the number of trips required and therefore reduce the amount of emissions.	Construction	Section 6.1.3	Local procurement will be undertaken where feasible and cost effective (refer to the Delivery Phase Sustainability Management Plan). Vehicle movements will be planned to minimise trips where practical and reasonable. Additional details are provided in Section 6.1.3.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-1	A wayfinding and road signage strategy would be developed and incorporated into the detailed design of the project design. This would include signage to communicate changes in turning / access restrictions, property access, and pedestrians/cyclist routes, and signage within Parramatta CBD to encourage use of alternative routes.	Design	Section 6.15	A wayfinding and road signage strategy will be prepared during detailed design. This would include signage to communicate changes in turning / access restrictions, property access, and pedestrians/cyclist routes, and signage within Parramatta CBD to encourage use of alternative routes. During construction, wayfinding and road signage requirements will be detailed in site specific CTTMPs, subject to the approval of SCO. The nature and form of the changes will depend on each traffic switch, but are likely to involve the use of permanent VMS, temporary VMS, fixed black on yellow guidance/ route signage, and temporary traffic control signage such as DETOUR->.
TT-2	Road safety audits would be completed during detailed design. This includes review of the design of uncontrolled crossings at light rail stops to consider suitable sight distances. If uncontrolled crossing cannot be safely provided, alternative designs would be incorporated into the project. A detailed safety review would be undertaken during detailed design to identify requirements for further responses to manage and reduce the risk of incidents arising from collisions during operation.	Design	Section 6.12	Road safety audits will be conducted during the design and construction of the Infrastructure Works. Road safety audits will be completed by personnel independent to the Infrastructure Works. The process for undertaking road safety audits is outlined in Section 6.12.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-3	The detailed design of the active transport link would: • Be reviewed by Transport for NSW for opportunities to maximise integration of the project with current and proposed bicycle corridors, such as future crossings of the Parramatta River associated with the Camellia Town Centre Master Plan • Be designed in accordance with Cycling Aspects of Austroads Guides (2017 Edition)	Design	Section 1.7 Section 6.6.4	These requirements will be addressed in the Pedestrian and Cyclist Network Facilities Strategy. The strategy will ensure that coherent, visible and safe pedestrian and cycle access is provided throughout the area adjacent to the Project corridor. This strategy will be developed in consultation with the Council(s), RMS, Pedestrian Council of Australia and Bicycle NSW. The various components of the strategy are outlined in Section 6.6.4 This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-4	Staged pedestrian crossing designs in the vicinity of each stop along the alignment would be reviewed during detailed design to ensure they provide adequate pedestrian storage commensurate with the available space.	Design	Section 1.7	This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-5	The Parramatta Light Rail team from Transport for NSW would work with the City of Parramatta Council and the Sydney Coordination Office in the context of its long term strategy for car parking in the local government area. The team would identify appropriate parking management measures (e.g. parking controls or replacement of special parking such as mobility parking or loading zones) for incorporation into the Parramatta Light Rail design, where it is impacting on-street car parking.	Pre-Construction	Section 1.7 Section 6.8	The JV will develop a Parking Management Strategy in consultation with CoPC and SCO. The strategy will be developed prior to the loss of parking and include the elements in Section 6.8. This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-6	The detailed design of interchanges with other modes of transport would be developed to enable easy customer transfer at Parramatta Transport Interchange, Westmead Station and at other significant locations identified for customer transfer. The design would: • Consider accessibility for a range of customer types and abilities • Develop Interchange Operations and Maintenance Plans setting out who owns, operates and maintains each asset within the interchange • Identify walking and cycling catchments and facilities at interchanges • Identify the network service plan post construction • Confirm changes necessary to footpaths, cycleways, passenger facilities, parking, traffic and road access, and integration of public domain to optimise access	Design	Section 1.7	This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-7	During detailed design, the design for the Darcy Road / Hawkesbury Road intersection would be reviewed to determine if additional pedestrian storage capacity is required to meet future demand. This would be supported by pedestrian storage capacity assessments to determine suitable crossing widths and configurations. Identified reasonable and feasible changes would be incorporated into the project design.	Design	Section 1.7	This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-8	During detailed construction planning, liaison would be undertaken with City of Parramatta Council, NSW Health, hospitals and other facilities within the Westmead Health Precinct (including Cumberland Hospital (east and west)) and emergency services to ensure construction staging of the project maintains appropriate access to the hospital precinct and is coordinated with other developments underway within the Westmead Health Precinct. Any potential impacts on the existing road network and internal access (including emergency vehicle access) would also be addressed including alerting emergency services when construction arrangements change. Any identified mitigation and management measures would be incorporated into the project design. UrbanGrowth NSW Development Corporation would also be consulted to minimise impacts of the operation of the light rail on road access and the future road network performance of the Parramatta North Urban Transformation Area, and pedestrian and cyclist access across the alignment. Transport for NSW would consider opportunities to optimise the integration of the light rail into the development, where reasonable and feasible.	Pre-construction Construction	Section 6.9 Section 7.2 Section 7.3	The TTLG and TCG provide a forum for consultation with relevant stakeholders (including CoPC, NSW Health). The access requirements will be detailed in the development of site specific CTTMPs. Access requirements are addressed in Section 6.9. Notification to emergency services is detailed in Section 7.3.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-9	The Parramatta Light Rail team from Transport for NSW would undertake an operational review of the existing local road network in Westmead and Parramatta North precincts in consultation with Roads and Maritime Services, City of Parramatta Council, Parramatta Park Trust and NSW Health to identify measures to minimise the impacts of the Parramatta Light Rail project due to re-direction of traffic onto the local road network. This could include localised capacity improvements (such as the reconfiguration of parking along Caroline Street) and measures to prioritise public emergency access to the Westmead Health Precinct. Reasonable and feasible mitigation and management measures would be considered as part of the detailed design of the project.	Design	Section 6.1	A Network Management Strategy will be prepared by TfNSW in consultation with RMS, SCO and CoPC. The scope of the Network Management Plan is detailed in Section 6.1.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-10	During detailed design, Transport for NSW would consider whether there is an opportunity to consolidate the Bridge Road Bridge and Parramatta North Bridge to provide access for light rail, hospital vehicles and active transport. This would be documented as an options assessment.	Design	N/A	An assessment was made of the potential to re-use the Bridge Road bridge, however it was not feasible. During the tender stage, the bridge service life, structural capacity and the structural capacity of footings/ piles, was determined to be inadequate for required light rail purposes. An assessment was conducted of the options to strengthen and upgrade the existing bridge to meet light rail requirements. However, it is a requirement that access between the Cumberland and Westmead hospital precincts is maintained during light rail construction. The strengthening and upgrading process for the bridge would require its closure, and as such, the consolidation of the bridges was not deemed viable. It was therefore proposed to construct a new bridge adjacent to the existing Bridge Road bridge. This approach was incorporated into the detailed design.
TT-11	Transport for NSW would explore opportunities during detailed design to provide through movements at the New Street / Fleet Street / Factory Street intersection. The goal would be to minimise impacts to local area access during the operation of the project and improvements would be incorporated, subject to impact assessment on final light rail or road network operations.	TBC	N/A	The scope of works and subsequent delivery of these works, is the subject of ongoing discussion and liaison between TfNSW and the JV.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-12	Signal coordination along Factory Street would be considered during detailed design to reduce road vehicle delays during operation.	Design	Section 1.7	This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-14	Signal coordination and phasing would be considered during detailed design to allow for increased pedestrian crossing times: • Along Church Street and Victoria Road, with consideration of staged pedestrian crossings during detailed design • Along other Church Street intersections, Smith Street intersections, and other key intersections across the Parramatta CBD Where required, this would be supported by pedestrian storage capacity assessments to determine suitable crossing widths and configurations. Identified reasonable and feasible changes would be considered for the project design.	Design	Section 1.7	This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-15	During detailed construction planning, Transport for NSW would determine, in consultation with Western Sydney University, a temporary alternative stop location and route for the university's free shuttle service.	Pre-Construction	Section 5.4	A temporary alternative stop location and route will be determined in consultation with Western Sydney University through the TTLG and TCG.

TT-17	In locations where access for local residents, businesses or other organisations to properties is permanently changed as a result of the operation of the project, a local access plan will be prepared. The local access plan will identify the traffic control or other measures to be implemented in the detailed design to provide alternative access. The local access plan will be communicated to the affected parties. Locations identified to date that require consideration include, but are not limited to: • The southern side of Macquarie Street. • Hainsworth Street, Westmead • Tramway Avenue, Parramatta • Alfred Street, Parramatta • North of Grand Avenue, Camellia, where properties are impacted by works on the Sandown Line For impacted owners of properties along the southern side of Macquarie Street the local access plans could include (but are not limited to): • Provision of alternative access location (new or use of an existing alternative available access location), where possible • Provision of temporary offsite parking elsewhere in the Parramatta CBD, if the impacted property is expected to undergo redevelopment • Maintaining current access if it does not have unreasonable impacts on the operation of the project and the property owner (subject to review of traffic volumes and control arrangements)	Construction	Section 6.9.1	Local Access Plans will be developed for all stages and areas affected by the Infrastructure Works. Local Access Plans will be developed in consultation with all affected parties and will consider temporary, permanent access and the staging between these states. The process for developing Local Access Plans is detailed in Section 6.9.1

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-18	Safe pedestrian and cyclist crossings will be maintained or be provided as necessary and practical. A dedicated risk assessment would be completed to identify management measures to ensure safe interaction of the project with the public. This will include: • The existing at-grade pedestrian crossing across Macquarie Street in the vicinity of Arthur Phillip High School. Any identified mitigation and management measures for an at-grade crossing would be incorporated into the project design. Transport for NSW would consult with the Department of Education on the outcomes of the risk assessment and identified responses • The detailed design of the right hand turn from Hassell Street into Harris Street would, where reasonable and feasible, incorporate a safe pedestrian and cyclist crossing of Harris Street to link Robin Thomas Reserve with Hassall Street, and would consider the potential for a future on-road bike path with dedicated bike lanes in Hassall Street (to be delivered by others). Any alternative pedestrian and cyclist provisions would be implemented prior to the removal of the existing pedestrian refuge.	Design Construction	Section 6.6.4	A Pedestrian and Cyclist Network Facilities Strategy will be prepared for the Infrastructure Works. The strategy will ensure that coherent, visible and safe pedestrian and cycle access is provided throughout the Project corridor. This strategy will be developed in consultation with the Council(s), TfNSW, RMS, Pedestrian Council of Australia and Bicycle NSW.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-20	During detailed design, opportunities to facilitate improved east-west crossings of the project alignment for existing and future communities would be explored by Transport for NSW in consultation with City of Parramatta Council. Provision for additional crossings would be safeguarded if any such crossing does not unreasonably impact light rail operation and would be delivered by others / incorporated into the project.	Design	Section 1.7	Development approvals for improved east-west crossings of the project alignment have been incorporated into the design. A Memorandum of Understanding with the City of Paramatta Council including design review and input processes has also been agreed with City of Paramatta Council This commitment has been incorporated into the RVTM and will be addressed as part of the Environmental Design Review Report for the relevant design package (Section 1.7).
TT-22	The Carlingford services bus replacement strategy for the project would be finalised during detailed construction planning, including the identification of any supporting infrastructure at Camellia, Rydalmere, Telopea, Dundas and Carlingford stations.	Pre-Construction	Section 5.4	Replacement bus services will be established prior to the closure of the Carlingford line as outlined in Section 5.4.
TT-24	Existing cycle routes would be maintained or diverted during construction.	Construction	Section 6.6.3	Processes for managing cyclist routes during construction are outlined in Section 6.6.3. Existing cycling facilities will be maintained where feasible and any alternative routes will be established in compliance with Austroads Guide.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-25	To maintain safe motorist, pedestrian and cyclist access where construction works would occur, mitigation and management measures would be detailed in the Construction Traffic Management Plan and implemented during construction. This would include:	Pre-construction Construction	Section 6 Site specific CTTMPs	Relevant mitigation and management measures will be implemented during construction in order to ensure safe motorist, pedestrian and cyclist access. Section 6 outlines the appropriate mitigation measures for construction traffic measures. Additional mitigation measures will be detailed in the site specific CTTMPs.
TT-25	Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers	Construction	Section 6.3.2	Speed awareness signs will be installed to manage the speed of traffic. Variable Message Signs (VMS) will also be utilised to enhance the communication of changed traffic conditions. The mitigation and management measures for speed are outlined in Section 6.3.2.
TT-25	Appropriate controls where vehicles are required to cross footpaths to access construction areas, including manual supervision, physical barriers or temporary traffic signals.	Pre-construction Construction	Section 6.1.3 Section 6.6.2	To ensure the safe movement of vehicles into construction sites, VMPs will be implemented. Further measures will include temporary traffic controls, traffic controllers at access points as well as sign posting under the TCPs. Additional appropriate controls are outlined in Section 6.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-25	Consideration of shared experience educational events that allow pedestrians, cyclists or motorists to sit in trucks and understand the visibility restrictions of truck drivers, and for truck drivers to understand the visibility from a bicycle.	Construction	Section 6.6.4	Consideration would be given to undertaking a public educational event in conjunction with TfNSW, if trend analysis or observation reports indicate that risks exist from PLR vehicles or worksites. PLR tool boxing and pre-start information will be prepared to provide additional information on pedestrian and cycling hazards, and included with VMP's where potential conflicts are identified.
TT-25	Consideration of pedestrian access needs for elderly people, children and people with disability, where reasonably practicable.	Pre-construction Construction	Section 6.6	The access needs of elderly people, children and people with disability will be considered where reasonably practicable. Defined pedestrian access paths and boundaries of work areas will be implemented to provide safe environments for pedestrians. Mitigation and management measures regarding pedestrian access needs for all users are outlined in Section 6.6.
TT-25	Specific construction driver training to understand route constraints, expectations, safety issues and to limit the use of compression braking.	Pre-construction Construction	Section 6.1.2	Drivers will be required to participate in driver training on route constraints, safety issues and compression breaking. Driver responsibilities are outlined in Section 6.1.2.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-25	Safety devices on construction vehicles that warn drivers of the presence of a vulnerable road user located in the vehicles' blind spots and warn the vulnerable road user that a vehicle is about to turn.	Construction	Section 6.1.3	Safety devices will be fitted to construction vehicles to ensure the safe movement of construction vehicles and vulnerable road users. The mitigation and management measures for construction vehicles are outlined in Section 6.1.3
TT-25	Site specific construction traffic management plans and site specific traffic control plans would be prepared and implemented, including mitigation and management responses associated with the temporary closures (including weekend closures) of: • Church Street and Pennant Hills Road. • Church Street and Barney Street. • Church Street and Board Street. • Church Street and Victoria Road. • Smith Street and Macquarie Street. • Church Street and George Street. • James Ruse Drive. • Grand Avenue. • Kissing Point Road.	Pre-construction Construction	Section 1.8 Section 6.1	Site specific CTTMPs will be prepared and implemented during construction. In addition, TCPs will also be prepared and implemented to provide guidance as to where signs and devices are arranged to warn and guide traffic. These plans will include mitigation and management measures regarding the temporary closures of the nominated roads. Further details on the scope of site specific CTTMPs is provided in Section 6.1.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-25	These site-specific traffic management plans would detail:	Pre-construction Construction	Section 1.8 Section 6.1	Site specific CTTMPs will be prepared and implemented during construction. Further details on the scope of site specific CTTMPs is provided in Section 6.1.
TT-25	Site access and associated route and turning movements	Pre-construction Construction	Section 1.8 Section 6.1	Construction vehicle routes for worksites in all precincts will be identified as part of the site-specific CTTMPs. The plans also outline the design of sites to facilitate the turning movements of large vehicles.
TT-25	Potential activities that could result in the disruption to traffic and transport networks, including pedestrian, cyclist and public transport networks and during special events.	Pre-construction Construction	Section 1.8 Section 6.1 Section 6.10	Site specific CTTMPs will outline potential activities that could disrupt traffic and transport networks. The plans will detail any traffic implications and significant impacts that may result from construction activities, particularly disruptions to pedestrian, cyclist and public transport networks during special events. Additional protocols regarding special events are outlined in Section 6.10.
TT-25	The timing to limit disruptions to the road and transport networks.	Pre-construction Construction	Section 1.8 Section 6.1	The site specific CTTMPs will outline protocols to limit disruptions to the road and transport networks. These procedures will aim to isolate work areas and minimise road user delays.
TT-25	The maintenance of access and safety of transport networks, parking and property.	Pre-construction Construction	Section 1.8 Section 6.1	The site specific CTTMPs will ensure the access and safety of transport networks, parking and property is maintained.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-25	Details responses to the management of an event that directly involves or impacts on traffic and transport networks.	Pre-construction Construction	Section 1.8 Section 6.1	An Incident Management Plan will be developed as outlining project response to unplanned and planned incidents. This will be further considered as part of site specific CTTMPs where a change of incident response may be required, including guidance on the management of external events that directly impact the traffic and transport networks.
TT-26	Heavy vehicle construction traffic would be prohibited from using: • Railway Parade, Westmead • Trott Street, North Parramatta • Noller Parade, Parramatta.	Construction	Section 6.1.3	Heavy vehicle movement restrictions will be implemented to prohibit the use of Railway Parade, Trott Street and Noller Parade. Vehicle movement restrictions will be conveyed in the VMPs as outlined in Section 6.1.3 and communicated via Toolboxes, Pre-Starts and ECMs.
TT-28	Hours of when construction deliveries and spoil removal would be undertaken within the Parramatta CBD and Rosehill and Camellia precincts would be determined in consultation with the Sydney Coordination Office and Roads and Maritime Services.	Pre-construction	Section 6.1.6 Section 7.2	Consultation will be carried out with the SCO and the RMS through the TTLG/ TCG to determine hours when construction deliveries and spoil removal will be undertaken in the Parramatta CBD, Rosehill and Camellia precincts. Consultation and coordination will be undertaken through the TCG and TTLG as outlined in Section 7.2.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-29	To maintain property access during construction, mitigation and management measures would be detailed in the Construction Traffic Management Plan and implemented during construction. This would include:	Pre-construction	Section 6.9.1	The JV will aim to maintain existing property access points, but where this cannot be achieved, alternative access will be provided. Mitigation and management measures relating to property access are outlined in Section 6.9.1. Further details will be provided in site specific CTTMPs where appropriate.
TT-29	Use traffic controllers and localised traffic management measures to maintain access through worksites, where practical.	Construction	Section 6.9.1	Where possible, traffic controllers will be utilised, and localised traffic management measures will be implemented to maintain access through worksites. Localised traffic management measures will be communicated to relevant staff through toolbox talks and daily pre-starts. Mitigation and management measures relating to property access are outlined in Section 6.9.1.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-29	Temporary access closures would occur in stages to minimise the duration of closures.	Construction	Section 6.9.1	Any temporary access closures that must be implemented will occur in stages to minimise the impacts on local residents and reduce the duration of closures. All proposed changes to existing access arrangements will be discussed with residents and/or businesses prior to the commencement of works. Mitigation and management measures relating to property access are outlined in Section 6.9.1.
TT-29	Provision of temporary alternative car parking for properties with on-site parking.	Construction	Section 6.9.1	Where properties contain on-site parking and access has been impacted, temporary alternative parking will be provided. All proposed changes to existing access arrangements will be discussed with residents and/or businesses prior to the commencement of works. Mitigation and management measures relating to property access are outlined in Section 6.9.1.

Ref#	Commitment	Timing	TTAMP reference	How Addressed
TT-30	Construction works that occur above or from Parramatta River at the Parramatta River Bridge (e.g. barges) would be scheduled during periods as agreed with Roads and Maritime, NSW Ports Authority and Harbour City Ferries.	Pre-construction	Section 7.2	Consultation with Roads and Maritime, NSW Ports Authority and Harbour City Ferries will determine the scheduling of construction work periods above or from Parramatta River. Consultation and coordination will be undertaken through the TCG and TTLG as outlined in Section 7.1 and 7.2, including Harbour City Ferries and NSW Ports Authority.
TT-31	A strategy for maintaining emergency vehicle access to the Westmead Health Precinct in case of a breakdown along Hawkesbury Road would be prepared in consultation with NSW Health and implemented. The project would be designed to enable emergency vehicles to use the project alignment in an emergency situation during periods of traffic congestion along Hawkesbury Road.	Construction	Section 6.9.3	Access plans will be developed in consultation with emergency services and NSW Health to ensure emergency vehicle access is maintained. Details of how access is to be maintained in the event of a breakdown will be addressed in site specific CTTMPs.

3.4 Third Party Agreements

Relevant requirements as detailed in Third Party Agreements are detailed in Table 3-3 together with a description as to how the matter will be addressed.

Table 3-3: Third Party Agreement Outcomes relevant to this TTAMP

ID Ref#	Commitment	Timing	TTAMP reference	How Addressed
RMS Collaboration Agreement: Clause 10	The Contractor must obtain ROLs in accordance with the requirements of TMC in order to occupy or close traffic lanes or impede the free flow of traffic on a road.	Construction	Section 6.2	The JV will obtain ROLs as per the requirements of Traffic Management Centre (TMC) and coordinate with the SCO.
RMS Collaboration Agreement: Clause 11.1	The Contractor must keep TfNSW regularly informed as to the progress of: (a) carrying out the Works under its Project Contract in accordance with the Consent Conditions; and (b) any Off-Alignment Works. To assist TfNSW in keeping RMS regularly informed as to the progress of the Project and any Off-Alignment Works.	Pre-Construction Construction	Section 7.2	Ongoing coordination and consultation will occur with TfNSW and other stakeholders through the TCG and the TTLG. The Traffic Manager will also provide updates to the Operations Manager for inclusion in the Monthly Progress Report. Additional details are provided in Section 7.2.
RMS Collaboration Agreement: Clause 12(b)	The Contractor must maintain those parts of the road(s) which the Contractor has access to and is working on and parts of the roads on which Works have been completed until the relevant Date of SOM Handover (as that term is defined in the Project Contract).	Construction	Section 6.5	The JV will maintain temporary and permanent roads within the worksite until completion and worksite handover. Maintenance of temporary roadways and detours, new roadways and existing

ID Ref#	Commitment	Timing	TTAMP reference	How Addressed
				roadways are addressed in sections 6.5.1, 6.5.2 and 6.5.3, respectively.
RMS Collaboration Agreement: Clause 12(f)	The Contractor must procure a dilapidation report in respect of any Off-Alignment Works on completion of those works by the Contractor under the Project Contract.	Pre-Construction Construction	Section 6.11	A dilapidation report with be prepared and provided to RMS prior to the use of roads by heavy vehicles as detailed in Section 6.11.
RMS Collaboration Agreement: Clause 16.1 (b)(i)	The Contractor must ensure that any works undertaken in road reserve are undertaken in accordance with 'RMS' road standards.	Construction	Section 3.1.1 Section 3.1.2	All work will be undertaken in accordance with the standards and guidelines listed in Section 3.
RMS Collaboration Agreement: Clause 16.1 (b)(iii)	The Contractor must, where works involve the construction of assets, undertake this in accordance with the published standards of the relevant asset owner current at the time of detailed design.	Construction	Section 3.1.1 Section 3.1.2	All work will be undertaken in accordance with the standards and guidelines listed in Section 3.
RMS Collaboration Agreement: Clause 16.1 (b)(iv)	The Contractor must, where works are on existing assets, undertake this in accordance with the published standards of the asset owner, current at the time of the applicable works or maintenance, to the extent that it is reasonable.	Construction	Section 3.1.1 Section 3.1.2	All work will be undertaken in accordance with the standards and guidelines listed in Section 3 where reasonable to match into existing assets.

ID Ref#	Commitment	Timing	TTAMP reference	How Addressed
RMS Collaboration Agreement: Clause 19 (b)(vi)	The Contractor must cover RMS reasonable costs (by payment upon receipt of a tax invoice) of repairs or replacement of any road or associated infrastructure damaged by the Contractor or its employees or subcontractors or persons under the control of them.	Construction	Section 6.11	The JV will repair or compensate for damage that has resulted from construction of the Infrastructure Works as verified by dilapidation reports.
Roads Act Approval Main Alignment Works: Clause 55	Whilst TfNSW is the project proponent, the Contractor is responsible for the safe and effective development of the Main Alignment Works under the Project Contract.	Construction	Section 6	As detailed in Section 6, the JV will manage traffic associated with the Infrastructure Works such that risks to all road users are minimised.
Roads Act Approval Off Alignment Works: Clause 54	Whilst TfNSW is the project proponent, the Contractor is responsible for the safe and effective development of the Off Alignment Works under the Project Contract.	Construction	Section 6	As detailed in Section 6, the JV will manage traffic associated with the Infrastructure Works such that risks to all road users are minimised.

3.5 Environmental Performance Outcomes

Relevant EPOs are listed in Table 3-4 below. This includes reference to required outcomes, the timing of when the commitment applies, relevant documents or sections of the environmental assessment influencing the outcome and implementation.

Table 3-4: Environmental Performance Outcomes relevant to this TTAMP

ID Ref#	Environmental Performance Outcome	Timing	TTAMP reference	How Addressed
EPO-TT-1 Construction	The project would implement measures to minimise impacts on the road network, including staging.	Construction	Section 6 Section 6.1.1	Section 6 outlines measures that will be implemented to ensure impacts to traffic, transport and access are minimised. Section 6.1.1 details the proposed strategy related to the construction and traffic staging.
EPO-TT-2 Construction	Pedestrian and cyclist safety would be maintained.	Construction	Section 6.6	Additional controls will be implemented to ensure pedestrian and cyclist safety. This will include providing temporary footpaths and crossings. Pedestrian and cyclist safety is addressed in Section 6.6.
EPO-TT-3 Construction	Effective coordination would be carried out to minimise cumulative network impacts.	Construction	Section 7.2	Coordination with relevant stakeholders and agencies through the TCG and the Traffic Transport Liaison Group will be carried out to ensure that the traffic management measures will mitigate cumulative impacts to the network (Section 7.2).
EPO-TT-4 Construction	Access to property would be maintained.	Construction	Section 6.9.1	Existing access to properties will be maintained. Where this cannot be achieved, alternative temporary access will be provided. Property access is detailed in Section 6.9.1.

4 Consultation

4.1 Consultation Requirements under the Infrastructure Approval

In accordance with the CoA A5, this Sub-plan has been developed in consultation with relevant local Councils and agencies (RMS, SCO and Emergency Services).

This Sub-plan will be submitted along with, or subsequent to, the submission of the CEMP, no later than one month before construction.

This consultation has assisted in the development and finalisation of the Sub-plan. Table 4-1 summarises relevant stakeholder reviews and response to review. Detailed consultation log and response to comments are provided in Appendix A.

Table 4-1 Summary of Consultation

Agency	Requirement	Status	Response	Date
SCO/RMS	Provided guidance on Plan structure and regulation. Requested inclusion of site-specific requirements. Remaining comments specified in Appendix A	Addressed	Closed	19/07/2019
NSW Police	Highlighted influence of major events and corresponding impact on emergency services. Recommended coordination with Parramatta Events Group.	Addressed	Closed	08/07/2019
NSW Ambulance	Highlighted single lanes provide minimal space for emergency vehicle transit, pull-off bays should be considered and requested confirmation that project communicating with other construction works in Westmead precinct	Addressed	Closed	08/07/2019
CoPC	Requested clarification on ROL process and inclusion of National Heavy Vehicle Regulator (NHVR) approval	Addressed	Closed	9/08/2019

Agency	Requirement	Status	Response	Date
Western Sydney Health (Part of NSW Health Network)	Highlighted requirement to maintain access on both sides of Campus and nil emergency power available to part of Campus.	Addressed	Closed	08/07/2019
Health NSW – Health Administration Corporation	Requested a rigorous system for collaborative management and planning of disruptions with SCHN is required, especially those within 100m of the hospital entrance.	Addressed	Closed	01/11/2019
Parramatta Park Trust	Requested inclusion as key stakeholder and involvement in various activities directly related to the Park. Requested Haulage Route through Park be removed. Highlighted impacts of increased traffic, including effects on parking and required insertion in applicable planning documentation.	Addressed	Closed	29/07/2019
Cumberland Council	Requested assurance that all Hawksbury Road related works be communicated to Cumberland Council	Addressed	Closed	17/07/2019

5 Construction traffic aspects and impacts

5.1 Purpose

The Infrastructure Works require construction works to be carried out within and adjacent to major arterial/ sub-arterial and local roads in the Westmead, North Parramatta, Parramatta CBD, Rosehill and Camellia and Carlingford precincts. This section summarises the impact of the Infrastructure Works on the surrounding road network and the traffic that interfaces with it. Further details regarding the proposed road network, traffic and access changes resulting from the Project are provided in Chapters 11 to 15 of the EIS and the Construction Traffic and Transport Impact Assessment Report (Technical Paper 2) and requirements arising from SPR Appendix H.

5.2 Impacts to Hospital and Emergency Vehicle Access

Access to Westmead Hospital and the Children's Hospital at Westmead will be maintained during construction. The northbound lane approaching the Children's Hospital at Westmead will be open to traffic at all times. The multi-storey car park access will be maintained throughout construction, with works staged and pedestrian and vehicle access maintained. Two-way traffic between the carpark and hospital main entrance will be maintained for as long as possible, thereafter one eastbound lane will be maintained.

Access within Cumberland Hospital, particularly access to the bridge over Parramatta River, will be maintained at all times during the Infrastructure Works with a new Parramatta North Bridge to be constructed adjacent to the existing bridge on the south side.

Any modifications to the existing access or operations will be proposed through the Project Control Group established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.

Access for emergency vehicles will be maintained at all times.

Where Hawkesbury Road is reduced to a single lane of less than 5.5m a tow truck rescue vehicle and operators will be provided onsite 24 hours a day to clear any lane blockages. During short periods when major construction and loading/unloading activities are underway, it may not be possible to allow emergency vehicles to traverse the full block length. During these times, access to an emergency within the block will be facilitated at an identified access point and diversion routes along the project alignment will be agreed with the emergency services prior to commencing the major construction and loading/unloading activities. Information to be provided will include the timing, location, duration and potential implications for emergency vehicle operations. Measures to facilitate the movement of emergency vehicles through work sites will be outlined in the site specific CTTMPs and discussed at TTLGs as detailed in Sections 6.1, 6.9 and 7.3.

5.3 Road Network Changes and Impacts

A large portion of the Infrastructure Works will be integrated within the existing road network. To accommodate the light rail and public domain infrastructure, changes will be required along the road network, including Church Street, George Street and Macquarie Street. Changes to the road network will include (but will not be limited to):

- Modified or new traffic signals
- Upgrades to intersections

- Pavement works
- Changes to lane configuration and directional flow
- Removal of car parking to accommodate displaced traffic lanes.

The key road configuration changes along and surrounding the alignment of the Project are summarised in Table 5-1 below and are depicted in Figures 5.2a to 5.2h of the EIS. Any proposal to modify these network changes will be subject to consultation initially through the working party of impacted stakeholders, with formal consultation undertaken following submission of CTTMPs to the SCO.

Table 5-1: Key Road Network Changes

Precinct	Key Traffic Impacts
Westmead	• One-lane, one-way traffic in the northbound direction along Hawkesbury Road will be implemented during construction. • Traffic signals at the Hawkesbury Road/Darcy Road intersection be modified. • Caroline Street will require a new signalised intersection. This will require a series of weekend works, which may be up to six months in duration. • Bridge Road will generally have one lane in each direction maintained during construction of the new bridge over Parramatta River. Piled foundations and abutments will be constructed on both sides of the river to support the new bridge.
Parramatta North	• Church Street (between Factory Street and Victoria Road) will become a southbound lane only during construction works following completion of the Road Enabling Works. The section of Church Street between Victoria Road and Market Street will be maintained as a northbound lane during construction. Existing access for the Novotel Hotel will be maintained at all times. • Factory Street will become local-access-only and a cul-de-sac will be constructed at its eastern end at Church Street Intersection to reduce traffic during the peak construction period. • Kerb adjustments will be needed to adjust for widening on Church Street and for bus stops, loading zones, garbage collection and emergency vehicle purposes. • Alternative bus routes will be established to maintain circulation between Pennant Hills Road and Lennox Bridge. • Bus stop changes will be in accordance with Appendix H. • A Traffic Management Plan will be required to accommodate major events at Western Sydney Stadium.
Parramatta CBD	• Works will be staged to minimise impacts to pedestrians and traffic. • George Street (between O'Connell Street and Harris Street) will become a two-lane, two-way street (provided as part of the Enabling Works Package). • Church Street (between Lennox Bridge and Macquarie Street) will become construction and emergency access only in a southbound

Precinct	Key Traffic Impacts
	direction. Property access will be covered in the LAPs developed as part of the site specific CTTMPs. • Macquarie Street will be reduced to one lane during construction. Traffic will be switched to travel eastbound following modification works to Harris Street and Hassall Street Intersection. • Alternative access arrangements are likely to be required for short periods of time where works occur immediately adjacent to properties with a single access point. In particular, temporary local traffic management and alternative access arrangements will likely be required for properties with access along the southern side of Macquarie Street. • George Street (between Harris Street and Alfred Street) will be reduced to one lane eastbound during construction.
Rosehill and Camellia	• Multiple lanes closures will be required on James Ruse Drive, which will need to be scheduled during the lowest traffic periods. • Temporary speed restrictions and lane restrictions will be established on James Ruse Drive during construction of the bridge crossing with a number of temporary full road closures required. • Tramway Avenue will become reduced to one eastbound lane with egress onto Arthur Street during construction. • Maintaining access to the existing properties along the Parramatta River across the existing former Sandown freight Line throughout construction.
Carlingford	• Replacement of heavy rail services on the T6 Carlingford Line with buses until the Light Rail service is in operation. The proposed bus stops facilitating this replacement bus service will need to be designed and constructed with appropriate consideration of the duration of their commission. • Substantial interface required with Sydney Trains to manage the rail assets between Clyde and Carlingford, the Sandown Line. • Temporary speed and lane restrictions will be established on Kissing Point Road Bridge to allow the construction of the new bridge. Lane closures will be staged (inside lanes followed by outside lanes) over a period anticipated to be 18 months. A number of full road closures will also be required for installation of the precast bridge elements over the road. • Major maintenance and strengthening work at the existing Parramatta River Bridge. • Extension of the existing pedestrian underpasses of the rail embankment, south of Parramatta River (James Hardie crossing) and north of Kissing Point Road at Leamington Road across the alignment. • Retaining wall work at Pennant Hills Road, which will require night work or off-peak lane closures.

5.4 Public Transport

The Infrastructure Works will require modifications to the existing bus network and services at the following key locations:

- Westmead – Bus operations and in particular the buses that use Hawkesbury Road, will be affected by the construction works. The North-west T-way buses will continue to operate in Darcy Road with the Darcy Road T-way station maintained as existing throughout the construction period. Any adjustment to the Hawkesbury Road bus stop would be developed as part of site specific CTTMPs and provided to NSW Health for comment as part of the approval process.
- North Parramatta along Church Street and O'Connell Street – Bus operations in the Parramatta North precinct will be affected during Infrastructure Works. Alternative options to using Church Street in North Parramatta include short term temporary diversions.
- Parramatta along Macquarie Street – The operation of the Western Sydney University student shuttle bus services will be impacted during Infrastructure Works as the current bus stop on Macquarie Street will not be accessible. A temporary alternative stop location and route will be determined in consultation with Western Sydney University through the Community Liaison Manager.
- T6 Carlingford Line – Train services will be discontinued at the start of the Infrastructure Works between Camellia and Carlingford. A shuttlebus service will run between Carlingford and Parramatta.

The bus diversions proposed during the Infrastructure Works will require off-corridor road works including changes to signage, parking restrictions, temporary bus stops and minor intersection reconfiguration.

Bus stop infrastructure would include adjustments to footpaths, provision of a sealed waiting/ boarding area, bus flag signage, shelters and other supporting infrastructure as required and agreed with CoPC. Section 6.14.4 of the EIS provides further details of the affected bus routes.

5.5 Construction vehicles and volumes

Construction traffic will include vehicles transporting equipment, materials and spoil, as well as light vehicles. Larger numbers of heavy vehicle movements will likely occur during the main civil construction works when heavy vehicles are required to transport spoil, concrete, equipment, tracks, overhead wiring etc. The EIS estimated heavy vehicle movements for each precinct are detailed in **Table 5-2**. It is expected that the peak level of truck movements will be associated with concrete pours, which will typically be of short duration. The Site Specific CTTMPs will contain an assessment of the heavy vehicle trip generation specific to the work types and work area covered by each of those plans, including assessment against prevailing traffic flows at the time of CTTMP preparation.

The strategy and principles for planning haulage routes, and high-level haul route diagrams, are provided in Section 6.1.6.

Table 5-2: Precinct heavy vehicle movement estimates (EIS, 2017)

Precinct	Daily average[1]	Peak daily average[2]	Peak hour[3]
Westmead	27	137	12
Parramatta North	31	269	24
Parramatta CBD	29	77	7
Rosehill and Camellia	20	227	21
Carlingford	39	136	12
Stabling and Maintenance Facility	96	103	9

[1] Average daily vehicle movements represent the total inbound and outbound truck movements (two-way) for the precinct (excluding testing phase).
[2] Peak average daily vehicle movements include the total inbound and outbound truck movements (two-way) for the precinct.
[3] Peak hour vehicle movements assume the peak average daily volumes are evenly distributed over weekday construction hours (7 am to 6 pm).

5.6 Changes to Public Footpaths and Pedestrian Access

Footpaths adjacent to work sites, particularly sites with high volumes of construction vehicle movements, are likely to require traffic controllers to manage the conflict between construction vehicles and pedestrians. Where work sites have an impact on footpaths, consideration will be given to the requirements of all pedestrians and especially users with specific requirements (e.g. elderly, strollers, disabled).

5.7 Changes to Cycle Paths/ Routes

Alternative major cycle route changes that are required during the Infrastructure Works include the following:

- Hawkesbury Road cycle path (between Railway Parade and Queens Road) will be temporarily impacted during construction
- Harris Street cycle path (between Macquarie Street and George Street) will be temporarily impacted during construction
- James Ruse Drive cycle path will be temporarily impacted during construction of the light rail bridge.

Proposed changes to cycle paths/routes will be detailed in CTTMPs and consultation will be undertaken following submission to the SCO. In addition, proposed changes to the Hawkesbury Road cycle path will be tabled at the Project Control Group (established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW).

5.8 Reduction in Parking

On-street parking and loading zones within the corridor will be affected during construction to provide sufficient work site width and to maximise the number of traffic lanes available. These changes will apply from the commencement of construction in any area and will be permanent in certain locations.

Loading zones, disabled parking, taxi ranks and service vehicle zones impacted by the Infrastructure Works will be relocated, where possible, to the permanent location proposed for these users in adjacent side streets.

The Fennell Street compound will occupy the site of an existing council car park located on the corner of Fennell Street and Church Street. Off-street parking is generally limited in this area and the displacement of these parking spaces will result in an increased demand for on-street parking.

A Parking Management Strategy will be developed prior to any long term adjustments or loss of parking (i.e. greater than 3 months), in accordance with the requirements of E11 of the Condition of Approval for PLR Stage 1 - CSSI 8285.

5.9 Impacts on Traffic Movements

While the resultant impacts of construction traffic on the local road network have been minimised during pre-construction traffic planning, some traffic impacts are unavoidable. During the construction phase, the potential restrictions on existing public roads will include:

- Reduced roadwork speed limits
- One lane alternate (stop/slow) operations
- Lane closures/ reduction in traffic capacity
- Turning prohibitions
- Detours
- Haulage operations and an increase in over-dimension vehicle movements
- Full closure of local roads during bridge construction
- Changes to private property or business access
- Short-term traffic control, comprising contra-flow or traffic detour during installation of pre-cast bridge beams
- An overall increase in the number of vehicles, both light and heavy construction vehicles.

These changes will potentially result in temporary delays, diversions, increased traffic congestion and increased travel times for the public. Furthermore, over dimension vehicles and construction elements may create temporary traffic hazards for other vehicles and road users that will be managed as detailed in Section 6.

5.10 Cumulative Traffic Impacts

A number of construction projects are currently in progress or are due to commence and will be in close proximity to the Infrastructure Works. As such, a number of cumulative construction impacts may occur, resulting in construction fatigue for the public. Cumulative increases in construction vehicle traffic on public roads may result in:

- Potential disruption to access and circulation routes to properties along the alignment
- Additional noise/vibration and air quality impacts on sensitive receivers
- Increased localised congestion from higher numbers of heavy vehicles.

The construction traffic generated within each precinct and the extent of road network changes will inform the management strategies and mitigation measures that will be implemented to minimise the impacts associated with traffic and access.

The impacts of construction traffic generated by each precinct will be assessed as part of the Site Specific CTTMPs, accompanying TCPs and ROLs for any road network changes. Mitigation

strategies to manage the road network and traffic impacts associated with construction are detailed in Section 6 of this Sub-plan.

The construction projects active within Parramatta CBD and surrounding areas is dynamic and as such assessment of construction traffic generation is best undertaken at the time that each site specific CTTMP is prepared. The assessment will include likely trip generation arising from PLR against the prevailing traffic conditions at the time. Where mitigations are required these will be agreed with SCO and outlined in the Site Specific CTTMPs.

5.11 Traffic Modelling

When required by SCO, RMS or the Principal, the JV will conduct traffic modelling and analysis to demonstrate the potential impact of the proposed temporary staging and works. Additionally, the modelling will be used to assist in determining appropriate mitigation measures.

The traffic modelling and analysis will be carried out in accordance with and the requirements of RMS Traffic Modelling Guidelines February 2013 and SPR Appendix H Clause 4. The modelling and analysis will enable the critical assessment of traffic impacts on the road networks and traffic systems from the proposed temporary works.

If models or traffic analysis is required, the JV will include the following:

- Detailed intersection modelling (where appropriate)
- Appropriate network coverage of roads detailed in SPR Appendix H Attachment 1 and any additional roads affected by the proposed works
- Assessment of traffic flow impacts (capacity reductions and traffic redistribution)
- Traffic operation performance results (degree of saturation, rate of delay, level of service)
- Changes to infrastructure, systems, facilities, services, plans and resources
- General and access restrictions to trafficable lanes
- Parking restrictions (clearways, no stopping, no parking, time restricted parking)
- Traffic management restrictions (turn restrictions, no through roads, one-way streets)
- Traffic signal operations
- Impacts of construction staging, both physical and timing impacts
- Traffic volume and travel time data.

6 Construction Traffic Management

6.1 Construction stage traffic management

The JV will plan all construction vehicle movements in accordance with SPR Appendix H and RMS Specification G10, with the aim to minimise the risk to other road users and minimise the traffic generated by the Infrastructure Works.

The types of construction vehicle movements will include:

- Delivery and removal of sheds/temporary offices to site compounds
- Deliveries of materials, supplies, plant or equipment to site
- Transportation of over dimension loads
- Removal of waste material and spoil
- Regular trips by construction personnel in work trucks and utes.

A Network Management Strategy will be prepared by TfNSW in consultation with RMS, SCO and CoPC prior to construction and will determine the appropriate measures to manage any potential impacts to traffic. The Network Management Strategy will include:

- Details of impacts to the network from road closures, directional changes, night works and traffic diversions
- Details of further appropriate network/intersection modelling and analysis undertaken since the EIS and/or Submissions Report was prepared
- Consideration of cumulative impacts from other construction projects
- Details of the required intersection upgrades and traffic management measures by precinct to minimise the impacts identified above
- Vehicular access changes
- Special event management
- Changes to bus services.

The Strategy will focus on the management of construction related traffic impacts and will be provided to the Planning Secretary for information before construction commences. The JV will provide input as relevant and implement the strategy during construction subject to any relevant commercial agreements.

Site specific CTTMPs will be developed by the JV in accordance with this TTAMP and will include TSPs, TCPs, VMPs, LAPs, as relevant for each specific change to traffic conditions. The site specific CTTMPs will be developed to cover the precincts affected by the Infrastructure Works including the surrounding areas where temporary or permanent traffic configuration changes are required. REMMM condition TT-25 specifically requires that the following intersections and roads will be covered within a site specific CTTMP however the scope of areas covered by site specific CTTMPs are not limited to these areas and the will be driven by the requirements of construction staging.:

- Church Street and Pennant Hills Road
- Church Street and Barney Street
- Church Street and Board Street
- Church Street and Victoria Road

- Smith Street and Macquarie Street
- Church Street and George Street
- James Ruse Drive
- Grand Avenue
- Kissing Point Road.

The site specific CTTMPs will comply with the requirements of this plan, SPR Appendix H, the conditions of approval and RMS Specification G10. The following aspects will be included in each plan:

- Proposed traffic staging layouts to facilitate construction and the safe passage of vehicles, pedestrians and cyclists
- Identification of construction vehicle routes for worksites in all precincts, including the design of sites to facilitate turning movements of large vehicles
- Details of potential traffic implications and significant impacts that may result from construction activities
- Protocols to limit disruptions to road and transport networks
- Access requirements for properties, businesses and side streets affected by the construction works through the development of local access plans
- Special events in the immediate vicinity of the work sites and measures to manage road users during the events.

The site specific CTTMPs will be developed in consultation with the SCO, RMS, TfNSW, CoPC, emergency services, transport operators and any other relevant authority. The final site specific CTTMPs will be submitted to SCO and RMS for approval at least 20 business days before starting any activity on the relevant worksite. Where additional information or further clarification is requested, the JV acknowledges that the 20-day assessment period applies from the date the requested details are provided. Further, the JV acknowledges that for any changes to end state TCS plans, or for very complex roadworks changes to TCS plans; additional review time may be required for approval of those TCS plans.

6.1.1 Construction staging

The Traffic Manager in conjunction with the Safety Manager will plan and sequence construction works with the objective to:

- Maximise safety for workers and road users by isolating work areas from live traffic flow
- Maintain existing capacity where possible
- Minimise road user delays
- Restrict traffic impacts to the conditions outlined in SPR Appendix H
- Minimise heavy vehicle movements during peak periods
- Minimise disruptions to pedestrians, cyclists and buses
- Provide appropriate and safe roads and footways for use by pedestrians, cyclists and vehicular traffic.

The effective planning of all construction activities is the key to achieving these objectives. The Construction Plan has divided the alignment into three key areas, with each area further sub-divided into Construction Area Plans (CAPs) as shown in Figures 6-1, 6-2 and 6-3. Each CAP will have a number Work Packs which will include the site specific CTTMPs. Each site specific CTTMP will detail the stages in which temporary traffic arrangements will be prepared.

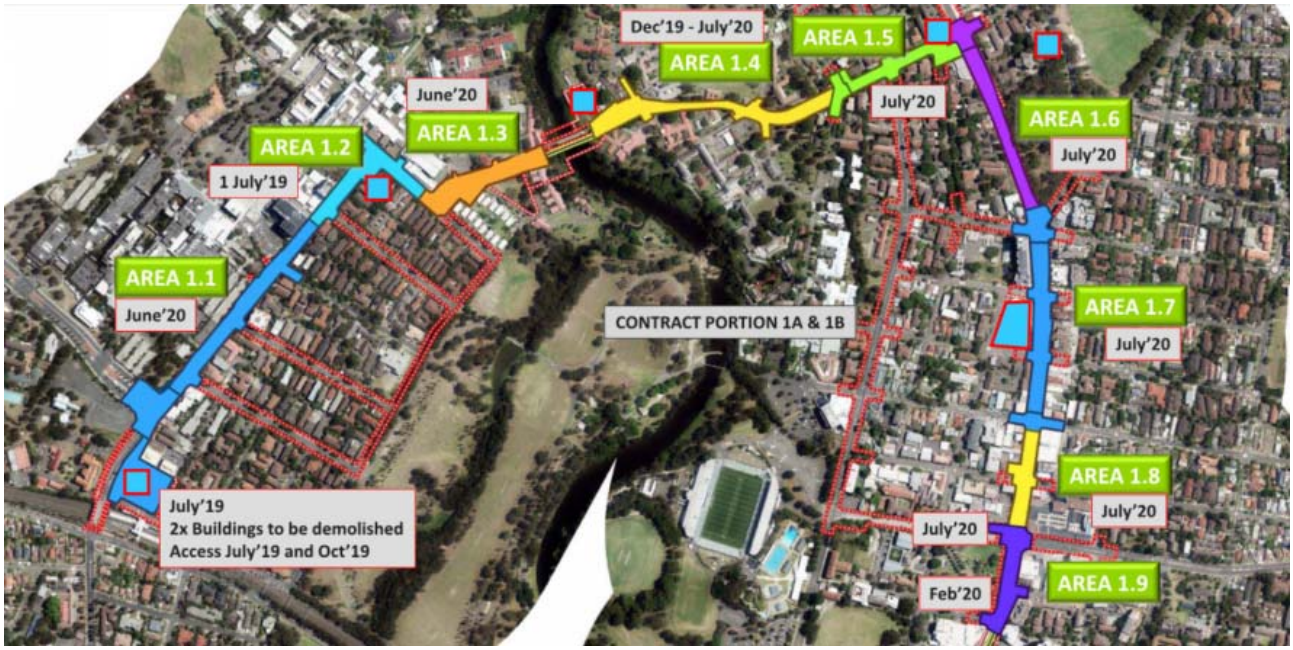

Figure 6-1 Area 1 Construction Sections

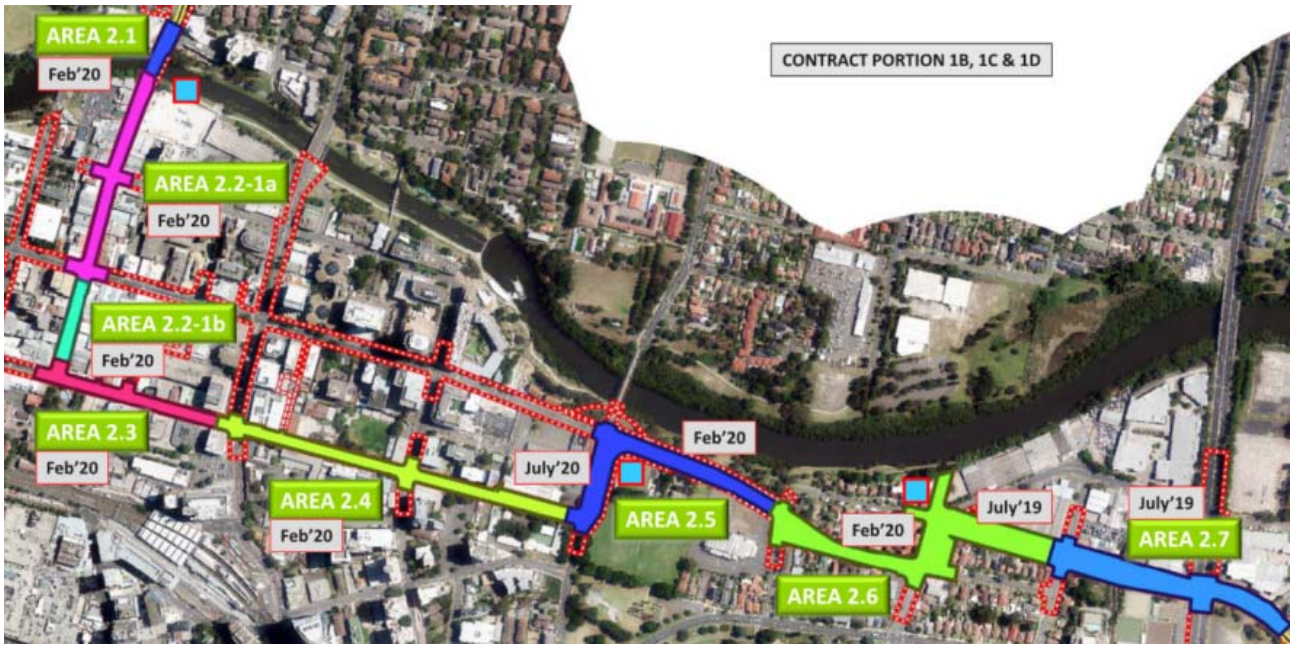

Figure 6-2 Area 2 Construction Sections

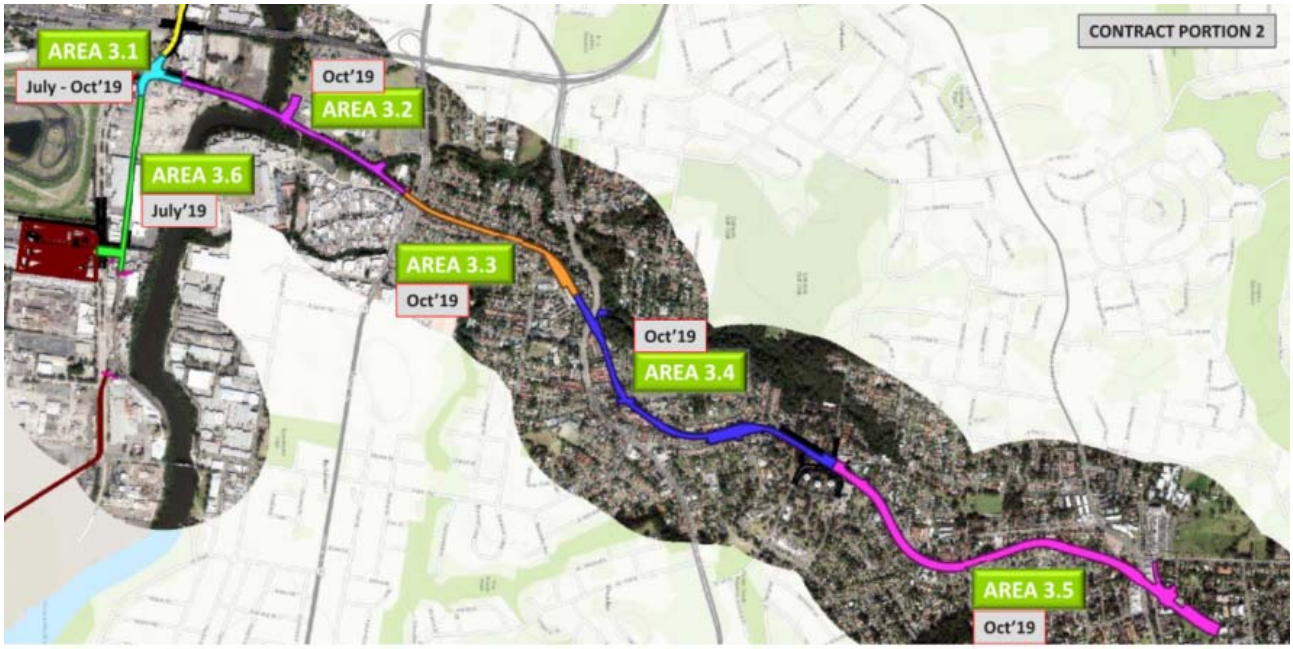

Figure 6-3: Area 3 Construction Sections

The construction programme and staging for each CAP will evolve over the course of the project subject to detailed construction planning. At a high level this will be driven by the access dates to each area of the corridor and it is anticipated that the work will fall into the blocks shown below. It should be noted that works in each area are subject to the prior completion of Enabling Works packages and delays to these may change the staging shown. Detailed programmes and staging of each area will be provided in the site specific CTTMPs.

Table 6-1 Construction Area Staging

Block	Construction Area Plan	Contract Portion	Area	Access Date
1	Westmead	1A	1.2	Jul-19
	Parramatta East	1D	2.7	Jul-19
	Sandown Line	2	3.6	Jul-19
2	Camelia	2	3.1	Oct-19
	Camelia	2	3.2	Oct-19
	Dundas	2	3.3	Oct-19
	Telopea	2	3.4	Oct-19
	Carlingford	2	3.5	Oct-19
	Rosehill	-	NA	Oct-19
3	Cumberland	1A/B	1.4	Dec-19
4	Parramatta West - Eat Street	1C/D	2.1	Feb-20
	Parramatta West - Eat Street	1C/D	2.2-1a	Feb-20

Block	Construction Area Plan	Contract Portion	Area	Access Date
	Parramatta West - Eat Street	1C/D	2.2-1b	Feb-20
	Parramatta West - Macquarie Street	1D	2.3	Feb-20
	Parramatta West - Macquarie Street	1D	2.4	Feb-20
	Parramatta East	1D	2.5	Feb-20
	Parramatta East	1D	2.6	Feb-20
5	Westmead	1A	1.1	Jun-20
	Cumberland	1A/B	1.3	Jun-20
	North Parramatta	1B	1.5	Jul-20
	North Parramatta	1B	1.6	Jul-20
	North Parramatta	1B	1.7	Jul-20
	North Parramatta	1B	1.8	Jul-20
	North Parramatta	1B	1.9	Jul-20

All temporary traffic control arrangements will be in accordance with SPR Appendix H, RMS Specification G10, RMS Traffic control at worksites manual, and AS 1742.3 Manual or uniform traffic control devices – traffic control for infrastructure works on roads.

6.1.2 Driver responsibilities

All drivers employed by the JV, whether direct employees or contractors, have a responsibility to drive safely, and comply with State road regulations, the Australian Road Rules and any other directives. Specific responsibilities include:

- Drivers will exercise care at all times. Special care will be taken when exiting and entering traffic flows, and whilst travelling within the construction site
- Drivers will comply with requirements of the VMPs developed for each precinct
- Drivers will aim to reduce the impacts of noise and light, from vehicle movements, e.g. avoiding unnecessary and excessive use of horns and compression breaking
- During inductions, heavy vehicle drivers will be provided with VMPs and the emergency response plan for construction traffic incidents
- Drivers will be required to participate in specific construction driver training including toolbox talks. Training topics covered will include VMPs, route constraints, safety issues, driver expectations and limiting compression breaking.

6.1.3 Plan vehicle movements

The JV acknowledges that attention must be given to the safe movement of construction vehicles when planning construction activities. Construction vehicle movements for each phase of work will:

- Comply with all relevant environmental approvals and the Project Deed
- Minimise the number of vehicle movements by balancing earthworks and recycling excavated materials
- Minimise the number of access points and ensure access points do not adversely impact on existing intersections, facilities or developments
- Minimise the need for heavy vehicle movements outside of standard construction hours
- Manage deliveries efficiently to minimise the number of trips required and therefore reduce emissions
- Establish stock piles at locations that minimise travel distances and impacts
- Coordinate staging, vehicle movement and scheduling, equipment and resourcing
- Minimise parking on public roads and utilise the light rail corridor for construction vehicle and staff movements to the greatest extent practicable
- Prevent idling or queuing on public roads by using compounds as marshalling and staging areas for construction vehicles
- Minimise use of routes on local roads that directly pass schools or childcare centres, or where no alternative route is available, restrict heavy vehicle movements between 8:00am and 9:30am and between 2:30pm and 4:00pm Monday to Friday, during the school term
- Access construction sites from arterial roads and the rail corridor to the greatest extent practicable
- Adhere to the nominated haulage routes and relevant heavy vehicle restrictions.

The above will be considered and managed through VMPs. The VMPs will show travel paths for trucks at key points on routes remote from the construction site such as places to turn around, accesses, ramps and side roads.

Construction heavy vehicles would be expressly prohibited from using Railway Parade Westmead, Trott Street, Parramatta and Noller Parade, Parramatta except under the following circumstances and in consultation with CoPC;

- Access to an address that is only accessible via the utilisation of the nominated streets (e.g. early stages of demolition of 145 Hawkesbury Road may occur via the rear access point in Ashley Lane which is a one-way road accessible via Railway Parade)
- Activities are required to be undertaken on the nominated streets (e.g. utility relocations).

The routes to be used by construction heavy vehicles would be outlined in the site specific CTTMPs prepared for each stage of work.

All construction spoil haulage vehicles, and construction plant will be clearly marked as part of the CSSI to enable identification within at least 50 metres of the vehicles and plant.

The majority of heavy vehicle movements will be associated with the removal of spoil and other materials and the delivery of construction materials to construction sites. To minimise the need for queuing in the local road network, compounds will be used as marshalling and staging areas for heavy vehicles. Trips will be managed by radio communication between construction personnel and truck drivers. Monitoring will be completed by the Traffic Manager to confirm compounds are of sufficient size.

Where feasible and cost effective the JV will aim to locally procure construction services and materials to reduce fuel consumption for transport.

Additional controls and measures will be applied to mitigate the risks associated with hazardous movements including:

- Restrict the practice of specific movements (e.g. turning bans)
- Provision of permanent major traffic controls and devices
- Installation of temporary traffic controls, including manual traffic controllers at accesses
- Provision of adequate sight distance and approach visibility, and signposted accordingly
- Installation of deceleration, acceleration and turning lanes outside of the through lanes
- Educating drivers
- Using spotters for reversing movements
- Installation of warning devices on articulated heavy vehicles to warn drivers that a road user is located in the vehicle's blind spot and warn the road user that a vehicle is about to turn
- Installation of non-tonal reversing beepers on all construction vehicles
- The application of VMPs.

The queueing or parking of heavy vehicles on approach to worksites can pose stakeholder concerns regarding noise or restricted access. The JV will minimise parking or queueing on public roads to the greatest extent practical by:

- Ensuring Subcontractors are advised in writing of the environmental requirements and the Planning Approval conditions (through contracts) and any other applicable Authority requirements, prior to commencing any work
- Undertake appropriate monitoring of each Subcontractors environmental protection measures to ensure that the specified environmental protection requirements are effectively implemented and maintained
- Require delivery drivers/ companies to read and sign a Drivers Code of Conduct to ensure they are aware informed of the environmental and compliance obligations under the terms of this approval and how their compliance with these requirements will be monitored.

Site supervisors and the JV Traffic Foreman will undertake daily inspections and advise incorrectly parked vehicles as required.

Tthe above obligations will be monitored by the Environment and Sustainability team through inspections, audits and reporting requirements as per Section 3.8 of the CEMP.

Any necessary corrective or preventative actions identified during inspections or auditing will be communicated to contractors via toolbox talks and addressed through contractor performance management processes.

6.1.4 Construction site traffic management

Whilst driving on construction sites there are a number of hazards a driver may experience, including rough surfaces, excavations/embankments, low clearance, other larger plant and existing infrastructure, among others. Of equal importance is the safety of unprotected construction personnel working within the construction site. For each phase of work, the JV will ensure that:

- A risk assessment is conducted for all work activities and vehicle movements
- VMPs are developed for all regular vehicle movements
- Regular toolbox meetings are delivered to discuss on-site vehicle movements and changes to work areas
- All plant are fitted with flashing yellow lights, non-tonal reversing alarms, horns and two-way radios
- Access tracks are clearly defined and sign posted

- Pedestrian tracks and crossing points are defined and clearly sign posted
- Where possible, large items of plant, such as scrapers are separated from smaller plant items
- Where possible, workers do not operate within three metres of moving plant
- Spotters and / or Traffic Controllers are positioned when workers are operating in close proximity to access tracks and plant
- Appropriate warning signs are installed on the approach to hazards or conflict points
- Where necessary, appropriate traffic controls are installed.

6.1.5 Site compound traffic management

Construction access to compounds and worksites will be outlined in the relevant site specific CTTMP. Vehicles involved in the Infrastructure Works will only enter, operate within, or exit from a traffic flow in a manner which does not endanger or restrict other road users and under suitably designed and appropriate traffic control measures. The JV will seek to provide access/egress to construction sites via the arterial road network wherever possible. Worksite access and egress arrangements will be indicated on CTTMP staging plans.

Pedestrian access to the work sites will be provided at all locations. Where possible and practicable, the JV will separate the workforce pedestrian routes from general public right of ways. The JV will also facilitate bicycle access to the work sites and will provide onsite bicycle parking facilities where possible.

The following management and mitigation measures shall be implemented where reasonable and feasible at all construction compounds and other ancillary facilities associated with construction:

- Compound access points will be developed with appropriate consideration of access requirements for adjacent properties and businesses
- Staging plans will be prepared for any ongoing changes to the traffic environment associated with compound use and establishment
- Access for emergency vehicles and to fire-fighting equipment will be maintained, or where modified will be done so in consultation with emergency services.

6.1.6 Construction traffic routes

The JV will plan all vehicle movements to minimise the impact on the road network. Where possible, movements will be limited by reusing excavated materials onsite and therefore reducing the need for off-site transportation.

When on-road haulage operations are required, the JV will, for each phase of work (eg utility relocations, concrete pours, etc):

- Conduct a traffic analysis to estimate the number of vehicle movements and assess the potential impact on the road network
- Develop a route that maximises the use of the arterial roads and minimises the use of local roads (using shortest route viable to arterial road network)
- Assess the route and determine the potential impacts on existing developments / traffic generating facilities (such as schools and child care facilities, shopping centres), intersections and Local Area Traffic Management (treatments that influence vehicle operation to create safer and more liveable local streets) etc
- As required, consult with Local Councils, SCO and key stakeholder via the TCG
- Select haulage vehicles that can safely negotiate the route
- Where possible, avoid movements during peak periods

- Develop a detailed VMP and toolbox all drivers
- Ensure the fleet are regularly maintained.

Consultation will be carried out with SCO and RMS through the TCG to determine appropriate hours for construction deliveries and spoil removal in the Parramatta CBD, Rosehill and Camellia precincts. Where changes to the agreed delivery times are required, further consultation will be carried out. As no heavy vehicle storage is allowed in the CBD, a layover area to the north or east of the sites will be determined based on current usage, arterial road access and travel times.

During haulage operations, the JV will conduct regular monitoring of various access, egress and haulage routes of the JVs traffic plant and equipment to ensure that:

- Operations are complying with the CoA, REMMMs and requirements of this TTAMP
- Haulage vehicles are travelling along routes that have been agreed for use with road authorities during the specified times for travel
- Haulage operations are not causing significant traffic congestion throughout the road network
- The VMPs are being followed
- Haulage vehicles are fitted with appropriate warning devices
- Construction vehicles and plant are fitted with identification signage
- Drivers are meeting their responsibilities (e.g. noise limitations)
- All necessary TCPs are installed
- The required vehicle and access point environmental controls are applied.

If haulage operations or other construction activities are affecting the free flow of traffic or the operation of the public transport network, the JV will immediately notify the SCO and provide advice on the likely impact of the matter. When requested by the SCO or TfNSW, the JV will provide assistance to restore the free flow of traffic.

The nominated EIS haulage routes are shown in Figures 6-3 through 6-7; and these will be reviewed during preparation of site specific CTTMPs, which will contain the detailed haulage routes for the works being undertaken at each stage/ location of construction.

Where the site specific CTTMP indicates that impacts will exceed those predicted by the EIS (e.g. significantly more vehicle movements or excessive disruption) traffic modelling may be utilised to quantify the impact. The change of scope process will then be followed as detailed in Section 3.12.2 of the CEMP.

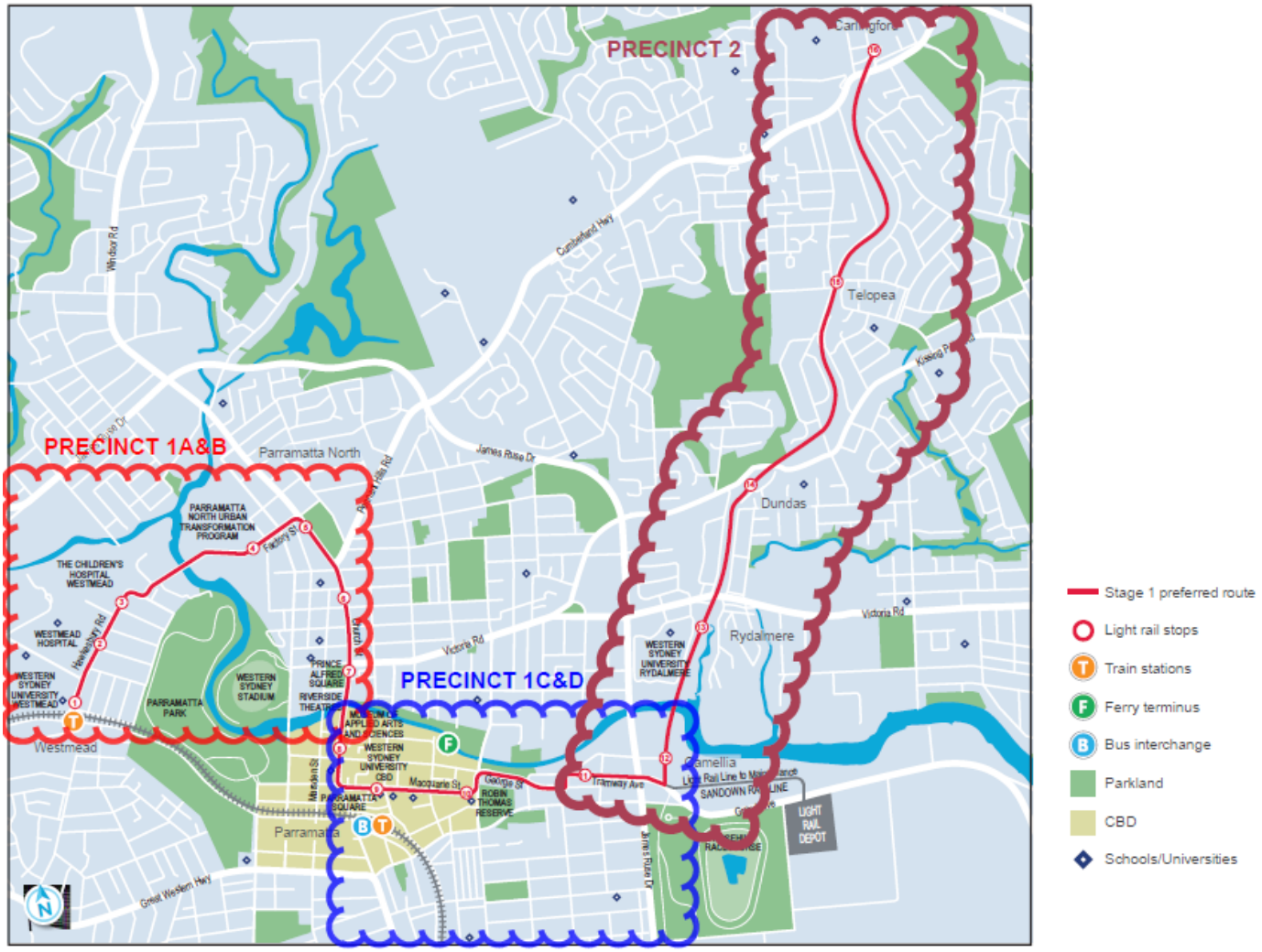

Figure 6-4 Route Map Indicating Contract Portions

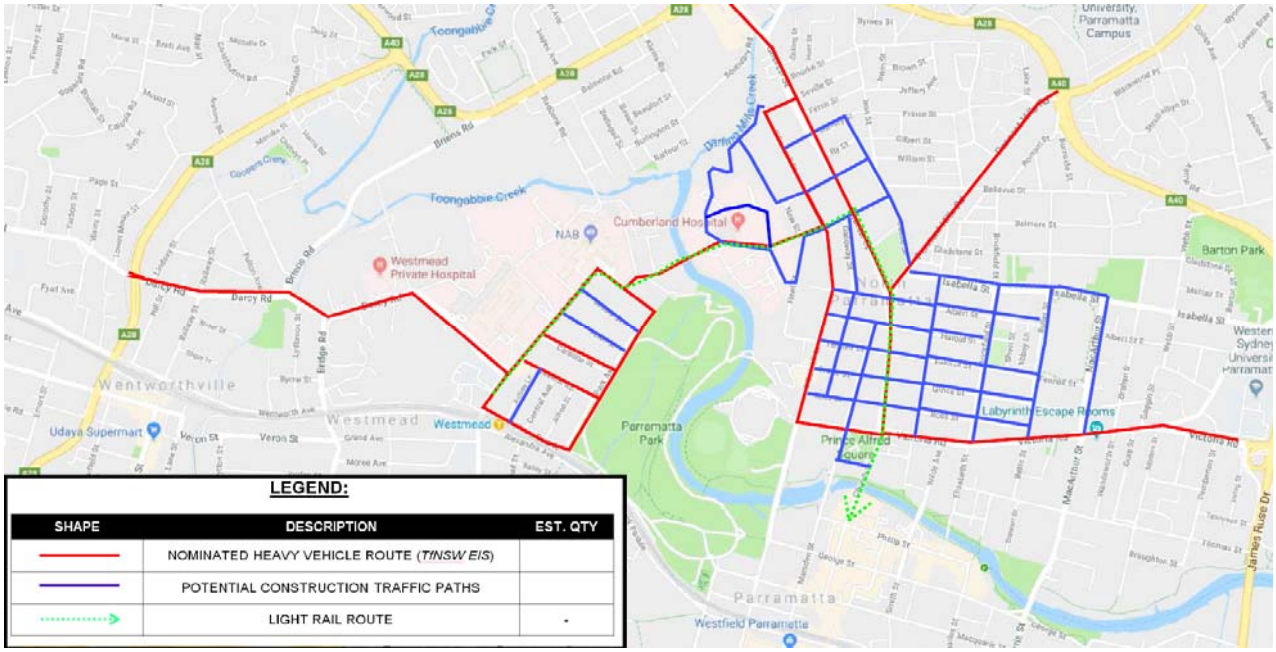

Figure 6-5 Identified Haulage Routes - Portion 1A & 1B (Main access via Darcy Rd, Church St & Pennant Hills Road)

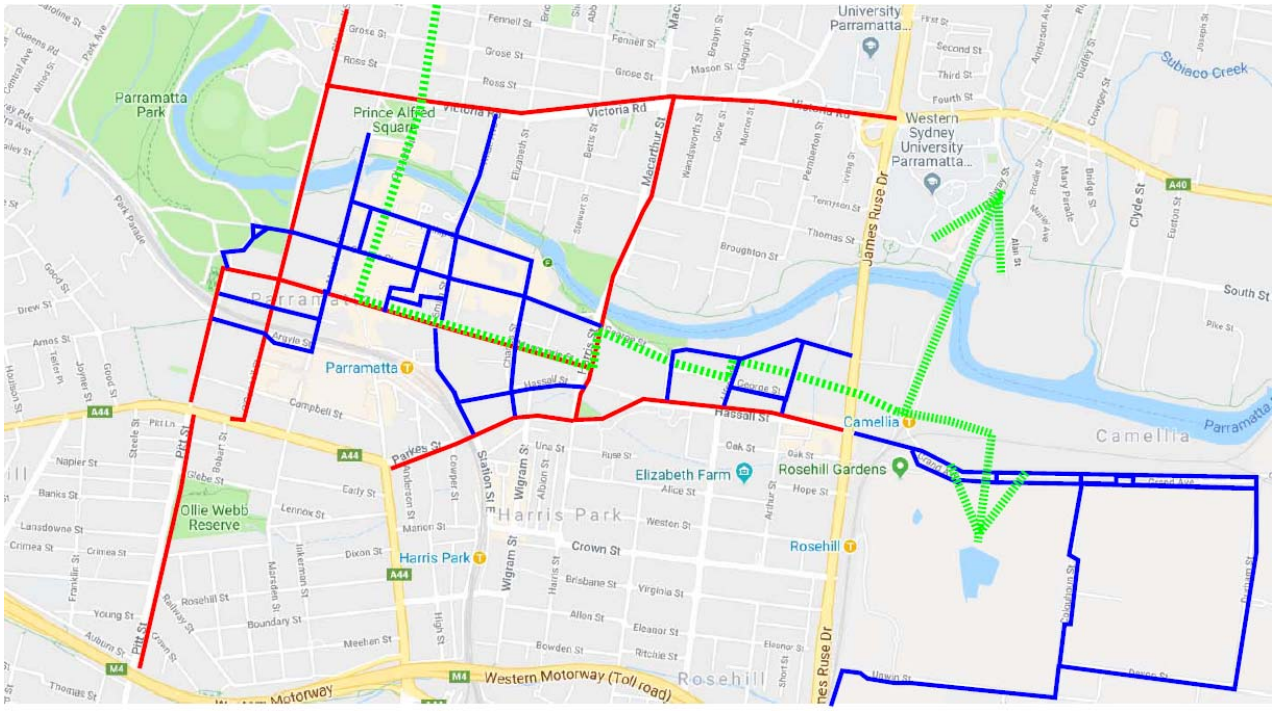

Figure 6-6 Identified Haulage Routes - Portion 1C & 1D (Main access via Church St, MacArthur St, Victoria Road, Pitt St and Parks/Hassall St)

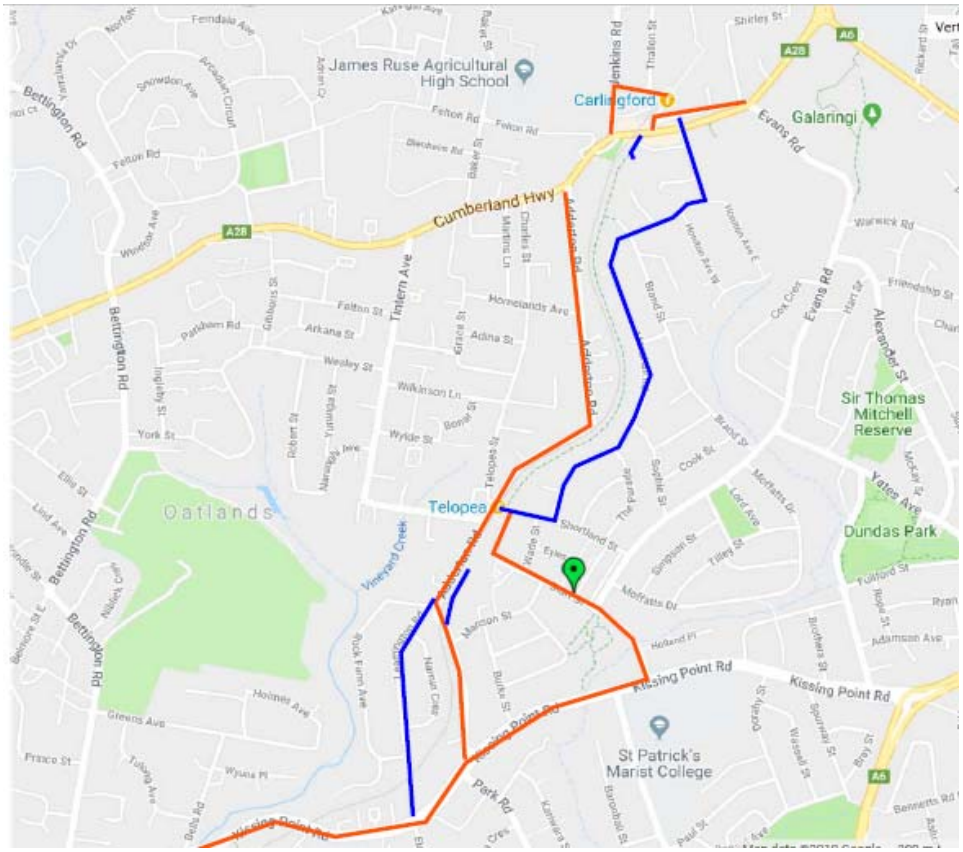

Figure 6-7 Identified Haulage Routes - Portion 2 (Main access via Adderton, Cumberland Highway and Kissing Point Rd/Sturt St)

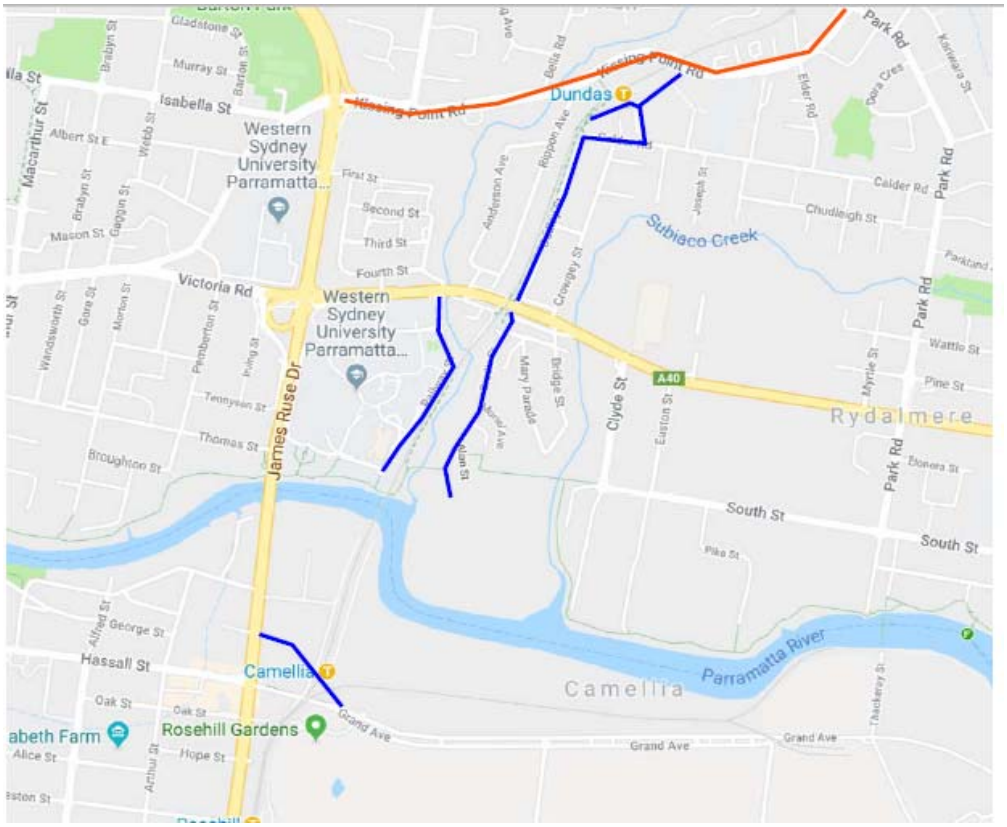

Figure 6-8 Identified Haulage Routes - Portion 2 (continued – Main access via Kissing Point Road)

6.1.7 Manage deliveries

All delivery drivers and subcontractors will be provided with the JV's policy on deliveries to worksites and offices which will consist of, but not limited to the following:

- All drivers making deliveries to any of the JV's construction sites or site compounds will be provided the relevant VMP that indicates the approved routes for construction vehicles
- Traffic warning signs will be installed on approaches to each construction access points in accordance with approved TCPs or traffic staging plans
- All construction access points (gates) will have specific numbers and project-specific gate signs will be installed at every access point
- All drivers will be instructed regarding gate numbers, approved access routes, timing of deliveries and parking area on-site
- Queuing of delivery vehicles outside the construction site before construction hours will not be permitted; only approved roadside lay-bys are to be used by delivery vehicles
- All deliveries will be planned to be carried out during the approved construction hours
- Delivery of any over-dimension loads will be in accordance with conditions stated in RMS permits. It is noted that certain over dimension loads may be delivered outside of construction hours as a result of RMS permits, and this will be done in accordance with the Out of Hours Protocol (refer to the Noise and Vibration Management Sub-plan).

Delivery drivers would also be provided with copies of VMP's as part of order/ delivery instructions. VMPs will reflect the requirements of CoA E5(d) by avoiding local roads and residential streets to the greatest extent practicable. It is noted that almost all construction worksites involve the use of local roads to an extent. Exceptions may include those worksites located on Harris St, Church St directly adjacent to Victoria Road, Church St directly adjacent to Pennant Hills Road, subject to site specific CTTMP approval.

Access to worksites directly from arterial roads, even if available, is almost always less safe than from side roads, and direct access is highly unlikely to be supported by RMS on safety grounds. However, in all cases, access via local roads would be minimised, and routes adopted that provide the shortest and least impactful journey.

Delivery drivers/companies are required by the JV to read and sign a Drivers Code of Conduct to ensure they are informed of the environmental and compliance obligations under the terms of the Planning Approval and how their compliance with these requirements will be monitored. These obligations are monitored by the Environment and Sustainability team through inspections, audits and reporting requirements (refer to CEMP Section 3.8).

The JV will implement various environmental controls and measures to mitigate the impacts to the surrounding environment and road network. ECMs will be prepared prior to the commencement of relevant construction activities and will incorporate adequate and appropriate mitigation measures and controls.

As detailed in the CEMP (Section 3.2.4), ECMs are designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions. ECMs will be revised throughout construction in consultation with relevant members from the project team, and concurrence provided by the TfNSW Environment and Planning Manager.

Environmental controls, as detailed in the Soil and Water Management Sub-plan, Air Quality and Dust Management Sub-plan and Noise and Vibration Management Sub-plan include:

- The compulsory covering of all loads prior to leaving the site
- Provision of suitable wheel cleaning facilities at major access points

- Dust suppression measures at loading/unloading areas and along the route
- Monitoring of haulage vehicle noise to ensure compliance with the vehicles manufacturer's specifications
- Clean-up crews, including street sweepers.

6.2 Road occupancy

Road occupancy is defined as any activity that shall or is likely to obstruct or have effect of restricting, closing, interfering with or obstructing the free flow of traffic on any lane or shoulder of a public road, any part of temporary Works opened to traffic.

Except in the case of an emergency, or when directed by Police, TfNSW or Emergency Services, the JV will obtain an ROL in accordance with the TMC Road Occupancy Manual prior to the commencement of any works which:

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

The ROL process will be applied where works will not result in a change in the existing site conditions after the completion of the works activity – i.e. traffic or footpath conditions return to the existing conditions at the end of the occupation. Examples where we will utilise the ROL process include utility service relocations, geotechnical investigation works, tree trimming, or any other work activity that is short term in nature. ROLs will be used prior to the commencement of full block occupations under a Construction Area Plan. Construction activities that permanently alter existing traffic conditions and the site establishment for full block occupations will be undertaken using the CTTMP process.

An emergency is defined 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. During emergency situations, the JV will immediately comply with any instructions from the NSW Police Service or a relevant Authority to re-open a lane, shoulder, footpath or shared path without delay, whether or not that lane, shoulder, footpath or shared path was closed by prior agreement.

In the event that construction works create a requirement to undertake emergency work, the JV will contact the TMC Transport Operations Room immediately and follow staff instructions.

6.2.1 Identify the road authorities

The road authorities responsible for roads affected by the Infrastructure Works depend on the classification of the roads and whether the section of the road is affected by RMS WAD works. The roads and road authorities are outlined in Table 6-1. The JV will liaise with these road authorities and other stakeholders via the TCG/ TTLG during the delivery of the Infrastructure Works.

Table 6-2 Roads and Road Authorities

Classification	Road Authority
State Roads	RMS
Regional Roads	Local Council Authority (CoPC, Cumberland Council) / RMS
Local	Local Council Authority (CoPC, Cumberland Council)

Transitway	RMS

6.2.2 Lane closure & road occupancy submission procedure

Any ROL application that will require the occupation of the roadway will be sent to TMC using the OPLINC (Online Planned Incident) System.

The TMC is responsible for processing and approving ROLs. The JV will submit all ROL applications through OPLINC at least 10 days prior to the relevant road occupancy.

Where applicable, works limited to a footpath or shared path, will be approved by SCO with notification sent to the relevant Local Council for their information.

To obtain an ROL for works affecting existing bus T-Way or works that require access through the T-Way, access protocols will be agreed with RMS, TMC, SCO and Bus Operators. The JV will adhere to the agreed protocols during the delivery of the Infrastructure Works.

The JV will check for any upcoming special events prior to submitting ROL applications for approval.

It should be noted that road occupancy requests must comply with the various road safety and traffic management principles outlined in this Sub-Plan. The duration of occupation for the ROL will be agreed with SCO prior to the application being made to TMC. In the event that the ROL is rejected for occupancy during standard hours, approval to conduct works outside standard hours will be sought in accordance with the Out of Hours Protocol (refer to the Noise and Vibration Management Sub-plan).

New TCPs or ROL requests that fall outside of standard operating hours are presented to SCO representatives at the TCG forum. Feedback is provided as required, prior to submitting ROL applications and TCPs to TMC.

6.2.3 Extensions of lane closure & road occupancy approvals

All road occupancies will be subject to the specific period of operation stated on the approved ROL and conditions on obtaining the other necessary approvals.

The TMC has limited the maximum period of a ROL for up to 6 months. To obtain extensions, the JV will be required to re-submit a completed ROL Application Form with a copy of original TCP, quoting the previous ROL number.

If the original lane closure and road occupancy submission is to be altered or changed, (e.g. change to times, TCP or proposed occupancy, significant change to work type etc.), a new ROL submission will need to be prepared.

The JV will be responsible to ensure the validity of each approved lane closure and road occupancy, thus regular monitoring of approval expiry dates is essential. The Traffic Manager will maintain a database of road occupancy approvals and relevant conditions of approval.

6.2.4 Authorisation limitations

Generally, in accordance with the TMCs requirements, the responsibility for implementation, coordination, and compliance with the lane closure and road occupancy approvals remains with the JV and specifically, the Traffic Manager. The TMCs granting of the approval does not:

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

6.2.5 Unplanned Lane Closure

In the event of an unplanned closure of a lane or a restriction in the flow of traffic, the JV will immediately advise the TMC representative of the nature of the closure or restriction and of the schedule for reopening the lanes as quickly as possible.

The JV will supply and install regulatory traffic control devices and remove them when the devices are no longer required in accordance with the requirements of the relevant Authorities, and as specified in the ROL.

In the event that an unplanned lane closure is required as a result of emergency construction works, the JV will follow emergency works procedures, including notifying the Environmental Representative (ER) of the need for works and associated lane closure.

6.3 Speed management

Temporary roadwork speed limits are one of many traffic controls that the JV will implement to manage the speed of traffic approaching and passing through a work site. The JV is conscious of the potential for speed reductions over long distances, to have negative impacts on road user travel times.

When considering the use of a roadwork speed zone, the JV will;

- Ensure they are clearly delineated and capable of being enforced
- Position speed signs away from other traffic control signs and devices
- Ensure they are only used while road works are in progress or the lower speed road conditions exist.

6.3.1 Speed Zone Authorisation (SZA)

An application to TMC will be made for any proposed temporary adjustment to speed limits as part of an ROL application.

Where speed zone changes are proposed for longer duration occupations, the speed signage and pavement marking devices will be shown in the traffic staging plans as part of site specific CTTMPs and submitted for the approval of SCO.

6.3.2 Construction Speed Zone

In order to maintain appropriate speed limits through some of the work zones, the use of safety barriers will be required to protect work and workers, as well as road users from worksite hazards.

When night works are required, special consideration will be taken to determine changes in the speed limit depending on the location and type of works.

When working adjacent to traffic in side streets, the speed limit selection will be based on the following criteria:

- Degree of vehicular and pedestrian conflicts
- Type and extent of the work
- Characteristics of the road and proximity of workers to passing traffic.

The following strategies may be implemented to encourage compliance with roadworks speed limits:

- Utilisation of existing speed cameras, if available
- Use of Speed Advisory Boards or ‘Speedcheck’ speed advisory signs which record and flash the speed a driver is travelling at, then switches to “Slow Down’’ if the driver has exceeded the speed limit

- Use of portable VMS to enhance advanced warning sign posting and provide changed traffic condition information to road users
- Delineation and traffic control devices to maintain the perception of an active and constrained roadworks environment
- Not installing unduly low speed limits or maintaining lower speed limits when they are no longer necessary.

Police presence to enforce speed zones can be employed as required as per TDT 2009/07 (Technical Direction - Police Speed Enforcement or Presence on RMS Work Sites). The Traffic Manager should contact the Police Traffic Coordinator at an early stage of the Infrastructure Works. Enforcement might include marked police vehicles patrolling the construction site and/or the inclusion of a stationary marked police vehicle with an operating flashing blue light positioned within the construction area or, provision of police enforcement facilities.

6.4 Traffic Control Devices

6.4.1 Signposting and delineation

Signage, VMS, pavement markings and retroreflective raised pavement markers (RRPMs) will be used during temporary works to inform, direct and control road users. These will be installed as required by the TSPs and as detailed in the approved TCPs to mitigate hazardous movements and conflict points.

The signage markings and RRPMs will be used in accordance with RMS Specifications RMS R141 or RMS 145, RMS R142 and RMS R143, to the same standard as for permanent work. The VMS used by the JV will be portable solar powered VMSs complying with AS 4852.2. The sizing of VMS will depend on the constraints of the installation location and prevailing speed of traffic, however wherever possible Size C boards will be used.

Pavement markings for all temporary works will be waterborne paint or for short duration installations line marking tape, unless specified otherwise. The removal of redundant pavement markings from wearing surfaces (except final wearing surfaces) will be carried out to comply with the requirements or RMS specification R141 or R145. Under no circumstances will redundant pavement marking within traffic lanes be removed by covering with paint.

Temporary speed zone signs will be supplied and erected at the locations indicated in the approved TCPs and traffic staging plans. The JV will keep signs covered when the speed zone is not applicable and remove the signs when the speed zone is no longer in force.

In addition, all construction access points will be appropriately sign posted on the approaches and at the access with a unique identification number. A TCP will be developed for sign posting schemes, which may be a separate plan or incorporated within the TMP and/or VMP. This will be determined in the development of the site specific CTTMPs.

VMSs will be used to keep road users informed of changes to the road conditions and possible delays caused by the construction works. These will be located as per the VMS Strategies developed and included where relevant with each site specific CTTMPs. The messaging will be kept current for the duration of the construction activities at the relevant worksite and locations adjusted to suit as the works progress. Ahead of traffic layout changes, VMS will be used to advise of the changes for the seven days prior and seven days following the change.

Maintenance of signage, pavement marking and VMSs within the worksite will be carried out by the JV. Where required, temporary pavement marking will be reapplied to provide clear delineation throughout the works. VMS will be kept secure and maintenance will include cleaning the face and solar panels and checking the battery at least once each month.

6.4.2 Safety Barriers

Safety barriers will be installed as part of the traffic staging layouts to provide separation of work areas from road users. Where safety barriers are installed, an exclusion zone will be established behind barriers (detailed in the staging plans) to prevent construction work and pedestrian movement within the deflection or impact zone of the barrier.

The barriers will be from the list of RMS accepted safety barrier products. They will be installed in accordance with RMS Specification R132 and the acceptance conditions for the relevant safety barrier product and manufacturer installation instructions.

Safety barriers or safety barriers systems will not be used in place of line marking.

6.5 Roadways and Detours

6.5.1 Temporary Roadways and Detours

Temporary roadways and detours will be constructed in accordance with the approved road design drawings. These roadways and detours will comply with the relevant RMS Specifications and/or the relevant authority specification for the particular road works element.

The traffic staging will be designed, installed and maintained to allow for the safe and efficient movement of traffic past, around and through the work areas, including surrounding roads that are impacted by the works. The JV will do this through the use of the following:

- Regulatory, directional and information signposting (installation, removal or changes to regulatory signposting will be approved by RMS, SCO)
- Longitudinal and transverse line marking and pavement markings
- Amendments to use transit lanes, stops and infrastructure
- Intersection controls, including traffic signals and detectors
- Speed limit changes
- Channelisation
- Turning and through movement restrictions
- Parking restrictions
- Tidal flow systems (where applicable).

Temporary roadways or detours will only be implemented where the JVs activities will prevent normal traffic flows for two successive days or longer, unless agreed otherwise with the relevant authority.

Any reduction below minimum lane width requirements will be agreed with the SCO prior to finalising and installing traffic staging layouts. Temporary alignments will have tracking (swept path) checks completed to confirm the geometry will be able to accommodate traffic movements for the largest vehicle able to use the public road network (without permit). As required, pavements and road shoulders will be designed and existing pavements modified and strengthened to support new traffic loadings.

Prior to opening any temporary roadways or detours to traffic, the JV will complete the installation of all pavement markings, RRPMs, signposting, safety barriers, temporary traffic signals and relocated or temporary bus stop as per the relevant TSPs and TCPs. The site will be inspected by a suitably qualified person under the RMS Prepare a Workzone Traffic Management Plan and Implement Traffic Control Plans courses. The purpose of the inspections is to confirm signs and traffic control devices are located to be visible and effective under site conditions and expected traffic speeds. Where any inspection identifies the need to alter or provide additional traffic control, the JV will update the applicable TCPs to reflect the final traffic control arrangement in place.

Following the opening of a temporary roadway or detour, the existing roadway sections will not be disturbed for a minimum of two days. The temporary roadway or detour will be monitored for failure and if required, traffic will be diverted back onto the existing roadway sections.

The JV will conduct maintenance of temporary roadways and detour routes, including:

- Existing pavements
- Line marking
- Kerb and gutter
- Road shoulders and verges
- Ancillary services
- Roadside environment
- Drainage
- Signage
- Vegetation and housekeeping
- Footpaths, pedestrian areas and cycleways.

In addition to the above maintenance works, the JV will repair any potholes, surface drainage blockages or other failures without delay. Debris of any type, including animal carcasses, shall be cleared as soon as practicable. Line marking will be reapplied as needed to provide clear delineation of traffic lanes.

At the completion of the relevant works, temporary roadways and detour arrangements will be removed by the JV. The worksite will be restored to a condition equivalent to that which existed before the works began.

6.5.2 Opening of New Roadways

Prior to opening any section of the Infrastructure Works to road traffic, the JV will consult with TfNSW, RMS, SCO, CoPC and the NSW Police Force to determine the most appropriate procedure for opening. Written notice will be provided to TfNSW to advise of the date of opening at least 10 business days prior to the opening.

The JV will complete all permanent signposting, pavement marking, safety barriers and traffic signals required under the Deed. These will be installed as detailed on the final design drawings, plans and report. A pre-opening road safety audit will also be completed as indicated in Section 6.12. All temporary traffic control devices no longer required for the safety of traffic will be removed at the time of opening to road traffic.

Maintenance of new roadways opened to traffic within the worksite will be completed by the JV until completion Infrastructure Works. Routine maintenance will include cleaning of kerbs and gutters, clearing drainage blockages, debris removal, grass mowing and vegetation trimming.

6.5.3 Maintenance of Existing Roadways

Routine maintenance of existing roadways will become the JVs responsibility following commencement of works, other than site establishment. The maintenance of existing roads within the limits of the worksite will include:

- Repairing potholes
- Clearing kerbs and gutters
- Clearing drainage blockages
- Removal of debris from roadway

- Straightening and cleaning roadside furnishings
- Grass mowing and trimming of vegetation.

The JV will co-operate with RMS, local councils and their agents in carrying out maintenance responsibilities.

TCS loops within the worksite will be monitored and maintained throughout construction. In the instance that TCS loops are impacted by the JVs activities they will be rectified and returned to service as a matter of urgency. This includes TCS loops located outside the work that have been impacted by the JVs activities.

6.6 Pedestrians and cyclists

The JV will identify pedestrian and cyclist needs by considering the:

- Number of pedestrians and cyclists
- Type of pedestrian activity (i.e. office, retail, residential, school or recreational) and cycling activity (e.g. school children, recreational, commuter, utility, touring or sport training)
- Origin and destination points, desired travel paths and the connectivity of cyclist routes
- Needs of vulnerable pedestrians, such as young children, the elderly, vision impaired, disabled people, people with prams and trolleys
- Needs to vulnerable cyclists, such as young children
- Proximity of pedestrian and cyclist generation developments, such as schools, universities, shopping centres, railway stations, bus terminals etc
- The travel speed of cyclists.

The above considerations will inform the design of alternative pedestrian and cyclist routes and detours. Specific measures will be developed as part of the site specific CTTMPs which may include:

- Maintaining continuous footpaths where these are removed/ modified
- Provision of kerb ramps that meet Australia Standards in relation to gradient, etc
- Provision of road crossings that match or exceed the safety of existing crossing infrastructure
- Performing road safety audits on the design and implementation of traffic switches.

Guidance on the needs of pedestrians and cyclists is provided in various parts of AUSTROADS Guide to Road Design and AUSTROADS Guide to Traffic Management.

6.6.1 Pedestrian Facilities

Pedestrian access requirements and impacts as a result of construction will be assessed and considered during the development of site specific CTTMPs, TSPs and TCPs. These will be developed in consultation with the relevant public transport providers and other transport stakeholders via the TCG. Wherever possible infrastructure works affecting footpaths will be planned to occur outside of peak pedestrian times. When requested by RMS, SCO or CoPC, the JV will reinstate pedestrian facilities for major events and festivals.

To provide a safe environment for pedestrians, the JV will clearly define the boundaries of all work areas, and where required, provide defined walking paths. Physical traffic management controls will be implemented to ensure that detrimental effects to natural surveillance, natural access control and definition of space are minimised. By adhering to the principles of crime prevention through environmental design (CPTED), the traffic management will reduce opportunities for offending and improve feelings of safety.

Fencing will be installed to restrict physical access to construction areas and to enhance site security. Various types of temporary and semi-permanent fencing may be installed. All physical barriers will be maintained during the Infrastructure Works and appropriately secured to prevent injury to the public or obstruction of traffic lanes.

Temporary lighting will comply with AS 4282 – Control of the Obtrusive Effects of Outdoor Lighting to ensure targeted illumination is achieved without causing obtrusive light spill to adjacent receivers.

6.6.2 Temporary footpaths and crossings

The JV will aim to maintain pedestrian access and facilities during the Infrastructure Works. Where the work areas restrict access to existing footpaths, the JV will implement alternative routes and facilities. Alternatives may include using the opposite footpath, the provision of temporary footpaths through the work area, or detours via other streets. Detours via other streets are to be agreed with CoPC and SCO, noting that pedestrian demand modelling is to be carried out as required.

All temporary footpaths will be:

- Clearly defined
- Signposted appropriately to indicate the direction of the footpath
- Constructed of an all-weather surface, free of trip hazards
- Designed to accommodate pedestrian needs, including pram ramps, hand rails and street lighting as required
- No less than the width of the route being replaced or 3.0m within the Parramatta CBD
- Adequately maintained.

When pedestrians are diverted onto the existing roadways adjacent to traffic flows, additional treatments will be implemented by the JV to ensure adequate separation is provided and clearly delineated. All diversions requiring a road crossing will use existing crossing facilities or safe crossing facilities will be provided.

Where feasible, the JV will aim to maintain all existing pedestrian crossing facilities, including mid-block transverse crossing facilities. Where this cannot be achieved, alternative facilities of a similar standard will be provided. At construction access points (or locations where there is a significant/ ongoing interaction between construction vehicles and pedestrians), traffic controllers will manage heavy vehicle movements and pedestrian movement across these points.

Pedestrian facilities and crossings will be considered and documented in the TCPs developed by the JV. RMS requirements and specifications will be considered when designing alternative pedestrian footpaths and associated facilities. The AUSTROADS Guide to Road Design, AUSTROADS Guide to Road Safety and the RMS Traffic Control at Worksites manual provides guidance on the design parameters of footpaths. The JV will obtain approval from the relevant road authorities prior to adjusting existing pedestrian facilities or implementing new temporary facilities.

6.6.3 Cyclist Facilities

The JV will aim to maintain all existing cycling routes and facilities during the Infrastructure Works. Alternative temporary facilities that comply with cycling aspects of Austroads Guide will be provided if any existing cycling facilities are affected by construction works. Consultation will be undertaken with Bicycle NSW or local bicycle user groups (BUG), local communities and relevant authorities for any proposed alternative routes. The proposal and summary of consultation will be provided to RMS and SCO prior to implementation.

Cycle paths and cycle crossing facilities will be considered and documented in the TCPs developed by the JV.

Bicycle parking/rack facilities will be installed at all light rail stops within the Carlingford precinct, unless these facilities already exist. Details of these will be considered in the permanent design, and as part of the Pedestrian and Cyclist Network Facilities strategy.

6.6.4 Pedestrian and Cyclist Strategy

A Pedestrian and Cyclist Network Facilities Strategy will be prepared for the Infrastructure Works. The strategy will ensure that coherent, visible and safe pedestrian and cycle access is provided throughout and adjacent to the Project corridor. This strategy will be developed in consultation with the relevant Council(s), TfNSW, RMS, Pedestrian Council of Australia and Bicycle NSW.

The strategy will cover the following components:

- Existing and proposed local and regional pedestrian and cycle facilities and strategies
- Safety for pedestrians in pedestrianised zones
- Alternative cycle routes during construction, based on safety and efficiency, and contingencies in the event that relocated routes are found to be inadequate
- Communication of changes, including user notification, advisory and directional signage at all new and adjusted facilities
- Pedestrian and cycle access, including local and regional pedestrian and bicycle connections
- Demand for pedestrian and cycle facilities with consideration of measures to encourage an increased pedestrian and cycle mode share
- Signage and way finding
- Cycle storage facilities on light rail vehicles and light rail stops
- The requirements of relevant design standards, including Austroads and NSW bicycle guidelines
- The potential for educational events during construction to educate road users on safety around heavy vehicles.

The Pedestrian and Cyclist Network and Facilities Strategy will be submitted to the Planning Secretary before construction of pedestrian/cyclist permanent built works (including the Active Transport Link) commences and implemented to ensure that all works are operational no later than the commencement of operations.

6.7 Public transport

The management of access for public transport users and operators during the construction period will occur in consultation with the relevant public transport providers and other transport stakeholders via the TTLG.

The JV will maintain the existing public transport facilities wherever possible, however where this cannot be achieved, equivalent temporary facilities will be provided (within 400 metres) unless agreed otherwise. Existing facilities that are relocated will not be closed until the replacement facilities are operating. All temporary facilities will be developed and constructed in accordance with the RMS, Council/s, and TfNSW requirements. All proposed changes to existing routes and bus stops facilities will be discussed with the bus operator, prior to the commencement of works, and notifications provided to passengers.

Where required as part of the TCP, the JV will supply and install public transport service-related portable and temporary signage and remove redundant signage to avoid confusion for public transport users.

6.8 Parking

A Parking Management Strategy will be prepared before the permanent or long-term loss (3 months or more) of any parking. The strategy will be implemented to manage and mitigate car parking impacts and kerbside parking access as a result of the CSSI in line with CoA E11 and the principles identified in Parramatta Light Rail Operational Traffic and Transport Technical Assessment Report. The strategy will cover the Infrastructure Works alignment, specifically the Westmead, Parramatta North and Parramatta CBD precincts and will include:

- Confirmation of the timing of the removal of on and off-street parking associated with the Infrastructure Works
- Comprehensive parking surveys of all parking spaces to be removed to determine current demand during peak, off-peak, school drop-off and pick-up, and weekend periods
- Assessment of the impacts of changes to on and off-street parking, taking into consideration outcomes of consultation with affected stakeholders
- Identification of measures to manage any reduction in parking including staged removal, resident parking schemes, managed staff parking arrangements, and provision of alternative parking arrangements for accessible and service spaces
- Replacement parking for specific impacted kerbside uses (e.g. accessible parking and loading zones) within the local vicinity with consideration of the Disability Discrimination Act 1992 (DDA) Public Transport Standards and the DDA Access Code (2010)
- Monitoring on the effectiveness of these measures, including potential unintended traffic impacts and contingencies in the event that the measures implemented are not adequate.

The Parking Management Strategy will be submitted to the Planning Secretary for information. Results of the monitoring are to be reported on by TfNSW in the Operational Traffic, Transport and Access Performance Review.

6.8.1 Parking and Kerbside Allocation during Construction

While the Parking Management Strategy will consider the end state parking and kerbside allocation, the site specific CTTMPs and TSPs will address parking changes throughout construction. During construction the SCO, RMS, CoPC, transport operators and other relevant stakeholders will be consulted, to inform them of the proposed changes to on-street parking and special use parking along the Project corridor. The TTLG will also be informed of changes to parking and kerbside allocation prior to the changes being implemented.

Where construction activities impact private parking, the JV will consult with the affected private property parking owner prior to the impact occurring to mitigate the loss and agree the preferred mitigation strategy. Correspondence with private property parking owners and progressive copies of the agreement will promptly be provided to TfNSW and the Independent Certifier. The final agreement and all correspondence will be provided within 5 business days of agreement execution.

Special use parking (including loading zones, taxi zones, mail zones, disabled parking, service vehicle zones, time of day restrictions and bus stops and layover areas) impacted by the Infrastructure Works will be relocated to provide equivalent special use parking. Bus stops and layover areas will be provided in accordance with SPR Appendix J. Where possible, special use parking will be relocated to the permanent location proposed for these users in adjacent side streets, with an aim to minimise the number of changes/relocations required.

Where parking is relocated, the new location of special use parking will be located as close as possible to the existing location. The new location will be opened for use prior to closing the previous location and will continue to provide an equivalent level of access to service users.

6.9 Maintaining access

6.9.1 Property Access

The JV recognises that safe and convenient access and passage for road users (including pedestrians and cyclists) to and from side roads and property is required at all times. Where access to side roads and properties is affected by works, alternative access options will be provided. Where possible, traffic controllers will be utilised and localised traffic management measures will be implemented to maintain access through worksites.

The JV will ensure the site specific CTTMPs address instances where property access is impacted or disrupted by the construction activities. The site specific CTTMPs and the associated LAPs shall indicate how suitable access will be maintained at all times to all properties. Specific areas to be covered by LAPs include, but are not limited to:

- Emergency Drop Off at Westmead Children's Hospital
- Westmead Adults ED entry
- Uni Clinics entry and exit,
- CASB Plaza entry road
- Research Lane
- Paringa Ave, Cumberland West
- Gardens Way, Cumberland West
- Warrinya Ave, Cumberland East
- Eastern Circuit, Cumberland East
- Greenup Drive, Cumberland East
- Southern side of Macquarie Street
- Hainsworth Street, Westmead
- Tramway Avenue, Parramatta
- Alfred Street, Parramatta
- North of Grand Avenue, Camellia
- Cumberland Hospital.

Should existing access require modification, the following principles will be applied:

- The location of the entry is to be as close as practicable to the existing entrance
- All proposed changes to existing access arrangements will be discussed with residents and/or businesses prior to the commencement of works
- Entrances to businesses are to be sign-posted
- Changes to level of access during business hours will be by written agreement from the owner
- Temporary restrictions to access, for construction reasons, shall be managed in consultation with the owner of the premises (these will occur in stages to minimise the impact on local residents and reduce the duration of temporary closures)
- Modified pedestrian access will be to at least an equivalent standard immediately prior to construction activities and driveways will accommodate an equivalent size vehicle as existing, unless agreed otherwise with the relevant property owner and/or occupier

- Where properties contain on-site parking and access has been impacted, temporary alternative parking will be provided
- Modification of access will be at no cost to the property owner.

The Traffic Manager (in coordination with the SCO) shall advise the Stakeholder and Community Liaison Manager of construction activities impacting property access to ensure that the required community consultation and notification processes are carried out in a timely manner.

Local Access Plans will be prepared by the JV prior to commencement of works for individual properties and access points that will be impacted by the construction works. These plans will be developed in consultation with affected parties (property owner and/or occupier, local community and stakeholders, as relevant) and reasonable endeavours will be undertaken to obtain agreement from the relevant affected parties. Evidence of the consultation and reasonable endeavours to obtain agreement will be provided to TfNSW, SCO and the Planning Secretary upon request. These access plans will establish the following factors:

- Road and access closures and provision of alternative routes
- Provision for pedestrian and cyclist access
- Special event strategies
- Provision of servicing and delivery requirements for all business and residents impacted, including loading zones, waste disposal and grease trap servicing
- Access periods or alternative access arrangements for affected businesses, landowners or tenants
- Strategies to maintain emergency, utility service maintenance and incident response access at all times
- Potential future access strategies for the Westmead Hospital and Westmead Railway Station
- Access to taxi ranks, mail zones, disabled parking, loading zones, cycleways and public transport
- Heavy vehicle access within the precinct, including Rosehill Gardens Racecourse, Westmead Hospital Precinct, Parramatta Park, loading docks, refuse collection and industrial precincts
- Adequate wayfinding to businesses.

If issues arise whereby the property owner and/or occupier deem the access inadequate, protocols will be followed in accordance with the dispute resolution processes outlined in the Community Communication Strategy.

It is not intended to prepare LAPs separately to the site specific CTTMPs, as the specific change of access as well as the exact network context will not be known until the relevant construction stage is developed. Each site specific CTTMP will contain an LAP where access to properties has been modified (for any period) and will be based on the extents of the traffic switch being undertaken.

Depending on the level of impact, stakeholder engagement will be undertaken through one of the following channels:

- Notification – stakeholders will be notified where access remains available but is subject to temporary restrictions. By way of example, traffic control is required to maintain access to properties or driveways.
- Consultation – stakeholders will be consulted where access is changed or temporarily restricted. In such cases, alternative access arrangements will be developed in consultation with the stakeholder(s).

Wayfinding strategies will be developed specific to each LAP and requirement.

Residential properties will be notified regarding changed access by letterbox drop, phone call or via email. It is not expected that signposting strategies would be engaged for this property type, other than normal traffic control signposting such as DETOUR -> and PEDESTRIANS ->, FOOTPATH CLOSED etc.

Should public access arrangements for public services such as hospitals, rail stations or bus stops be changed, the JV would provide wayfinding signage to advise users of the modified arrangements. This would consist of signs installed at decision points and subsequent turns, so that users could be guided to the location of new access. Enhanced strategies including manned information/ direction points or “you are here” wayfinding maps may be implemented, depending on the scale of change and resulting impact of each change.

The type of wayfinding signage would depend on the type of changed access. For vehicular access changes, VMS or custom black on yellow road signage may be used. For pedestrian access, black on yellow signage or corflute signs may be used. Information regarding upcoming changes would also be provided to any stakeholders registered on the project to receive notifications.

Local Access Plans will be provided to TfNSW, RMS and SCO for each stage of the Infrastructure Works as part of the site specific CTTMPs.

6.9.2 Waste collection

The JV will maintain access for waste and refuse collection throughout construction. Where it cannot be maintained, the JV will provide a reasonable alternative for waste and refuse collection. Premise occupants, managers and owners along with waste collectors and relevant stakeholders will be consulted to determine waste load and local constraints.

The site specific CTTMPs will detail how access for waste and refuse collection will be managed, identifying where access cannot be maintained and providing alternate options for waste collection.

6.9.3 Emergency Vehicle Access

The JV will ensure that all Emergency Service ‘first responders’ (Police, Fire and Ambulance) are provided un-restricted thoroughfare at all short-term work sites (lane closures) both day and night.

At long-term work sites (barrier enclosed daytime construction), the JV will endeavour to offer Emergency Services vehicles an alternative route through the work site to avoid / overtake congestion on the public road. However, at times during some stages of construction this thoroughfare will not be a safe option for ‘road going vehicles’, or traversable at all.

The Traffic Manager will ensure that the Emergency Services contacts identified in Section 7.3 are provided updates of all site access and egress locations, including the appropriate UHF channels and entry protocols to facilitate this thoroughfare.

Access plans will be developed in consultation with emergency services and NSW Health, to ensure emergency vehicle access is maintained for Westmead Hospital (along Hawkesbury Road) and between the two parts of the Cumberland Hospital. The access plans will consider how emergency vehicle access will be maintained in the event of a breakdown along Hawkesbury Road. Details are to be covered in the site specific CTTMPs and TSPs, including how the Project alignment could be used for alternative access.

6.10 Special events

A calendar of special events will be maintained in consultation with the Premier’s Department, the SCO, City of Parramatta City Council, Western Sydney Stadium and Parramatta Park Trust. Details on special events that are locally held and not classed as major events, will be sourced from a variety of areas including the local chamber of commerce, local councils, neighbourhood centres, education facilities, local Police stations and through community forums and engagement.

Discussions will be held with the event organiser where works have the ability to impact on the event.

The JV will incorporate known Class 1 and Class 2 Events into the construction programme. As required, the JV will manage the coordination of traffic during Class 1 and 2 Events in the immediate vicinity of the work sites. Emergency vehicle access will be provided and where possible, alternate parking and taxi zones will be explored and detailed in the relevant site specific CTTMP. Pedestrian and cyclist access will be maintained as agreed with the relevant authority and event organiser.

Prior to special events, the JV will consult with the TTLG and the special event organisers regarding planned construction activities during the special event and proposed management measures. During special events the JV will implement additional measures required to manage road users, comply with site specific CTTMP approvals and ROLs and manage construction traffic to and from worksites. Any work that has the potential to impact the network surrounding the special event will not be undertaken unless agreed by the SCO and RMS.

The site specific CTTMPs will provide further details on special events scheduled with a 12-month look ahead. These will include specific measures to manage road users during the events and proposed measures to minimise disruption from construction activities. Feedback from organisers and other stakeholders will be documented in these plans.

6.10.1 Parramatta CBD Events

Known annual events in the CBD that may be impacted by the works are detailed in Table 6-3. As additional events are programmed or become known, these will also be considered by the JV.

Table 6-3 City Centre Annual Events

MONTH	EVENT	COMMENT
January	Trust Summer Series	N/A
	Australia Day	N/A
April	ANZAC Day Celebrations	N/A
	Bankwest Stadium Opening	N/A
June	Matsuri Japan Festival	N/A
July	Burmatta Naidoc	Increased pedestrian movement. Parramatta Park Event
	Winterlight (05 to 21 July)	Increased pedestrian movement around Prince Albert Park during the day and evening (estimated 25,000 to 100,000 visitors)
October	Parramatta Lanes	Increased pedestrian activity through multiple laneways throughout Parramatta CBD (estimated 95,000 people)
November	Loy Krathong Festival (Thai Water festival)	Increased pedestrian activity along Parramatta River (estimated 14,000 people)

MONTH	EVENT	COMMENT
	Good Things Festival	Alternative music concert in Parramatta Park
December	New Year's Eve	Parramatta Park
Feb	Tropfest	Parramatta Park

The JV will commence liaison with TfNSW, SCO and the City of Parramatta on the requirements for the New Year's Eve celebrations as soon as the Works Programme has been finalised.

6.10.2 Business Activation

The Business Activation Plan (BAP) will provide details on how the JV will support local businesses affected by the Infrastructure Works. As part of the BAP, business management strategies will be developed for each stage of construction.

The locations for business activation include Church Street between George Street and Market Street (known as Eat Street) and Church Street between Market Street and Albert Street (known as North Parramatta).

Eat Street will not be occupied from 1 November to 31 January each year. Ongoing activation will also be provided for two week periods once every three months in each of the following areas:

- Area 1 – Church Street – George Street to Phillip Street
- Area 2 – Church Street – Phillip Street to Lennox Bridge
- Area 3 – Church Street – Lennox Bridge to Market Street
- Area 4 – Church Street – Market Street to Victoria Road
- Area 5 – Church Street – Victoria Road to Fennell Street
- Area 6 – Church Street – Fennell Street to Victoria Road.

Site specific CTTMPs will include a LAP (as required) and will identify opportunities to work with TfNSW to incorporate the BAP.

TfNSW Place Managers (Community and Engagement) are members of the TCG where CTTMPs are presented for comment and feedback. Participation in the TCG ensures that BAP requirements are adequately reflected in each relevant CTTMP.

6.11 Pre-condition and dilapidation reports

Condition reports for all existing roads and all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected during work will be prepared before commencement of such work as per CoA E6. The report will state the current condition of the asset and a copy will be provided to the asset owner no later than one month before the commencement of works of the CSSI.

With the exception of damage resulting from normal usage of the road, the JV will repair any damage that has resulted from the construction of the Infrastructure Works. Repair may occur through compensation to the asset owner or through restoring the item to its condition prior to the damage. If issues arise, protocols will be followed in accordance with the dispute resolution processes outlined in the Community Communication Strategy (Condition B2).

6.12 Road safety audits

A road safety audit is a formal examination of an existing or future road project, in which an independent audit team, with members currently registered on the NSW Register of Road Safety Auditors, assess the crash potential and safety performance of the change in traffic conditions. Audits will be carried out in accordance with:

- NSW Centre for Road Safety Guidelines for Road Safety Audit Practices
- Austroads Guide to Road Safety Part 6A: Implementing Road Safety Audits.

The JV will conduct road safety audits during the design, construction and handover phases to identify any deficiencies and/or safety hazards and promote continual improvement. Audits will assess the safety performance of any change to traffic conditions associated with the project works.

Road Safety Audits will be undertaken at the following stages:

- Design (temporary roadwork layouts and permanent works)
- Construction traffic switches
- Opening of permanent works.

The objectives of a road safety audit are to:

- Provide an independent assessment of the change of traffic conditions from a road safety perspective
- Review the existing road environment, operational site, design and background information and form conclusions about the safety performance and crash potential for the change of traffic conditions
- Consider the effects in transition areas any proposed changes will have on the existing built environment
- Identify potential safety problems of each traffic change or section of road
- Evaluate the operational site in terms of interaction with its surrounds and visualise potential impediments and conflicts for road users
- Identify and report on aspects of the traffic changes that may result in unnecessary or unreasonable hazards for all road users
- Ensure that measures to eliminate or reduce the problems are considered by the asset owner
- Provide a documented account of the consideration of road safety concerns.

6.12.1 Permanent Works Road Safety Audits

The design stage audits of permanent works involve the review of the design drawings, reports and supporting information and an inspection of the site, its approaches and connections. Standard issues such as sight distance, speed zones, safety barriers, alignment, delineation pedestrian facilities and signage (amongst others) will be assessed with respect to safety. The detail design audits will be completed at the System Definition Review 30% (SDR), Preliminary Design Review 70% (PDR) and Detailed Design Review 90% (DDR) design stages and the recommendations will be addressed as the design progresses.

“Pre Opening”, or “Post Opening – Finalisation” audits, including day and night time inspections, are to be undertaken on completion of all permanent works. The purpose of these audits is to ensure that the work has been constructed in accordance with the plans, identify whether the adaptation of the design to the site has resulted in any unintended road safety concerns, to consider all previous Road Safety Audit findings, addresses site constraints appropriately and to identify any road safety risks that may existing in the end state for all road users.

Copies of all permanent works road safety audits, without items actioned, will be issued to PLR Representative within 24 hours of it being supplied to the JV. The items will then be actioned as required and once completed, a final report of issues and corrective actions will be issued to TfNSW. Copies of all RSAs and corrective action plans will be provided in progressive updates to the design reports. A copy of the report will also be made available to the DPIE, upon request.

6.12.2 Construction Road Safety Audits

The JV will undertake Detailed Design stage audits on the proposed construction traffic staging plans, and Roadworks Stage audits on the implemented Site Specific CTTMP configurations in accordance with the requirements of SPR Appendix H Clause 2.3.4. The purpose of these audits is to ensure temporary controls and traffic management arrangements are safely installed and are appropriate for all road users and construction personnel.

Road Safety Audits will be performed utilising the following methodology:

- Commencement meeting or briefing provided from the Traffic Manager (or delegate) to the Lead Auditor
- Review of the relevant documents (e.g. design plans, TMPs, etc) by the auditors
- For Roadworks Stage audits, site inspections conducted during daytime and the night
- Development of road safety issues. Any Roadworks stage high priority issues to be communicated to the Traffic Manager by phone immediately following the audit
- Preparation of a Road Safety Audit report and submission, within 3 days of the conducting of the audit
- Completion meeting conducted with the Traffic Manager (or delegate)
- The Traffic Manager will then prepare a response to the audit findings and provide a copy of the completed audit to SCO.

The JV will consider and respond to the recommendations of the independent road safety audits and to the recommendations of any road safety audits that may be undertaken by RMS/ SCO.

6.12.3 Corrective Actions

Deficiencies identified during audits and site inspections will be discussed with the design team, relevant construction units and/or Traffic Team/ field resources.

Audit results requiring follow-up actions will be raised as either a corrective action or a non-conformance. Any identified actions will be assessed against a safety matrix to nominate the probable consequence and likelihood of any risk identified. High risks issues will be addressed as soon as possible.

Any proposed changes to current CTTMPs will be initiated by the Traffic Manager or delegate after consultation with construction personnel. Corrective actions will be undertaken at the next available safe opportunity. Interim risk management will be implemented if necessary and may include warning signage, VMS messaging and public broadcasts in consultation with the Community and Stakeholder Management Team.

Approval from the Independent Certifier will be obtained as to the satisfactory closure of any RSA findings relating to the permanent works.

6.12.4 Audit Frequency and Responsibility

Roadworks Stage Road Safety Audits will be undertaken within 48 hours of any temporary realignment implemented by an approved CTTMP. All audits will be conducted by an independent qualified RSA auditor. In addition, an external road safety audit of long-term signage plan on public roads may be carried out every 6 months.

The responsibility and frequency for managing the road safety audit program is outlined in Table 6-4.

Table 6-4 Road safety audit frequency and responsibilities

Audit Type	Responsibility	Frequency
Design Audits	Design Manager or Traffic Manager to engage external auditor	As required for each stage of design
External audit of temporary traffic arrangements	Traffic Manager to engage an external auditor	At least every 6 months
Roadworks Stage audit of changed traffic conditions and/ or temporary traffic switches	Traffic Manager to engage an external auditor	Following the opening of all new traffic layouts
Pre-Opening or Post opening-Finalisation audit of all end state conditions.	Design Manager to engage an external auditor	After the opening of end state configurations

6.12.5 Preventative Actions

The Traffic Manager will regularly analyse and review the following data to identify trends and preventive action to be taken to reverse negative trends, or prevent a recurrence of undesirable outcomes:

- Results of incident and crash investigations
- Incident, near miss and observation reports
- Daily Inspection Checklists
- Results of traffic flow monitoring
- Feedback from TCG and TTLG meetings and other meetings with external agencies
- Changes to legislation
- Industry reports

All preventive actions will be closely monitored to determine their effectiveness.

6.13 Incident management and response

The occurrence of unplanned incidents within the Project corridor can have significant impacts on road user delay. Similarly, incidents that occur outside the Project corridor on the surrounding road network can temporarily restrict construction activities. Clause 5 of SPR Appendix H describes the specific requirements for Incident Management relating to the Project.

The types of unplanned incidents that may occur include:

- Motor vehicle crashes (including broken down vehicles)
- Fires
- Environmental spills
- Construction type incidents

- Structural catastrophic failures
- Inclement weather conditions
- Flooding
- Anti-social behaviour
- Terrorist attacks/bomb threats.

In order to minimise the impact of such events on road user delay, the JV will:

- Clearly identify the roles and responsibilities of government agencies and the project team when responding to incidents
- Establish and maintain communication protocols for both internal and external communications with Community & Stakeholder Manager involvement
- Provide support to emergency services, where appropriate
- Reschedule planned works that will interfere with the incident, or create additional delays to those road users already affected by the incident
- Ensure all procedures work within the requirements of the Incident Response Management Sub-Plan.

The existing system developed by the Enabling Works (Package 1) will be adopted in relation to incident management and response. This includes a group messaging system and phone contact list for critical personnel. Should an incident affecting access occur, notification of impacts and site response will be circulated from the Site Superintendent or nominated Traffic Incident Response Resource. For non-critical incidents, written notification will be provided to nominated recipients in accordance with the Communications Management Plan.

6.13.1 Traffic Incident Management Plan

A Traffic Incident Management Sub-Plan will be developed as a subplan to this document to guide the JV's response to road user incidents during construction. This will be prepared in conjunction the requirements outlined within the Safety Management Plan prepared by the JV.

The Traffic Incident Management Sub-Plan will:

- Identify stakeholders involved in responding to incidents and their contact details
- Describe the road network and traffic systems covered by the plan
- Describe the processes, procedures and protocols to respond to and clear traffic incidents and return traffic to normal conditions
- Identify procedures to be followed to gain the required authorisation to tow and remove vehicles
- Outline communication processes with TMC and with emergency service providers
- Describe any anticipated minor incidents that could occur (type, nature, time of day, location on network), potential effects and mitigation measures and responses that can be implemented to make the road safe for road users and the public (including VMS, lane use controls, driver advisory signs)
- Each site specific plan will identify location specific measures required, alternative traffic routes to be used and tools, equipment and resources that may be required for that location
- Address how the JV will deal with immediate safety issues on carriageways surrounding an incident

- Identify any incidents that may occur outside the road network, but which can cause impacts to the wider network as a whole and develop plans to mitigate the possible disruption and aid in any response.

The Traffic Incident Management Sub-Plan will be reviewed annually (and following any non-minor incidents) to assess the effectiveness of the responses and update the plan accordingly to include suggested improvements. The plan will be submitted to TfNSW, TMC, SCO, and RMS for comment and review as and when requested. Any local deviation to the plan that is required will be approved and covered in the relevant site specific CTTMP.

6.13.2 Incident Database

An incident database will be maintained to record all incidents and road crashes. The database and relevant records will be provided to TfNSW and SCO upon request. The database will include the following information:

- Time of incident (when it occurred, when it was logged)
- Time incident response was dispatched and when they arrived at the incident
- Time the incident was cleared
- Incident response (included personnel in attendance, equipment, resources utilised, whether the incident management plan was followed and any suggested improvements to the plans)
- Record of relevant conditions (e.g. weather, oils spills, visibility, road surface condition)
- Photographs and video of the incident
- Contact details of the persons involved in the incident (if provided).

6.13.3 Incident Response Resources

The JV will provide a dedicated incident response person and dedicated incident response vehicle (together known as the incident response resource) from when the first worksite is occupied until the demobilisation of the last worksite, unless agreed otherwise with SCO. The role of the incident response resource is to safely manage all road users (including pedestrians and cyclist) in the event of an incident during the Infrastructure Works. Incidents may include:

- Vehicular breakdown
- Construction activity that impedes traffic and transport movements when a ROL has not been issued
- Vehicle, cyclist and pedestrian collisions that disrupt traffic flows
- Other obstructions that disrupt traffic flow (animals, fallen trees, storm damage, failure of any infrastructure such as drainage, signage, barriers etc.)
- Spillage of non-hazardous or hazardous material.

The incident response resource will be located within the vicinity of works and progressively monitor the road network affected by the construction activities in line with the Incident Response Management Sub-Plan. The incident response person is responsible for immediately notifying the TMC of all traffic incidents and responding to incidents to clear the incident and restore normal traffic flow as soon as practicable. The incident response will log incidents and activities in the JVs incident database.

The incident response vehicle will carry sand, saw dust, sand bags, oil spill kits, brooms, shovels and sufficient traffic control devices to respond to incidents as detailed in the site-specific incident management plans. The JV will have additional resources, equipment and materials available that can be reallocated/ deployed to respond to any likely incident such as:

- Plant

- Safety equipment vehicles
- Tow trucks
- Human resources
- Other resources as identified in the site-specific incident management plans.

In the event of a traffic incident, the JV's target response time shall be less than 15 minutes on Mondays to Saturdays between 5am and 8pm and less than 30 minutes at all other times. Where another incident is already being responded to and the incident response person is unable to meet these timeframes, the Traffic Manager will contact the TMC to agree on incident response priority and whether further resources are required.

Minor incidents are to be cleared by the JV in less than 40 minutes, unless the TMC has been notified that the clearance will exceed 40 minutes. For all other incidents, the JV will provide reasonable assistance to emergency services and the TMC to clear the incident and restore vehicular traffic flow as soon as practicable.

6.13.4 Construction Hours

In accordance with the requirements of EIS Statement Technical Paper 2 Construction Traffic, normal construction hours for the project will be:

- Monday to Friday (excluding public holidays): 7 am to 6 pm
- Saturday: 8 am to 1 pm.

Further to these standards hours will vary from site to site and will be listed within each site specific CTTMP and be approved by SCO and TfNSW prior to the commencement of any work.

Generally, for road works the following requirements will apply:

- Work on any road will be carried out outside of the AM and PM peak periods and during night work
- Intersection work involving full closure will be carried out, indicatively from Saturday 1 am to Monday 3 am.

6.14 Chain of Responsibility

The JV will develop a Chain of Responsibility process to address the requirements under the National Heavy Vehicle Law.

6.15 Wayfinding Strategy

A wayfinding and road signage strategy will be prepared during detailed design for the project end-state. This would include signage to communicate changes in turning/access restrictions, property access, and pedestrians/cyclist routes, and signage within Parramatta CBD to encourage use of alternative routes.

During the construction stage, wayfinding and road signage requirements will be detailed in site specific CTTMPs and subject to the approval of SCO.

The nature and form of the wayfinding devices used would depend on each traffic switch, but are likely to involve the use of permanent VMS, temporary VMS, fixed black on yellow guidance/ route signage, and temporary traffic control signage such as DETOUR->.

7 Compliance management

7.1 Roles and responsibilities

The JV's organisational structure and overall roles and responsibilities are outlined in Section 3.3 of the CEMP. Specific responsibilities for the implementation of construction traffic management are detailed below.

The dedicated Traffic Management Team will be responsible for the day to day implementation of this Sub-plan and all other associated obligations. The Traffic Manager is the designated JV representative on the TTLG for the duration of the design and delivery of the Infrastructure Works.

7.1.1 Traffic Manager

The roles and responsibilities of the Traffic Manager include:

- Ensuring controlled copies of the TTAMP are issued to the relevant construction and maintenance staff and the TfNSW Representative
- Managing the dedicated Traffic Incident Response crew in the delivery of required maintenance activities, incident and emergency support, and providing support/resources during traffic switches
- Providing summary reports to the Operation Manager for inclusion in the Monthly Progress Report including incidents, maintenance and repairs, asset and infrastructure inspections, road occupancies, traffic management plans submitted and/or approved, and any other relevant traffic related issues
- Support the project team in achieving the road safety and traffic management objectives
- Provide technical advice to the design and construction teams in the areas of road safety, traffic engineering and traffic management
- Assist with the planning, development and revisions of the TTAMP, the TSPs and the Emergency and Incident Response Management Sub-Plan
- Prepare Precinct/site specific CTTMPs and submit to SCO and RMS for approval, including amending and updating plans, as required, to ensure that they remain current as work progresses
- Develop principles and strategies to ensure traffic management measures are planned, implemented and maintained in accordance with best practice, including all relevant safety regulations and standards
- Establish contacts and maintain a productive relationship with the SCO, Local Councils, Police, the TTLG, emergencies service agencies, and other stakeholders on all traffic and incident related issues
- Be available to report, receive and answer traffic and incident related inquires to and/or from; SCO, RMS, TMC, TfNSW, NSW Police Force, members of the public and any other relevant stakeholder involved and/or affected by the JV's activities
- Monitor and evaluate the ongoing effectiveness of traffic management activities, including road user delays or unsafe conditions and where necessary suggest corrective actions to mitigate any deficiencies
- Updating the TTAMP in response to any incidents arising from the Infrastructure Works or road authorities' maintenance requirements

- Develop and monitor the road safety audit and inspection process, implement corrective actions and maintain detailed records
- Manage the ROL application process for all relevant local roads, state roads and Transitways, and maintain records
- Manage the SZA process including maintaining detailed records
- Maintain detailed TCP records, including Location Risk Assessments
- Keep records of the Traffic Controllers' qualifications and ensuring they are current
- Develop a strategy for the dissemination of changed traffic condition information to potentially affected parties, including road users, local communities and transport operators
- In coordination with the JV Environment and Sustainability Manager manage the implementation of and the compliance reporting for the traffic and transport related Conditions of Approval.

7.1.2 Traffic Control Supervisors (supplied by Traffic Control Sub-Contractor)

- Manage the day to day operations and work load of the traffic control teams
- Manage the implementation of traffic control layouts ensuring adequate number of staff and equipment on-site
- Undertake pre-starts for each traffic control teams at the beginning of every shift
- Provide relevant copies of TCPs, ROLs and SZAs to traffic control teams
- Undertake daily inspections of short-term traffic control, maintain records and provide copies to the Traffic Manager weekly
- Install and maintain long-term traffic control layouts
- Manage all VMPs for construction deliveries, haul movements, site accesses and crane works on-site
- In conjunction with the Traffic Manager, investigate traffic related incidents/ hazards, identify preventative measures and manage the implementation of actions to mitigate future occurrences
- Ensure the OH&S needs of all staff, especially traffic control team members, are met
- Assist with the development of TCPs
- Any other duties as directed by the Traffic Control Team.

7.2 Communication

The JV will consult and communicate with the local community, businesses, agencies and relevant stakeholders that will be affected during the Infrastructure Works. Traffic and transport communications will be captured in the JV's Communication and Engagement Management Plan. The consultation and communication process adopted by the JV in accordance with SPR Appendix H Section 3 will:

- Provide timely, accurate and comprehensive information to enable users to optimise their travel options and reduce the impact of the works on traffic and transport
- Accommodate feedback from the community and stakeholders related to traffic and transport management issues.

To meet these requirements the JV will:

- Continue to coordinate and chair the ongoing weekly meetings of the TCG

- Continue to coordinate and chair the ongoing monthly meetings of the TTLG
- Communicate traffic issues to the community via the Communication and Engagement Management Plan
- Engage with relevant groups as may be required for specific work activities, e.g. for works above Parramatta River, the NSW Ports Authority and Harbour City Ferries.

All community information releases for the management of traffic and transport networks produced by the Communication and Engagement Management Plan and systems will be submitted to TfNSW for approval at least 5 business days ahead of release date in accordance with the Management Requirements.

7.2.1 Traffic Coordination Group (TCG)

The Traffic Manager will continue to chair the TCG, consisting of the following representatives of the relevant approval authorities and other relevant parties:

- The JV
- TfNSW
- RMS
- SCO
- CoPC
- TMC (in particular. special events coordination and transport integration (buses))
- Enabling Works Contractor (Package 1)
- Great River City Light Rail consortium
- Bankwest Stadium
- External stakeholders (as required) dependent on construction activity locations.

The TCG was established in February 2019 and meets weekly to discuss the Traffic Management impacts on the road network.

The group is a technical forum to discuss:

- Proposed traffic management measures throughout construction
- Potential impacts on the road network around each worksite and the proposed mitigations
- Feedback on proposed CTTMPs and TCPs before formal submission
- Upcoming works to raise and address any issues and ensure works proceed as per the agreed project program
- Key potential conflict points with other interfacing projects and any required adjustments to program activities or haul routes
- Coordination of traffic management arrangements and noise generating activities with other construction projects/activities to manage cumulative impacts.

The TCG will also act as a ready reference for un-planned events which impact the occupation of the road network.

The TCG will coordinate and resolve issues arising within the group, with SCO taking the lead mediation role in the resolution of any conflicts. Should escalation of matters be required, RMS would be the arbitrator. RMS is the road authority and has delegated authority over traffic matters arising on the project.

7.2.2 Traffic & Transport Liaison Group (TTLG)

The TTLG includes senior representatives of the JV (Traffic Manager & Community & Stakeholder Manager), TfNSW, SCO, RMS and other relevant agencies as listed below.

The TTLG provides a forum for discussion of all traffic, transport and road safety matters associated with the Infrastructure Works, including:

- Construction staging, current and proposed
- Traffic operations, including changes in traffic alignments, work area's and parking restrictions, if any
- Community feedback and identified issues, comments
- Impacts on public transport
- Pedestrian and cyclist impacts
- Proposed communication strategies for future works and actions.

The following user groups have been invited to participate in the TTLG:

- TfNSW
- RMS
- SCO
- TMC
- Local Council
- NSW Police Force
- NSW Fire and Rescue Service
- NSW Ambulance Service
- NSW Health (incorporating Children's Hospital Westmead, Western Sydney Health and Cumberland Hospital)
- Parramatta Park
- Bus Operators
- Bankwest Stadium/ NSW Venues Live
- State Emergency Services
- Enabling works contractors
- Physical Disability Council NSW
- Pedestrian groups.

As the project progresses, representatives from the following organisations may be invited as required:

- Local businesses, schools and residents
- Community liaison/action groups
- NSW Bus and Coach Association
- NSW Taxi Council

- BUGs or Bicycle NSW
- Special Events committees
- Adjacent major infrastructure projects
- Heavy Vehicle Industry
- Tow Truck Industry.

The TTLG was established in June 2019 and the group now meets on a monthly basis. As the Infrastructure Works proceed, meeting frequency may change as determined by the TTLG, considering what is acceptable to all members.

7.2.3 On-site Contacts

Table 7-1 JV Key Contacts

Position	Name	Mobile Number
Construction Manager	Mac Harvey	0437 501 549
Traffic Manager	Richard Thomas	0427 909 651
Traffic Engineer	Monica Yee	0408 769 745
Safety Manager	Jeff Bowers	0433 692 811
Environment and Sustainability Manager	Peter Monsted	0437 685 224
Community Manager	Sarah-Louise Power	0403 132 905

7.2.4 Out of Hours Contacts

Table 7-2 JV Key Contacts

Position	Name	Mobile Number
Night Shift Foreman	TBA	
General Superintendent	TBA	
Construction Manager	Mac Harvey	0437 501 549
Traffic Manager	Richard Thomas	0427 909 651
Traffic Engineer	Monica Yee	0408 769 745

7.3 Notification to Emergency Services

Emergency services will require current information about changed traffic conditions and potential delays when travelling around the construction work areas. The JV will ensure all emergency services are regularly consulted about proposed changed traffic conditions via the TTLG.

Emergency Services will be notified via email at least five days before the implementation of a TMP. The CTTMP forecast will also be a discussion topic at TTLG meetings. The minutes of these meetings will be forwarded to all the key Emergency Services contacts listed below.

Consultation with the following organisations will be undertaken throughout construction:

- RMS Road Safety and Traffic Services Manager
- NSW Police Force
- NSW Health
- Ambulance Service of New South Wales, District Manager
- State Emergency Service
- NSW Fire Brigade
- Local Councils.

Emergency Services workshops may be undertaken to discuss traffic arrangements for emergency services and safety issues during construction.

An emergency service contact list is provided in **Table 7-3**.

Table 7-3 Emergency Service Contacts

Agency	Number
NSW Police	131 444
NSW Fire & Rescue	9265 2999
NSW Ambulance	9320 7378
SCO	1800 139 389
TMC	8396 1400

7.4 Inspections

Requirements and responsibilities in relation to inspections are documented in Section 3.9 of the CEMP.

Prior to opening of temporary roadways, alignments or detours the site will be inspected by a suitably qualified person under the RMS Prepare a Workzone Traffic Management Plan and Implement Traffic Control Plans courses. The purpose of the inspections is to confirm signs and traffic control devices are visible and effective under site conditions and expected traffic speeds.

Daily inspections will be carried out by the JV's Traffic Control Supervisor at the start and end of each day's work. The inspections will check that all traffic control measures and signs are in place as per the relevant TCP. The inspection details will be recorded and provided to the Traffic Manager weekly.

As detailed in Section 6.12, site inspections for Road Safety Audits will be undertaken at the detailed design, construction and pre-opening stages.

7.5 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of traffic management measures, compliance with this Sub-plan, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 3.9 of the CEMP.

7.6 Reporting

The JV will report to TfNSW, the TTLG and other stakeholders on all traffic and transport management matters during the delivery of the Infrastructure Works. The frequency of reports provided by the JV will include:

- Immediate – notification of major vehicle accidents (with a report within two days), breaches of any ROL conditions
- Weekly reports – planned lane closures/road occupancies and the performance results of recently implemented changed traffic conditions/operations
- Monthly reports – summarising construction activities, proposed major traffic changes, upcoming media releases, and incidents. This will be done via the TTLG.

Transport and traffic reports (and the executive summaries of these reports) will be made publicly available from the Project website.

7.6.1 Reporting during Construction

The Traffic Manager will collate and submit specific information to the Construction Manager at the end of each month for inclusion in the Monthly Progress Report. Relevant traffic management information for this report will include:

- Current and upcoming TMPs
- Number and brief description of traffic incidents attended, with a cumulative to date total
- Upcoming major road occupations/detours
- Summary of recent major road occupations/detours and learnings
- Asset and infrastructure inspections, including maintenance and repairs
- Feedback from stakeholders including ‘hotline’ comments
- Summary of stakeholder liaison including TTLG meetings
- Other relevant operational matters.

8 Review and improvement

8.1 Continuous improvement

Continuous improvement of this Sub-plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets. The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of traffic management
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

8.2 TTAMP update and amendment

The processes described in Section 3.9 and Section 3.11-3.12 of the CEMP may result in the need to update or revise this Sub-plan. This will occur as needed.

Only the Construction Traffic Manager (in consultation with the Environment and Sustainability Manager) can amend this TTAMP. This Sub-plan will be reviewed quarterly in accordance with Exhibit A, Annexure 2.

A copy of the updated Sub-plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure – refer to Section 3.11.2 of the CEMP.

Appendix A - Consultation Evidence

Table A- 1: Log of consultation with SCO/RMS as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	05/07/2019	Email	Comments Table submitted via email
Out	18/07/2019	Email	Reply to questions
In	19/07/2019	Email	Confirmation of Close out

Table A- 2: Log of issues raised by SCO/RMS as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	1st para 2nd sentence, 'TfNSW Centre for Road Safety Technical Direction for road safety audits…..'. Please explain this reference as it is not a current accepted guide.	Noted. Section 6.12 has been reviewed and simplified to address RSA process and the specific requirements of Appendix H.	Section 6.12
1.02	1st para 2nd sentence, 'will be completed at each stage of the design'. What are the details of these stages?	Noted. Section 6.12 has been reviewed and simplified to address RSA process and the specific requirements of Appendix H.	Section 6.12.1
1.03	During construction works full Road Safety Audits may not be warranted for many of the temporary changes (of a minor nature) in traffic management. A Road Safety Check (as per Part 3 Guidelines for Road Safety Audit Practices) could suffice, as less time is involved in compilation compared to the more formal Road Safety Audit	Noted. Section 6.12 has been reviewed and simplified to address RSA process and the specific requirements of Appendix H.	Section 6.12.2

Reference	Comment	How addressed	Management plan reference location
1.04	1st para 2nd sentence This sentence is not applicable to a Road Safety Audit. Refer Sec 4.5 Guidelines for Road Safety Audit Practices.	Noted. Section 6.12 has been reviewed and simplified to address RSA process and the specific requirements of Appendix H.	Section 6.12.3
1.05	The Road Safety Audit should be carried out before the TCP is implemented.	Noted. Section 6.12 has been reviewed and simplified to address RSA process and the specific requirements of Appendix H.	Section 6.12.4
1.06	Generally the document lacks the detail required of an over-arching Construction Traffic and Transport Management Plan (CTTMP) for a major project.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	General
1.07	The document appears to concentrate on demonstrating compliance with the Ministers Conditions of approval and has failed to address the requirements of the SPR Appendix H. Please review Appendix H and ensure that this document addresses all of its requirements concisely and coherently.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	General
1.08	For future revisions the 'DRAFT' watermark should be removed.	Noted. Draft watermark removed from document.	General
1.09	Document to include a description of existing traffic conditions, including length, direction and type of road (regional, local road function etc), important access points, brief description of current AM, business and PM peak traffic volumes, a description of number and type of lanes applying to both weekdays and weekends and a description of parking/loading zones applying to both weekdays and weekends.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	Not applicable

Reference	Comment	How addressed	Management plan reference location
1.10	Document to include the standard site operation hours.	Noted. General construction hours have been included.	Section 6.13.4
1.11	Document to include a high-level construction program.	Noted. High Level construction programme incorporated into document.	Section 6.1
1.12	Document to include a high level risk register.	Noted. This is not within the scope of this plan. A traffic risk identification process and high-level risk register will provided in subsequent revisions.	Not applicable
1.13	For future revisions the version status should be signed.	Noted. Final submission of this plan will be signed.	Page iii
1.14	For ease of reference Abbreviations are to be provided in alphabetical order.	Noted. Abbreviations have been recorded.	Page iv
1.15	Clause 1 should also provide commentary on the enabling works and how they provide for and mitigate the Infra works.	Noted. Commentary surrounding the Enabling works have been incorporated into Section 1.2.3	Clause 1
1.16	SPR Appendix H Clause 2.3 (a) requires the overarching CTTMP to provide “The methodologies and specific measures to achieve and satisfy the targets, objectives and performance indicators for the safe and efficient movement and management for all users of the traffic and transport networks and systems.”	SPR Appendix H C 2.3 targets to be incorporated into the report.	Clause 2.3
1.17	The targets provided are insufficient. Please include the targets provided in SPR Appendix H Clause 1.2 as a minimum.	Noted. Targets to be incorporated into the report.	Clause 2.3

Reference	Comment	How addressed	Management plan reference location
1.18	Please include appropriate traffic and transport performance targets in the document and demonstrate how they will be achieved.	Noted. Performance targets to be developed and will be included in a later revision.	Clause 2.3
1.19	These Clauses are not required in an over-arching project CTTMP. If they must be included move them to the back of the document as Appendices where they will not distract from the purpose of the CTTMP.	Noted. These tables have been included to satisfy the Planning Conditions of Approval.	Clause 3.2,3.3 and 3.4
1.20	SPR Appendix H Clause 2.3 (b) requires this plan to be developed in consultation with various stakeholders. To demonstrate this, a distribution list and any responses received from the stakeholders should be included in the document.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	Clause 4.1
1.21	Define what an emergency access lane in this Clause. See SPR Appendix H Clause 1.3 (c)(x).	Noted. Required details to be incorporated into subsequent revisions.	Clause 5.1
1.22	It would be worth noting in this clause that SPR Appendix H Table 5 requires a tow truck to be provided (by the Contractor) onsite 24 hours a day while Hawkesbury Rd is reduced to a single lane of traffic less than 5.5m wide.	Noted. Appendix H requirements included in the plan. Detailed information to meet the requirements of Roads Act Approval is not relevant to the scope of this submission and will be provided in subsequent revisions.	Clause 5.1
1.23	This Clause should only state that which is permitted in SPR Appendix H. Where proposed arrangements fall outside of Appendix H then it should be noted that it is a proposal only subject to future detailed review and approval by SCO and RMS.	Noted. Section 5.3 amended to show requirements from SPR Appendix H. Sentence added to confirm the requirement to discuss proposals in detail with RMS and SCO.	Clause 5.2

Reference	Comment	How addressed	Management plan reference location
1.24	This Clause should include construction site traffic generation and access, including spoil access routes, type of truck to be used, consideration of geometry and manoeuvring requirements on the route, separate routes for contaminated spoil removal. In principle priority will be given to the use of State or Council roads (may require separate Haulage Management Plan).	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	Clause 5.4
1.25	Additional information is required in this Clause. Specify concurrent projects, their traffic generation, and identify cumulative traffic impacts.	Noted. This is not within the scope of this plan. The construction projects active within Parramatta CBD and surrounding areas is dynamic and as such, an assessment of construction traffic generation will be provided in a subsequent revision.	Clause 5.9
1.26	Please refer to the requirements of the SPR Appendix H Clause 4.	Noted. Reference to SPR Appendix H Clause 4 incorporated into document.	Clause 5.10
1.27	Provide more detailed traffic staging information in this Clause.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	Clause 6.1
1.28	This Clause should be collocated with Clause 5.4 and Appendix B.	Noted. The traffic impacts due to the project and the impacts due to haulage routes are covered in separated sections of the document. Linking and descriptive text has been added.	Clause 6.1.6

Reference	Comment	How addressed	Management plan reference location
1.29	Please note that the Transport Management Centre issue Road Occupancy Licenses (ROL) and Speed Zone Authorisations (SZA) on behalf of Roads and Maritime Services. The Sydney Coordination Office (SCO) does not issue ROLs or SZAs.	Noted. Text clarified to note ROLs, SZAs to be obtained from TMC as per SPR Appendix H requirements.	Clause 6.2.2, 6.2.3 and 6.3.1
1.30	Clause is nonsensical. SCO does not issue ROLs or SZAs (TMC do) or approve CTTMPs (RMS do). Please only note contractual requirements rather than non-documented 'SCO requirements.	Noted. Text clarified to reflect SPR Appendix H requirements. Changed to TMC.	Clause 6.2.4
1.31	Please identify the requirements of SPR Appendix H Clause 2.3.4 and how the project will address them.	Noted. Section updated to clarify RSA requirements	Clause 6.12
1.32	There is no requirement to provide completed RSAs to the TTLG members.	Noted. Text updated to remove requirement.	Clause 6.12
1.33	Please refer to SPR Appendix H Clause 5 for the Incident Response requirements.	Noted. Reference to Appendix H Clause 5 added.	Clause 6.13
1.34	Note it is not uncommon for major projects to provide a separate Traffic and Transport Incident Management Plan as a sub plan to the over-arching project CTTMP.	Noted. An Incident Management Response Sub-Plan will be developed and discussed with SCO.	Clause 6.13
1.35	Incident response plans for unplanned incidents must be prepared and included in this document.	Noted. An Incident Management Response Sub-Plan will be developed and discussed with SCO.	Clause 6.13
1.36	Incident response plans are not required in site specific CTTMPs.	Noted. Site Specific CTTMPs will only discuss variations to the plan or specific incidents that relate to that piece of work. Text updated to reflect.	Clause 6.13.1

Reference	Comment	How addressed	Management plan reference location
1.37	More detailed information is required for the incident response resource. What type of vehicle, how many personnel, what are the training requirements of the personnel, how will they be contacted, what are there hours of operation, etc.	Noted. These details will be provided in the Incident Response Management Sub-Plan which will be developed and discussed with SCO.	Clause 6.13.3
1.38	The roles and responsibilities for key personnel should be located in the front of the document, before they are referenced.	Noted. This is not within the scope of this plan. Detailed information to meet the requirements of Roads Act Approval will be provided in subsequent revisions.	Clause 7.1
1.39	Please refer to SPR Appendix H Clauses 3.1 and 3.4.	Noted. Text to be updated to reference TTLG, TCG. Reference in document will be made to Community & Stakeholder Engagement Plan re: dissemination of information to the community.	Clause 7.2
1.40	Nothing was provided in this appendix.	Noted. Comment sheet has been provided after first round of comments from stakeholders.	Appendix A
1.41	These figures should be collocated with Clause 5.4.	Noted. Figures to be incorporated into Section 6.1.6. Appendix B to be removed.	Appendix B
1.42	Figures should be larger with easily readable street names and suburbs.	Noted. Updated Haul Route Diagrams will be included will be provided in subsequent revisions.	Appendix B
1.43	There are too many routes specified, especially in the CBD. Routes must be rationalised to a primary and secondary route.	Noted. Further details of specific primary and secondary routes will be included will be provided in subsequent revisions.	Appendix B
1.44	Nothing was provided in this appendix.	Noted. ER endorsement will be included when received.	Appendix C

Table A- 3: Log of consultation with NSW Police as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	28/06/19	Email	Email of Question
Out	02/07/19	Email	Reply to Question
In	04/07/19	Email	Confirmation of Close out
In	08/07/19	Consultation	Questions raised in Emergency Services Consultation Session. All queries closed out in session.

Table A- 4: Log of issues raised by NSW Police as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	After reviewing the proposed works within the Parramatta CBD and the foreseeable impact, namely Macquarie Street being closed to local access only, can you comment whether consideration to remove kerb side parking from George Street to allow dual lanes in both East and West directions be created instead of the single lane, has been canvassed. This can be easily created with an adjustment to the kerb alignment to a small area on the north side of George Street immediately west of Church Street.	The changes on George St are being completed as part of the enabling works (under another contract package) and will result in two lanes in each direction, however some kerb side parking is being retained within these two lanes. Parking will be removed at intersections to provide dual lane for queuing or dedicated turning lanes. The consideration of parking has been completed in the development of a Parking Management Strategy required under the Planning Approval. In terms of the Infrastructure Works, we are not permitted to close lanes on Macquarie Street until the George Street enabling works to have been completed. During construction one, one-way lane will be provided with a switch from Westbound to Eastbound at some point. In its finished state traffic will flow Eastbound with 2 lanes from O'Connell to Marsden, 1 lane from Marsden to Horwood, no lane from Horwood to Smith and then 1 lane from Smith to Harris. These requirements are specified in our deed with TfNSW and Table 5-1: Key Road Network Changes will be updated in the next revision to be consistent with these deed requirements.	Table 5-1
1.02	How many plans will we be required to review?	Over the course of the project approximately 150 plans.	Answer provided in consultation session
1.03	Is it wide enough for firetruck? Worst case scenario will be a semi-trailer.	Appendix H – Prescribes main traffic components, which will include emergency services requirements.	Answer provided in consultation session

Reference	Comment	How addressed	Management plan reference location
1.04	Expressed concerns about congestion in Parramatta CBD, particularly around Christmas time and when events are on at the stadium.	Comment noted.	Answer provided in consultation session
1.05	Police do road closures for big events at the stadium. If there are any closures around George Street for construction works, they will require advanced notice. Particularly around the corner of George and O'Connell Streets.	Comment noted.	Answer provided in consultation session
1.06	Note that emergency indicator panel/emergency access might be not at the front of a building, might be at the side or the back.	Comment noted.	Answer provided in consultation session
1.07	Concern raised about no main contact for the project.	Project contact to be clarified. Jack nominated as NSW PF contact. Westmead contact to be clarified. Adam Dewberry will be contact for NSW Fire Jordan Emery contact for NSW Ambulance CoP to provide contact for SES	General
1.08	Recommendation to coordinate with the Parramatta Events Group.	Comment noted.	Answer provided in consultation session

Table A- 5: Log of consultation with NSW Ambulance as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	08/07/19	Consultation	Questions raised in Emergency Services Consultation Session. All queries closed out in session.

Table A- 6: Log of issues raised by NSW Ambulance as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	Single lane is very little space for an emergency vehicle, pull off bays are an important consideration, particularly on Hawkesbury Road, but applicable to the whole project.	CPBDJV have accounted for one traffic lane, and an overtaking lane – overall width of 5.5m. Allows for ambulance access and in case of breakdowns if a tow truck requires the space.	Noted for future Site Specific CTTMPs Section 6.13.1
1.02	Has there been any coordination with other construction works in the Westmead precinct?	CPBDJV will take over once the widening works are complete, as this is part of the enabling package. Won't be working concurrently with the enabling works. Coordination with enabling works is ongoing.	Section 1.2.3

Table A- 7: Log of consultation with CoPC as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	8/07/2019	Consultation	Questions raised in Emergency Services Consultation Session.
In	10/07/19, 12:56	Email	Questions table submitted.
In	10/07/19, 12:58	Email	Additional questions submitted
Out	26/07/19, 10:52	Email	Updated comments register sent confirming that recommendations had been incorporated into the plan.
In	9/08/19, 16:36	Email	Response confirming that City of Parramatta Council is satisfied with the response to the comments. Comments register attached with closed out comments.

Table A- 8: Log of issues raised by CoPC as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	Clarify scope of rail corridor	Response provided in meeting	General project scope
1.02	Referring to Paragraph 3 - it is not clear where it would be applicable that an ROL would be sent to Council and whether this is for notification only or requires a Council approval.	This Section has been revised to clarify the ROL procedure. All ROLs will be coordinated and approved through the SCO and TMC. Where e.g. footpath changes notification will be sent to council for their information.	Section 6.2.2
1.03	The report does not appear to mention National Heavy Vehicle Regulator (NHVR) approvals	Requirements for the NHVR will be added to the Plan.	General

Table A- 9: Log of consultation with Western Sydney Health as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	08/07/19	Consultation	Questions raised in Emergency Services Consultation Session. All queries closed out in session.

Table A- 10: Log of issues raised by Western Sydney Health as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	Important to maintain access on both sides of the campus, and the ability to respond to emergencies on both sides. Access needs to be maintained 24/7, for the whole campus. There is also no emergency power on one part of the campus. If something happens to the power supply, there needs to be the capability to bring in a generator if required.	Comment noted.	NA

Table A-11: Log of consultation with Parramatta Park Trust as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	05/07/19	Email	Comments
Out	10/07/2019	Email	Reply to Questions
Out	10/07/2019	Email	Request for Close Out
Out	17/07/2019	Email	Request for Close Out
In	29/07/2019	Email	Confirmation that the Trust's concerns have been address. Closed.

Table A -12: Log of issues raised by Parramatta Park Trust as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	Parramatta Park is a key stakeholder	Noted.	General
1.02	Westmead Precinct will potentially have impacts on Parramatta Park and we would need traffic management plans to accommodate various scale events and non-event mode at Parramatta Park. Event mode bump-in and bump-out includes heavy vehicle b-doubles transferring equipment (stage, sound, lighting etc) that can only egress by Queens Rd and the Westmead precinct. Emergency Vehicle access also needs to be assured at all times.	Noted. The requirements of Parramatta Park will be included in the development of Site Specific Construction Traffic and Transport Management Plans.	General

Reference	Comment	How addressed	Management plan reference location
1.03	Parking in Parramatta Park will likely be affected from extra use as vehicles move from lost street Parking. Conflict between Park visitor parking and construction impacted parking sites needs consideration.	Noted. Parking loss due to the works will considered in the Parking Management Plan that is currently being developed. Any construction requirements coming from this plan will be implemented in the Site Specific Construction Traffic and Transport Management Plans.	Section 5.8
1.04	Potential for increased traffic into the Parklands as vehicles use the park roads to avoid construction road impacts – particularly residents of Westmead. Impacts on Park road assets, monitoring changes and possible management needs consideration.	Traffic changes around the work packages will be planned with the production of Traffic Management Plans. These will consider traffic increases into the Parklands and mitigate where necessary.	General
1.05	Parramatta Park requires referencing throughout this section at level of Council and Stadium – liaison, references etc. PP events need including – refer to Trust Summer Series and liaison with the Trust will be required on finalisation of Summer Series Event schedule (but one key known event is Australia Day).	Reference to Parramatta Park Trust, Trust Summer Series and Australia Day added to the plan.	Section 6.10
1.06	Figure B3 has an identified haulage route through the Park (in blue) – this needs deleting.	Haulage routes through the park will be removed.	Figure B3 (moved to Section 6.1.6)

Table A - 13: Log of consultation with Cumberland Council as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
In	11/07/2019	Email	Comments
Out	11/07/2019	Email	Reply to Question
In	17/07/2019	Email	Confirmation of Close out

Table A - 14: Log of issues raised by Cumberland Council as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	The only significant impact I can foresee to the Cumberland Community would be local traffic management. I would assume that your engagement plan would ensure Council is thoroughly communicated with regarding any traffic impacts along Hawkesbury Road	Response confirmed primary communications for ongoing traffic management is via TCP and TTLG. Although not specifically mentioned, Cumberland Council can be invited to attend meetings as works may impact traffic along Hawksbury Road.	General

Table A - 15: Log of consultation with Health NSW – Health Administration Corporation as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19& 20/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 18:40	Email	Issue of Traffic, Transport and Access Management Sub-plan for review.
Out	10/07/19 11:02	Email	Request for comments or update on when comments may be received.
Out	17/07/19 20:03	Email	Request for comments or update on when comments may be received.
In	29/07/19 17:27	Email	Response with comments on the Traffic, Transport and Access Management Sub-plan
Out	05/08/19, 12:53	Email	Response on comments raised and confirmation that recommendations had been incorporated into the plan (as required).
In	09/08/19, 13:32	Email	Response from Westmead Precinct stating that final response will be streamlined through one party for NSW Health. Final responses to CEMP and Sub-Plans will be forthcoming.
In	4/09/2019, 6:44	Email	Response from PWC (NSW Health nominated representative) detailing consolidated comments on nominated plans.
In	01/11/19, 17:59	Email	Response from PWC confirming that all comments on the SEMP, CEMP and Sub-plans have been satisfactorily closed.

Table A - 16: Log of issues raised by Health NSW – Westmead Precinct as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	• The Children's Hospital at Westmead (CHW) has approx. 60,000 Emergency Department Presentations per annum, 24/7/365. • 32,000 admissions per annum. • Up to 500,000 outpatient visits per annum. • 300 children and their parents staying overnight most nights. • Families presenting in emergency situations and potentially distressed. • Most children attending come with multiple family members / carers and families and come and go from the hospital via car multiple times in one day to facilitate sharing the car of the child. • The Children's Hospital at Westmead is a very busy place and the needs of the children and families need to be managed very, very carefully. • It should be noted many children visiting the hospital have disabilities.	Noted and confirmed that SCHN is a key stakeholder for changes to traffic conditions in the Westmead area.	General

Reference	Comment	How addressed	Management plan reference location
1.02	We are fully supportive of the PLR Project and the end state and transport options it will provide, getting there will be a challenge. We are committed to working with PLR and the various contractors to ensure the following: 1. Safe and timely access to the hospital at all times throughout construction. 2. Minimisation of disruption through collaborative planning and innovative approaches. 3. Ensuring the safety of children, staff and contractors at all times.	Noted	General

1.03	We request that, a rigorous system for collaborative management and planning of disruptions be developed and that KPIs for this process be reported to PLR regularly. CHW will be a member of this disruption planning group. Importantly early notification and planning of disruptions is required, especially those within 100m of the hospital entrance.	A Development Agreement has been executed between Westmead Health and Education Precinct and TfNSW. The agreement includes specific requirements that have been agreed to by both parties to manage the construction of PLR and related impacts. The agreement also includes commitments for HAC (Health Administration Corporation) and TfNSW (and its contractors) to work cooperatively and in good faith. In addition, the agreement makes commitments to ongoing consultation in various forms including convening Project Control Group meetings monthly, or as otherwise agreed. The consultation comments and requests have been addressed in the context of this Development Agreement with an understanding that the individuals commenting on the CEMP & Sub-plans may or may not be familiar with the obligations established within the Development Agreement. In addition to the Project Control Group, a rigorous process for managing changes to traffic conditions (including pedestrian access) exists whereby the CPBDJV requests approval for all traffic changes as we progress through the staging required to achieve end state. This includes Construction Traffic Management Plans (CTTMPs) for ongoing occupations and permanent traffic changes, as well as Road Occupancy Licenses for short term works. These approvals are granted through the Sydney Co-Ordination Office (SCO), under the guidance of the TTLG (of which NSW Health have nominated representatives on behalf of the hospital precinct). SCO will require CPBDJV to demonstrate consultation with NSW Health for all changes impacting Hospital access/ within the adjacent Precinct. Should the impacts of CPBDJV works result in unacceptable impacts to SCHN operations and your concerns remain unresolved through liaison with CPBDJV directly, then as a	General

Reference	Comment	How addressed	Management plan reference location
		key stakeholder representation can be made via the SCO, who can ensure CPBDJV are held to account.	
1.04	Appendix 1B. Page 53 (page 60 of PDF): Please include specific details of how the entrance to The Children's Hospital at Westmead will be managed throughout the project.	Any modifications to the existing access or operations will be proposed through the Project Control Group established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.	Section 5.2
1.05	Page 55 (Page 62 of the PDF): Please include details of how the bus stop on Hawkesbury road will be accommodated / relocated during construction.	Any adjustment to the Hawkesbury Road bus stop would be proposed as part of site specific CTTMPs and provided to NSW Health for comment as part of the approval process.	Section 5.4
1.06	Page 76 (83 of PDF): Emergency Vehicle access. Please include The Children's Hospital at Westmead on this page. The fact that CHW was not noted is concerning. It should also be noted access for members of the general public must also be maintained for 'emergency drop off' purposes.	Noted. CHW added. Emergency drop off purpose access would be maintained.	Section 6.9.1
1.07	Page 89 (96 of the PDF): Include negotiation / notification with the hospitals.	Section 5.2 has been revised to note that any modifications to the existing access or operations will be proposed through the Project Control Group established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.	Section 5.2

Reference	Comment	How addressed	Management plan reference location
1.08	As discussed on the telephone, SCHN is very concerned about the potential disruption to our patients during construction. We request ongoing active engagement with our organisation and the development of systems and processes to ensure good planning in liaison with health services.	Ongoing consultation with SCHN will be achieved through the Project Control Group. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.	General
1.09	On 5.6 Changes to Public Footpaths and Pedestrian Access: INFRA to confirm if HAC will be consulted and provide review of proposed pedestrian and wayfinding signage when construction work zones are in place. Concern that access routes to hospital facilities may not be clear. New routes will also need to be communicated in advance.	Consultation will be undertaken in the development of site specific CTTMPs to ensure that all changes are planned with the hospital and communicated in advance.	Section 6.9.1
1.10	"Hawkesbury Road cycle path (between Railway Parade and Queens Road) will be temporarily impacted during construction": INFRA to confirm extent of impact. Bike path runs through HAC land at Darcy and Hawkesbury Road intersection and is regularly used.	The extent of impacts to the Hawkesbury Road cycle path are not currently known. However, any proposed changes will be tabled at the Project Control Group. Layout and staging will be developed as part of CTTMPs and consultation will be undertaken following submission to the SCO.	Section 5.7

Reference	Comment	How addressed	Management plan reference location
1.11	On Section 6.2 Road occupancy: INFRA to confirm that DNs (Disruption Notices) will be provided if and when hospital access or operations will be affected by construction works.	Any modifications to the existing access or operations will be proposed through the Project Control Group established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.	Section 5.2
1.12	On Section 6.9 Maintaining access: INFRA to add key Westmead campus roads not captured: • Westmead Adults ED entry, • Uni Clinics entry and exit, • CASB Plaza entry road, • Research Lane • Paringa Ave, Cumberland West • Gardens Way, Cumberland West • Warrinya Ave, Cumberland East • Eastern Circuit, Cumberland East • Greenup Drive, Cumberland East	The nominated Westmead campus roads have been added to Section 6.9.1. It is noted that all roads impacted by works will be captured as necessary in site specific CTTMPs.	Section 6.9.1
1.13	On Section 6.9 Maintaining access: INFRA to confirm HAC will be consulted for input in all CTTMPs (Construction Traffic and Transport Management Plans) affecting the Westmead Campus prior to submission to RMS.	Any modifications to the existing access or operations will be proposed through the Project Control Group established under the Development Agreement executed between Westmead Health and Education Precinct and TfNSW. In addition, consultation will be undertaken following submission of CTTMPs to the SCO.	Section 5.2 Section 6.9.1

Reference	Comment	How addressed	Management plan reference location
1.14	On Section 6.13 Incident management and response: INFRA to confirm how HAC will be included in the Incident Notification process (either Traffic, Environmental or other incidents that may impact access/operation of the Westmead Campus)	The existing system developed by the Enabling Works (Package 1) will be adopted in relation to incident management and response. This includes a group messaging system and phone contact list for critical personnel. Should an incident affecting access occur, notification of impacts and site response will be circulated from the Site Superintendent or nominated Traffic Incident Response Resource. For non-critical incidents, written notification will be provided to nominated recipients in accordance with the Communications Management Plan.	Section 6.13
1.15	On Section 7.2.2 Traffic & Transport Liaison Group (TTLG): INFRA to confirm whether HAC will be included in the TTLG. Text currently reads “Should be included” suggest, “will be included”.	Section 7.2.2 has been revised to note that the nominated user groups (including NSW Health incorporating Children’s Hospital Westmead, Western Sydney Health and Cumberland Hospital) have been invited to participate in the TTLG.	Section 7.2.2

Appendix B – Environmental Representative Endorsement

15 May 2020

Transport for NSW

Attention to: **Megan Haberley**
Senior Manager Environment
Parramatta Light Rail
130 George St, Parramatta, NSW 2150

Review of Appendix B1 – Traffic, Transport and Access Management Sub-Plan.
Infrastructure Works Stage 1 - Parramatta Light Rail
(PLR1INF-CPBD-ALL-TF-PLN-000001 Rev 7)

Pursuant to SSI8285 Condition of Approval A23 (d) i), as the approved Environmental Representative, I confirm that I have reviewed the updated Appendix B1 – Traffic, Transport and Access Management Sub-Plan. Infrastructure Works Stage 1 - Parramatta Light Rail (PLR1INF-CPBD-ALL-TF-PLN-000001, Rev 7), dated 14/11/2019, prepared by CPB Downer Joint Venture, for consistency with the requirements of the Conditions of Approval.

In my opinion the updates to the aforementioned document are minor in nature and are consistent with the requirements included in or required under the terms of the Conditions of Approval for the Parramatta Light Rail (Stage 1) development.
It is noted the following documents referred to within the Traffic, Transport and Access Management Sub-Plan are to be finalised as per the Conditions of Approval requirements:

- Network Management Strategy (CoA E10);
- Parking Management Strategy (CoA E11);
- Pedestrian and Cyclist Network and Facilities Strategy (CoA E14);
- Wayfinding and road signage strategy (REMM TT-1).

Yours sincerely,

Australian Quality Assurance & Superintendence Pty Ltd (AQUAS)

Gillian Lehn
Environmental Representative
phone: +61 2 9956 9963 | fax: 02 9954 1951 | mobile: +61 438 355 346 |
email: gillian.lehn@aquas.com.au |

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Parramattalightrail.nsw.gov.au
Parramattalightrail@transport.nsw.gov.au
1800 139 389
Level 10, 130 George Street Parramatta 2150