

Construction Traffic, Transport and Access Management Plan

**Transport for NSW
Package 5 – Supply, Operate, Maintain (SOM)**

**Parramatta Light Rail
December 2021**

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Document control

Approval and Certification

Title	Construction Traffic, Transport and Access Management Plan Package 5 – Supply, Operate, Maintain (SOM) Parramatta Light Rail
Endorsed by Environmental Representative	
Signed	
Dated	
Approved on behalf of Transport for NSW by	
Signed	
Dated	
Approved on behalf of Great River City Light Rail Pty Ltd by	
Signed	
Dated	

About this release

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Version	Date	Prepared By	Approved By
A	10/04/2019	Advisian on behalf of GRCLR	
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Glossary / Abbreviations

Abbreviation	Expanded text
BOCC	Backup Operation Control Centre
CAF	Sub-Contractor Construcciones y Auxiliar de Ferrocarriles
CEMP	Construction Environmental Management Plan
CJP	Customer Journey Plan
CoA	Condition of Approval
CoPC	City of Parramatta Council
CSSI	Critical State Significant Infrastructure
CTTAMP	Construction Traffic, Transport and Access Management Plan
CTTMP	Construction Traffic and Transport Management Plan
DPIE	NSW Department of Planning, Industry and Environment
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EMMM	Environmental mitigation and management measures
EMS	Environmental Management System
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPO	Environmental Performance Outcomes
ER	Environmental Representative
GRCLR	Great River City Light Rail, means GRCLR and key Suppliers/Subcontractors
IMS	Integrated Management System
LAP	Local Access Plan
LORAC	Subcontractor Laing O'Rourke Australia
NAM	Network and Asset Management
OPLINC	TfNSW Online System for ROL Applications
PLR	Parramatta Light Rail

Abbreviation	Expanded text
REMMM	Revised Environmental Mitigation and Management Measures
RMS	Roads and Maritime Services (now TfNSW)
ROL	Road Occupancy Licence
SaMF	Stabling and Maintenance Facility
SCO	Sydney Coordination Office
SOM	Supply, Operate and Maintain
SPA	Swept Path Analysis
SSCTTMP	Site Specific Construction Traffic and Transport Management Plan
SZA	Speed Zone Authorisation
TCG	Traffic Control Group
TCP	Traffic Control Plan
TfNSW	Transport for New South Wales
TfNSW RM	Transport for New South Wales Roads and Maritime
TGS	Traffic Guidance Scheme
TMC	Traffic Management Centre
TTLG	Traffic and Transport Liaison Group
VMP	Vehicle Movement Plan
VMS	Variable message sign

1 Introduction

1.1 Context

This Construction Traffic, Transport and Access Management Plan (CTTAMP or Plan) is a Sub-Plan to the Construction Environmental Management Plan (CEMP) for the Parramatta Light Rail (PLR) Supply, Operate and Maintain (SOM) Contract (Package 5).

PLR is one of the NSW Government's major infrastructure projects being delivered to serve a growing Sydney. PLR will connect Westmead to Carlingford via Parramatta Central Business District (CBD) and Camellia. PLR is expected to be operational in 2023. More detailed description of the overall PLR Project is provided in Section 1.2.

The PLR Project received planning approval on the 29 May 2018 (SSI 8285) and was subsequently modified twice with approvals issued on 21 December 2018 and 25 January 2019 respectively. This CTTAMP has been prepared to address the requirements of the Minister's Conditions of Approval (CoA) and the revised environmental mitigation and management measures (REMMM) listed in the Parramatta Light Rail Stage 1 Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement (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) (SPIR) and all applicable legislation.

1.2 Background and project description

PLR 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 PLR include:

- A new dual track light rail network of approximately twelve kilometres in length, including approximately seven kilometres within the existing road corridor and approximately five kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services
- Sixteen 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 Facility (SaMF) 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 PLR route is shown in Figure 1-1.



Figure 1-1: Parramatta Light Rail route

1.2.1 Statutory context

PLR has been 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).

Detailed environmental impact assessments have been carried out and approved by the Minister for Planning. The Planning Approval for the project is described in Section 1.2.2.

1.2.2 PLR planning approval

The Parramatta Light Rail was approved by the Minister for Planning on 29 May 2018, under Section 5.19 of the *Environmental Planning and Assessment Act (EP&A Act) 1979*. An environmental impact statement (EIS) was prepared as part of the infrastructure application (SSI-8285) as a submissions and preferred infrastructure report (SPIR) following public exhibition of the EIS.

The Infrastructure Approval has subsequently been modified twice under Section 5.25 of the EP&A Act, with approvals issued on 21 December 2018 and 25 January 2019 respectively. The modifications related to changes to conditions of approval (CoA) not the physical description of PLR.

1.3 Staging of the PLR works

The PLR comprises approximately 12km alignment from Westmead to Carlingford via Camellia and consists of a mix of both on-street and dedicated corridor.

PLR is being delivered under five delivery packages as detailed in the Staging Report:

- Enabling Works (**Package 1**) – Local road network improvements including O’Connell Street and George Street (off-alignment)
- Westmead Precinct Works (**Package 2**) – Hawkesbury Road widening and demolition at Cumberland Hospital (east and west Campus)
- Early Works (**Package 3**) – Remediation of the Stabling and Maintenance Facility (SaMF)
- Infrastructure Works (**Package 4**) – 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 Works (**Package 5**) – The Project (subject of this Plan) 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 SaMF, including all light rail operations, customer service and asset management.

The Infrastructure Approval, modifications and related environmental assessment documents can be found at: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8285.

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.

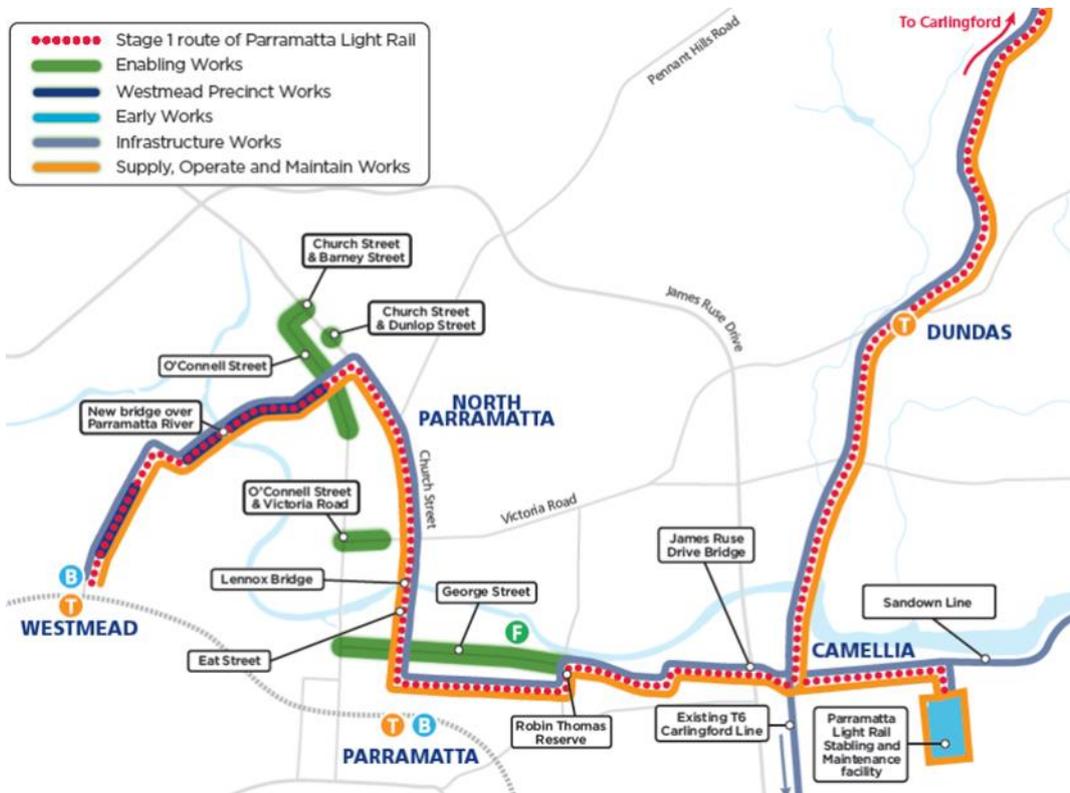


Figure 1-2: Parramatta Light Rail Delivery Package Interface

1.4 Project description for Supply, Operate and Maintain – Package 5

As System Integrator for PLR, the Supply, Operate and Maintain (SOM) Contractor's activities include:

- Delivery activities
- Light rail vehicle procurement
- Operation and maintenance.

The delivery activities include all investigation, selection, specification, design, approvals, construction, manufacture, installation, testing & commissioning, operational readiness and activities to transition from the delivery phase to the operations phase.

In summary the package includes the following. Figure 1-3 further details these activities.

- All works above and additional to the platform concrete foundation slab at all stops
- Stabling and maintenance facility
- Central control system
- Light rail signalling system
- Elements of the road intersection signalling system
- Communications and passenger information systems
- Power Supply system
- Procurement of light rail vehicles (LRV)
- Maintenance plant and machinery for the LRVs
- Earthing & bonding, electrolysis and electromagnetic compatibility

- Electronic ticketing system for top up or ticket machine and fixed location reader.

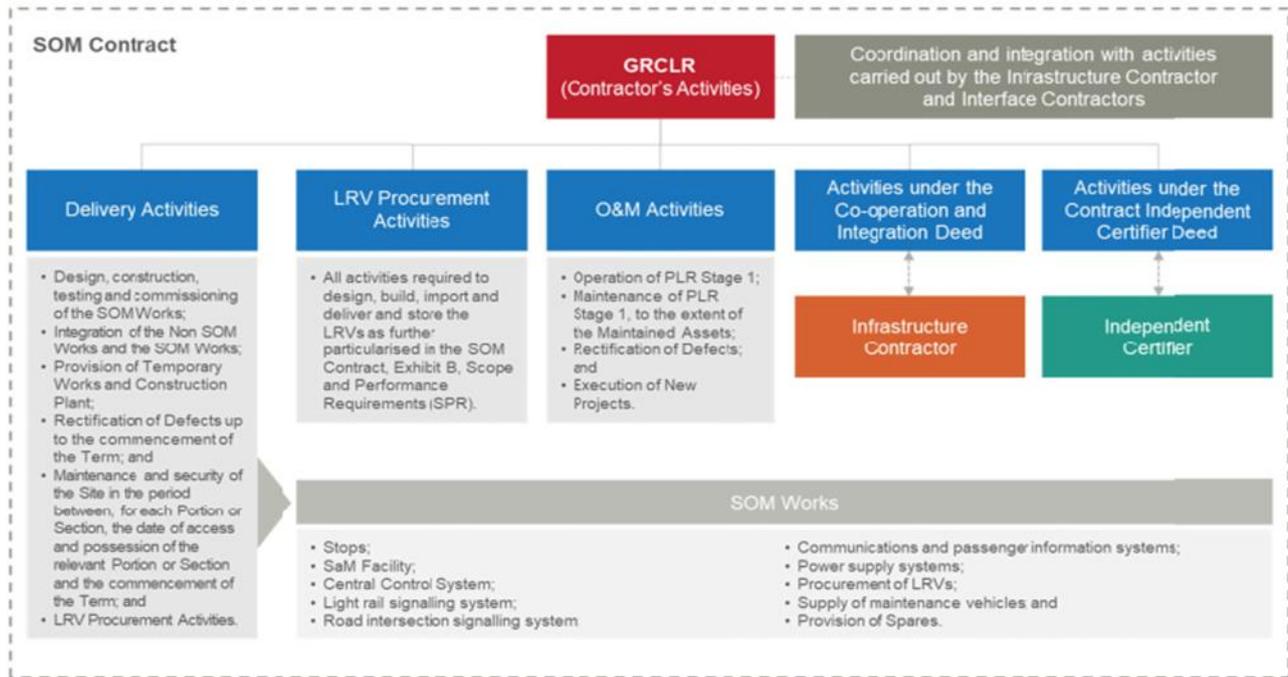


Figure 1-3: SOM contract activities for PLR

Great River City Light Rail (GRCLR) is responsible for the delivery of the SOM works for PLR. GRCLR has sub-contracted out the supply component of these works to Construcciones y Auxiliar de Ferrocarriles (CAF) who has engaged Thales, General Electric and Laing O'Rourke Australia (LORAC) to undertake the design and construction responsibilities associated with the supply component of the works, which includes the design and construction related activities including testing and commissioning, and excludes all operational and maintenance activities.

GRCLR is the owner of the Construction Environmental Management Plan (CEMP) and Plans, and is responsible for ensuring implementation of and compliance by all subcontractors during construction works of the SOM package, which include the construction of the light rail systems (including high-voltage power supply), stops above slab level, as well as the stabling and maintenance facility. Further detail on the SOM construction works is provided below.

1.4.1 Stops

Light rail stops would be constructed after the Infrastructure Contractor has completed the stop slabs and access, with works at each stop commencing progressively after the completion of the adjacent linear segment of track infrastructure. There are sixteen stops that would be constructed. The stops will be in the following locations:

- Westmead Station
- Westmead Hospital
- Children's Hospital at Westmead
- Cumberland Hospital
- Factory Street
- Fennell Street
- Prince Alfred Square
- Eat Street

- Parramatta Square
- Harris Street
- Tramway Avenue
- Camellia
- Rydalmere
- Dundas
- Telopea
- Carlingford.

1.4.2 Stabling and maintenance facility

A stabling and maintenance facility (SaMF) will be constructed at 6 Grand Avenue, Camellia on a former industrial site adjacent to the Rosehill Gardens Racecourse. The facility will provide for maintenance, repair, refurbishing, upgrading, stabling, cleaning of light rail vehicles and a base for infrastructure maintenance activities and will operate 24 hours a day and 7 days a week. Administration and staff facilities, as well as the operations control centre for the light rail network, will be located within the maintenance building. Parking for staff and visitors will be provided on site, including maintenance vehicle parking. An electrical substation will be located at the site to power the facility and light rail.

This site is referred to as Area of Environmental Interest (AEI) 27 in the Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement.

The site has undergone subsurface remediation works to render the site suitable for commercial industrial use. This has removed all vegetation from the site. GRCLR will receive the site cleared of vegetation and with an unsealed capping layer.

The Local heritage listed tram alignment (I6) passes adjacent to the northern end of the site. Grand Avenue lies within the curtilage of the heritage tram alignment.

This site is to be used as the main SOM project compound. The facility will be established following completion of ground remediation works and capping of the site, which will be completed by others. GRCLR will receive the site along with a validation certificate from an EPA Accredited Site Auditor. Prior to establishment, the ground will be managed to minimise dust emissions.

The type and extent of works to construct the SaMF are summarised in Table 1.1.

Table 1.1: Type and extent of works to construct the SaMF

Type of works	Works extent
Site establishment	<ul style="list-style-type: none"> • Site office and amenities during construction
Earthworks and subsurface works	<ul style="list-style-type: none"> • Combined service route • Drainage • Hydraulics (sewer, water, fire)

Type of works	Works extent
Civil works	<ul style="list-style-type: none"> • Fencing • Service roads • Footpaths • Carparks • Landscaping • Substation – TPS 8
Rail systems	<ul style="list-style-type: none"> • Track • Overhead wiring • DC feeders
Structures	<ul style="list-style-type: none"> • Administration and Maintenance building (construction of foundation and slab, structural frame, roofing and cladding, MEP fit out, finishes) • Outbuildings (fire pump house, sanding plant building, cleaners store, train wash building)
Operations control centre	<ul style="list-style-type: none"> • Construction of foundation and slab, structural frame, roofing and cladding, MEP fit out, finishes • Fire pump house, sanding plant building, cleaners store, train wash building
Rail stops	None

1.4.3 Substations

Traction Power Substations (TPSs) would generally comprise prefabricated structures, which are manufactured off-site. On-site works would typically comprise excavation, foundation preparation and construction, and the installation of conduits and other in-situ works (i.e. electrical works) prior to the installation of the prefabricated substation building and security fencing surrounding the site. Note that the demolition of existing buildings at TPS sites will be undertaken by the Infrastructure Contractor and is outside of the scope of this Plan.

1.4.4 Rail systems

The installation of rail systems would include the installation of overhead wiring and jewellery, rail signalling and associated infrastructure and systems. The overhead wiring structures and footings will be constructed by the Infrastructure Contractor, as will be the combined services route within which the rail systems conduits will be installed. The overhead wiring (OHW), structures and footings within the SaMF will be constructed by GRCLR.

A Backup Operations Control Centre (BOCC) will be constructed adjacent to Dundas Station on the corner of Dudley Street and Calder Road, Dundas. Table 5.1 provides the construction activities being undertaken at the BOCC site.

1.5 Scope of this plan

This CTTAMP has been prepared for the construction of Package 5 Activity A (Stabling and Maintenance Facility) and Activity B (remaining SOM works), as per Staging Report Revision 7.02. Referred to as the Project.

This CTTAMP applies to the construction of the SaMF and the remainder of the SOM works for the alignment, including Stops, TPSs, BOCC and other sites (i.e. full SOM scope or construction works), as per Staging Report Revision 7.02. Referred to as the Project.

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

A full suite of control measures in compliance with the CoA, REMMMs and Environmental Performance Outcomes (EPO) is provided in this CTTAMP, to inform the construction teams of traffic and transport management requirements for both direct and indirect impacts for the Project, which can also be applied for the wider SOM construction scope, as described in Section 1.3.

The CTTAMP is required to be submitted to the Secretary for information, at least one month before construction works commence in accordance with CoA C6.

1.6 Relationship with relevant works packages

1.6.1 Infrastructure contractor – Parramatta Connect (Package 4)

The Infrastructure Works is closely aligned to the Package 5, Supply, Operate and Maintain (SOM) Works. A graphical representation of the split in scope between the two packages is depicted in Figure 1-4. The reason for dividing this work into two packages 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 and will not trigger the operational conditions, except for those that relate to detailed design.

An interface between the two packages 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-compliance management.

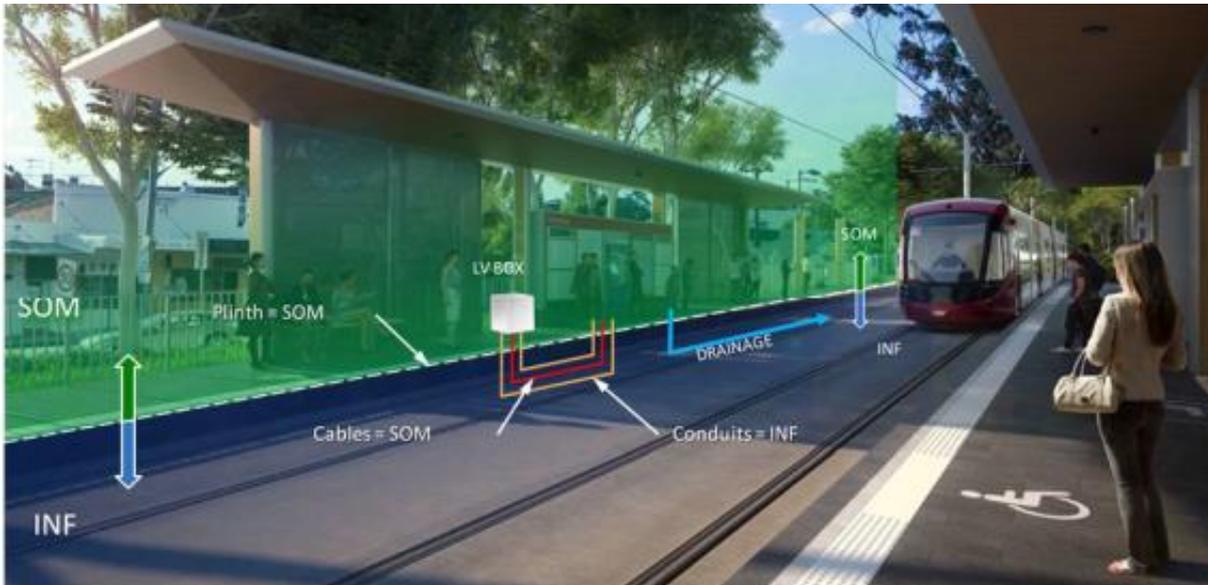


Figure 1-4: Relationship between Infrastructure Works and SOM Works

1.6.2 Remediation contractor – Ventia (Package 3)

The SOM contract is dependent on the completion of the remediation works at the stabling and maintenance facility (SaMF) site, by the Early works portion 2 contractor (referred to as the remediation contractor).

The SaMF site is subject to historical contamination and is a listed contaminated site by the Environment Protection Authority (EPA). The works have been split to ensure that appropriately qualified contractor, experienced in remediating heavily contaminated sites, is managing the remediation of the site. The remediation contractor will complete their works and provide GRCLR a remediated site, complete with a site audit statement, and supporting management documentation, fit for purpose for site establishment, construction and operational activities associated with PLR.

The remediation works will deliver the remediated site, including any details of any ongoing management requirements, and will not trigger the construction and operational conditions, except for those that relate to detailed design. The Remediation Contractor will provide GRCLR with a Long Term Environmental Management Plan (LTEMP) for the SaMF which will include all construction, operation, management, maintenance and monitoring requirements for the SaMF. GRCLR will implement the requirements relevant to the construction and operation of the Stabling and Maintenance facility.

Ongoing management for the remedial works on the SaMF site will be implemented through the LTEMP which will be approved by the Site Auditor, as part of the issuing of the Site Audit Statement (SAS) for the site. The LTEMP will be a stand-alone document, and all monitoring and reporting will be managed through the processes and procedures in the LTEMP, and not through the GRCLR CEMP.

An interface between the two packages has been established to ensure the remediated site meets the design requirements for the construction, operation and maintenance of the site.

1.7 Environmental management systems overview

The construction of the Project will be managed in accordance with the GRCLR Integrated Management System (IMS) which includes an Environmental Management System (EMS). The EMS will be adopted as the guiding environmental management framework for the Project. The EMS is compliant with AS/NZS ISO 14001:2015. The EMS is integrated with the project wide IMS which includes assurance, quality and health and safety, management systems.

The EMS will guide the development of the Project's governance documentation, including this CTTAMP, the CEMP and associated management plans, procedures and management tools to achieve the commitments and intentions established by the GRCLR Environment and Sustainability Policy, to ensure environmental performance and sustainability objectives and targets are achieved.

All works carried out on the site will be in accordance with:

- Minister's Conditions of Approval (CoA) SSI-8285
- Revised Environmental Mitigation and Management Measures (REMMMs)
- Environmental Performance Outcomes (EPO's)
- AS/NZ ISO 14001
- All applicable legislation
- Project Deed
- GRCLR IMS.

1.7.1 Construction environmental management plan

A CEMP has been prepared for the SOM contract (Package 5). This CEMP provides the system to manage and control the environmental aspects of the SOM contract (Package 5) during construction. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. In accordance with CoA C8, construction will not commence until the CEMP and the associated management plans specified in CoA C3 are approved by the Secretary or provided to the Secretary for information (as required by CoA C3).

1.7.2 Environment management plans

Subject-specific environmental management plans have been prepared to support the CEMP. These documents were prepared to identify requirements and processes applicable to specific impacts or aspects of the SOM contract (Package 5). They address the relevant requirements of the CoAs, REMMMs and EPOs. A list of construction management plans for the SOM contract (Package 5) and their approval requirements are provided in Table 1.2.

Table 1.2: Environmental management plans

Document name	Document number	Approval pathway/ requirement
Traffic, Transport and Access Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000032	REMMM GEN-1 CoA C3 (a) REMMM TT-25
Flora and Fauna Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000033	REMMM GEN-1 CoA C3 (e) REMMM BI-3
Noise and Vibration Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000034	REMMM GEN-1 CoA C3 (b) REMMM NV-1

Document name	Document number	Approval pathway/ requirement
Soil and Water Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000035	REMMM GEN-1 REMMM HY-6
Heritage Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000037	REMMM GEN-1 CoA C3 (d) REMMM AB-2 REMMM HE-21
Air Quality Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000038	REMMM GEN-1 REMMM AQ-1
Construction Waste and Resource Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000039	REMMM GEN-1 REMMM WM-2
Contaminated Land Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000040	REMMM GEN-1 REMMM CM-3
Site Establishment Management	PLR1SOM-GLR-ALL-PE-PLN-001002	REMMM GEN-1 CoA C18 REMMM GEN-2
Flood Management Plan	PLR1SOM-GLR-ALL-PM-PLN-000047	REMMM GEN-1 CoA C3 (c) REMMM HY-4

2 Purpose and objectives

2.1 Purpose

The purpose of this Construction Traffic, Transport and Access Management Plan (CTTAMP) is to meet the requirements of CoA C3(a) and to describe how GRCLR proposes to manage traffic during construction of the Project, including traffic control and traffic management measures to manage potential hazards associated with the traffic environment. This TTAMP has been prepared to be consistent with the Project Construction Traffic and Transport Management Plan (CTTMP) and available Site Specific Construction Traffic and Transport Management Plans (SSCTTMP), developed and managed separately through the GRCLR IMS, under which day to day traffic management will occur for the SOM scope of works.

2.2 Objectives

The key objective of the CTTAMP is to ensure that traffic impacts during construction are minimised and are within the scope permitted by the planning approval. 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, GRCLR will undertake the following:

- Ensure appropriate controls and procedures are implemented during construction activities to address potential traffic and access impacts around the SOM sites
- Ensure appropriate measures are implemented to address the relevant CoAs, REMMMs and EPOs outlined in Section 3 of this plan, and the safeguards detailed in the EIS
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this Plan
- Implementing traffic control that maximises safety for workers and public by isolating work area whilst minimising delay to road users
- Planning and staging all work activities to effectively minimise road occupancy and potential impacts on the road network
- Maintaining access to and from adjacent properties
- Restricting construction vehicle movements to designated routes to and from site
- Seeking approval from key stakeholders including Sydney Coordination Office (SCO), City of Parramatta Council (CoPC), the former Roads and Maritime Services (RMS), Traffic Management Centre (TMC), NSW Police, Bus providers, Emergency Services and local businesses, schools and residents to ensure they are well informed about the works and changes to traffic conditions.

It will be necessary to ensure appropriate control measures are implemented during work activities to address all potential traffic impacts and that these control measures comply with regulations and conditions of approval. To meet these objectives, the CTTAMP will incorporate the following strategies:

- Ensuring all road users are managed including motorists, motorcyclists, pedestrians, cyclists, people with disabilities and people using public transport
- Ensuring work activities are carried out sequentially to minimise adverse impacts

- Provision will be made for works personnel to enter the work area in a safe manner in accordance with safety procedures
- All entry and exit movements to and from traffic streams will be in accordance with the requirements of safe working practices.

Site-specific Traffic Control Plans (TCPs) will be developed, an example of which has been included in Appendix B. These identify the traffic control measures to be implemented during the works. Further TCPs shall be developed as necessary during the various stages of the SOM package. All proposed arrangements, signage and devices details contained within these TCPs will be in accordance with Australian Standards 1742.3 and RMS TCWS Manual 5.0.

3 Environmental requirements

3.1 Relevant legislation and guidelines

3.1.1 Legislation and regulatory requirements

Identified regulatory requirements are:

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

Legislation relevant to traffic management also includes the *Environmental Planning and Assessment Act 1979* (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 A1 of the CEMP.

3.1.2 Guidelines

The main guidelines, specifications and policy documents relevant to this Plan include:

- Traffic Control at Worksites Technical Manual - Document No. | RMS.18.898 | Version No: 5.0 (27 July 2018)
- AUSTRROADS Guide to Traffic Management 2009 – Parts 1-13
- AUSTRROADS Guide to Road Design 2009 – Parts 1-7
- AUSTRROADS Guide to Road Safety 2009 – Parts 1-9
- Guidelines for Road Safety Audit Practices
- RMS QA Specification M209 – Road Plates
- RMS D&C Q6 Quality Management System
- RMS D&C R132 Safety barrier systems
- The Australian New Zealand Standard on “Road safety barrier systems and devices” (AS/NZS 3845 Parts 1 and 2)
- RMS D&C R142 Retroreflective Raised Pavement Markers
- RMS D&C R143 Signposting
- RMS D&C R145 Pavement Marking
- RMS QA Specification 3368
- RMS QA Specification R141 - Pavement marking

- RMS Specification G10 – Traffic Management
- RMS Specification G10M – Traffic Management (Maintenance Works)
- Traffic Signals Specification, SI/TCS/8, Installation and Reconstruction of Traffic Light Signals
- Traffic Signal Design Guidelines, RTA/Pub 08.092
- 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.

3.1.3 Compliance tracking for Construction Sites currently being used by the Infrastructure (Package 4) Contractor

With the exception of the SaMF and 8 Colquhoun Street sites, all other construction sites are currently being used by the Infrastructure (Package 4) Contractor. As such details are not available to be included in this TTAMP. Instead, this TTAMP discusses where compliance with the CoA will be captured, that being in the SSCTTMPs and TCPs which are required to be approved by TfNSW Roads and Maritime (TfNSW RM), and will be managed, retained and stored in the GRCLR IMS.

Note, until the Infrastructure (Package 4) Contractor completes their works and begins handing over the other construction sites, GRCLR will operate all construction activities out of the SaMF and 8 Colquhoun Street sites, for which full details have been provided in this TTAMP.

3.2 Ministers conditions of approval

The CoA relevant to this Plan are listed in Table 3.1 below. A cross reference is also included to indicate where the condition is addressed in this Plan or other Project management documents.

Table 3.1: Conditions of approval relevant to the CTTAMP

CoA No.	Condition Requirements	Document reference	How Addressed
A5	<p>Where the terms of this approval require a document or monitoring program to be prepared or a review to be undertaken in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Secretary with the document or monitoring program or review. The evidence must include:</p> <p>(a) documentation of the engagement with the party(ies) identified in the relevant condition of approval before submitting the document for approval;</p> <p>(b) log of the points of engagement or attempted engagement with the identified party(ies) and a summary of the issues raised by the identified party(ies);</p> <p>(c) documentation of any follow-up with the identified party(ies), where feedback has not been provided, to confirm that the identified party(ies) has none or has failed to provide feedback after repeated requests;</p> <p>(d) outline of the issues raised by the identified party(ies) and how they have been addressed, including evidence that the party(ies) is satisfied the issues have been addressed; and</p> <p>(e) where there are outstanding issues raised by the identified party(ies) that have not been adopted, the reasons why they have not been/could not be adopted must be provided, including evidence of consultation with the relevant party(ies).</p>	<p>Section 4 – Consultation</p> <p>Standalone CoA A5 Consultation Report (PLR1SOM-GLR-ALL-EN-RPT-001007)</p>	<p>GRCLR issued the CTTAMP to the following stakeholders for consultation:</p> <ul style="list-style-type: none"> • TfNSW RM (formerly RMS) • City of Parramatta Council • Emergency Services <p>a) b) and c) A summary of the consultation outcomes is presented in Section 4 of this Plan.</p> <p>d) and e) Complete record of the consultation undertaken for this Plan demonstrating compliance with A5 is in a standalone consultation report submitted to DPIE together with this plan.</p>

CoA No.	Condition Requirements	Document reference	How Addressed																		
C3	<p>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:</p> <table border="1"> <thead> <tr> <th>Required CEMP Sub-plan</th> <th>Relevant government agencies to be consulted for each CEMP Sub-plan</th> <th>Secretary Approval/ Information</th> </tr> </thead> <tbody> <tr> <td>(a) Traffic, transport and access</td> <td>Relevant Council(s), Roads and Maritime Services, Emergency Services</td> <td>Information</td> </tr> <tr> <td>(b) Noise and vibration</td> <td>Relevant Council(s), EPA, NSW Health</td> <td>Approval</td> </tr> <tr> <td>(c) Flood Management</td> <td>Relevant Council(s), OEH, Sydney Water</td> <td>Information</td> </tr> <tr> <td>(d) Heritage</td> <td>Relevant Council(s), OEH</td> <td>Approval</td> </tr> <tr> <td>(e) Flora and Fauna Biodiversity</td> <td>Relevant Council(s), OEH</td> <td>Information</td> </tr> </tbody> </table>	Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan	Secretary Approval/ Information	(a) Traffic, transport and access	Relevant Council(s), Roads and Maritime Services, Emergency Services	Information	(b) Noise and vibration	Relevant Council(s), EPA, NSW Health	Approval	(c) Flood Management	Relevant Council(s), OEH, Sydney Water	Information	(d) Heritage	Relevant Council(s), OEH	Approval	(e) Flora and Fauna Biodiversity	Relevant Council(s), OEH	Information	<p>Section 4 – Consultation (summary only)</p> <p>Standalone CoA A5 Consultation Report (PLR1SOM-GLR-ALL-EN-RPT-001007)</p>	<p>The following consultation has been undertaken for this CTTAMP:</p> <ul style="list-style-type: none"> • City of Parramatta Council • TfNSW RM (formerly RMS) • Emergency Services. <p>Comments have been considered and this document updated accordingly.</p> <p>A summary of the outcomes of the consultation is presented in Section 4 of this Plan.</p> <p>Consultation evidence to be included in CTTAMP Consultation Report once received (See A5).</p>
Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan	Secretary Approval/ Information																			
(a) Traffic, transport and access	Relevant Council(s), Roads and Maritime Services, Emergency Services	Information																			
(b) Noise and vibration	Relevant Council(s), EPA, NSW Health	Approval																			
(c) Flood Management	Relevant Council(s), OEH, Sydney Water	Information																			
(d) Heritage	Relevant Council(s), OEH	Approval																			
(e) Flora and Fauna Biodiversity	Relevant Council(s), OEH	Information																			
C4	<p>The CEMP Sub-plans must state how:</p> <p>(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;</p> <p>(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;</p> <p>(c) the relevant terms of this approval will be complied with; and</p>	<p>Section 3.2 – Ministers conditions of approval</p> <p>Section 3.3 – Revised environmental mitigation and management measures</p>	<p>a) and c) Conditions are presented in Section 3, showing how each is addressed in the plan.</p> <p>b) and d) Section 6 demonstrates how aspects and impacts identified in Section 5 will be managed.</p>																		

CoA No.	Condition Requirements	Document reference	How Addressed
	(d) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed.	Section 3.4 – Environmental performance outcomes	d) Section 7 and 8 outline the inspection, auditing, and continuous improvement processes to review the effectiveness of management measures and ensure risks identified during construction are captured and managed.
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 agency to be included in a CEMP Sub-plan because of consultation, including all copies of correspondence from those agencies, must be provided to the Secretary with the relevant CEMP Sub-plan	Section 4 – Consultation Standalone CoA A5 Consultation Report (PLR1SOM-GLR-ALL-EN-RPT-001007)	A summary of consultation evidence is contained in Section 4 of this plan. A full record is contained in a stand alone Consultation Report (See A5).
C6	Any of the CEMP 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 1.5 – Scope of this plan	Requirement stipulated. Discussed in Section 1.5.
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, as 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, construction of a stage must not commence until the CEMP and Sub-plans for that stage have been approved by the Secretary. <i>Note: the requirement to submit or have a CEMP or CEMP Sub-plan approved is specified in Condition C3</i>	Section 1.7 – Environmental management systems overview	Construction will not commence until the CEMP and the associated management plans specified in CoA C3 are approved by the Secretary or provided to the Secretary for information (as required by CoA C3).

CoA No.	Condition Requirements	Document reference	How Addressed
C21	All construction spoil haulage vehicles and construction plant must be clearly marked as being for the CSSI in such a manner to enable immediate identification within at least 50 metres of the vehicles and plant.	Section 6.1 – Construction traffic management	Instruction stipulated in section.
TRAFFIC AND TRANSPORT			
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 – Construction traffic aspects and impacts Section 6 – Construction traffic management	The surrounding environment is identified and assessed, and appropriate measures are put in place to minimise impacts on the network and mitigate safety risks.
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 service providers and relevant council(s). Wayfinding signage must be provided to direct commuters to relocated bus stops.	Section 5.5 – Public transport access Section 6.5 – Public transport	Interface between construction works and public transport identified. Alternative bus stops are to be arranged and coordinated with TTLG and TCG. This CoA is not relevant to SaM facility as no bus stops require relocation as a result of works at the SaMF.
CONSTRUCTION TRAFFIC AND ACCESS			
E5	Construction vehicles (including staff vehicles) associated with the CSSI must:	Sections 6.6 & 5.2 – Property access	Property access impacts and mitigation measures have

CoA No.	Condition Requirements	Document reference	How Addressed
	<p>(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;</p> <p>(b) not idle or queue in local residential streets;</p> <p>(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;</p> <p>(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</p> <p>(e) adhere to the nominated haulage routes identified in the Construction Traffic, Transport and Access Management Plan required under Condition C3.</p>	<p>Section 5.4 – Construction parking and loading impacts</p> <p>Section 5.3.2 – Construction vehicle haulage routes</p> <p>Section 6.1 – Construction stage traffic management</p>	<p>been given in Sections 6.7 and 5.1, respectively.</p> <p>a) Parking provision for construction related heavy and light vehicles given off-street. Additional street side parking available for SaMF to accommodate occasional worker fluctuations.</p> <p>b) Site plans developed to ensure vehicles don't queue on street</p> <p>c) d) e) Haulage routes have been designated to nearest arterial roads. An example of a Vehicle Movement Plan (VMP) haulage route is provided in Section 5.3.2, and completed VMPs can be accessed via the GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>

CoA No.	Condition Requirements	Document reference	How Addressed
CONDITION REPORTS			
E6	Existing condition reports for all roads and all property and infrastructure in the road reserve likely to be used or affected by works must be prepared before commencement of such works. 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 construction of the CSSI.	Section 6.9 – Pre-condition and dilapidation reports	A pre-condition report to be prepared and issued to TfNSW and CoPC at least one month prior to 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): (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.	Section 6.9 – Pre-condition and dilapidation reports	a) and b) Engagement with relevant stakeholders should be undertaken in accordance with section 6.1 of the CEMP and the Communication Community Strategy.
PROPERTY ACCESS			
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 6.6 – Property access	Instruction given in this section. Details of property access issues given in Table 6-6. <i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR</i>

CoA No.	Condition Requirements	Document reference	How Addressed
			<i>Integrated Management System (IMS).</i>
E9	<p>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:</p> <p>(a) road and access closures and provision of alternative routes;</p> <p>(b) provision for pedestrian and cyclist access;</p> <p>(c) special event strategies;</p> <p>(d) provision of servicing and delivery requirements for loading zones and waste disposal;</p> <p>(e) access periods or alternative access arrangements for businesses, landowners or tenants affected by the CSSI;</p> <p>(f) strategies to maintain emergency and incident response access at all times;</p> <p>(g) potential future access strategies for the Westmead Hospital and Westmead Railway Station; and</p> <p>(h) access to taxi ranks and loading zones.</p> <p>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.</p>	<p>Section 6.1 – Construction stage traffic management (a)</p> <p>Section 6.6 – Property access (d)(e)(f)</p> <p>Section 6.8 – Special events (c)</p> <p>Section 5.4 – Construction parking and loading impacts (h)</p> <p>Appendix B – TCP</p>	<p>The detail of changes to access as a result of the SOM scope of work will be captured in the SSCTTMPs. The SSCTTMPs will be prepared and managed separated in the GRCLR IMS. Consultation on the SSCTTMPs being with</p> <ul style="list-style-type: none"> • SCO • TfNSW • CoPC • emergency services • transport operators <p>Mitigation measures introduced in Section 6, where necessary, including where relevant to GRCLR preparation of Access Plans as detailed in CoA E9.</p> <p>TCPs, which will detail temporary changes to access, for all sites to be</p>

CoA No.	Condition Requirements	Document reference	How Addressed
			<p>made available through the GRCLR IMS.</p> <p>Condition a, b, e, g, and h are not relevant for SaMF.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>
TRAFFIC NETWORK MANAGEMENT			
E10	<p>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:</p> <p>(a) details of impacts to the network from road closures, directional changes, night works and traffic diversions;</p> <p>(b) details of further appropriate network/intersection modelling and analysis undertaken since the EIS and/or Submissions Report was prepared;</p> <p>(c) consideration of cumulative impacts from other construction projects;</p> <p>(d) details of the required intersection upgrades and traffic management measures by precinct to minimise the impacts identified above;</p> <p>(e) vehicular access changes;</p>	Network Management Strategy (PLR-TFNSW-PJT-PE-RPT-000018)	<p>Network Management Strategy (January 2019) received – prepared by TfNSW.</p> <p>This CCTAMP has taken into consideration the NMS.</p>

CoA No.	Condition Requirements	Document reference	How Addressed
	<p>(f) special event management; and</p> <p>(g) changes to bus services.</p> <p>The Strategy must focus on the management of construction related traffic impacts and be provided to the Secretary for information before works commence.</p>		
E11	<p>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:</p> <p>(a) confirmation of the timing of the removal of on and off-street parking associated with the construction of the CSSI;</p> <p>(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;</p> <p>(c) assessment of the impacts of changes to on and off-street parking taking into consideration outcomes of consultation with affected stakeholders;</p> <p>(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;</p> <p>(e) replacement parking for specific impacted kerbside uses (e.g. accessible parking and loading zones) within the local vicinity with</p>	Section 5.4 – Parking Management	<p>A Project Wide Parking Management Strategy (PMS) has been prepared covering the entire PLR alignment.</p> <p>Should the SOM works impact parking additional to that covered by the approved PMS an addendum to the existing document will be prepared if an update is required.</p>

CoA No.	Condition Requirements	Document reference	How Addressed
	<p>consideration of the <i>Disability Discrimination Act 1992 (DDA) Public Transport Standards and the DDA Access Code (2010)</i>; and</p> <p>(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.</p> <p>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.</p>		
E12	<p>Safe pedestrian and cyclist access must be maintained around worksites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, and alternate equivalent route which complies with relevant standards must be provided and signposted.</p>	<p>Sections 5.6 & 6.7 – Pedestrian and cyclist access</p> <p>Appendix B – TCP</p>	<p>Traffic controllers to consider pedestrians and cyclists when controlling access/ egress movements at site gates.</p> <p>No designated pedestrian or cyclist route impacted by SaMF construction.</p> <p>Example TCP provided in Appendix, with complete plans to be made available through GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>

CoA No.	Condition Requirements	Document reference	How Addressed
PEDESTRIAN AND CYCLIST NETWORK AND FACILITIES STRATEGY			
E14	<p>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:</p> <ul style="list-style-type: none"> (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 (h) the requirements of relevant design standards, including Austroads and NSW bicycle guidelines. <p>The Pedestrian and Cyclist Network and Facilities Strategy must be submitted to the Secretary before construction of pedestrian/cyclist</p>	PCNFS (PLR1INF-BECA-ALL-EN-RPT-000001)	<p>A Pedestrian and Cyclist Network and Facilities Strategy (PCNFS) is a standalone strategy that would be used to identify safe and accessible pedestrian and cycle paths during construction.</p> <p>As per Staging Report (Revision 7.02) a PCNFS (PLR1INF-BECA-ALL-EN-RPT-000001) has been prepared by the Stage 2 Infrastructure Contractor for the entire project.</p>

CoA No.	Condition Requirements	Document reference	How Addressed
	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.		
EMERGENCY VEHICLE ACCESS			
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 6.6 – Property access	Table stipulates that access to hospitals must be maintained.
ACCESS TO BUSINESSES			
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.	Sections 6.6 & 5.2 – Property access Appendix B – TCP	For each construction site, where required, impacted properties and pedestrian and vehicle movements are identified and mitigation measures, as per Local Access Plan (LAP), are introduced to maintain property access. LAP to be produced following consultation with property/business owners and tenants. Example TCP is provided in appendix with all plans to be

CoA No.	Condition Requirements	Document reference	How Addressed
			<p>made available in GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>
E17	<p>Alternative pedestrian and vehicular access, and servicing arrangements must be developed in consultation with 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.</p> <p>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.</p>	<p>Sections 6.6 & 5.2 – Property access</p> <p>Appendix B – TCP</p>	<p>Alternate strategies and a local access plan (LAP) will be made following consultation with property/business owners or tenants where required.</p> <p>Any changes to footpaths or diversions need to undergo consultation with CoPC and SCO.</p> <p>Example TCP is provided in appendix with all plans to be made available in GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>

CoA No.	Condition Requirements	Document reference	How Addressed
HOURS OF WORKS			
E21	Works must be undertaken during the following hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; (b) 8:00am to 12:00pm Saturdays; and (c) at no time on Sundays or public holidays.	Section 5.1 – Hours of work	Acceptable work hours to be communicated in project inductions, ECMs and toolbox talks. Acceptable hours are also detailed within Section 5.1.
E22	Notwithstanding Condition E21, and with the exception of 'Eat Street', works may be undertaken during the following hours: (a) 6:00pm to 7:00pm Mondays to Fridays, inclusive; and (b) 12:00pm to 6:00pm Saturdays.	Section 5.1 – Hours of work	Acceptable work hours to be communicated in project inductions, ECMs and toolbox talks. Acceptable hours are also detailed within Section 5.1.
E23	Notwithstanding Condition E21, works may be undertaken in the Camellia and Rosehill precincts (east of James Ruse Drive) and the Carlingford precinct (from Parramatta River to Victoria Road) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the <i>Interim Construction Noise Guideline</i> (DECC, 2009), between 10.00pm and 7.00am.	Section 5.1 – Hours of work	Acceptable work hours to be communicated in project inductions, ECMs and toolbox talks. Acceptable hours are also detailed within Section 5.1.
E24	Construction outside the hours identified in Condition E21 along 'Eat Street' must be established through consultation with affected businesses as outlined in the Business Activation Plan required by Condition E110.	Section 5.1 – Hours of work	This condition is stipulated directly in the section.

CoA No.	Condition Requirements	Document reference	How Addressed
E25	<p>Works may be undertaken outside of the hours defined in Conditions E21 to E22, as applicable, but only if one or more of the following applies:</p> <p>(a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or</p> <p>(b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or</p> <p>(c) where different hours of works are permitted or required under an EPL in force in respect of the CSSI; or</p> <p>(d) works approved under an Out-of-Hours Work Protocol for works not subject to an EPL; or</p> <p>(e) construction that causes LAeq(15 minute) noise levels:</p> <p>i) no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and</p> <p>ii) no more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses, and</p> <p>iii) no more than 15dBA above the night-time rating background level at any residence during the night-time period, when measured using the LA1(1 minute) noise descriptor, and</p> <p>iv) continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), and</p>	Section 5.1 – Hours of work	<p>Acceptable work hours to be communicated in project inductions, ECMs and toolbox talks.</p> <p>Acceptable hours are also detailed within Section 5.1.</p>

CoA No.	Condition Requirements	Document reference	How Addressed
	v) intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006).		
E26	On becoming aware of the need for emergency construction works, the Proponent must notify the ER of the need for those activities or works. The Proponent must also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.	Section 6.11 – Incident management and response	Advised to contact GRCLR Sustainability and Environment Manager who will advise Environmental Representative, TfNSW and affected sensitive receivers if emergency works are required.
LIGHTING AND CCTV			
E97	<p>Lighting and CCTV</p> <p>All lighting to be implemented as part of the CSSI must have regard to the location of nearby residential dwellings. Lighting impacts must be minimised to the extent possible including the use of shields to reduce light spill and annoyance to adjacent residences.</p>	Section 6.4.7 – Light towers	<p>Communicated through project inductions, ECMs and Toolbox Talks.</p> <p>Lighting to be used for nightwork and positioned away from motorists and nearby residents.</p>

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 CTTAMP

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
GEN-1	<p>A 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:</p> <ul style="list-style-type: none"> • Traffic, transport and access management • Noise and vibration management • Heritage management • Air quality and dust management • Soil and water management • Flora and fauna management • Waste and resource management 	Construction	This CTTAMP	Preparation of this CTTAMP.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<ul style="list-style-type: none"> • Site compound and ancillary works management • Landscape and temporary works management • Emergency and incident response management. <p>The CEMP would be prepared by the responsible contractor(s) and approved by the Secretary of the NSW Department of Planning and Environment.</p>			
TT-17	<p>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.</p> <p>Locations identified to date that require consideration include, but are not limited to:</p> <ul style="list-style-type: none"> » 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. <p>For impacted owners of properties along the southern side of Macquarie Street the local access plans could include (but are not limited to):</p>	Construction Operation	Section 5.2 – Property access	<p>LAPs produced in consultation with affected property owners/tenants and can be found in the GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<ul style="list-style-type: none"> » 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). 			
TT-25	<p>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:</p> <ul style="list-style-type: none"> » Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers » Appropriate controls where vehicles are required to cross footpaths to access construction areas, including manual supervision, physical barriers or temporary traffic signals. » 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	<p>Section 5.3.2 – Construction vehicle haulage routes</p> <p>Section 6.1 – Construction stage traffic management</p> <p>Appendix B – TCP</p>	<p>TCPs will indicate which mitigation measures are required to maintain safe road and site environment. To be produced for all sites as required. Example in appendix.</p> <p>VMPs will indicate appropriate vehicle routes to and from the site to minimise disruption to the road network. An example is provided in Section 5.3.2.</p> <p>VMPs to be produced on an ongoing basis as required for all sites and can be accessed through the GRCLR IMS.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR</i></p>

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<ul style="list-style-type: none"> » Consideration of pedestrian access needs for elderly people, children and people with disability, where reasonably practicable. » Specific construction driver training to understand route constraints, expectations, safety issues and to limit the use of compression braking. » 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. <p>Site specific construction traffic management plans would be prepared and implemented, including mitigation and management responses associated with the temporary closures (including weekend closures) of Grand Avenue.</p> <p>These site-specific traffic management plans would detail:</p> <ul style="list-style-type: none"> » Site access and associated route and turning movements. » Potential activities that could result in the disruption to traffic and transport networks, including pedestrian, cyclist and public transport networks and during special events. » The timing to limit disruptions to the road and transport networks. » The maintenance of access and safety of transport networks, parking and property. 			<p><i>Integrated Management System (IMS).</i></p>

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	» Details responses to the management of an event that directly involves or impacts on traffic and transport networks.			
TT-26	Heavy vehicle construction traffic would be prohibited from using: <ul style="list-style-type: none"> » Railway Parade, Westmead » Trott Street, North Parramatta » Noller Parade, Parramatta 	Construction	Section 6.1.4 – Construction traffic routes EIS – Technical Paper 2	Section stipulates these prohibited access areas. Suggested routes for some sites can be found in the EIS, SSCTTMP and VMP. This information to be communicated during toolbox talks when appropriate.
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.	Construction	Section 5.1	Consultation will be undertaken with the Sydney Coordination Office and Roads and Maritime prior to agree the construction deliveries and spoil removal.
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: <ul style="list-style-type: none"> » Use traffic controllers and localised traffic management measures to maintain access through worksites, where practical, 	Construction	Section 6.6 – Property access Section 6.1 – Construction stage traffic management Appendix B – TCP	Appropriate measures have been identified to maintain property access. Parking allocation for site workers provided and identified. Example TCP provided in appendix. <i>Details will be captured in the SSCTTMP which will be</i>

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<ul style="list-style-type: none"> » Temporary access closures would occur in stages to minimise the duration of closures » Provision of temporary alternative car parking for properties with on-site parking. 			<i>maintained in the GRCLR Integrated Management System (IMS).</i>
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.	Construction	Section 5.1	This commitment stipulated in section.
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 6.6, Table 6.5	<p>Table 6.5 stipulates a strategy is required to maintain emergency vehicle access if traffic congestion prevents use of Hawkesbury Road.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>
RC-1	<p>Coordination and consultation with the Sydney Coordination Office and the following stakeholders would occur at the appropriate project stages as required to coordinate interfacing projects:</p> <ul style="list-style-type: none"> » Department of Planning and Environment. 	Construction	<p>Section 4 – Consultation</p> <p>Section 7.2 – Communication</p> <p>TCG Meetings</p> <p>TTLG Meetings</p>	<p>Records of consultation to be kept. Relevant stakeholders identified as:</p> <ul style="list-style-type: none"> • TfNSW • SCO • TMC

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<ul style="list-style-type: none"> » 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. <p>Coordination and consultation with these stakeholders would include:</p> <ul style="list-style-type: none"> » 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. 			<ul style="list-style-type: none"> • CoPC • NSW Police • Emergency Services • Bicycle User Groups • Local Business Groups.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	<p>» Developing mitigation strategies in order to manage conflicts cumulative impacts of the Parramatta Light Rail and other interfacing projects. Depending on the nature of the conflict, this could involve:</p> <ul style="list-style-type: none"> • 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. 			
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 5.3.2 – Construction vehicle haulage routes Section 6.1.4 – Construction traffic routes	Work hours have been detailed and haulage routes detailed. Example VMP provided in Section 5.3.2.
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.	Construction		REMM only applicable in conjunction with CoA B1-B5 (Staging Report (Rev 7.02)). Consultation and Communication strategies. Compliance with REMM outlined in Project Community and Stakeholder Engagement Plan (CSEP).

Ref#	Commitment	Timing	CTTAMP 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.	Construction	Section 6.8 – Special events TCG Meetings TTLG Meetings	Regular consultation with special event organisers. Approvals required by TfNSW, TMC and council. Coordination of implementing traffic management measures is required.

The Construction Noise and Vibration Management Plan (NVMP) is a plan of the CEMP and details specifics relating to the mitigation and minimisation of noise and vibration impacts, including an Out of Hours Work (OOHW) protocol which would consider traffic noise outside standard construction hours. The NVMP has been prepared in accordance with relevant contemporary requirements and developed in consultation with the necessary regulatory authorities.

3.4 Environmental performance outcomes

Relevant EPOs are listed in Table 3.3 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 3.3: Environmental performance outcomes relevant to this CTTAMP

ID Ref#	Environmental Performance Outcome	Timing	CTTAMP Reference	How Addressed
EPO-TT-1	The project would implement measures to minimise impacts on the road network, including staging	Construction	Section 6 – Construction traffic management	The plan includes management measures to minimise impacts on the road network. <i>Details will be captured in the SSCTTAMP which will be maintained in the GRCLR Integrated Management System (IMS).</i>

ID Ref#	Environmental Performance Outcome	Timing	CTTAMP Reference	How Addressed
EPO-TT-2	Pedestrian and cyclist safety would be maintained.	Construction	Section 5.6 – Pedestrian and cyclist access Section 6.7 – Pedestrian and cyclist access	Section describes that access and safety to be maintained or alternative routes provided. A Pedestrian and Cyclist Network and Facilities Strategy (PCNFS) is a standalone strategy that would be used to identify safe and accessible pedestrian and cycle paths during construction.
EPO-TT-3	Effective coordination would be carried out to minimise cumulative network impacts.	Construction	Section 6.1 – Construction stage traffic management 6.8 – Special events	Measures are taken to ensure minimal impact on surrounding road network, in particular, haulage routes, and around periods of special events
EPO-TT-4	Access to property would be maintained	Construction	Section 6.6 – Property access	Works at the SaMF are not expected to impact on property access. If property access is potentially impacted as a result of construction activities, management measures as outlined in Section 6.6 will be implemented. <i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i>

ID Ref#	Environmental Performance Outcome	Timing	CTTAMP Reference	How Addressed
EPO-LU-2	Access to private property would be maintained.	Construction	Section 6.6 – Property access	<p>Impacts of construction works on surrounding properties identified and mitigated.</p> <p><i>Details will be captured in the SSCTTMP which will be maintained in the GRCLR Integrated Management System (IMS).</i></p>

4 Consultation

CoA C3(a) requires that the CTTAMP is prepared in consultation with RMS, Emergency Services and CoPC. Table 4.1: and Table 4.2 below provides a summary of consultation undertaken under CoA A5. Full details are in CoA A5 Consultation Report – Construction Traffic, Transport and Access Management Plan (PLR1SOM-GLR-ALL-EN-RPT-001007).

Table 4.1: Stakeholder Consultation Summary – Activity A

Stakeholder	Consultation Dates	Response Received	Issue Raised	Where Addressed
TfNSW Roads and Maritime (formerly RMS)	6 August to 23 October 2020	Yes – 1 October 2020	Related to TTMP (not TTAMP).	CoA A5 Consultation Report (PLR1SOM-GLR-ALL-EN-RPT-001007)
Emergency Services (NSW Police and Fire and Rescue)	5 August to 2 September 2020	Yes – 31 August and 7 September 2020, respectively	No comments.	N/A
City of Parramatta Council (CoPC)	7 August to 4 September 2020	Yes – 3 September 2020	No comments.	N/A

Table 4.2: Stakeholder Consultation Summary – Activity B

Stakeholder	Consultation Dates	Response Received	Issue Raised	Where Addressed
TfNSW Roads and Maritime (formerly RMS)	2 June to 29 June 2021	Yes – 22 June 2021	<ul style="list-style-type: none"> • Consultation with CJP Operations • Approval of temporary construction compound site traffic arrangements • Review and Improvement • Consultation with Network Operations. 	<ul style="list-style-type: none"> • Section 7.5 • Section 8 • Section 8 • Section 6.4.6

Stakeholder	Consultation Dates	Response Received	Issue Raised	Where Addressed
Emergency Services (NSW Police and Fire and Rescue)	2 June to 30 June 2021	Yes – 30 June 2021 and 29 June, respectively	No comments.	N/A
City of Parramatta Council (CoPC)	2 June to 9 July 2021	Yes – 7 July 2021	Ongoing Review of CTTAMP.	Section 8

This sub plan has been developed in consultation with relevant stakeholders as identified above. The outcomes of the consultation are addressed and documented in a separate standalone Consultation Report, submitted to DPIE together with this CTTAMP.

In accordance with COA C8 construction will not commence until this Subplan has been submitted to and approved by the Planning Secretary for DPIE.

5 Construction traffic aspects and impacts

The Project (subject of this Plan) includes the construction of the following:

- SaMF
- TPSs
- Light rail stops above slab level
- BOCC.

Chapter 2 of the CEMP provides a description of the Project features and construction activities. Table 5.1 provides a summary of the construction activities for the Project.

Table 5.1: Construction activity summary

SaMF	TPSs	Light rail stops	BOCC
<ul style="list-style-type: none"> • Site establishment • Shallow earthworks and subsurface works • Hydraulics (sewer, water, fire, drainage) • Rail systems • Operational Control Centre • Development of Structures • Fencing • Landscaping • Carpark and footpaths 	<ul style="list-style-type: none"> • Construction site establishment • Substructure construction • Installation of utilities and services • Installation of architectural screening, security fencing and lighting • Landscaping • Roadworks 	<ul style="list-style-type: none"> • Prefabricated column and canopy placement • Installation of wind break screens and lighting • Connection to previously constructed or existing utilities • Stop fit out 	<ul style="list-style-type: none"> • Construction site establishment • Substructure construction • Installation of utilities and services • Superstructure building works.

Assessment of the Project’s construction impact has been carried out by assessing each of the separate compounds and their respective corridor work sites as proposed by GRCLR in the delivery methodology (March, 2020). Four separate construction site compounds are proposed to be established along the corridor. The compounds will be established to provide facilities and amenities for GRCLR staff and located so as to service delivery operations for the designated portion of the route. The details of these are as follows:

1. Cumberland Hospital Base (incl. Stops 1-6), servicing LORAC's corridor works from Westmead to Riverside Theatres.
2. O’Connell St Base (Incl. Stops 6-10), servicing LORAC's corridor works from Riverside Theatres to Robin Reserve.

3. Stabling and Maintenance Facility (incl. Stops 11-12), servicing LORAC's works at the SaMF as well as corridor works from Robin Reserve to North of Parramatta River.
4. Adderton Rd Base (incl. Stops 13-16), servicing LORAC's corridor works from North of Parramatta River to Carlingford.

At the time of writing, site specific details, including traffic control plans and property access changes, were only available for the SaMF. Detailed information of other proposed sites will be provided in each of the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).

5.1 Hours of work

Acceptable hours of work, as detailed below, will be communicated in project inductions, Environmental Control Maps (ECM) and toolbox talks.

Construction of the SOM Package is to be conducted between the hours of:

- a. 7:00am to 6:00pm Mondays to Fridays, inclusive;
- b. 8:00am to 12:00pm Saturdays; and
- c. at no time on Sundays or public holidays.

In accordance with CoA E24, construction work undertaken outside the above hours along Eat Street must be established through consultation with affected businesses.

Notwithstanding the above hours, and with the exceptions of Eat Street, works may be undertaken during the following hours:

- a. 6:00pm to 7:00pm Mondays to Fridays, inclusive; and
- b. 12:00pm to 6:00pm Saturdays.

Works may be taken in the Camellia and Rosehill precincts (east of James Ruse Drive which is inclusive of the SaMF) and the Carlingford precinct (from Parramatta River to Victoria Road) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), between 10.00pm and 7.00am.

Works may also be undertaken outside of defined hours where one or more of the following applies:

- a. for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
- b. where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
- c. where different hours of works are permitted or required under an EPL in force in respect of the CSSI; or
- d. works approved under an Out-of-Hours Work Protocol for works not subject to an EPL; or
- e. construction that causes LAeq(15 minute) noise levels:
 - i. no more than 5 dB(A) above the rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), and
 - ii. no more than the 'Noise affected' noise management levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses, and
 - iii. no more than 15dBA above the night-time rating background level at any residence during the night-time period, when measured using the LA1(1 minute) noise descriptor, and

- iv. continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (December 2006), and
- v. intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (December 2006).

Where emergency construction works are required, the Environmental Representative must be notified, as well as all sensitive receivers that may be impacted throughout the duration of the works.

Hours of when construction deliveries and spoil removal would be undertaken within the Parramatta CBD, Rosehill and Camellia precinct would be determined in consultation with the Sydney Coordination Office and Roads and Maritime Services (now TfNSW).

Construction outside the hours identified above along ‘Eat Street’ must be established through consultation with affected businesses as outlined in the Business Activation Plan and in line with the Project Out of Hours Works Protocol.

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.

5.2 Property access

Where required, Local Access Plans (LAPs) will be developed in consultation with affected property owners and/or tenants for individual properties and accesses that will be affected by the works. All LAPs, new and amended, will be maintained in the GRCLR EMS within the IMS.

Access for emergency vehicles and utility services maintenance vehicles would be maintained at all construction sites. Any changes to access needs to be communicated to emergency and utility services through the TTLG and relevant utility working groups.

Waste collection access is also to be maintained during construction. Changes to waste collection arrangements need to be outlined in the SSCTTMPs including details of consultation with affected residents or businesses.

The details of each site’s impact on local property access, including emergency vehicle, utility services maintenance vehicles and waste collection, are shown in Table 5.2.

The sites are currently being used by the Infrastructure (Package 4) Contractor. Table 5.2 will be updated when each site is handed over to GRCLR to ensure the actual impact is captured, if access arrangements are required to change from those currently being used by the Infrastructure (Package 4) Contractor.

Table 5.2: Construction site impact on property access

Site Compound & Worksites	Details	Impacts
Cumberland Hospital Base & Stops 1-6	Predominantly hospitals and residential from Stops 1-5, and light commercial on Church Street around Stop 6.	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

Site Compound & Worksites	Details	Impacts
O'Connell St Base & Stops 6-10	Predominantly commercial from Stop 6-10.	<p>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.</p> <p><i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>
Stabling and Maintenance Facility & Stops 11-12	<p>SaMF is within a light industrial area, recreational space and Rosehill Gardens Racecourse. The SaMF is contained within site boundaries and off corridor.</p> <p>Predominately residential and light commercial around Stop 11, and commercial and industrial around Stop 12.</p>	<p>No change to property access surrounding the SaMF.</p> <p>Neighbouring properties' access will be subject to traffic management measures such as reduced speed limits. See Figure 5-1.</p> <p><i>Corridor works details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>
Adderton Rd Base & Stops 13-16	The former T6 Carlingford Line is being converted to light and consequently no properties adjoin the construction site.	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

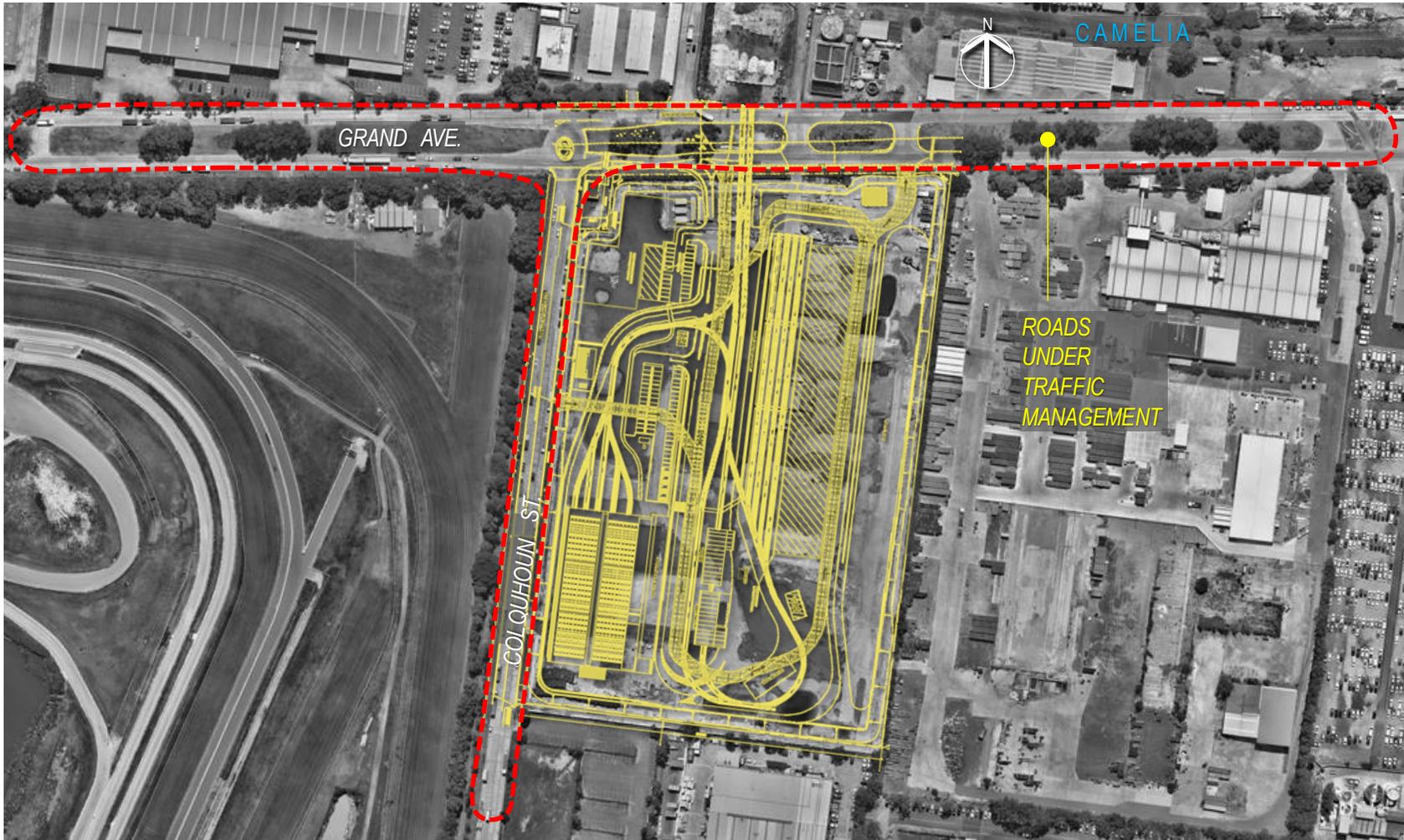


Figure 5-1: SaMF construction impact areas

5.3 Construction traffic impacts

5.3.1 Construction vehicle movements

This section identifies where construction vehicles will interface with the existing road network and traffic conditions in the immediate vicinity of the work sites.

Sites other than SaMF and 8 Colquhoun Street are currently being used by the Infrastructure (Package 4) Contractor. Table 5.3 will be updated when each site is handed over to GRCLR to ensure the actual impact is captured if impacts and arrangements are required to change from those of the Infrastructure (Package 4) Contractor.

Table 5.3: Site construction vehicle movements

Site Compound & Worksites	Details	Impacts
Cumberland Hospital Base & Stops 1-6	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
O'Connell St Base & Stops 6-10	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Stabling and Maintenance Facility & Stops 11-12	<p><u>Compound</u></p> <p>Construction maintained within site boundaries.</p> <p>Up to three site gates where construction traffic interfaces with local traffic.</p> <p>Stage 1 – Site Establishment</p> <p>Existing entry/exit gate on Grand Ave.</p> <p>Stage 2 to 7 – Main Works</p> <p>Gate 1 entry on Colquhoun St.</p> <p>Gate 2 entry on Grand Ave.</p> <p>Gate 3 exit on Grand Ave.</p> <p><u>Stops</u></p> <p><i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>	<p><u>Compound</u></p> <p>Vehicle access/egress movements from the site may create a requirement that local traffic stop</p> <p>Potential for queuing to gain site access on Grand Ave. and Colquhoun St.</p> <p><u>Stops</u></p> <p><i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>
Adderton Rd Base & Stops 13-16	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

5.3.2 Construction vehicle haulage routes

Generally, trucks will have origins and destinations from a wide variety of locations throughout Sydney. From the sites, it is expected that heavy vehicles use the shortest route possible to the arterial road network, while complying with approved Restricted Access Vehicle routes. Haulage routes between the work sites and the nearest arterial road are provided below in Table 5.4 with example haulage routes for the SaMF provided in Figure 5-2 and Figure 5-3. Refer to each SSCTTMP for recommended haulage routes. All SOM work sites' arrival and departure routes can be found in IMS/EMS as they become available.

Table 5.4: Construction vehicle haulage routes

Site Compound & Worksites	Nearest Arterial Road	Access/Egress Routes from/to Arterial Road
Cumberland Hospital Base & Stops 1-6	Cumberland Highway (Hart Drive / Briens Road / James Ruse Drive)	<p>Access from west: Turn from Cumberland Highway (Hart Drive) onto Darcy Road through to Hawkesbury Road.</p> <p>Egress to west: Reverse movements to access.</p> <p>Access from north: Turn from Cumberland Highway (James Ruse Drive / Briens Road) onto Windsor Road continuing onto Church Street. O'Connell Street can also be used via Board Street.</p> <p>Egress to north: Reverse movements to access.</p> <p>Access from northeast: Turn from Cumberland Highway (James Ruse Drive) onto Pennant Hills Road through to Church Street.</p> <p>Egress to northeast: Reverse movements to access.</p> <p>Access from east: Turn from James Ruse Drive onto Victoria Road through to Church Street and O'Connell Street.</p> <p>Egress to east: Reverse movements to access.</p> <p><i>Greater detail to be provided to site access/egress locations in SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>

Site Compound & Worksites	Nearest Arterial Road	Access/Egress Routes from/to Arterial Road
O'Connell St Base & Stops 6-10	Cumberland Highway (Briens Road), James Ruse Drive & Great Western Highway	<p>Access from north: Turn from Cumberland Highway (James Ruse Drive / Briens Road) onto Windsor Road continuing onto Church Street. Turn right onto Board Street to access O'Connell Street.</p> <p>Egress to north: Reverse movements to access.</p> <p>Access from northeast: Turn from James Ruse Drive onto Victoria Road through to Macarthur Street (turn left to access eastern end of CBD) or O'Connell Street.</p> <p>Egress to northeast: Reverse movements to access.</p> <p>Access from southeast: Turn from James Ruse Drive onto Hassall Street through to Parkes Street. Turn right onto Macarthur Street to access CBD.</p> <p>Egress to southeast3: Reverse movements to access.</p> <p>Access from south: From Great Western Highway turn onto Parkes Street then onto Macarthur Street.</p> <p>Egress to south: Reverse movements to access.</p> <p>Access from southwest: From Great Western Highway turn onto Pitt Street or O'Connell Street then use Macquarie Street.</p> <p>Egress to southwest: Reverse movements to access.</p> <p><i>Greater detail to be provided to site access/egress locations in SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>
Stabling and Maintenance Facility & Stops 11-12	James Ruse Drive	<p>Access: Turn from James Ruse Drive onto Grand Avenue. Gate 1 on Colquhoun Street can be accessed by turning right onto Colquhoun Street Gate 2 can be accessed by using the turnaround within the median strip on Grand Avenue after the Colquhoun Street turnoff. See Figure 5-2.</p> <p>Egress: Turn left from Gate 3 onto Grand Avenue towards James Ruse Drive. See Figure 5-3</p>

Site Compound & Worksites	Nearest Arterial Road	Access/Egress Routes from/to Arterial Road
Adderton Rd Base & Stops 13-16	James Ruse Drive and Cumberland Highway (Pennant Hills Road)	<p>Access from southwest: Turn from James Ruse Drive onto Victoria Road to access alignment south of Kissing Point Road and north of Parramatta River.</p> <p>Egress to southwest: Reverse movements to access.</p> <p>Access from west: Turn from James Ruse Drive onto Kissing Point Road then left onto Adderton Road or Sturt Street.</p> <p>Egress to west: Reverse movements to access.</p> <p>Access from northwest: Turn from Cumberland Highway onto Adderton Road.</p> <p>Egress to northwest: Reverse movements to access.</p> <p>Access from north: Turn from Cumberland Highway onto Jenkins Road and then James Street, or onto Lloyd Avenue to access Carlingford Stop.</p> <p>Egress to north: Reverse movements to access.</p> <p><i>Greater detail to be provided to site access/egress locations in SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i></p>

There are several roads that are not considered appropriate for use as haulage routes. These roads, as listed below, will be identified on all TCPs and haulage maps for the SOM scope of works. They will be communicated to all suppliers and trucking companies. Exceptions will only be made if directed by TfNSW RM or NSW Police for safety or other reasons. Identified routes include the following:

- Railway Parade, Westmead – note haulage permitted between Hawkesbury Road and Ashley Lane, within the PLR construction site;
- Trott St, North Parramatta; and
- Noller Parade, Parramatta.

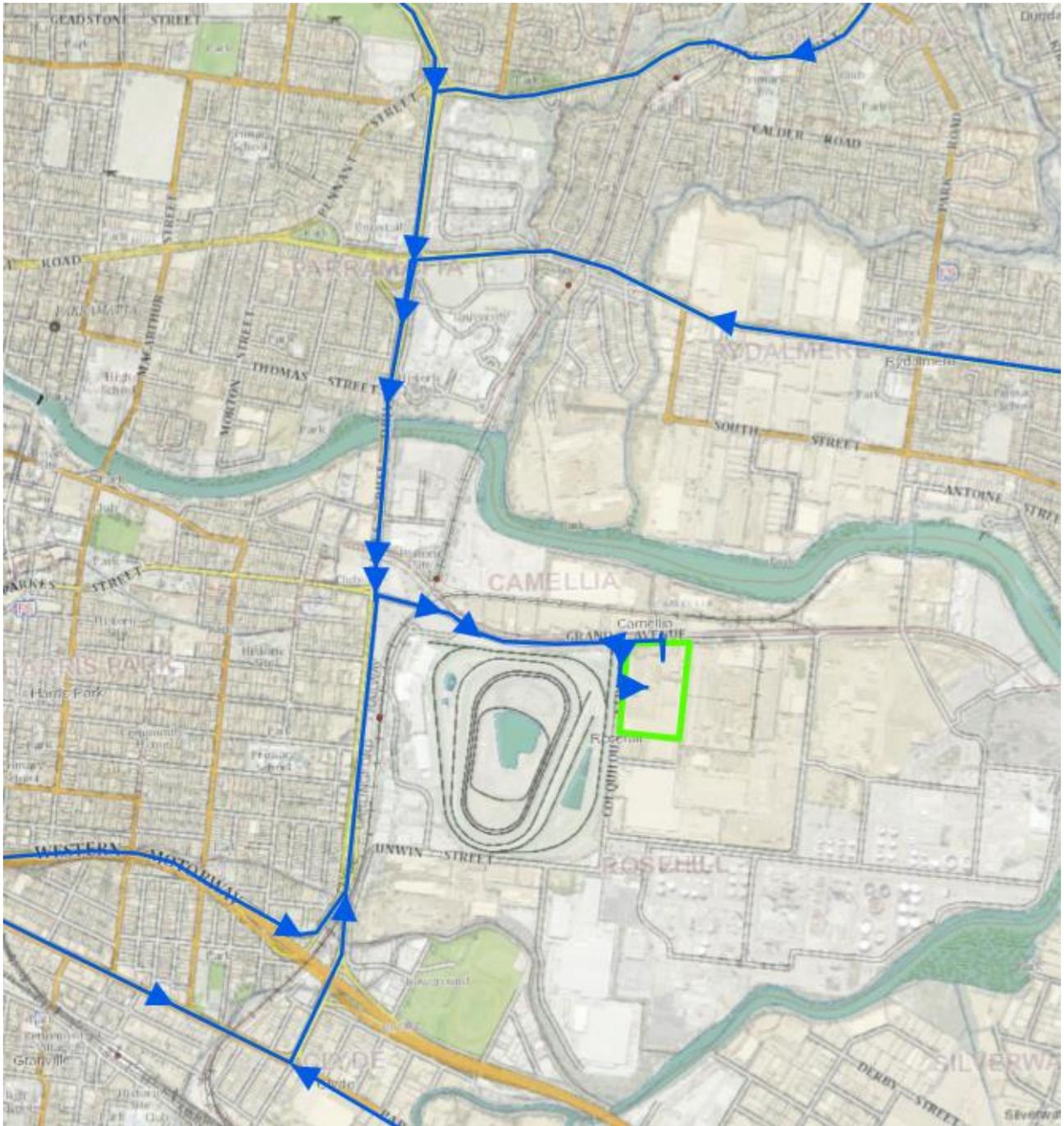


Figure 5-2: SaMF access haulage routes

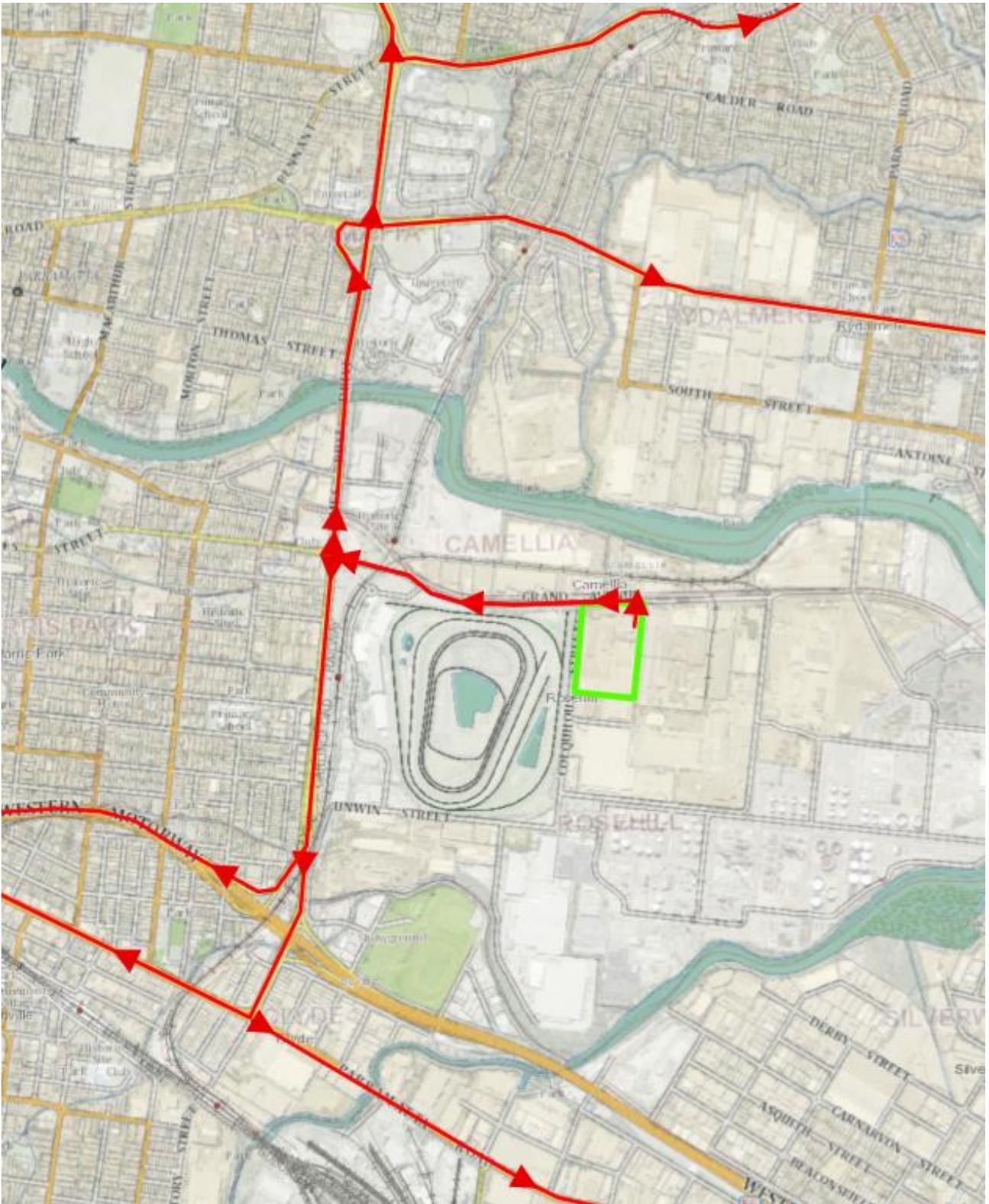


Figure 5-3: SaMF egress haulage routes

5.4 Construction parking and loading impacts

This section addresses the impact of construction on the light vehicle parking facilities and loading zones at each of the work sites. The impact of on-street parking along the PLR alignment has been explored in the EIS - Technical Paper 2 and is considered in this section.

Changes to parking need to be consulted with SCO, TfNSW, CoPC, transport operators and other relevant stakeholders. An additional Parking Management Strategy should only be required if parking conditions change from the original plan. In Table 5.5 below, the existing parking capacity is identified with the impact of the site construction predicted in the EIS.

The sites are currently being used by the Infrastructure (Package 4) Contractor. Table 5.5 will be updated when each site is handed over to GRCLR to ensure the actual impact is captured. Until the Infrastructure (Package 4) Contractor completes their works and begins handing over the below sites, GRCLR will operate all construction activities out of the SaMF and 8 Colquhoun sites, for which full details have been provided in this TTAMP.

Table 5.5: Construction parking and loading impacts

Site Compound & Worksites	Existing Conditions	Impact
Cumberland Hospital Base & Stops 1-6	<i>Site currently occupied by Infrastructure (Package 4) Contractor. Details for GRCLR use will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS) at time of handover from Infrastructure Contractor (Package 4 Contractor).</i>
O'Connell St Base & Stops 6-10	<i>Site currently occupied by Infrastructure (Package 4) Contractor. Details for GRCLR use will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details and will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS) at time of handover from Infrastructure Contractor (Package 4 Contractor).</i>
Stabling and Maintenance Facility & Stops 11-12	Kerbside parking in each direction on Grand Avenue and Colquhoun Street Periods of high parking demand due to proximity to racecourse 50 car capacity around site boundary Heavy vehicles usually parked on Colquhoun Street No loading zones	Construction will attract an average of 40 and up to 50 workers on-site at one time. Heavy vehicles, construction vehicles and machinery to be parked within the SaMF. Construction deliveries to occur on-site.
Adderton Rd Base & Stops 13-16	<i>Site currently occupied by Infrastructure (Package 4) Contractor. Details for GRCLR use will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS) at time of handover from Infrastructure Contractor (Package 4 Contractor).</i>

5.5 Public transport access

Project construction activities will interface with some existing public transport infrastructure and the operational services that they provide. The TfNSW information website has been consulted to provide a thorough account of all services which may be impacted by the Project.

Bus routes as well the Western Sydney University shuttle are more likely to be impacted by construction works than train operations. Interference with normal operational routes and access to stops will occur. The existing bus operations around each site are shown in Table 5.6.

Table 5.6: Public transport operations and access

Site Compound & Worksites	Existing Conditions	Impact
Cumberland Hospital Base & Stops 1-6	<p><u>Sydney Trains</u></p> <p>T1 and T5 lines at Westmead Station</p> <p><u>NSW TrainLink</u></p> <p>Blue Mountains Line at Westmead Station</p> <p><u>Buses</u></p> <p>Buses operate throughout this area with main routes along Hawkesbury Road, Darcy Road, Church Street, Albert Street and O'Connell Street. Routes include:</p> <ul style="list-style-type: none"> • 549,550 • 600,601,603,604,606,625 • 706,711,712 • 818 	<p>Train services will be maintained as usual.</p> <p>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.</p> <p>Bus operations in the Parramatta North precinct will be affected during construction.</p>
O'Connell St Base & Stops 6-10	<p><u>Sydney Trains</u></p> <p>T1, T2 and T5 at Westmead Station</p> <p><u>NSW TrainLink</u></p> <p>Blue Mountains Line, Central XPT and Outback Xplorer at Parramatta Station</p> <p><u>Buses</u></p> <p>Buses operate throughout this area with main routes along O'Connell Street, Grose Street, Victoria Road, Church Street, Wilde Avenue, Philip Street, George Street, Smith Street, Hassall Street, and Parkes Street. An interchange is at Parramatta Train Station with the Liverpool-</p>	<p>Train services will be maintained as usual.</p> <p>Several bus services will be heavily impacted as PLR construction occupies roads currently used by buses. This applies to Church Street and Macquarie Street</p> <p>The operation of the Western Sydney University student shuttle bus services will be impacted during construction as the current bus stop on Macquarie Street will not be accessible.</p>

Site Compound & Worksites	Existing Conditions	Impact
	<p>Parramatta Transitway commencing here. Routes include:</p> <ul style="list-style-type: none"> • 501,521,523,524,525,545, • 546,549,550,552 • 600,601,603,604,606,625 • 706 • 900,906,909 • M92 <p>Western Sydney University shuttle buses also operate through this area, stopping at the Parramatta City Campus on Smith Street.</p>	
<p>Stabling and Maintenance Facility & Stops 11-12</p>	<p>No public transport east of James Ruse Drive impacting the SaMF.</p> <p><u>Trains</u></p> <p>The Carlingford Line will not be operational at time of construction. No train services impact this site.</p> <p><u>Buses</u></p> <p>Limited bus services operate throughout this area with main routes along Hassall Street and James Ruse Drive. Routes include:</p> <ul style="list-style-type: none"> • 535 • M92 	<p>Train services will be discontinued at the start of the Infrastructure Works between Camellia and Carlingford. A shuttlebus service (535) will run between Carlingford and Parramatta. (Implemented January 2020)</p>
<p>Adderton Rd Base & Stops 13-16</p>	<p><u>Trains</u></p> <p>The Carlingford Line will not be operational at time of construction. No train services impact this site.</p> <p><u>Buses</u></p> <p>Buses operate throughout this area with main routes along Victoria Road, Calder Road, Kissing Point Road, Adderton Road, Sturt Street, Marshall Road, and Pennant Hills Road. Routes include:</p> <ul style="list-style-type: none"> • 500N,501,513,521,523,524,525,535,545,546,550 • 625 	<p>No impact to train or bus services as trains will not be operational and construction of the PLR will take place within the rail corridor. All bus services should remain operational.</p>

Site Compound & Worksites	Existing Conditions	Impact
	<ul style="list-style-type: none"> N61 <p>Western Sydney University shuttle buses also operate through this area, stopping at Parramatta North and South Campuses.</p>	

5.6 Pedestrian and cyclist access

Pedestrian and cyclist access and safety must be maintained throughout construction. Where necessary alternative routes should be provided.

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).

Existing conditions of roads and pedestrian and cyclist infrastructure impacted by the Project are detailed in Appendix A.

Proposed changes to cycle paths/routes will be detailed in site specific CTTMPs and consultation will be undertaken following submission to the SCO.

6 Construction traffic management

6.1 Construction stage traffic management

All sites except the SaMF in Tables 6.1, 6.2, 6.3 and 6.4 below are currently being used by the Infrastructure (Package 4) Contractor. Management of construction staging will be addressed in the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS) at the time of handover when all details will be provided by the Infrastructure (Package 4) Contractor. The SSCTTMP will be reviewed and approved by TfNSW RM.

6.1.1 Construction site traffic plans

Traffic Staging Plans (TSP) will be developed prior to construction based on current methodology for the construction of the project to demonstrate how traffic will be managed within the construction zone.

A summary of the construction staging is given in Table 6.1 with measures taken to manage construction vehicle impacts on the road network. TSPs for each construction stage (stage 1 and 2) will be developed in consultation with and provided to the Environmental Representative to ensure all environmental measures reflect staging needs.

All traffic management will be undertaken in accordance with AS 1742.3 and the Traffic Control Plans for each stage.

Table 6.1: Site construction staging

Site Compound & Worksites	Stages	Construction Vehicle Management Measures
Cumberland Hospital Base & Stops 1-6	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
O'Connell St Base & Stops 6-10	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Stabling and Maintenance Facility & Stops 11-12	Stage 1 – Site Establishment (stage 1 of construction)	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
	Stage 2 – Main Works (stages 2-7 of construction)	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Adderton Rd Base & Stops 13-16	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

6.1.2 Construction site traffic management

Traffic management solutions will be required for the SOM construction sites. The adopted traffic management measures satisfy the construction traffic and transport management objectives found in Section 12 of the CTTMP. A summary of the traffic management measures is shown in Table 6.2.

For road classification and proposed traffic control arrangements refer to Appendix A. All TCPs required will be developed prior to works and as required submitted through the hold point processes. All completed TCPs will be made available through the GRCLR IMS.

Table 6.2: Construction site traffic management measures

Site Compound & Worksites	Stages	Traffic Management Measures
Cumberland Hospital Base & Stops 1-6		<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
O'Connell St Base & Stops 6-10		<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Stabling and Maintenance Facility & Stops 11-12	Stage 1	<ul style="list-style-type: none"> <i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
	Stage 2	<ul style="list-style-type: none"> <i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Adderton Rd Base & Stops 13-16		<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

6.1.3 Site compound traffic management

The traffic management within construction sites will be developed to accommodate expected vehicle movements depending on the layout of the compounds. Each site will require its own VMP. VMPs are to include movements of all vehicles in and around the site compound, location of parking and pedestrian routes for workers and public, in accordance with the traffic staging plans. VMPs, when completed, will be made available through the GRCLR IMS. Table 6.3 shows traffic management measures that will be implemented.

Table 6.3: Site compound traffic management

Site Compound & Worksites	Traffic Management Measures
Cumberland Hospital Base & Stops 1-6	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
O'Connell St Base & Stops 6-10	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Stabling and Maintenance Facility & Stops 11-12	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Adderton Rd Base & Stops 13-16	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

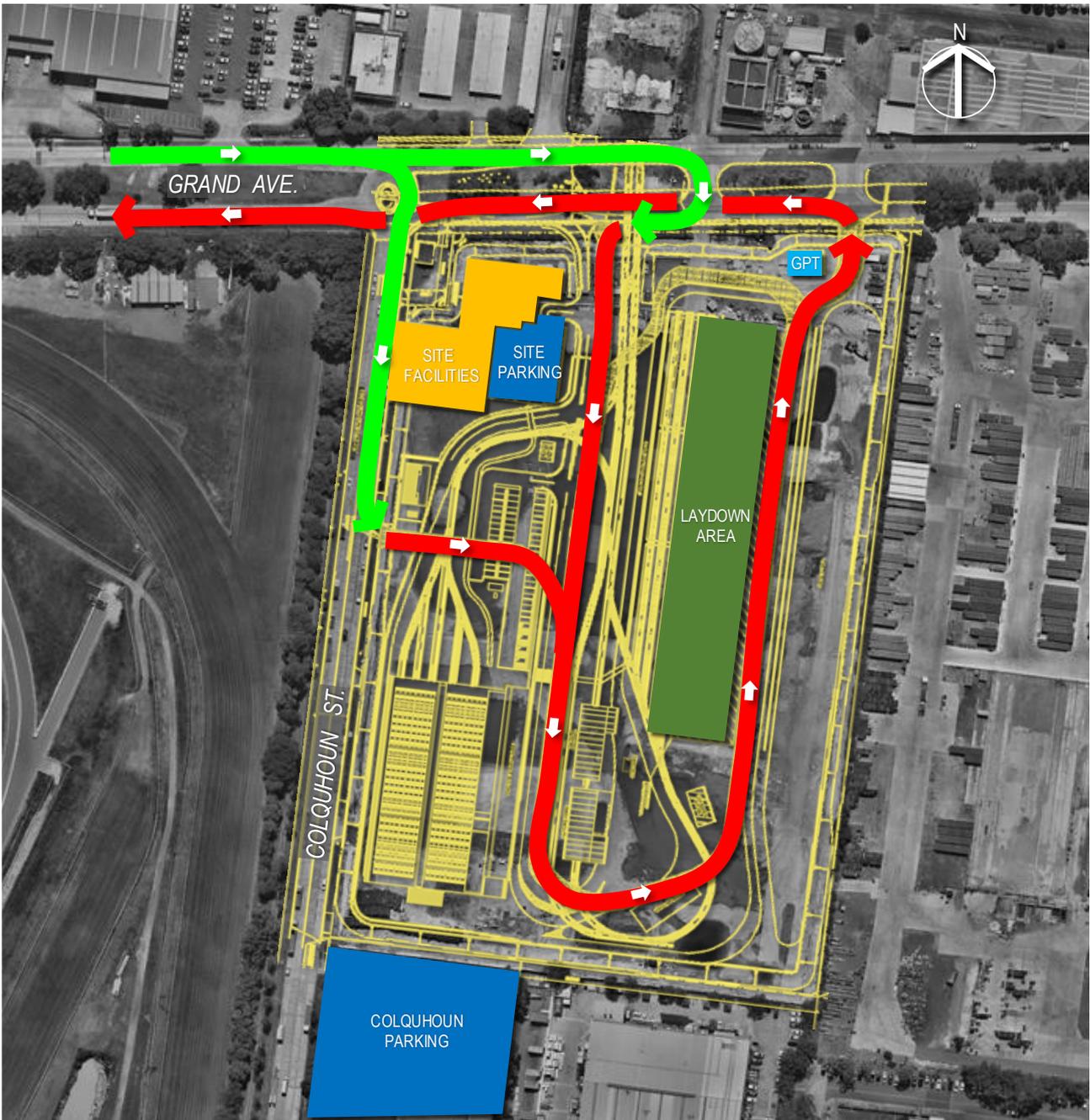


Figure 6-1: SaMF site layout

6.1.4 Construction traffic routes

Construction vehicle routes have been developed with the objective to provide the shortest distances to/from the arterial road network whilst minimising the impact of construction traffic on the surrounding road network. Truck movements to and from site shall be restricted to this designated route to ensure minimal impact on local streets within the vicinity of the site. Approach and departure haulage routes should be provided in the SSCTTMPs and an example route for the SaMF has been provided in Section 5.3.2.

Construction vehicles entering and exiting the traffic stream at each site must be mindful of the conditions that may affect the safety of these movements. All work vehicles shall:

- Have a VMP developed and submitted in accordance with RMS G10 clause 2.3.2 and 2.7.1
- Enter and leave site in a forward direction using the approved truck routes unless pre-approved and traffic controllers on site to assist with reversing movements
- Decelerate slowly and signal their intention by indicator to leave the traffic stream
- Activate the vehicles rotating beacon on approach to and departure from work site
- Wait until indicated by traffic control for a gap in traffic before leaving the construction site
- Radio ahead to advise of approach to ensure work site space is available.

To comply with REMMM TT-26, no heavy vehicle shall use:

- Railway Parade, Westmead
- Trott Street, North Parramatta
- Noller Parade, Parramatta.

Drivers should be reminded of these restrictions during toolbox talks.

Projected vehicle types and volumes throughout different site staging have been supplied in Appendix C. These estimates will be determined during design development.

To comply with CoA C21, all construction spoil haulage vehicles and construction plant must be clearly marked as being for the Parramatta Light Rail project in such a manner to enable immediate identification within at least 50 metres of the vehicles and plant.

6.2 Road occupancy

A Road Occupancy Licence (ROL) is required for all planned activities that affect the free flow of traffic of any lane or shoulder. Applications for ROLs will be submitted at least 10 working days prior to the planned commencement of the activities requiring road occupancy. The activity will not commence until the ROL is obtained.

ROLs for routine services with a minor impact, and mobile work activities will be applied for. All ROL applications will be carried out in accordance with RMS Specification G10 and ROLCOA.

The TMC will be contacted prior to traffic management being implemented and subsequently when the traffic management has been cleared as per the online ROL activation system.

All ROLs will be made available on the GRCLR IMS when complete.

6.3 Speed management

Temporary roadwork speed zones may be implemented during construction to manage the speed of traffic approaching the site. In order to temporarily reduce a speed limit, a Speed Zone Authorisation (SZA) is required to be in place. SZAs, where required, will be applied for online using the Online Planning Incident (OPLINC) system and submitted with the ROL application.

Each site will be risk assessed during staging and TCP development to determine required speed management around the area and as per RMS 18.898 Version 5.

The speed limit selected shall not exceed the maximum safe speed of travel for that work area. The safe speed is dependent on the degree of vehicular and pedestrian conflicts, the type and extent of the work in progress, the characteristics of the road and the proximity of workers to passing traffic. Using appropriate signs and devices together with, if considered necessary, an authorised roadwork speed limit, the speed of passing traffic shall be reduced to the 40 km/h.

6.4 Signposting and delineation

Traffic Control and Delineation Devices will be specified in TCPs where necessary and appropriate. These include, but are not limited to the following:

6.4.1 Signage

Any requirement for permanent advanced warning signage shall be installed by the principal contractor GRCLR so as to:

- Provide warning and notification of the upcoming road works
- Inform of the changes to traffic conditions

All signs used shall conform to the designs and dimensions as per AS1742.3. Prior to installation, all signs and devices shall be checked by the site supervisor to ensure they are in good conditions and meet the following standards:

- Condition – signs that are bent, broken or have surface damage shall not be used.
- Cleanliness – signs should be free from accumulated dirt and grime.
- Fluorescence & Retro reflectivity – all signs & devices must meet Australian Standards
- Battery operated devices – shall be checked for lamp operation and battery condition.

Signage requirements are shown on each Traffic Control Plan. Any signs erected prior to being needed shall be covered by a suitable material and only removed immediately prior to the commencement of works.

Signs and devices shall be positioned and erected in accordance with the locations and spacing shown on the TCP. All signs shall be positioned and erected so that:

- They are properly displayed and securely mounted
- They are within the driver's line of sight
- They cannot be obstructed from view
- They do not obscure other devices and signs from the driver's line of sight
- They do not become a possible hazard to vehicles especially along the road edge.
- They do not deflect traffic into an undesirable path.

Should the use of additional (not shown on the TCP) or reduced number of signs or devices be required, they shall be recorded within the traffic control inspection records as a variation to the TMP, following prior approval.

Where there is potential for conflict between existing signage and temporary signage erected for the purpose of traffic control, the existing signs shall be covered.

6.4.2 Cones and bollards

Traffic cones will comply with RMS QA Specification RMS 3352 under the following conditions:

- Small size cones 450mm high – not to be used
- Standard size cones 700mm or higher – will be used
- Temporary bollards will be at least 750mm high and 100mm in diameter and made from fluorescent red/orange material and be resilient to impact.

6.4.3 Safety barriers

Temporary safety barriers may be used to protect work zones and pedestrians from traffic. Safety barrier types and their end treatments will be in accordance with Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers, Roads and Maritime Services Austroads Guide Supplement Publication No: Pub.11.097 and only products from the RMS accepted list will be used.

6.4.4 Portable variable message signs

Portable variable message signs (VMS) may be used at prominent locations for prior notification of works and to keep road users informed of changes to road conditions and of possible delays as a result of the work. Messages displayed on the VMS must remain current for the duration of the works and be relocated as necessary as the works progress.

The VMS must be portable, Type C size, and solar powered, complying with AS 4852.2.

VMS usage will also comply with Guidelines for Location of VMS and Technical Direction for use of VMS and RMS G10.

All messages will be approved by TfNSW prior to activation.

6.4.5 Pavement markings and signs

Pavement markings, retro reflective raised pavement markers and signposting may be used in the temporary works. Unless specified otherwise, only line marking tape or waterborne paint will be used for pavement markings for temporary works.

The Specifications, RMS R141, RMS 142 and RMS 143 must be used as relevant to the same standard as for permanent works.

If removal of pavement markings is required, the Traffic Staging Plans will provide details of the proposed methods for removal, the estimated durations to carry out the removal, and if necessary, any proposed measures to restore the road surface. These will be based on the relevant standards/ procedures covering each particular circumstance and comply with RMS D&C R145 – Pavement Marking.

As Per Traffic Control at Worksites Technical manual - all redundant pavement markings shall be immediately obliterated or removed in such a way as to leave a clean, undamaged pavement with a surface texture, reflectivity characteristics and colour comparable to the adjacent pavement surface. Blacking out shall not be permitted.

All redundant raised pavement markers shall be immediately removed from the pavement.

6.4.6 Temporary traffic signal design

Traffic signals required for staging will be designed in accordance with the SPR, and subject to the design review process. All temporary arrangements for changes to signals will be sent to TfNSW RM Network and Asset Management (NAM) for review and acceptance prior to commencement of works.

6.4.7 Light towers

Lighting towers will be used to facilitate night works or when where there is insufficient light.

Lighting towers will be positioned away from motorists and assessed for any glare which may pose a risk to road users or affect residents and businesses. Where possible towers will be protected to subdue noise where required for long term operations.

6.5 Public transport

The project will require some diversions to existing bus routes and changes to bus stops, as well as the four shuttle bus services. Any changes incurred to bus operations need to be coordinated by

the Infrastructure Contractor and tabled at the TTLG and TCG. The EIS – Technical Paper 2 addresses the bus route interaction with different precinct’s construction sites.

The required changes to operational routes and access to stops is provided in Table 6.4.

Table 6.4: Public transport changes

Site Compound & Worksites	Changes to routes and access
Cumberland Hospital Base & Stops 1-6	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.
O'Connell St Base & Stops 6-10	<p>Alternative options to using Church Street in North Parramatta include temporary diversions to O'Connell Street.</p> <p>Bus routes usually operating within the PLR construction footprint of Macquarie Street are already diverted to George Street.</p> <p>A temporary alternative stop location on Smith Street will be in operation throughout the construction period.</p>
Stabling and Maintenance Facility & Stops 11-12	<p>There are no changes to existing bus operations within this construction site.</p> <p>There is an additional bus service (535) operating to provide frequent services in the absence of the Carlingford Line.</p>
Adderton Rd Base & Stops 13-16	T6 Carlingford Line – Train services have discontinued between Camellia and Carlingford. A shuttlebus service will run between Carlingford and Parramatta. (Implemented January 2020)

6.6 Property access

Property access for surrounding properties must be maintained during construction and disruption to businesses, residents and local users kept to a minimum. Where usual access to properties cannot be maintained, alternate strategies and a local access plan (LAP) will be made following consultation with property/business owners or tenants. At completion of the works, access will be reinstated to the affected properties to at least an equivalent standard at no cost to the property owner, unless otherwise agreed with the property owner. Copies of plans must be made available to the Secretary on request.

Access for emergency vehicles, utility maintenance vehicles and waste collection needs to be maintained throughout construction. Any changes to access will be communicated to emergency and utility services through the TTLG and relevant utility working groups. Details of consultation with affected businesses and residents need to be kept.

Property access is addressed in the EIS – Technical Paper 2, the findings of which are included in this section. The property access measures undertaken at the SOM package sites are shown in Table 6.5.

The sites are currently being used by the Infrastructure (Package 4) Contractor. Table 6.5 will be updated when each site is handed over to GRCLR to ensure the actual impact is captured, but only if access arrangements are required to change from those currently implemented by the Infrastructure (Package 4) Contractor.

Table 6.5: Property access mitigation

Site Compound & Worksites	Property Access Mitigation	Emergency, Utility and Waste Collection Mitigation
Cumberland Hospital Base & Stops 1-6	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	Emergency vehicle access to all hospital sites must be maintained. A strategy is required for access for emergency vehicles within the alignment at times when traffic congestion prevents use of Hawkesbury Road. <i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
O'Connell St Base & Stops 6-10	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	Kerb adjustments will be needed to adjust for widening on Church Street and for bus stops, loading zones, garbage collection and emergency vehicle purposes. <i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>
Stabling and Maintenance Facility & Stops 11-12	No property access issues to the SaMF.	No change
Adderton Rd Base & Stops 13-16	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>	<i>Details will be provided within the SSCTTMP and maintained in the GRCLR Integrated Management System (IMS).</i>

6.7 Pedestrian and cyclist access

Construction activities should be planned around pedestrian volumes, particularly in areas of high pedestrian activity. Pedestrian needs will be identified by considering the:

- Pedestrian volumes, and wherever possible schedule works on footpaths outside of peak pedestrian times
- Type of pedestrian activity (i.e. office, retail, residential, school or recreational)
- Origin and destination points, desired travel paths
- Needs of vulnerable pedestrians, such as young children, the elderly, vision impaired, disabled people, people with prams and trolleys
- Proximity to schools, universities, shopping centres, railway stations, bus terminals etc

The above considerations will inform the design of alternative pedestrian 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.

All temporary pedestrian/shared paths will be clearly defined, signposted, constructed of asphalt or concrete equivalent, contain ramps and be well maintained while in operation. Temporary footpath widths will be a minimum width of no less than the path being replaced, and 3m within Parramatta CBD.

Before commencing work on any section, cycle routes will be identified and alternative routes provided if necessary. Local bike user groups, local communities and the relevant authorities will be consulted.

The SOM Works will affect cycle routes including:

- Hawkesbury Road cycle path (between Railway Parade and Queens Road); and
- Harris Street cycle path (between Macquarie Street and George Street).

Details of the proposed changes to cycle infrastructure will be included in SSCTTMPs and maintained in the GRCLR Integrated Management System (IMS).

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

6.8 Special events

Special events, will at times, impact the pedestrian and traffic movements around the construction sites. The events need to be taken into consideration when planning staging, construction works and ROLs. Special event approvals will be assessed by TfNSW, TMC and the relevant council and the traffic management measures must be coordinated appropriately to address the impact on the road network and travel times. Following consultation with special event organisers and other stakeholders, special events will be addressed in the contract program.

Known special events that may have an impact on the project sites are shown in Table 6.6.

Table 6.6: Special events

Site Compound & Worksites	Precinct / Venue	Key Events and Planning Requirements
Cumberland Hospital Base & Stops 1-6	Parramatta Park	<p>Australia Day celebrations (January)</p> <p>Tropfest (February)</p> <p>Burmatta Naidoc (July)</p> <p>Good Things Festival (November)</p> <p>New Year's Eve celebration (December).</p> <p>GRCLR to liaise with TfNSW, SCO and CoP on the requirements as soon as the SSCTTMPs are finalised and required specific measures to manage road users are known.</p>

Site Compound & Worksites	Precinct / Venue	Key Events and Planning Requirements
O'Connell St Base & Stops 6-10	Bankwest Stadium	Around 45 rugby league and football events per year.
	Prince Alfred Square	Winterlight Festival (July) attracting 25,000 to 100,000 visitors. ANZAC Day celebrations (April) GRCLR to liaise with TfNSW, SCO and CoP on the requirements as soon as the SSCTTMPs are finalised and required specific measures to manage road users are known.
	Parramatta CBD	Parramatta Lanes (October) attracting an estimate of 95,000 pedestrians to CBD laneways. Matsuri Japan Festival (June) in Centenary Square. GRCLR to liaise with TfNSW, SCO and CoP on the requirements as soon as the SSCTTMPs are finalised and required specific measures to manage road users are known.
	Parramatta River Foreshore	Loy Krathong Festival (Thai Water Festival) (November) attracting an estimate of 14,000 pedestrians along Parramatta River. GRCLR to liaise with TfNSW, SCO and CoP on the requirements as soon as the SSCTTMPs are finalised and required specific measures to manage road users are known.
Stabling and Maintenance Facility & Stops 11-12	Rosehill Gardens Racecourse	Over 200 events per year including race days, conferences and school exams. GRCLR to remain in contact with Australian Turf Club through the TTLG to minimise road impacts and parking disruptions. Traffic management measures to be coordinated with Australian Turf Club.
Adderton Rd Base & Stops 13-16	Western Sydney University	Key events unknown. GRCLR to liaise with TfNSW, SCO and CoP on the requirements as soon as the SSCTTMPs are finalised and required specific measures to manage road users are known.

6.9 Pre-condition and dilapidation reports

A Road Pre-condition Report(s) will be prepared for affected roads likely to be used by construction traffic prior to commencement of works. Road Precondition Reports are to assess the current condition of the road and describe mechanisms to restore damage that may result due to traffic and transport related to the construction.

The Pre-condition Report will survey a pre-determined table of affected roads and consider the following (but not limited to):

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

Works at the SaMF site will commence at the completion of Early Works (Package 3) while all other SOM Package works will either commence during Infrastructure Works (Package 4) or at their completion. An agreed time shall be given to enable the contractors to repair any damage made to affected roads prior to a Road Pre-Condition Report being produced for a SOM Package site. Where restorative works are deemed inefficient or abortive in the context of the programme, Package 4 Road Pre-Condition Reports can be used in creation of a new Road Pre-Condition Report to benchmark any damage done prior to commencement of SOM Package works.

The Road Pre-Condition Report will be submitted to the relevant asset owner for review prior at least one (1) month prior to the commencement of construction and/or haulage.

Following completion of construction, a Road Dilapidation Report shall be prepared to assess potential damage that may have resulted from the construction works. The Road Dilapidation report is to take into consideration the findings of the Road Pre-Condition Report.

Where damage has been found to be caused by the construction activities, the matter should be dealt with as per the CEMP & the Communication Community Strategy, and in reasonable accordance with the asset owner's discretion.

6.10 Road safety audits

Road Safety Audits are not required for Package 5, Activity A. However, Road Safety Audits will be conducted by an independent Road Safety Auditor as required for other works in accordance with the audit schedule developed (PLR-SOM-GLR-PJT-PM-SCH-000001). An audit programme has been submitted to the DPIE by TfNSW as part of the compliance tracking programme. The environmental audit programme, as submitted to the Secretary, is provided in Section 8.3 of the CEMP which will be implemented for the duration of construction.

6.11 Incident management and response

In the event of any unplanned incident or accident on site, whether or not involving traffic or road users, the Incident Response Management Plan (IRMP) (PLR1SOM-GLR-ALL-PM-PLN-000009) should be referred to. This guide addresses:

- Identifying stakeholders involved in responding to road user incidents
- Describing the road network and traffic systems, and
- Describing the processes, procedures and protocols to respond to road user incidents, clear incidents and return to the traffic network to normal conditions.

Incidents will be tracked in the GRCLR IMS and the INX system for reporting to TfNSW.

In the event of an emergency, the following relevant authorities must be contacted and advised of the nature of the works, type of emergency and contact details for the site supervisor.

Table 6.7: Emergency Services Contact List

Emergency Service	Contact Number
NSW Police Service	000
NSW Ambulance Service	000
NSW Fire & Rescue	000
State Emergency Service (SES)	132 500
TMC	131 700
Work Cover	13 10 50

To meet CoA E26, on becoming aware of the need for emergency construction works, Section 7 of the CEMP, Environmental Incident and Emergency Response, shall be consulted and followed, Additionally, the GRCLR Sustainability and Environment Manager must be advised, who will then contact TfNSW and the ER for those activities or works. The GRCLR will also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

7 Compliance management

7.1 Roles and responsibilities

The GRCLR Project Team’s organisational structure and overall roles and responsibilities are outlined in Section 4.1 of the CEMP. Specific responsibilities for the implementation of construction traffic management are detailed below, as per the CTTMP.

Table 7.1: Traffic and transport management responsibilities

Role	Responsibility
Project Director	<ul style="list-style-type: none"> • Ensures the objectives of this CTTAMP are met; and • Ensures that all incidents within the Site, affecting Works or affecting the public or other stakeholders are reported to TfNSW, SCO and other relevant stakeholders.
RMS Coordinator / Traffic Manager	<ul style="list-style-type: none"> • Interface with Infrastructure Contractor, TfNSW, SCO and TMC; • Manage the preparation of SSCTTMPs; • Monitors the preparation, implementation and monitoring of road occupancies, including TCPs, ROLs, VMPs; • Will be contactable at all times during the construction phase to liaise with TfNSW, TMC and Police when required; • Will have the authority to stop work on any activity when required to prevent traffic incidents, congestion, or to comply with a request from TfNSW, SCO or Police; • Will immediately report incidents to or delays to TfNSW in accordance with the Incident Response Management Plan; • Appropriate training, including Select/Modify Traffic Control Plans; • Organise audits (both internal and external); • Interface with TfNSW (and SCO and TMC where required); and • Manage the approval process with TfNSW.
Construction Manager	<ul style="list-style-type: none"> • Ensure the CTTAMP objectives are implemented; • Ensure the project meets the requirements of the Project Deed, SPR, RMS Specification G10 and other applicable requirements; • Ensure all incidents caused by site activity, and/or the public but near or affecting site activity are reported to TfNSW, SCO and other relevant authorities; • Coordinate incidents with TfNSW, TMC and Police; • Ensure all staff have the appropriate training, including Traffic Control at Worksites Manual, Traffic Controllers; and • Ensure the implementation of SSCTTMPs, ROLs, TCPs, VMPs, LAPs.

Role	Responsibility
General Foreman and Foremen	<ul style="list-style-type: none"> • Coordinate field resources; • Support the delivery of road safety and traffic management objectives in accordance with this CTTAMP; • Provide direction and support to enable effective planning of temporary traffic management arrangements; • Manage incidents in accordance with the Incident Response Management Plan; • Ensure compliance with approved TCPs, ROLs, LAPs, VMPs, PMPs; and • Assist with implementing mitigation measures to address unsafe road conditions, including traffic congestion.
Project and Site Engineers	<ul style="list-style-type: none"> • Assist in the delivery of road safety and traffic management objectives in accordance with this CTTAMP; • Assist the Traffic Manager in planning the works and identifying the necessary traffic management arrangements to facilitate the works; and • Conduct regular inspections of traffic control, VMPs.
CAF/Communications Manager and Place Managers	<ul style="list-style-type: none"> • Lead targeted consultation, engagement and communication activities in line with responsibilities, actions and timeframes set out in the approved Community Communication Strategy (CCS); • Assist in the management of incidents; • Assist in the development of LAPs; and • Ensure adherence with the CCS.

7.2 Communication

Early engagement will be undertaken with the key stakeholders and authorities, prior to the formal approval process. This is necessary to identify any key issues of concern that may require alternative approaches to be considered in methodology.

Further to any consultation, site-specific TCPs will be developed for each specific site of work in accordance with relevant RMS and Australian Standards. These plans will show the specifics of the proposed works and individual traffic controls for each site. These TCPs will be formally submitted for comment/concurrence by the relevant stakeholders prior to implementation. The main stakeholders/authorities are as follows:

- TfNSW
- SCO
- Parramatta Council
- Emergency Services
- NSW Police
- Bicycle User Groups
- Local Business Groups

Each TCP is to operate within the conditions of any approvals or licenses issued from authorities. The TCPs will be available through the GRCLR IMS when complete.

Extensive effort will be made to provide timely, accurate, relevant and accessible information regarding the proposed changes to local traffic conditions. The GRCLR has developed a Communications and Engagement Plan (CEP). This plan will be referenced for any notification to residents, businesses or commuters. The GRCLR Communication and Stakeholder Manager will be responsible for planning and implementing.

Notification about traffic management impacts may include (but is not limited to) the following:

- Letterbox notifications, leaflets and fact sheets
- Face to face engagement
- TfNSW website
- Variable Message Signs (VMS)
- Media releases and social media updates
- Live Traffic.com.au
- Advertising in local newspapers as per TSR 6.7.

Local residents and businesses will also be consulted in advance where there is likely to be a direct impact, for example temporary loss of driveway access or power supply. The GRCLR Communication and Stakeholder Manager will provide relevant contact information for the purpose of dealing with queries and complaints including:

- Project Enquiries Number: 1800 139 389
- Email: parramattalightrail@transport.nsw.gov.au
- Web: www.parramattalightrail.nsw.gov.au
- 24-hour Construction Response Line.

7.3 Inspections

Requirements and responsibilities in relation to inspections are documented in Section 8 of the CEMP.

On completion of establishing the work site, the site is to be monitored for a suitable period of time. The traffic control contractor shall ensure that all signage, devices and controls are maintained at all times. Inspections shall be carried out:

- Before the start of work activities each day on site
- During construction hours
- At the end of each shift period.

A daily record of the inspections shall be kept indicating:

- What additional traffic controls were erected
- When changes to controls occurred and why
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

The traffic control contractor will ensure that personnel are assigned to monitor the traffic control site and carry out inspections as follows:

Before Work Starts:

- Inspect all signage and devices to ensure they are undamaged and comply with the requirements depicted on the Traffic Control Plan.
- After any adjustments have been made to the signs and devices, conduct a drive through inspection to confirm effectiveness.
- Provide contact name and number for traffic control site supervisor to TMC for day's activities if applicable.

During Construction Hours:

- Ensure that appropriate personnel drive through the site periodically to inspect all signs and devices and ensure they are undamaged and comply with the requirements depicted on the TCP.
- Ensure on site traffic controllers are in place and carrying out necessary duties.
- Keep records of any changes made throughout the day.

At the End of Each Shift Period:

- Conduct an end of shift site inspection, allowing time for any maintenance work
- Remove any unnecessary signage (Workers Symbolic, Traffic Controller)
- Ensure any lighting is added to road safety barriers as necessary
- Record details of inspection and any changes made.

7.4 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of traffic management measures, compliance with this plan, CoA and other relevant approvals, licenses and guidelines. An audit schedule has been developed (PLR-SOM-GLR-PJT-PM-SCH-000001).

An environmental audit programme has been submitted to the DPIE by TfNSW as part of the compliance tracking programme. The environmental audit programme, as submitted to the Secretary, is provided in Section 8.3 of the CEMP which will be implemented for the duration of construction.

7.5 Reporting

GRCLR will report to the SCO, TMC, TTLG and other stakeholders on all traffic and transport management issues related to the SOM package works. The reporting obligations are described in Section 8.4 of the CEMP.

GRCLR will attend regular meetings with the Infrastructure Contractor (PCPLR) and TfNSW in the form of a Traffic Control Group (TCG). GRCLR will provide weekly updates, by exception, as works and compound arrangements change. These updates will be made to TfNSW RM Customer Journey Plan (CJP) Operations and NAM only in weeks where working arrangements change.

8 Review and improvement

8.1 Continuous improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

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 CTTAMP update and amendment

The processes described in Section 9.1 to Section 9.2 of the CEMP may result in the need to update or revise this Plan. This will occur as needed.

Only the Construction Traffic Manager (in consultation with the GRCLR Environment and Sustainability Manager) can amend this CTTAMP.

Modifications to the CEMP or management sub plans must be submitted to the ER for endorsement. Minor amendments and administrative changes to CEMP may be approved by the ER. These amendments will be included in the six monthly Construction Compliance Report in accordance with CoA A37. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure – refer to Section 10.2 of the CEMP.

This plan will be updated to include changes associated with establishment of new compounds, prior to site establishment works being commenced.

Appendix A – Road classification

Westmead Precinct

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Hawkesbury Road	Regional	Two-way, two lane traffic in each direction on divided road	50km/h	No
	State (T-way)	Dedicated bus lane in the southbound direction, south of Railway Parade		
CROSS ST / RANGE	Alexandra Avenue to Darcy Road			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> • Dedicated Bus T-way left turn lane onto Darcy Road • Pedestrian paths around Darcy Road intersections with signalised pedestrian crossing • Pedestrian access to PLR terminus on east side of alignment • Signalised pedestrian crossing at Railway Parade providing southern access to terminus TRAFFIC CONTROL MEASURES: <i>Details and will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Hawkesbury Road	Local	Two-way, one lane traffic in each direction divided by PLR alignment	40km/h	No
CROSS ST / RANGE	Darcy Road to Hainsworth Street			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> • Dedicated turning lanes to retain one lane of traffic in each direction • 1 main intersection at Caroline Street allowing crossing of PLR alignment • 3 minor intersections with hospital access roads not allowing PLR alignment crossing • Pedestrian paths along both sides of the road corridor TRAFFIC CONTROL MEASURES: <i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Hainsworth Street	Local	Two-way, one lane traffic in each direction, divided by PLR alignment	40km/h	No

CROSS ST / RANGE	Hawkesbury Road to Bridge Road
SIGNIFICANT FEATURES:	
<ul style="list-style-type: none"> • Access to The Children’s Hospital at junction of Hawkesbury Road and Hainsworth Street • T-junction intersection with Bridge Street with all turning movements allowed • 1 intersection with hospital parking access road allowing left in/ left out movement only • Pedestrian paths along both sides of the road corridor • Signalised pedestrian crossings at each end of PLR stop and around Bridge Street intersection 	
TRAFFIC CONTROL MEASURES:	
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>	

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Bridge Road	Local	Two-way, one lane traffic in each direction, undivided	20km/h	No
CROSS ST / RANGE	In the Cumberland Hospital precinct (private access only)			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • Adjacent to PLR alignment • Footpath along northern side of Bridge Road • Boom gates to restrict access retained west of Gardens Way • PLR crosses Gardens Way • Dedicated pedestrian and cyclist path alongside PLR • Several minor hospital access roads 				
TRAFFIC CONTROL MEASURES:				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

Parramatta North Precinct

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Cumberland Hospital internal roads	Local	Two-way, one lane traffic in each direction, undivided	20km/h	No
CROSS ST / RANGE	In the Cumberland Hospital precinct (private access only) between Parramatta River and Fleet Street/ New Street			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • Roads adjacent to PLR alignment • PLR crosses Warrinya Avenue • Dedicated pedestrian and cyclist path alongside PLR • Six pedestrian crossings across PLR alignment west of Cumberland Hospital stop 				
TRAFFIC CONTROL MEASURES:				

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Factory Street	Local	Two-way, one lane traffic in each direction, divided by PLR alignment	50km/h	No
CROSS ST / RANGE	New Street to Church Street			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • Intersection at Factory Street / Fleet Street / New Street where PLR alignment re-joins road corridor • Left turn only from Factory Street onto Fleet Street • Major intersection at O'Connell Street allowing crossing of PLR alignment • Signalised pedestrian crossings at all intersections • T-junction intersection with Galloway Street allowing left in / left out movements only • Footpaths on both sides of the road 				
TRAFFIC CONTROL MEASURES:				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Church Street	State	Two-way, one lane traffic in each direction, divided by PLR alignment		No
CROSS ST / RANGE	Factory Street to Victoria Road			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • Four intersections allowing crossing of PLR alignment <ul style="list-style-type: none"> ○ Factory Street – with signalised pedestrian crossings ○ Pennant Hills Road and Albert Street – with signalised pedestrian crossings. Albert Street from east only allowed to turn south onto Church Street ○ Grose Street – with signalised pedestrian crossings ○ Victoria Road – with signalised pedestrian crossings • Four intersections not allowing PLR alignment crossing <ul style="list-style-type: none"> ○ Albert Street – access onto Church Street from east only ○ Harold Street – left in / left out movements only ○ Fennell St – left in / left out on east of alignment and only westbound direction of traffic on west of alignment. Signalised pedestrian crossing to north of intersection ○ Ross Street – access onto Church Street heading south from east, and left in / left out from west • Footpaths along both sides of the corridor • Occasional widening to allow for dedicated turning lanes • Two unsignalised pedestrian crossings, one at each of the PLR stops 				
TRAFFIC CONTROL MEASURES:				

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

Parramatta CBD Precinct

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Church Street	Local	One-way, one lane		No
CROSS ST / RANGE	Victoria Road to Market Street			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • One lane only, heading north to the east of the alignment, with ability to turn right onto Victoria Road or Palmer Street. No through movement across Victoria Road • Intersection with Market Street allows Market Street traffic to cross the alignment to access Novotel Hotel or turn left onto Church Street • Large pedestrianised area between PLR alignment and Prince Alfred Square • Signalised pedestrian crossings at Victoria Road intersection and Market Street. 				
TRAFFIC CONTROL MEASURES:				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Church Street	Local	Pedestrianised zone	N/A	No
CROSS ST / RANGE	Market Street to Macquarie Street			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • No vehicle traffic in this section – pedestrianised zone • Phillip Street signalised intersection has one lane of traffic in each direction with no on-road parking • George Street signalised intersection has one lane of traffic in each direction with no on-road parking 				
TRAFFIC CONTROL MEASURES:				
<ul style="list-style-type: none"> • Church Street (between Lennox Bridge and Macquarie Street) will become construction and emergency access only in a southbound direction. 				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Macquarie Street	Local	One lane, one way	50km/h	Yes
CROSS ST / RANGE	Church Street to Harris Street			

SIGNIFICANT FEATURES:

- PLR alignment along road corridor with one lane of traffic travelling east on the north side of the alignment
- No vehicle access alongside Parramatta Square Stop
- Macquarie Street crosses PLR alignment at Church Street then must turn left onto Horwood Place
- Pedestrian paths on north side of the road with unsignalised pedestrian crossing on Horwood Place
- Several signalised pedestrian crossings along section
- Intersection with Smith Street includes bus lanes in each direction on Smith Street
- Southbound vehicles on Smith Street can turn onto the PLR alignment towards Parramatta Square Stop in a shared light rail/vehicle zone for access to a future development at Parramatta Square
- Pedestrian crossings at every approach at Smith Street intersection
- Driveway accesses on north side of Macquarie Street, and on south side east of Charles Street
- Barrack Lane and Argus Lane access onto Macquarie Street from the north
- Large signalised pedestrian crossing east of Barrack Lane
- Intersection with Charles Street with pedestrian crossings at all approaches
- Unsignalised pedestrian crossing at west end of Harris Street Stop
- Left turn only for vehicles approaching Harris Street intersection

TRAFFIC CONTROL MEASURES:

- Traffic will be switched to travel eastbound following modification works to Harris Street and Hassall Street Intersection.

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Harris Street	Regional	Two-way, two lane traffic in each direction on undivided road	40 km/h	Yes
CROSS ST / RANGE	Macquarie Street to George Street			

SIGNIFICANT FEATURES:

- Signalised T-junction intersection with Macquarie Street where PLR alignment crosses Harris Street to turn north adjacent to street
- Signalised pedestrian crossing on south approach to signalised intersection with Macquarie Street
- Northbound direction widens to one left turn, one right turn and one through lane for signalised intersection with George Street
- Signalised pedestrian crossing at George Street intersection continuing across the PLR alignment as it turns eastward alongside George Street
- Southbound direction widens from one lane to two lanes on approach to Macquarie Street intersection
- Carpark driveways on west side of street
- Pedestrian paths on west side of street only

TRAFFIC CONTROL MEASURES:

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
George Street	Regional	One-way, two lanes of traffic	50km/h	No
CROSS ST / RANGE	Harris Street to Alfred Street			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • PLR alignment adjacent to George Street • T-junction crossing over PLR alignment to carpark with pedestrian crossing • Pedestrian path along north side of road only • Signalised intersection with Noller Parade / Purchase Street with pedestrian crossings on each approach • Right hand lane on approach to Noller Parade / Purchase Street becomes right turn lane • Purchase Street approach to intersection is right turn only onto George Street, while Noller Parade approach is approach only with left and through movements only • East of Noller Parade / Purchase Street, George Street is one lane in each direction on either side of the alignment • Residential driveway accesses onto either side of George Street between Noller Parade / Purchase Street and Alfred Street • Pedestrian crossings at Alfred Street signalised intersection 				
TRAFFIC CONTROL MEASURES:				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

Rosehill and Camellia Precinct

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Alfred Street	Local	Two-way, one lane traffic in each direction on undivided road	50km/h	No
CROSS ST / RANGE	George Street to Tramway Avenue			
SIGNIFICANT FEATURES:				
<ul style="list-style-type: none"> • Signalised pedestrian crossing at George Street intersection and unsignalised pedestrian crossing at River Road West intersections • Residential driveway on west side of street • PLR alignment adjacent to east side of street • Pedestrianised area around intersection with Tramway Avenue • Unsignalised pedestrian crossing with River Road West 				
TRAFFIC CONTROL MEASURES:				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Tramway Avenue	Local	One way, one lane in westward direction on each side of PLR alignment	50km/h	No
CROSS ST / RANGE	River Road West to Arthur Street			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> • Tramway avenue is separated by pedestrianised areas around Tramway Avenue Stop, the alignment, pedestrian and cycle paths, and nature strips • Residential driveways access both lanes • Pedestrian paths on residential sides of both lanes • Pedestrian crossings over alignment at each end of the stop and connecting Alfred Street 				
TRAFFIC CONTROL MEASURES: <i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
James Ruse Drive	State	Two-way, three lanes traffic in each direction on divided road	70km/h	No
CROSS ST / RANGE	Hassall Street/ Grand Avenue to River Road West			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> • Road passes under new light rail and pedestrian/cyclist bridge • Unsignalised intersection with Grand Avenue North to the east and carpark access roads (one entrance and one exit, left in/ left out) on the west, around the bridge abutment • Keep clear markings on road at intersection with Grand Avenue • Existing pedestrian paths alongside road 				
TRAFFIC CONTROL MEASURES: <ul style="list-style-type: none"> • Multiple nightshift and weekend lanes closures will be required on James Ruse Drive, which will need to be scheduled during the lowest traffic periods. • The James Ruse Drive bridge implementation will require a full road night shift closure. 				
<i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Grand Avenue North	Local	Two-way, one lane traffic in each direction on undivided road	60km/h	No
CROSS ST / RANGE	James Ruse Drive to Grand Avenue			

SIGNIFICANT FEATURES:

- Uncontrolled pedestrian crossing near James Ruse Drive
- Pedestrian path on north side of road
- Commercial business driveways to north
- Road narrows towards east

TRAFFIC CONTROL MEASURES:

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Grand Avenue	Local	Two-way, Divided	60km/h	No
CROSS ST / RANGE	James Ruse Drive to Durham Street			

SIGNIFICANT FEATURES:

- 1 dedicated traffic lane in each direction
- 1 dedicated kerbside parking lane in each direction
- Traffic lanes separated by an approximate 18 metre median strip
- Two median crossovers exist on the frontage of the SaMF site
- One main intersection within the range – roundabout at Colquhoun Street
- Many access points to business, predominantly on the east bound direction
- Approved B-double route

TRAFFIC CONTROL MEASURES:

- 40km/h worksite speed limit reduction
- Truck warning signs
- Traffic Controller warning signs

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Colquhoun Street	Local	Two-way Undivided	60km/h	No
CROSS ST / RANGE	Grand Avenue to Devon Street			

SIGNIFICANT FEATURES:

- 1 dedicated traffic lane in each direction
- 1 dedicated kerbside parking lane in each direction
- No intersections with other roads within the range
- A few business access points on the eastern side of the road
- Approved B-double route

TRAFFIC CONTROL MEASURES:

- 40km/h worksite speed limit reduction
- Traffic Controller warning signs

Carlingford Precinct

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Kissing Point Road	State		km/h	
CROSS ST / RANGE				
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> 				
TRAFFIC CONTROL MEASURES: <ul style="list-style-type: none"> Lane closures will be required to implement the bridge girders. <p><i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i></p>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Adderton Road	Local	Two-way, one lane traffic in each direction, undivided	50km/h	No
CROSS ST / RANGE	Continuing north from Robert Street where road is adjacent to PLR			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> Pedestrian traffic control signals crossing Adderton Road to Telopea Stop between two T-junction intersections Clear zones at T-junctions to prevent queuing traffic blocking turning movements to/from Robert Street and Telopea Street Foot paths either side of road No parking on road adjacent to PLR stop Parallel parking on both sides of road north from Telopea Street Many driveway accesses to the west side of road Trees on west side of road between parking spaces Some traffic calming devices prior to Adderton Road turning left away from PLR alignment Dedicated pedestrian and cycle path to the east of the PLR alignment 				
TRAFFIC CONTROL MEASURES: <p><i>Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).</i></p>				

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Pennant Hills Road	State	Two-way, two lanes traffic in each direction, undivided	60km/h	No
CROSS ST / RANGE	Jenkins Road to Lloyds Avenue			
SIGNIFICANT FEATURES: <ul style="list-style-type: none"> Bridge over PLR alignment 				

- Pedestrian paths on both sides of road
- East of bridge, T-junction with Tiptrees Avenue allowing all movements
- East of bridge, T-junction with Lloyds Avenue allowing left in/ left out movements only

TRAFFIC CONTROL MEASURES:

- Retaining wall work at Pennant Hills Road, which will require night work or off-peak lane closures.

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Unnamed road	Local	One-way, one lane traffic	km/h	No
CROSS ST / RANGE	Connecting Jenkins Road to James Street			

SIGNIFICANT FEATURES:

- Parallel parking on north side of road on approach to Carlingford Stop
- Road narrows to one lane in east, north-east direction alongside Carlingford Stop
- Pedestrian path on each side of narrowed road, opening up to large pedestrianised area around stop entrance.
- Unsignalised pedestrian crossing at stop entrance
- Driveway to heritage produce store at pedestrianised area – shared zone
- Pedestrian and cycle crossings across PLR alignment at each end of platform to dedicated path

TRAFFIC CONTROL MEASURES:

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	SCHOOL ZONE
Lloyds Avenue	Local	One-way, one lane traffic	50km/h	No
CROSS ST / RANGE	Pennant Hills Road to Colman Avenue			

SIGNIFICANT FEATURES:

- Driveway to construction site alongside Carlingford Stop, left in/ left out movements only
- Bus stop on left and Bus zone on right
- Commuter carpark driveway entrance near Colman Avenue and exit near Lloyds Avenue intersection with Pennant Hills Road allowing left turn out only
- Pedestrian footpath on either side of road

TRAFFIC CONTROL MEASURES:

Details will be provided within the SSCTTMP and TCP and maintained in the GRCLR Integrated Management System (IMS).

Appendix B – Example Traffic control plan

Note: To be developed and implemented at a later date prior to commencing works and to be kept and maintained outside of this CTTAMP in the GRCLR IMS.

Appendix C – Construction traffic

Table C1: SaMF vehicle types

Vehicle	Vehicle Classification	Vehicle Details	Carrying	Access	Estimated Volumes
				SAM facility	
Concrete Agi	General Access Vehicle (GAV)	H – 3.550m W – 2.460 L - 7.800	Concrete	From / To North From / To South	>5
Low Loader	Restricted Access Vehicle (RAV) Class 1	H – varies subject to load W – 2.500m to 4.500m L – 17.500m to 20.000m	Piling Rig Excavators Manitou EWP Bobcat	N/A	<5 (Deliveries only)
Line Pump	GAV	H – 3.25m W – 2.5m L – 11.2m	N/A	From / To North From / To South	>5
16m Concrete Pump	GAV	H – 3.25m W – 2.5m L – 11.9m	N/A	From / To North From / To South	>5
Bogie Tipper	GAV	H – 2.900m W – 2.465m L – 11.345m	Quarry Products	From / To North From / To South	>5
12m Rigid (including HIAB)	GAV	H – 3.550m W – 2.500m L – 11.200m	Pile Cages Precast Concrete Products Smaller site sheds	From / To North From / To South	<5 (Deliveries only)
Semi-Trailer	Restricted Access Vehicle (RAV) Class 1	H – 4.25m W – 3m L – 19m	Site Sheds (3m width) Steel Reinforcement Precast Concrete Products Tower Crane sections Piling Rig Excavators Manitou EWP Bobcat	N/A	<5 (Deliveries only)
Truck and Dog	Restricted Access Vehicle (RAV) Class 1	H – 2.900m W – 2.465m L – 11.345m	Excavated material Quarry Products	From / To North From / To South	>5

Table C2: SaMF site vehicle volumes

Period	Stage 1		Stage 2		Stage 3		Stage 4		Stage 5		Stage 6		Stage 7	
	Site Establishment		Earthworks & Subsurface		Civil Works & Car Parks		Rail, Overhead Wiring & Signalling Systems		Maintenance Workshop		Electrical & Power Supply Systems		Outbuildings & Specialist Equipment	
	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site	LV (workers on site)	HV on Site
0500–0700	10	3-5	10-15	0	10-15	0	10-15	0	10-15	10-15	5-10	0	5-10	5-10
0700 - 1000	5	1-2	15-20	15-20	10-15	5-10	10-15	10-15	15-20	15-20	10-15	10-15	10-15	10-15
1000–1200	2-5	1-2	5-10	5-10	5-10	10-15	5-10	5-10	5-10	5-10	5-10	5-10	5-10	5-10
1200–1400	2-5	1-2	10-15	10-15	10-15	5-10	10-15	10-15	5-10	10-15	10-15	5-10	5-10	5-10
1400–1500	2-5	1-2	5-10	10-15	5-10	5-10	5-10	5-10	10-15	5-10	5-10	5-10	5-10	5-10
1500–1600	5	1-2	15-20	5-10	15-20	10-15	10-15	10-15	5-10	15-20	10-15	10-15	10-15	10-15
1600–1800	10	3-5	5-10	1-5	10-15	5-10	5-10	5-10	3-5	5-10	5-10	5-10	3-5	3-5
1800–0500	0	0	1-5	0	5-10	0	0	0	0	0	0	0	0	0

Table C3: 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).

Appendix D – ER Endorsement



14 July 2021

Transport for NSW

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

**Review of Construction Traffic, Transport and Access Management Plan
Transport for NSW, Package 5 - Supply, Operate, Maintain (SOM)
Parramatta Light Rail
(PLR1SOM-GLR-ALL-PM-PLN-000032 Rev 2)**

Pursuant to SSI8285 Condition of Approval A23 (d) i), as the approved Environmental Representative, I confirm that I have reviewed the Construction Traffic, Transport and Access Management Plan, Transport for NSW, Package 5 - Supply, Operate, Maintain (SOM), Parramatta Light Rail (PLR1SOM-GLR-ALL-PM-PLN-000032 Rev 2), dated 9 July 2021, prepared by Great River City Light Rail, for consistency with the requirements of the Conditions of Approval.

In my opinion the aforementioned document is consistent with the requirements included in or required under the terms of the Conditions of Approval for the Parramatta Light Rail (Stage 1) development.

Yours sincerely,

Australian Quality Assurance & Superintendence Pty Ltd (AQUAS)

A handwritten signature in black ink, appearing to read 'Gillian Lehn', is positioned above the printed name.

Gillian Lehn

Environmental Representative
phone: +61 2 9956 9963 | fax: 02 9954 1951 | mobile: +61 419 253 787 |
email: gillian.lehn@aquas.com.au |

Filename : AQ1148.05 PLR GLR CTTAMP endorsement 210714