Construction Traffic, Transport and Access Management Plan

Transport for NSW
Supply, Operate, Maintain (SOM) Package

Parramatta Light Rail
November 2020

PLR1SOM-GLR-ALL-PM-PLN-000032 Rev 0

NSW GOVERNMENT

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Document control

Approval and Certification

Title	Parramatta Light Rail Construction Traffic, Transport and Access Management Plan
Endorsed by Environmental Representative	
Signed	
Dated	
Approved on behalf of Transport for NSW by	
Signed	
Dated	
Approved on behalf of [Insert name of Construction Contractor] by	
Signed	
Dated	

About this release

Title	Construction Traffic, Transport and Access Management Plan

Version	Date	Prepared By	Approved By
A	10 April 2019	Advisian on behalf of GRCLR	
B	17/04/2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR	
C	12/06/2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR	
D	30/07/2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR	
E	24/10/2020	GRCLR	
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Revision	Date	Description
A	10 April 2019	Advisian on behalf of GRCLR
B	17 April 2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR
C	12 June 2020	Revised to address TfNSW comments
D	30/07/2020	Revised to address ER comments
E	24/10/2020	Revised for Stakeholder Consultation and ER Endorsement
0	3/11/2020	Editorial updates

Contents

Glossary / Abbreviations

Abbreviation	Expanded text
CAF	Sub-Contractor Construcciones y Auxiliar de Ferrocarriles
CEMP	Construction Environmental Management 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	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
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	Laing O'Rourke Australia
OPLINC	TfNSW Online System for ROL Applications
PLR	Parramatta Light Rail
REMMM	Revised Environmental mitigation and management measures
RMS	Roads and Maritime Services (now TfNSW)
ROL	Road Occupancy Licence

Abbreviation	Expanded text
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
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 (12) kilometres in length, including approximately seven (7) kilometres within the existing road corridor and approximately five (5) kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services
- Sixteen 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 was 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.

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.

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.

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.

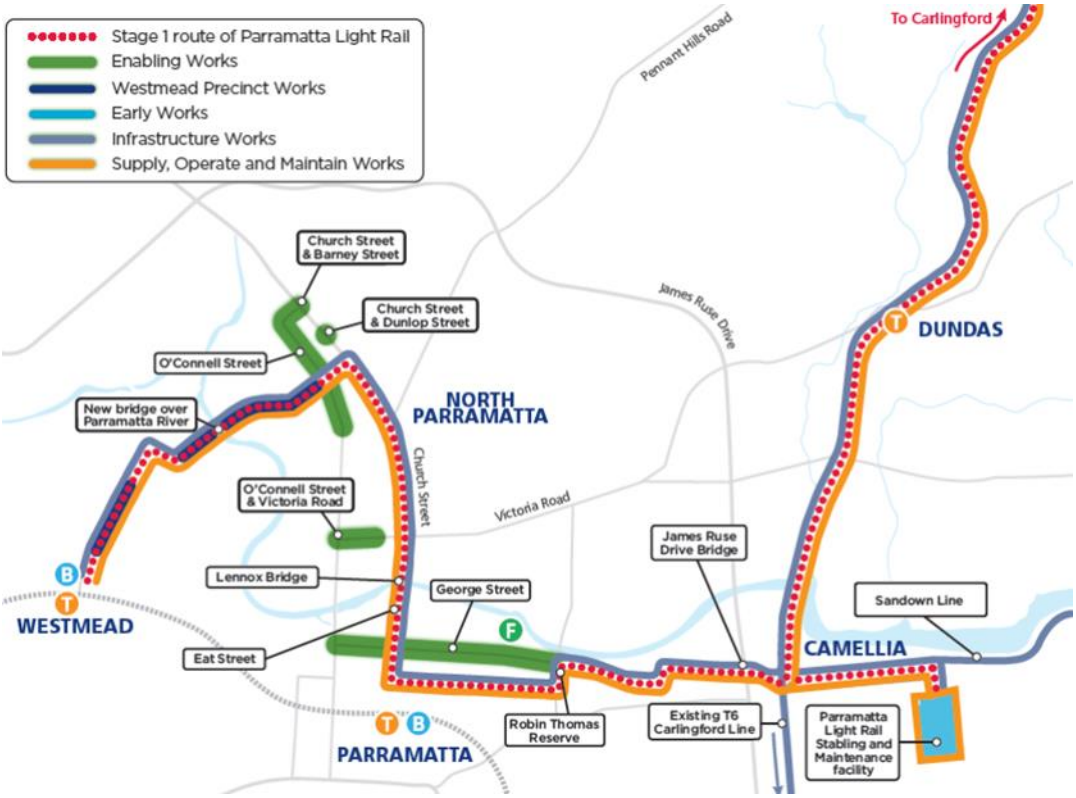

Figure 1-2: Parramatta Light Rail Delivery Package Interface

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

As System Integrator for PLR, the 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 SOM 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.

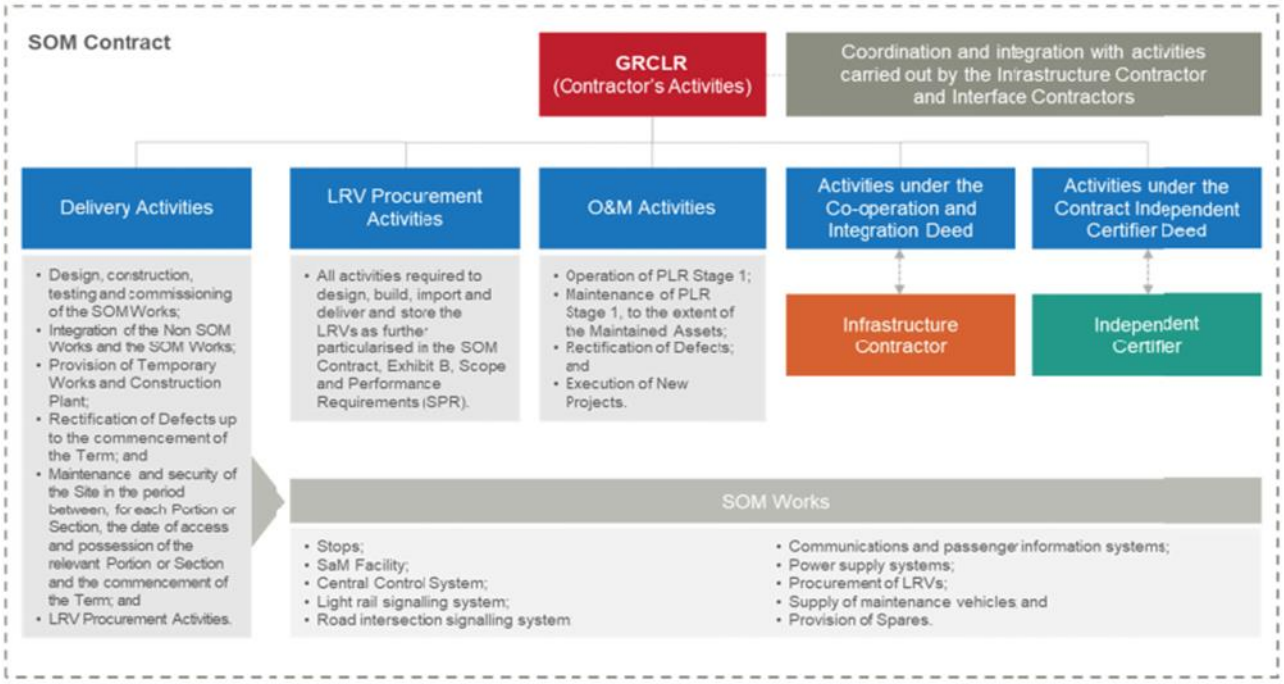

Figure 1-3: SOM contract activities for PLR

Great River City Light Rail (GRCLR) is responsible for the delivery of the SOM contract 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 (the Project). Further detail on the Project 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 its proposed land use as a stabling and maintenance facility. 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	• Site office and amenities during construction
Earthworks and subsurface works	• Combined service route • Drainage • Hydraulics (sewer, water, fire)

Type of works	Works extent
Civil works	• Fencing • Service roads • Footpaths • Carparks • Landscaping • Substation – TPS 8
Rail Systems	• Track • Overhead wiring • DC feeders
Structures	• 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	• 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 (TPS) would generally comprise prefabricated structures, 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.

1.5 Scope of this plan

This CTTAMP applies to the construction of the stabling and maintenance facility (SaMF) only. The CTTAMP will be revised to include the remainder of the SOM works in line with the delivery program of the SOM works, which are dependent on the works of other interface contractors. It has been prepared for Stage 3 Activity A, as per Staging Report Revision 6.03.

The CTTAMP is applicable to all activities during construction of the sites, referred to as the 'Project' in this document, including all areas where physical works will occur, or areas that may be otherwise be 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 SaMF, 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.

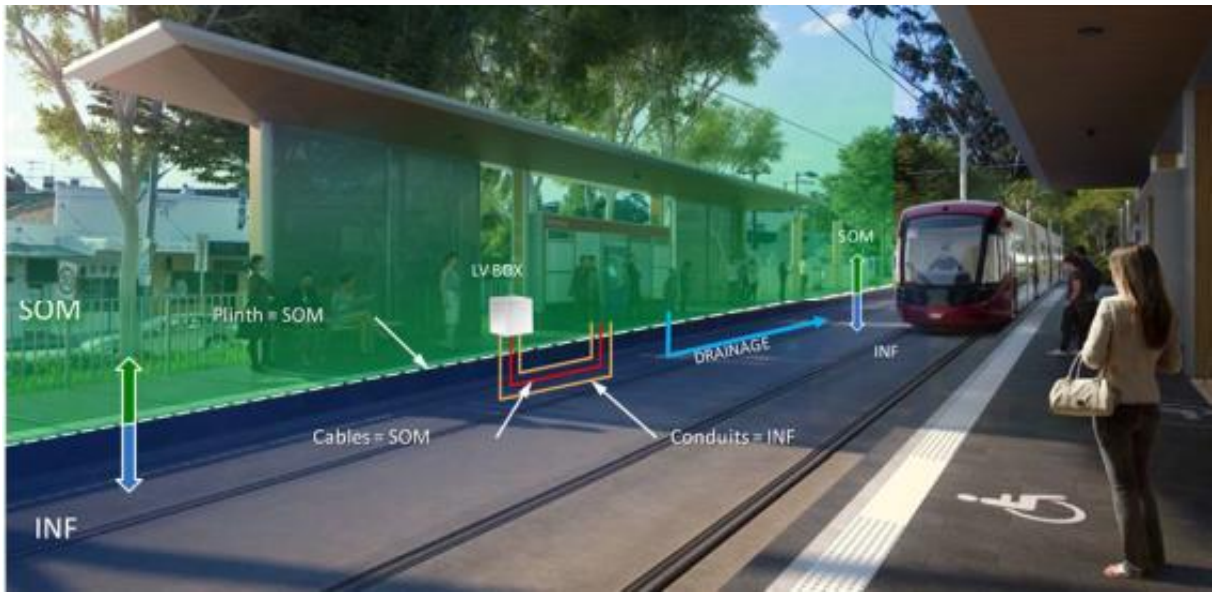

Figure 1-4: Relationship between Infrastructure Works and SOM Works

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 remediation contractor.

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 SOM 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 SaMF 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 / EMS.

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.

The CEMP will be endorsed by the ER and provided to the Secretary for approval at least one month prior to the commencement of construction. In accordance with CoA C8, where construction of the CSSI is proposed to be staged, construction of a new stage will not commence until the CEMP and the associated management plans specified in CoA C3 (if affected) are revised and 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 will be prepared to support the CEMP. These documents are 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
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

Document name	Document number	Approval pathway/ requirement
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 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
- *Road Regulation 2008*
- *Road Transport Act 2013*
- *Road Transport (Safety and Traffic Management) (Road Rules) Regulation 1999*
- *Work Health Safety Act 2011*
- *Work Health Safety Regulations 2011.*

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 №. | RMS.18.898 | Version №: 5.0 (27 July 2018)
- AUSTROADS Guide to Traffic Management 2009 – Parts 1-13
- AUSTROADS Guide to Road Design 2009 – Parts 1-7
- AUSTROADS Guide to Road Safety 2009 – Parts 1-9
- 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

3.2 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	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: (a) documentation of the engagement with the party(ies) identified in the relevant condition of approval before submitting the document for approval; (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); (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; (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 (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).	Section 4 - Consultation CTTAMP Consultation Report	GRCLR issued the CTTAMP to the following council(s) and government authorities for consultation: • TfNSW • City of Parramatta Council • Emergency Services • NSW Police • Bus Operators • Bicycle User Groups • Local Business Groups a) b) and c) A summary of the consultation outcomes is presented in Section 4 of this Plan. d) and e) Consultation evidence to be included in CTTAMP Consultation Report once received.

<table>
<tr><th>CoA No.</th><th>Condition Requirements</th><th>Document reference</th><th>How Addressed</th></tr>
<tr><td>C3</td><td>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:
<table>
<tr><th>Required CEMP Plan</th><th>Relevant Government Agencies to be Consulted for Each Plan</th><th>Secretary Approval/ Information</th></tr>
<tr><td>Traffic, Transport and Access Information</td><td>Relevant Council(s), Roads and Maritime, Emergency Services</td><td>Information</td></tr>
</table></td><td>4 - Consultation

CTTAMP Consultation Report</td><td>The following consultation has been undertaken for this CTTAMP:
City of Parramatta Council
TfNSW (previously RMS)
Emergency Services.
Comments have been considered and this document updated accordingly.

A summary of the outcomes of the consultation is presented in Section 4 of this Plan.

Consultation evidence to be included in CTTAMP Consultation Report once received.</td></tr>
<tr><td>C4</td><td>The CEMP Sub-plans must state how:

(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;

(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;

(c) the relevant terms of this approval will be complied with; and</td><td>3.2 - Ministers conditions of approval

3.3 - Revised environmental mitigation and management measures

3.4 - Environmental performance outcomes</td><td>a) and c) Conditions are presented in Section 3, showing how each is addressed in the plan.

b) and d) Section 6 demonstrates how aspects and impacts identified in Section 5 will be managed.</td></tr>
</table>

CoA No.	Condition Requirements	Document reference	How Addressed
	(d) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed.		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	4 - Consultation CTTAMP Consultation Report	All correspondence from consultations is stored in Section 4 and in the CTTAMP Consultation Report.
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.	1.5 - Scope of this plan	Requirement stipulated.
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.	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
	Note: the requirement to submit or have a CEMP or CEMP Sub-plan approved is specified in Condition C3		
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.	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.	5 - Construction traffic aspects and impacts 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.	5.5 - Public transport access 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			

CoA No.	Condition Requirements	Document reference	How Addressed
E5	Construction vehicles (including staff vehicles) associated with the CSSI must: (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; (b) not idle or queue in local residential streets; (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; (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 (e) adhere to the nominated haulage routes identified in the Construction Traffic, Transport and Access Management Plan required under Condition C3.	6.6 & 5.2 - Property access 5.4 - Construction parking and loading impacts 5.3.2 - Construction vehicle haulage routes 6.1 - Construction stage traffic management	Property access impacts and mitigation measures have been given in Section 6.7 and 5.1, respectively. 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. b) Site plans developed to ensure vehicles don't queue on street 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.
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	6.8 - Pre-condition and dilapidation reports	A pre-condition report to be prepared and issued to TfNSW and CoPC at least

CoA No.	Condition Requirements	Document reference	How Addressed
	to the asset owner no later than one month before the commencement of construction of the CSSI.		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.	6.8 - 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.	6.6 - Property access	Instruction given in this section. Details of property access issues given in Table 6-6.
E9	Access plans must be prepared and implemented for individual properties and accesses that will be impacted by construction and operation of the CSSI. The access plans must be developed in consultation with affected parties (property owner and/or occupier, as relevant) and the Proponent must make reasonable endeavours to obtain agreement from the relevant affected parties, and evidence of consultation demonstrating this must be provided to the Secretary on request. The access plans must establish:	6.1 - Construction stage traffic management (a) 6.6 - Property access (d)(e)(f) 6.7 - Special events (c) 5.4 - Construction parking and loading impacts (h)	SSCTTMPs to provide change in access details for all sites with consultation of those plans being with • SCO • TfNSW • CoPC

CoA No.	Condition Requirements	Document reference	How Addressed
	(a) road and access closures and provision of alternative routes; (b) provision for pedestrian and cyclist access; (c) special event strategies; (d) provision of servicing and delivery requirements for loading zones and waste disposal; (e) access periods or alternative access arrangements for businesses, landowners or tenants affected by the CSSI; (f) strategies to maintain emergency and incident response access at all times; (g) potential future access strategies for the Westmead Hospital and Westmead Railway Station; and (h) access to taxi ranks and loading zones. 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.	Appendix B - TCP	• emergency services • transport operators Mitigation measures introduced in Section 6, where necessary. TCPs, which will detail temporary changes to access, for all sites to be made available through the GRCLR IMS. Condition a, b, e, g, and h not relevant for SaMF.
TRAFFIC NETWORK MANAGEMENT			
E10	The Proponent must prepare and implement a Network Management Strategy for construction of the CSSI, in consultation with RMS, Sydney Coordination Office and Relevant Council(s) before impacts on the road network (including intersections) occur. The Strategy must determine appropriate measures to manage impacts to traffic identified in the documents listed in Condition A1, and must include: (a) details of impacts to the network from road closures, directional changes, night works and traffic diversions;		Network Management Strategy (January 2019) received. This plan has taken into consideration the NMS.

CoA No.	Condition Requirements	Document reference	How Addressed
	(b) details of further appropriate network/intersection modelling and analysis undertaken since the EIS and/or Submissions Report was prepared; (c) consideration of cumulative impacts from other construction projects; (d) details of the required intersection upgrades and traffic management measures by precinct to minimise the impacts identified above; (e) vehicular access changes; (f) special event management; and (g) changes to bus services. The Strategy must focus on the management of construction related traffic impacts and be provided to the Secretary for information before works commence.		
E11	A Parking Management Strategy must be prepared before permanent or long term loss of parking i.e. greater than three (3) months. The Strategy must be implemented in consultation with the relevant road authority and Relevant Council(s) to manage car parking impacts and kerbside parking access, particularly for the Westmead, Parramatta North and Parramatta CBD precincts, as a result of the CSSI. The Parking Management Strategy must include, but not be limited to: (a) confirmation of the timing of the removal of on and off-street parking associated with the construction of the CSSI; (b) comprehensive parking surveys of all parking spaces to be removed to determine current demand during peak, off-peak, school drop-off and pick-up, and weekend periods;	5.4 - Parking Management	Project wide Parking Management Strategy (PMS) already produced. SOM to produce an appendix to the existing document if an update is required.

CoA No.	Condition Requirements	Document reference	How Addressed
	(c) assessment of the impacts of changes to on and off-street parking taking into consideration outcomes of consultation with affected stakeholders; (d) identification of measures to manage any reduction in parking including staged removal, resident parking schemes, managed staff parking arrangements, and provision of alternative parking arrangements for accessible and service spaces; (e) replacement parking for specific impacted kerbside uses (e.g. accessible parking and loading zones) within the local vicinity with consideration of the *Disability Discrimination Act 1992 (DDA) Public Transport Standards and the DDA Access Code (2010);* and (f) monitoring on the efficacy of these measures, including potential unintended traffic impacts and contingencies in the event that the measures implemented are not adequate. The Parking Management Strategy must be submitted to the Secretary for information and the results of monitoring reported in the Operational Traffic, Transport and Access Performance Review required by Condition E18.		
E12	Safe pedestrian and cyclist access must be maintained around 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.	Appendix B - TCP	Traffic controllers to consider pedestrians and cyclists when controlling access/ egress movements at site gates. No designated pedestrian or cyclist route impacted by SaMF construction. Example TCP provided in Appendix, with complete

CoA No.	Condition Requirements	Document reference	How Addressed
			plans to be made available through GRCLR IMS.
PEDESTRIAN AND CYCLIST NETWORK AND FACILITIES STRATEGY			
E14	A Pedestrian and Cyclist Network and Facilities Strategy must be prepared in consultation with Relevant Council(s), RMS, Pedestrian Council of Australia and Bicycle NSW. The Strategy must identify safe and accessible pedestrian and cycle paths, during construction and operation, including facilitation of future cycle paths and dedicated cycleways as identified in the documents listed in Condition A1, state and local government plans, with the objective of providing seamless, coherent, visible, and safe pedestrian and cycle access throughout and adjacent to the CSSI corridor. The Strategy must consider: (a) existing and proposed local and regional pedestrian and cycle facilities and strategies; (b) safety for pedestrians in pedestrianised zones; (c) alternative cycle routes during construction, based on safety and efficiency, and contingencies in the event that relocated routes are found to be inadequate; (d) pedestrian and cycle access, including local and regional pedestrian and bicycle connections; (e) demand for pedestrian and cycle facilities with consideration of measures to encourage an increased pedestrian and cycle mode share; (f) signage and way finding; (g) cycle storage facilities on light rail vehicles; and		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. The PCNFS is not relevant for SaMF given the site is closed from the public. As per Staging Report (Revision 6.03).

CoA No.	Condition Requirements	Document reference	How Addressed
	(h) the requirements of relevant design standards, including Austroads and NSW bicycle guidelines. The Pedestrian and Cyclist Network and Facilities Strategy must be submitted to the Secretary before construction of pedestrian/cyclist permanent built works (including the Active Transport Link) commences and implemented to ensure that all works are operational no later than the commencement of CSSI operations.		
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.	6.6 - Property access	Specified area not relevant for SaMF.
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.	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

CoA No.	Condition Requirements	Document reference	How Addressed
			property/business owners and tenants. Example TCP is provided in appendix with all plans to be made available in GRCLR IMS. Not relevant to the SaMF
E17	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. 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.	6.6 & 5.2 - Property access Appendix B - TCP	Alternate strategies and a local access plan (LAP) will be made following consultation with property/business owners or tenants where required. Any changes to footpaths or diversions need to undergo consultation with CoPC and SCO. Example TCP is provided in appendix with all plans to be made available in GRCLR IMS.
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	5.1 - Hours of work	Acceptable work hours to be communicated in project inductions, ECMs and toolbox talks.

CoA No.	Condition Requirements	Document reference	How Addressed
	(c) at no time on Sundays or public holidays.		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.	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 *Interim Construction Noise Guideline* (DECC, 2009), between 10.00pm and 7.00am.	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.		Area not relevant to SaMF.
E25	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: (a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or	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.

CoA No.	Condition Requirements	Document reference	How Addressed
	(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 (DEC, 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 (DEC, 2006).		

CoA No.	Condition Requirements	Document reference	How Addressed
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.	6.10 - 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	Lighting and CCTV 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.	6.4.7 - Light towers	Communicated through project inductions, ECMs and Toolbox Talks. Lighting to be used for nightwork and positioned away from motorists and nearby residents.

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	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: • **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 • Site compound and ancillary works management	Construction	This CTTAMP	Preparation of this CTTAMP.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	• Landscape and temporary works management • Emergency and incident response management. The CEMP would be prepared by the responsible contractor(s) and approved by the Secretary of the NSW Department of Planning and Environment.			
TT-17	In locations where access for local residents, businesses or other organisations to properties is permanently changed as a result of the operation of the project, a local access plan will be prepared. The local access plan will identify the traffic control or other measures to be implemented in the detailed design to provide alternative access. The local access plan will be communicated to the affected parties. Locations identified to date that require consideration include, but are not limited to: » The southern side of Macquarie Street. » Hainsworth Street, Westmead. » Tramway Avenue, Parramatta. » Alfred Street, Parramatta. » North of Grand Avenue, Camellia, where properties are impacted by works on the Sandown Line. For impacted owners of properties along the southern side of Macquarie Street the local access plans could include (but are not limited to):	Construction Operation	5.2 - Property access	LAPs produced in consultation with affected property owners/tenants and can be found in the GRCLR IMS.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	» 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	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: » 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	5.3.2 - Construction vehicle haulage routes 6.1 - Construction stage traffic management Appendix B - TCP	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. 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. VMPs to be produced on an ongoing basis as required for all sites and can be accessed through the GRCLR IMS.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	» 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. 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. These site-specific traffic management plans would detail: » 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.			

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: » Railway Parade, Westmead » Trott Street, North Parramatta » Noller Parade, Parramatta	Construction	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 at the SaMF.
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: » Use traffic controllers and localised traffic management measures to maintain access through worksites, where practical,	Construction	6.6 - Property access 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.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	» 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.			
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		Area not relevant to SaMF.
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		Area not relevant to SaMF.
RC-1	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: » Department of Planning and Environment. » Other Transport for NSW agencies (including Roads and Maritime Services; Sydney Trains and Sydney Buses). » Sydney Water	Construction	4 - Consultation 7.2 - Communication TCG Meetings TTLG Meetings	Records of consultation to be kept. Relevant stakeholders identified as: • TfNSW • SCO • TMC • CoPC • NSW Police

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	» 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. Coordination and consultation with these stakeholders would include: » Current and upcoming development applications and precinct master plans. » Provision of regular updates to the detailed construction program, construction sites and haul routes. » Identification of key potential conflict points with other construction projects. » Developing mitigation strategies in order to manage conflicts cumulative impacts of the Parramatta Light Rail and other interfacing projects. Depending on the nature of the conflict, this could involve: • Adjustments to the Parramatta Light Rail (Stage 1) construction program, work activities or haul routes; or			• Emergency Services • Bicycle User Groups • Local Business Groups.

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
	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	5.3.2 - Construction vehicle haulage routes 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 6.03). Consultation and Communication strategies. Compliance with REMM outlined in Project Community and Stakeholder Engagement Plan (CSEP).
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	6.7 - Special events TCG Meetings TTLG Meetings	Regular consultation with special event organisers. Approvals required by TfNSW, TMC and council. Coordination of implementing traffic

Ref#	Commitment	Timing	CTTAMP reference	How Addressed
				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	6 - Construction traffic management	The plan includes management measures to minimise impacts on the road network.
EPO-TT-2	Pedestrian and cyclist safety would be maintained.	Construction		Not relevant to SaMF
EPO-TT-3	Effective coordination would be carried out to minimise cumulative network impacts.	Construction	6.1 - Construction stage traffic management 6.7 - Special events	Measures are taken to ensure minimal impact on surrounding road network, in particular, haulage routes, and around periods of special events

ID Ref#	Environmental Performance Outcome	Timing	CTTAMP Reference	How Addressed
EPO-TT-4	Access to property would be maintained	Construction	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.
EPO-LU-2	Access to private property would be maintained.	Construction	6.6 - Property access	Impacts of construction works on surrounding properties identified and mitigated.

4 Consultation

CoA C3(a) requires that the CTTAMP is prepared in consultation with RMS, Emergency Services and CoPC. Table 4-1 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

Stakeholder	Consultation Dates	Response Received	Issue Raised	Where Addressed
TfNSW Roads and Maritime (formerly RMS)	23 July to 23 October 2020	Yes – 1 and 23 October 2020	Related to TTMP (not TTAMP).	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.

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 the 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

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 precinct would be determined in consultation with the Sydney Coordination Office and Roads and Maritime Services (now TfNSW).

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 5-1.

Table 5-1: Construction site impact on property access

Site	Details	Impacts
SaMF *see Figure 5-1*	Within a light industrial area, recreational space and Rosehill Gardens Racecourse. The SaMF is contained within site boundaries and off corridor.	No change to property access. Neighbouring properties' access will be subject to traffic management measures such as reduced speed limits.

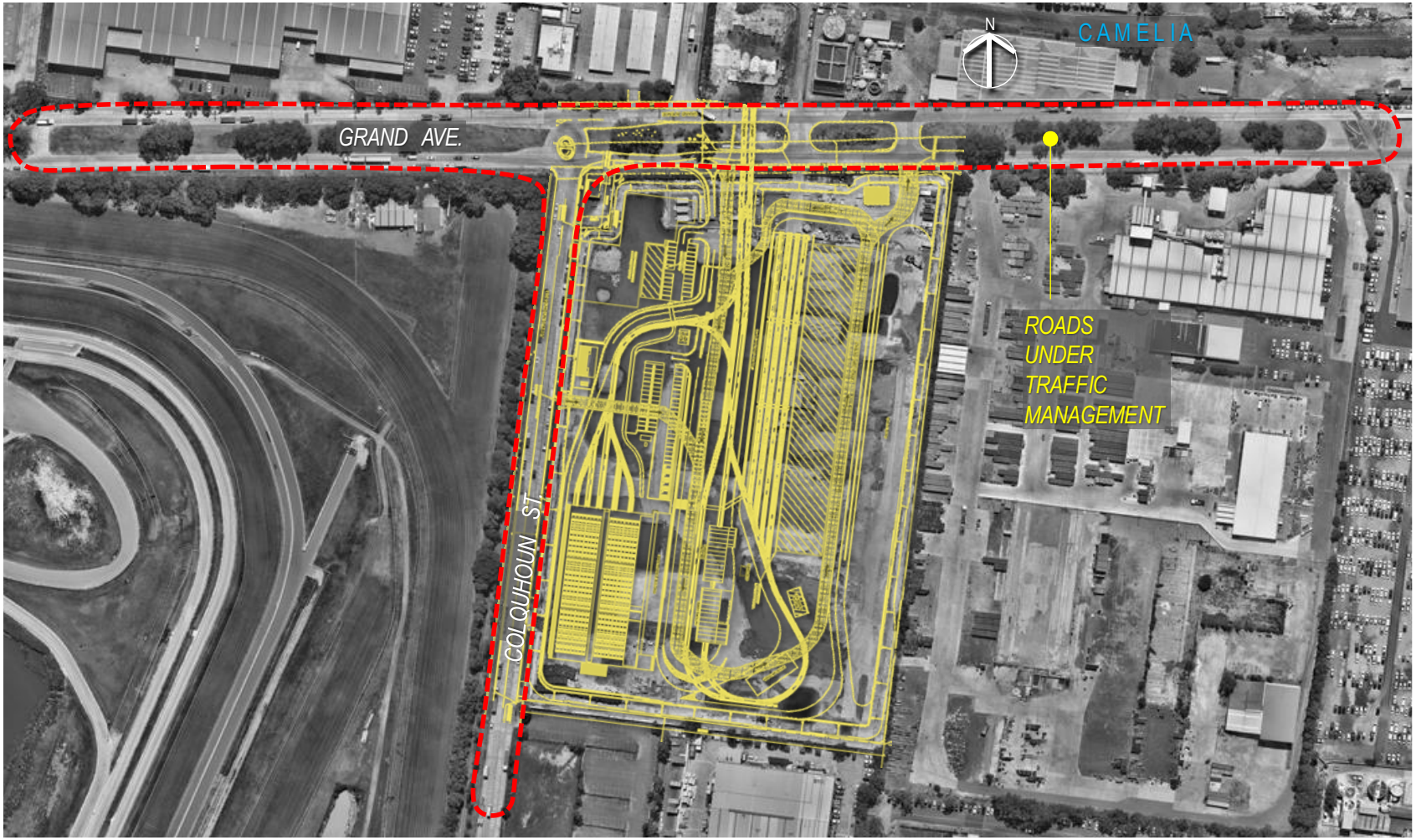

Figure 5-1: SaMF construction impact areas

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.

Table 5-2: Site construction vehicle movements

Site	Details	Impacts
SaMF	Construction maintained within site boundaries. Up to three site gates where construction traffic interfaces with local traffic. Stage 1 – Site Establishment • Existing entry/exit gate on Grand Ave. Stage 2 to 7 – Main Works • Gate 1 entry on Colquhoun St. • Gate 2 entry on Grand Ave. • Gate 3 exit on Grand Ave.	Vehicle access/egress movements from the site may create a requirement that local traffic stop Potential for queuing to gain site access on Grand Ave. and Colquhoun St.

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 5-3 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 5-3: Construction vehicle haulage routes

Site	Nearest Arterial Road	Access/Egress Routes from/to Arterial Road
SaMF *Figure 5-2* *Figure 5-3*	James Ruse Drive	Access: Turn from James Ruse Drive onto Grand Avenue. Gate 1 on Colquhoun St. can be accessed by turning right onto Colquhoun St. Gate 2 can be accessed by using the turnaround within the median strip on Grand Ave after the Colquhoun St. turnoff. Egress: Turn left from Gate 3 onto Grand Ave. towards James Ruse Dr.

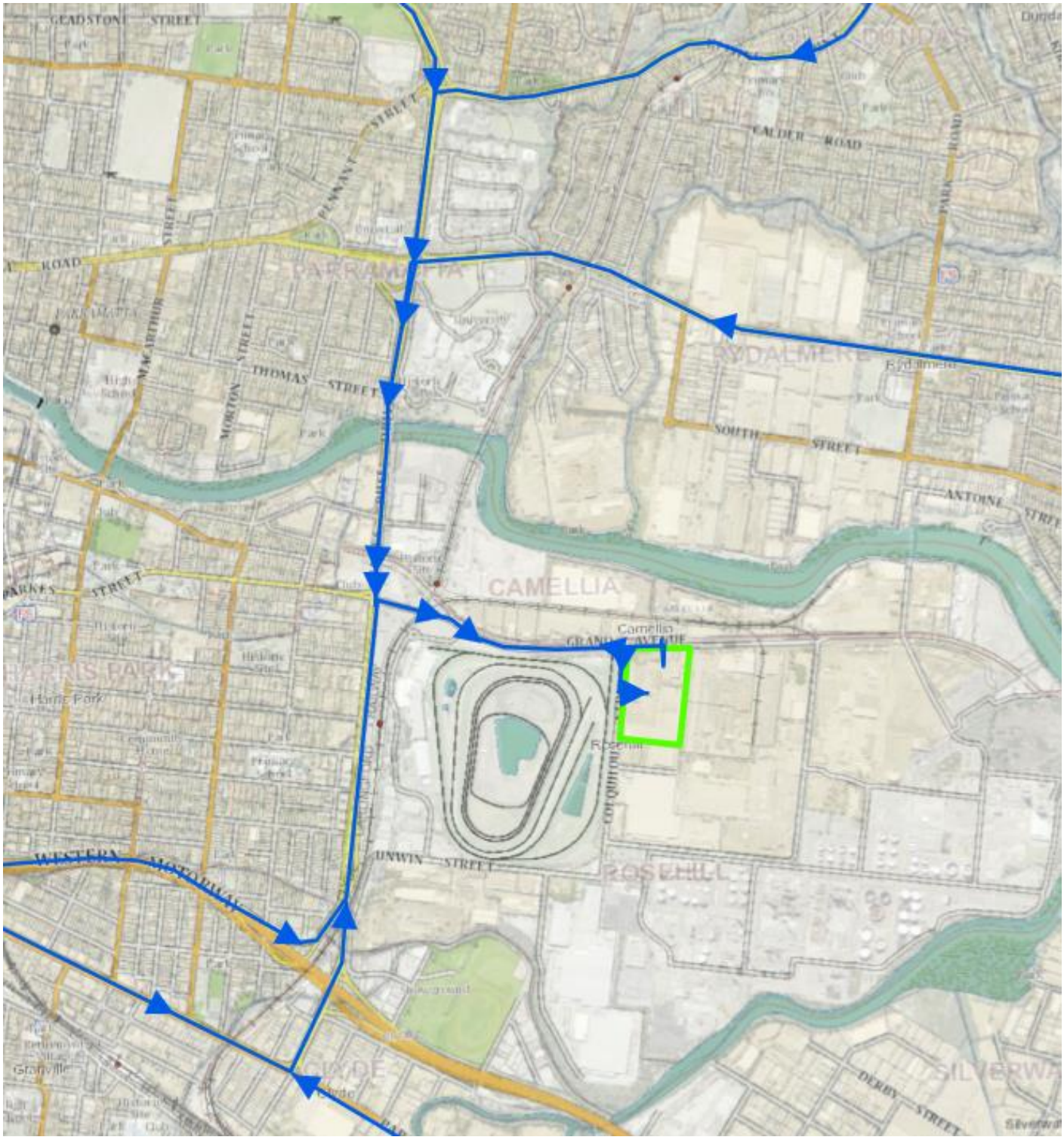

Figure 5-2: SaMF access haulage routes

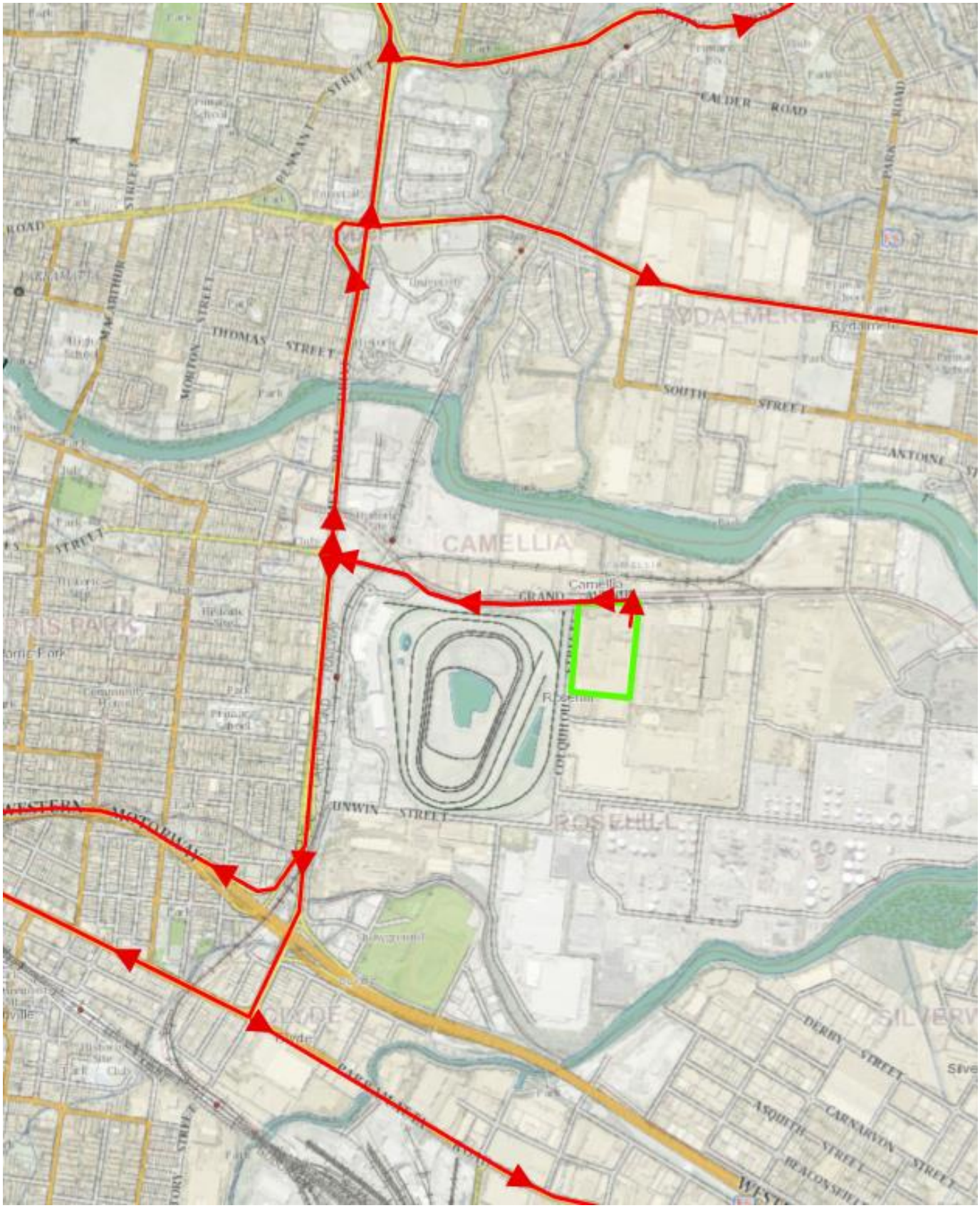

Figure 5-3: SaMF egress haulage routes

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 5-4 below, the existing parking capacity is identified with the impact of the site construction.

Table 5-4: Construction parking and loading impacts

Site	Existing Conditions	Impact
SaMF	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.

5.5 Public transport access

Project construction activities will interface with some existing public transport infrastructure and the operational services that they provide. The EIS - Technical Paper 1 provides a thorough account of all affected services which have been considered in this section.

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 5-5.

Table 5-5: Public transport operations and access

Site	Existing Conditions	Impact
SaMF	No public transport east of James Ruse Drive	No Impact.

6 Construction traffic management

6.1 Construction stage traffic management

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	Stages	Construction Vehicle Management Measures
SaMF	Stage 1 – Site Establishment (stage 1 of construction)	Two RMS accredited traffic controllers located at site entrance on Grand Ave. to control site vehicle access/egress movements.
	Stage 2 – Main Works (stages 2-7 of construction)	Four RMS accredited traffic controllers located at each of the three site entrances to control site vehicle access/egress movements onto Grand Ave. and Colquhoun St.

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 CTTAMP. 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	Stages	Traffic Management Measures
SaMF	Stage 1	Grand Ave. • Reducing the speed limit to 40km/h in each direction • Signs warning of works and preparation to stop on approach to the site from the east and west • Two RMS accredited traffic controllers located at entrance managing site access/egress movements
	Stage 2	Grand Ave. & Colquhoun St. • Reducing the speed limit to 40km/h in each direction • Signs warning of works and preparation to stop on approach to the site from the east and west • Signs warning road users of increased heavy vehicle usage of the roads • Four RMS accredited traffic controllers located at entrances managing site access/egress movements

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	Traffic Management Measures
SaMF *see Figure 6-1*	On-street queuing avoided by set-back entry/exit points to allow at least one truck to stop off the road reserve. Heavy vehicle travel route within the site fosters forward direction travel. 50 on-site parking spaces and additional parking provided at 8 Colquhoun St to provide a total of 200 off street parking spaces. Availability of unrestricted parking along Grand Ave and Colquhoun St as a last option when required during periods of higher worker attendance to the SaMF.

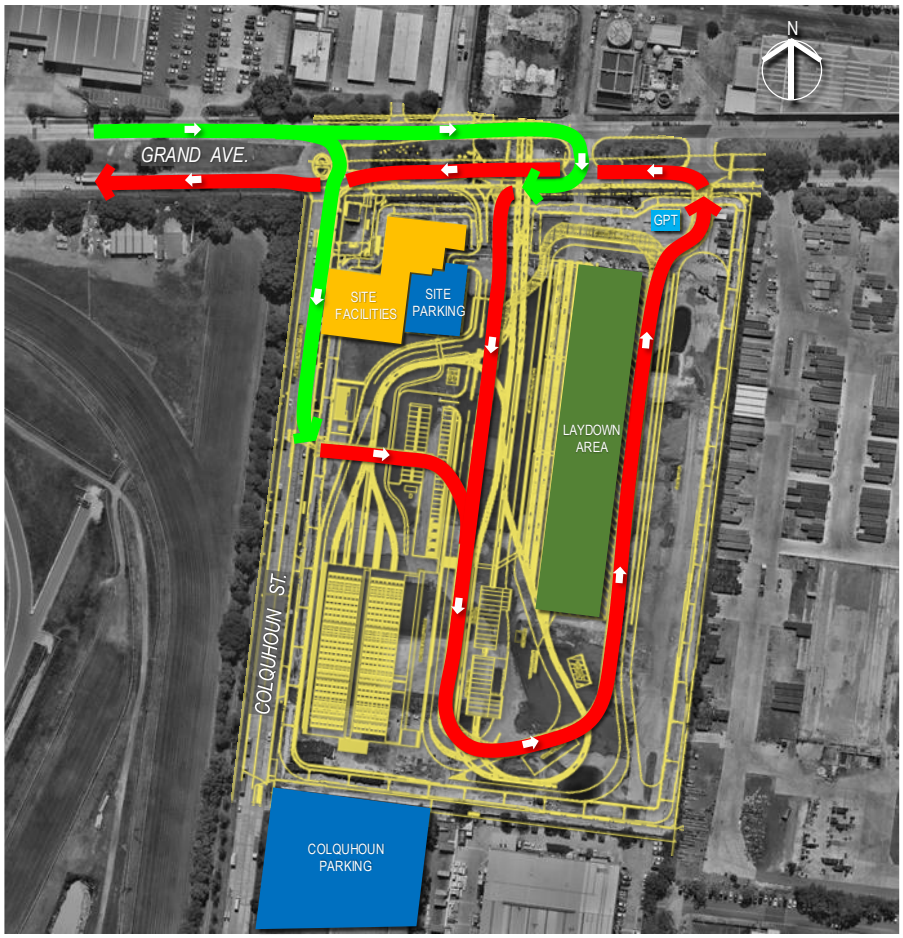

Figure 6-1: SaMF site layout

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 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.

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 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	Changes to routes and access
SaMF	No Impact.

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.

Table 6-5: Property access mitigation

Site	Property Access Mitigation	Emergency, Utility and Waste Collection Mitigation
SaMF	No property access issues	No change

6.7 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.

Special events that may have an impact on the project sites are shown in Table 6-6.

Table 6-6: Special events

Site	Precinct / Venue	Key Events and Planning Requirements
SaMF	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.

6.8 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 own 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.

6.9 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.

6.10 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	• 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	• 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	• 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

Role	Responsibility
	• Ensure the implementation of SSCTTMPs, ROLs, TCPs, VMPs, LAPs.
General Foreman and Foremen	• 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	• 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	• 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 program. 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.

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.

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Appendix A – Road classification

ROAD NAME	ROAD AUTHORITY	ROAD CONFIGURATION	SPEED LIMIT	ROAD ORIENTATION
Grand Avenue	Local	Two-way Divided	60km/h	East - West
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	ROAD ORIENTATION
Colquhoun Street	Local	Two-way Undivided	60km/h	North - South
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

Appendix B – Example Traffic control plan

Note: To be developed and implemented prior to commencing works

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Appendix C – Construction traffic

Table D1: 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 D2: SaMF site vehicle volumes

	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	
Period	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

Appendix D – ER Endorsement

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3 November 2020

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

Review of Parramatta Light Rail Stage 1 - Transport for NSW Supply, Operate, Maintain (SOM) Package - Construction Traffic, Transport and Access Management Plan (CTTAMP)

Pursuant to Parramatta Light Rail – Stage 1 (SSI-8285) Condition of Approval A23 (d) (i), as the approved Environmental Representative, I confirm that I have reviewed the following documents against the requirements of relevant conditions of approval (CoA) A5, C1, C3-C6, C8 E1-E17 and revised environmental mitigation measures (REMMs) GEN-1:

- Transport for NSW Supply, Operate, Maintain (SOM) Package Parramatta Light Rail - Construction Traffic, Transport and Access Management Plan (CTTAMP) October 2020 (PLR1SOM-GLR-ALL-PM-PLN-000032) Revision E – For the construction of Stabling Yard Maintenance Facility only

- Standalone Report Consultation Report- CoA A5 Consultation Report for Construction Traffic, Transport and Access Management Plan, October 2020 (PLR1SOM-GLR-ALL-EN-RPT-001007 Revision A)

The reviewed CTTAMP and consultation report is a sub-plan to the CEMP for the construction of the Stabling and maintenance facility (SaMF) only.

As per the condition of approval C8, this CTTAMP is now endorsed for submission to the Secretary for approval no later than one month before the commencement of construction.

Yours sincerely,

Australian Quality Assurance & Superintendence Pty Ltd (AQUAS)

Annabelle Tungol
Environmental Representative
email : annabelle.tungol@aquas.com.au

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