

Site Establishment Management Plan

**Transport for NSW
Infrastructure Works (Package 4)**

Parramatta Light Rail – Stage 1
August 2020

PLR1INF-CPBD-ALL-PE-PLN-000003 Rev 11

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Site Establishment Management Plan

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Infrastructure Contract

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Document Control

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

Amendments

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

Revision	Details
Rev A	CPBD JV internal review
Rev B	Incorporation of CPBJV review comments
Rev 0	First draft submitted to TfNSW and ER.
Rev 1	Second draft submitted to TfNSW and ER for consultation. Revision issued for external stakeholder consultation.
Rev 2	Incorporation of external stakeholder consultation comments. Issued to ER for endorsement.
Rev 3	Incorporation of ER comments and issued to ER for endorsement.
Rev 4	Incorporation of ER endorsement and issued to the DPIE for approval.
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Rev 10	Addition of the Lot 34 O'Connell Street ancillary facility
Rev 11	Minor amendments as part of annual review

Contents

Contents	i
Glossary / Abbreviations.....	iv
1 Introduction	1
1.1 Context	1
1.2 Background	1
1.2.1 Parramatta Light Rail – Stage 1 description.....	1
1.2.2 Statutory Context	3
1.2.3 Stage 1 Delivery Strategy	3
1.3 Infrastructure Works	4
1.4 Relationship with SOM	5
1.5 Scope of the Plan	5
1.6 Environmental management system overview	6
2 Purpose and objectives.....	8
2.1 Purpose	8
2.2 Objectives.....	8
2.3 Targets	8
3 Environmental requirements	9
3.1 Relevant legislation and guidelines	9
3.1.1 Legislation.....	9
3.1.2 Guidelines and standards	9
3.2 Minister’s Conditions of Approval	11
3.3 Revised Environmental Mitigation and Management Measures	24
3.4 Environmental Performance Outcomes.....	43
4 Ancillary Facilities.....	48
4.1 Ancillary Facilities	48
4.2 Site Establishment/Demolition.....	48
5 Environmental aspects and potential impacts.....	60
5.1 Construction activities, site establishment and decommissioning	60
5.1.1 Construction activities, site establishment and operation	60
5.1.2 Decommissioning and rehabilitation	60
5.2 Impacts.....	61
5.3 Management of Ancillary Facilities	61
5.3.1 Environmental risk assessment for ancillary facilities	61
6 Consultation	63

7	Assessment and approval process	64
7.1	Minor construction ancillary facilities	64
7.2	Approved ancillary facilities under the EIS/SPIR.....	64
7.3	Construction Noise and Vibration Impact Statement.....	65
8	Environmental control measures	67
9	Compliance management.....	84
9.1	Roles and responsibilities.....	84
9.2	Training.....	84
9.3	Environmental Incident and Emergency Response.....	84
9.3.1	Internal Reporting	85
9.3.2	External Reporting	86
9.3.3	Environmental Incident Investigations	87
9.3.4	Environmental Incident Simulation Drills.....	87
9.3.5	Environmental Incidents and Response Procedures	87
9.4	Monitoring and inspection.....	87
9.5	Reporting	87
9.6	Licences and permits.....	93
9.7	Auditing.....	93
10	Review and improvement.....	94
10.1	Continuous improvement.....	94
10.2	SEMP update and amendment	94
	Appendix A – Location of Ancillary Facilities and Proposed Uses.....	95
	Appendix B – Environmental risk assessment	119
	Appendix C – Minor ancillary facility checklist template	141
	Appendix D – Environmental Incident and Emergency Response Plan.....	144
	Appendix E – Consultation Evidence	164
	Appendix F – Environmental Representative Endorsement.....	174

Tables

Table 3-1:	Conditions of Approval relevant to the SEMP	11
Table 3-2:	Revised environmental mitigation and management measures relevant to this SEMP	24
Table 3-3:	Environmental Performance Outcomes relevant to this SEMP	43
Table 4-1:	Ancillary Facilities	50
Table 6-1:	Summary of Consultation and Approval	63
Table 8-1:	Ancillary facilities management and mitigation measures	68
Table 9-1:	Environmental Incidents Definitions.....	85
Table 9-2:	Inspection and Monitoring Requirements	88
Table 9-3:	Reporting Requirements.....	92

Figures

Figure 1 1: Parramatta Light Rail Stage 1 Route 2

Figure 1 2: Parramatta Light Rail Stage 1 Delivery Strategy 4

Figure 1 3: Relationship between Infrastructure Works and Supply, Operate and Maintain Works . 5

Figure 1 4: Environmental Management System..... 7

Figure 7 1: Approach to Additional Assessments 66

Glossary / Abbreviations

Abbreviations	Expanded text
AA	Acoustic Advisor
AEP	Annual Exceedance Probability
Ancillary facility	A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory, material stockpile area car parking compound and truck marshalling facility.
ARI	Average Recurrence Interval
ASS	Acid Sulphate Soil
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CNVIS	Construction Noise and Vibration Impact Statement
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning and Environment (NSW Department of Planning, Industry and Environment or DPIE as at 1 July 2019)
DPI	Department of Primary Industries
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environment Protection Authority
ER	Environmental Representative
ESCP	Erosion and Sediment Control Plan
ETS	Electronic Ticketing System
EWMS	Environmental Work Method Statements
Infrastructure Works	Package 4 – Infrastructure Works
ICNG	Interim Construction Noise Guideline

Abbreviations	Expanded text
INP	NSW Industrial Noise Policy
JV, the	CPB Contractors and Downer EDI Works Joint Venture (Parramatta Connect)
Minor ancillary facilities	Minor ancillary facilities comprising lunch sheds, office sheds, and portable toilet facilities, that are not identified in the Approval documents but have been approved by the ER.
NEPC	National Environment Protection Council
NPW Act	<i>National Parks and Wildlife Act 1974</i>
Planning Approval	Infrastructure approval SSI 8285
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RCLG	Responsible Construction Leadership Group
REMMM	Revised Environmental Mitigation and Management Measure
RNP	NSW Road Noise Policy
SAR	Site Accommodation Requirements as detailed in the Responsible Construction Leadership Group
SaM	Stabling and Maintenance Facility
SEMP	Site Establishment Management Plan
Stage 1	Parramatta Light Rail – Stage 1 (Westmead to Carlingford)
SPIR	Submissions and Preferred Infrastructure Report
SWMS	Safe Work Method Statements
TfNSW	Transport for NSW
WAP	Work Area Plan

1 Introduction

1.1 Context

This Site Establishment Management Plan (SEMP or Plan) has been prepared for the Parramatta Light Rail Stage 1, Package 4 Infrastructure Works (Infrastructure Works). This SEMP has been prepared to address the requirements of the Minister's Conditions of Approval (CoA) SSI-8285, the Revised Environmental Mitigation and Management Measures (REMMMs) and Environmental Performance Outcomes (EPO's) listed in *Parramatta Light Rail Stage 1 Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement* (the EIS), as amended by the *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report)* (February 2018) (the SPIR). In addition, this Plan addresses all applicable legislation and contractual requirements, including the PLR Stage 1 Infrastructure Contract Project Deed (ISD-17-6721).

1.2 Background

1.2.1 Parramatta Light Rail – Stage 1 description

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

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

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

In summary, the key features of Stage 1 include:

- A new dual track light rail network of approximately twelve (12) kilometres in length, including approximately seven (7) kilometres within the existing road corridor and approximately five (5) kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services
- Sixteen (16) stops that are fully accessible and integrated into the urban environment including a terminus stop at each end of Westmead and Carlingford
- High frequency 'turn-up-and-go' services operating seven days a week from 5am to 1am. Weekday services will operate approximately every 7.5 minutes in the peak period between 7am and 7pm
- Modern and comfortable air-conditioned light rail vehicles, nominally 45 metres long and driver-operated, each carrying up to 300 passengers
- Intermodal interchanges with existing public transport services at Westmead terminus, Parramatta CBD and the Carlingford terminus
- Creation of two light rail and pedestrian zones (no general vehicle access) within the Parramatta CBD along Church Street (generally between Market Street and Macquarie Street) and along Macquarie Street (generally between Horwood Place and Smith Street)

- A Stabling and Maintenance (SaM) Facility located in Camellia for light rail vehicles to be stabled, cleaned and maintained
- New bridge structures along the alignment including over James Ruse Drive and Clay Cliff Creek, Parramatta River (near the Cumberland Hospital), Kissing Point Road and Vineyard Creek, Rydalmere
- Alterations to the existing road network including line marking, additional traffic lanes and turning lanes, new traffic signals, and changes to traffic flows
- Relocation and protection of existing utilities
- Public domain and urban design works along the corridor and at Stop precincts
- Closure of the heavy rail line between Carlingford and Clyde
- Active transport corridors and additional urban design features along sections of the alignment and within Stop precincts
- Integration with the Opal Electronic Ticketing System (ETS)
- Real time information in light rail vehicles and at Stops via visual displays and audio.

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



Figure 1-1: Parramatta Light Rail Stage 1 Route

1.2.2 Statutory Context

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

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

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

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

1.2.3 Stage 1 Delivery Strategy

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

- **Enabling Works (Package 1)** – 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 (SaM) Facility
- **Infrastructure Works (Package 4)** (the subject of this Plan) – Design and construction of civil works, public domain and light rail infrastructure up to road level/top of rail and to the top of the concrete slab at stops, including provision of utility services (excluding high-voltage power supply and cabling for rail systems), and decommissioning of the T6 Carlingford Line
- **Supply, Operate and Maintain Works (Package 5)** – Design and construction of the light rail systems, high-voltage power supply and stops above slab level, the supply of light rail vehicles, and the design and construction of the SaM Facility, including all light rail operations, customer service and asset management.

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

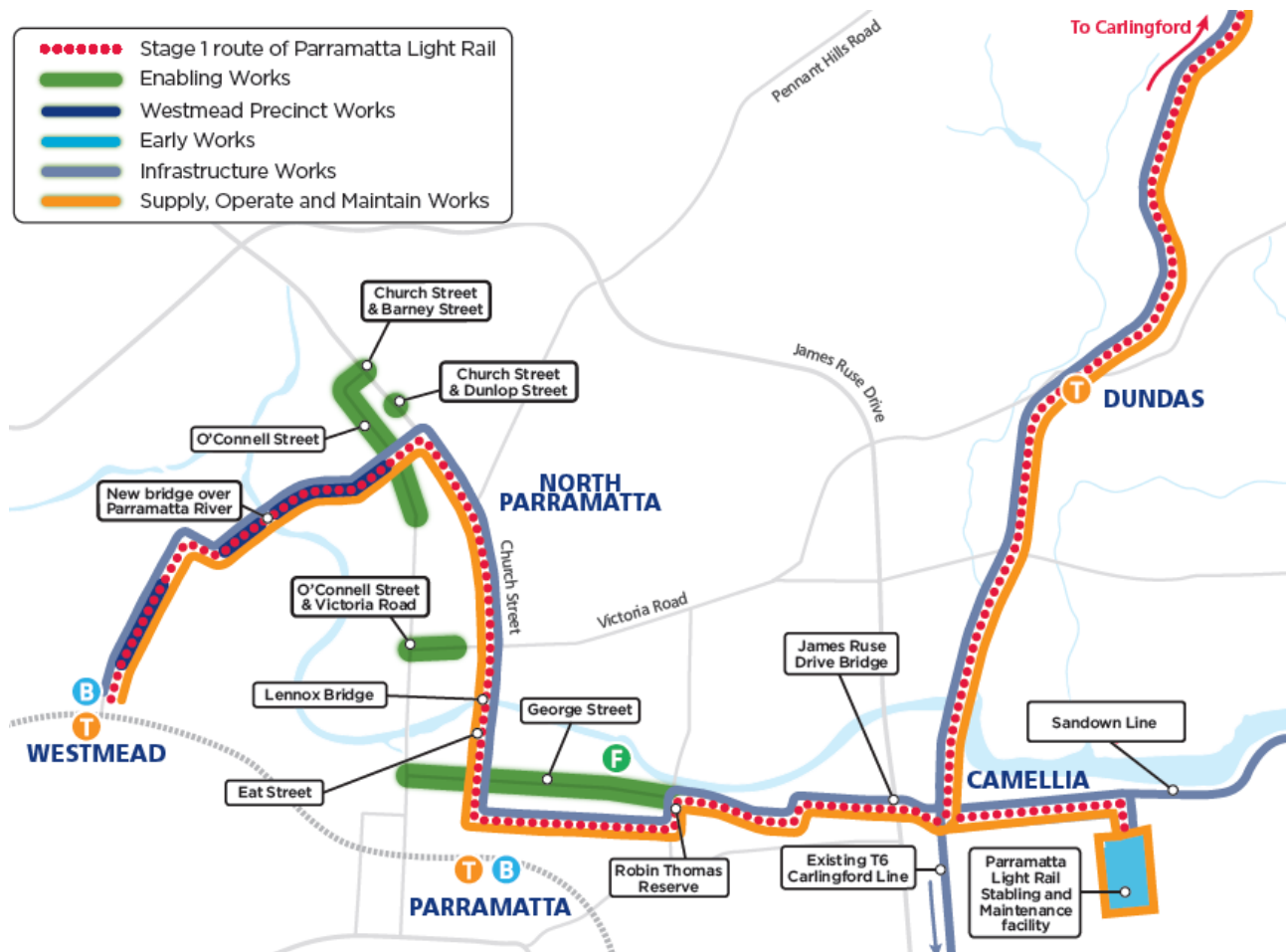


Figure 1-2: Parramatta Light Rail Stage 1 Delivery Strategy

1.3 Infrastructure Works

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

- Utility services adjustment and relocation works (for more than minor impact)
- Property demolition to make space for the light rail tracks and ancillary facilities
- Decommissioning of the existing Carlingford T6 heavy rail line and disused Sandown Line
- Earthworks and retaining structures
- Drainage works
- Intersection signalling works
- The light rail civil infrastructure and stop slabs
- Urban and architectural design and finishes of the corridor and public domain
- Rail, track slabs, ballasted track and grass tracks
- Footpath and kerb realignment including intersection works and road upgrades to accommodate light rail and other traffic (both temporary and permanent)
- New light rail bridges carrying the light rail over the Parramatta River (at Cumberland Hospital), James Ruse Drive, Vineyard Creek and Kissing Point Road and bridge strengthening and modifications to existing bridges as required

- Provision of the Active Transport Link for pedestrians and cyclists
- Staff and passenger facilities at each light rail terminus
- Rail/road interaction including traffic signals and road sharing
- Testing and commissioning of the Infrastructure Works.

1.4 Relationship with SOM

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

The reasoning for dividing this work into two 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 of Stage 1 and will not trigger the operational conditions, except for those that relate to detailed design.

An interface between the two Joint Ventures has been established to monitor cumulative impacts and the coordination of environmental complaints management, site management controls, and the delineation of incident reporting and non-compliance management.

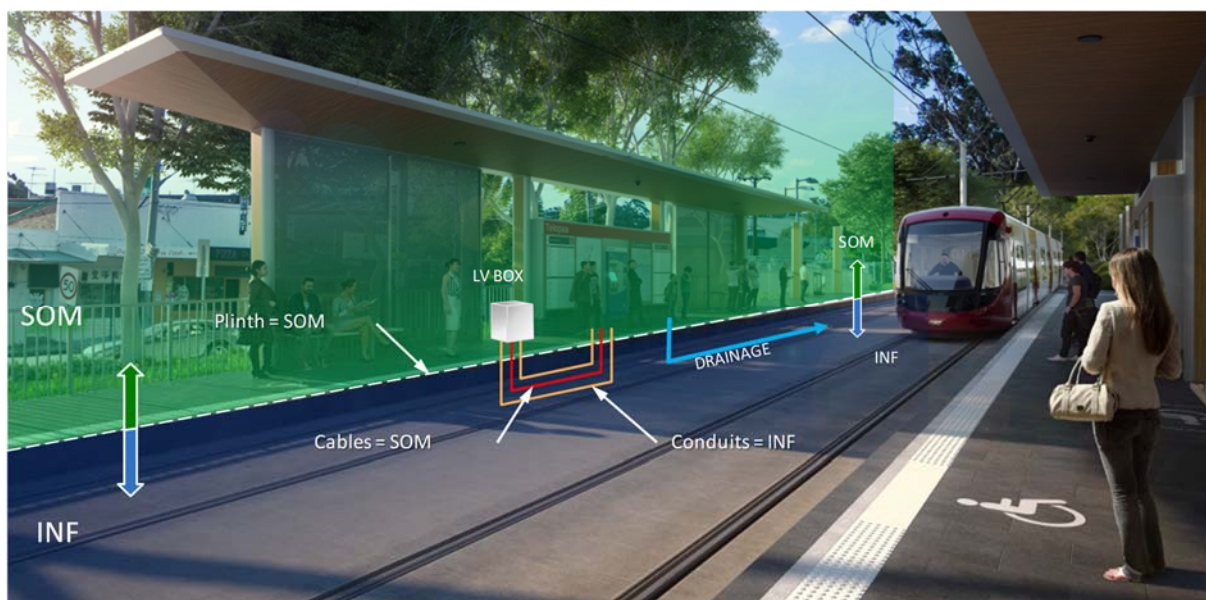


Figure 1-3: Relationship between Infrastructure Works and Supply, Operate and Maintain Works

1.5 Scope of the Plan

This Plan outlines the mitigation and management measures the JV will use to address potential impacts arising from the establishment of Infrastructure Works ancillary facilities, while complying with relevant approval, statutory and contract requirements. Sections 3.2, 3.3 and 3.4 provide compliance tables identifying where in this Plan relevant requirements are addressed.

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

1.6 Environmental management system overview

To achieve the intended environmental performance outcomes, CPB have established, implemented, maintained and continually improved an EMS in accordance with the requirements of ISO14001:2015. The CPB EMS will be adopted as the guiding environmental management framework for the Infrastructure Works.

The EMS consists of governance documentation, including this Plan, the CEMP, Sub Plans, procedures and tools as set out below and illustrated in **Figure 1-4**.

- **The JV Environment and Sustainability Policy.** Outlines the commitments and intentions established by the JV to ensure environmental performance and sustainability objectives and targets are achieved.
- **The SEMP.** This document details the processes and procedures to be implemented during establishment of any construction ancillary facility as identified in the EIS and SPIR (and excluding minor construction ancillary facilities) to comply with applicable CoA, REMMMs, EPOs, legislative obligations and contractual requirements. The relevant compliance obligations are detailed in Section 3.2 and 3.3, with a cross reference to where they are met in this Plan.
- **The CEMP.** The CEMP details the processes and procedures to be implemented during the Infrastructure Works to comply with applicable CoA, REMMMs, EPOs, legislative obligations and contractual requirements.
- **Environmental Management Sub-plans.** These documents describe procedures and controls for specific environmental aspects requiring more rigorous management strategies.
- **Geographic Information System (GIS).** The GIS incorporate key features of the alignment and relevant environmental constraints. Features include waterways, heritage, biodiversity contamination and sensitive receivers amongst other site relevant features. The GIS forms the basis of Environmental Control Maps (ECMs).
- **Erosion and Sedimentation Control Plans.** Site specific plans illustrating erosion and sediment controls. These plans are designed and will be implemented in accordance with the 'Blue Book' Managing Urban Stormwater: Soils and Construction (Landcom 2004), and other specifications, as required.

The SEMP will be implemented in coordination with the following management plans:

- Contract Management Plan
- Risk Management Plan
- Safety Management Plan
- Incident Management Plan
- Workforce Development Plan
- Construction Management Plan
- Interface Management Plan
- Utility Services Management Plan
- Workforce Relations Management Plan
- Testing and Commissioning Plan.

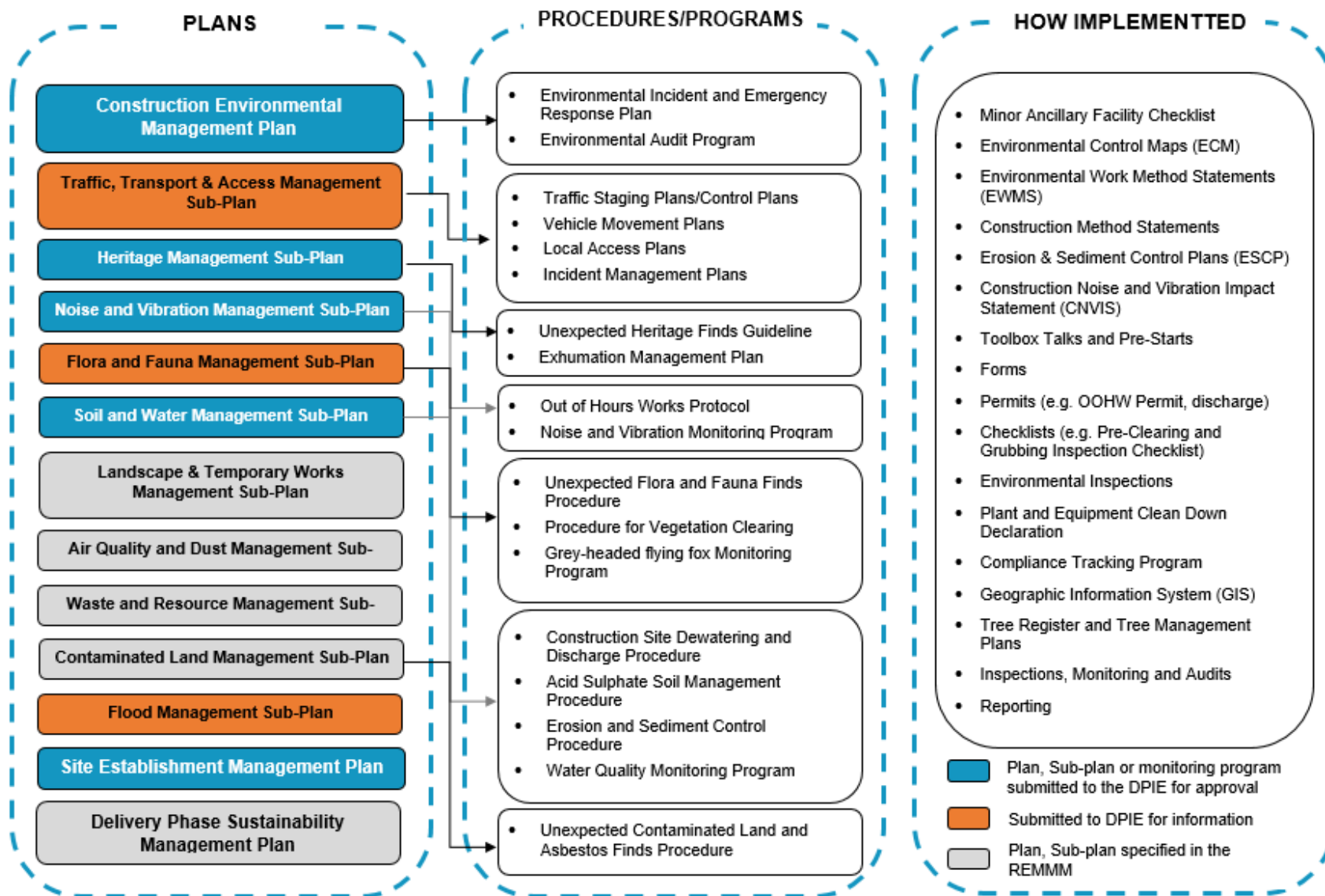


Figure 1-4: Environmental Management System

2 Purpose and objectives

2.1 Purpose

The purpose of this Plan is to outline the environmental management practices and procedures to be implemented for the establishment of the construction ancillary facilities.

2.2 Objectives

The key objective of the SEMP is to comply with the planning approval and ensure that actual or potential impacts caused by ancillary facilities and minor ancillary facilities are minimised within the scope permitted by the planning approval. To achieve this objective, the following will be undertaken:

- Comply with the Infrastructure Contract Project Deed
- Identify potential issues arising from the construction, operation, rehabilitation and decommissioning of ancillary facilities
- Define a process for evaluating any additional ancillary facilities required during construction
- Ensure appropriate controls and procedures are implemented during construction activities to avoid or minimise actual and potential impacts to the environment and sensitive receivers along the Project corridor
- Ensure appropriate measures are implemented to address the relevant CoA (**Table 3-1**), safeguards detailed in the EIS and SPIR (**Table 3-2**), and environmental performance outcomes (**Table 3-3**)
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this Plan
- Provide staff with an increased level of understanding and awareness of sensitive environmental issues within and adjacent to ancillary facilities and ensure effective communication is maintained with statutory authorities
- Ensure ancillary facilities comply with the Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements (SAR).

2.3 Targets

The following targets have been established for the management of impacts resulting from establishment of ancillary facilities:

- Establish adequate and appropriate controls as detailed in this Plan to demonstrate compliance with the relevant legislative requirements, CoA and REMMMs
- Monitor implementation of controls in accordance with this Plan to assess compliance, detect control weaknesses and identify continual improvement opportunities.

3 Environmental requirements

This chapter describes legislative, regulatory and guidance framework that applies to ancillary facilities.

3.1 Relevant legislation and guidelines

Legislation, guidelines and standards of relevance to this Plan are listed below and addressed as required within the document.

3.1.1 Legislation

Legislation relevant to the management of ancillary facilities includes:

- *Biosecurity Act 2015*
- *Biodiversity Conservation Act 2016*
- *Contaminated Land Management Act 1997*
- *Environmental Planning and Assessment Act 1979 (EP&A Act)*
- *Environmentally Hazardous Chemicals Act, 1985*
- *Heritage Act 1977*
- *National Greenhouse and Energy Report Act 2007*
- *National Parks and Wildlife Act 1974 (NPW Act)*
- *Pesticides Act 1999*
- *Protection of the Environment Operations Act 1997 (POEO Act)*
- *Work Health and Safety Act 2011.*

3.1.2 Guidelines and standards

Guidelines and standards relevant to ancillary facility management include the following publications:

- Action for Air 2009 (NSW DEC)
- Air Quality Monitoring Criteria for Deposited Dust (DEC Guideline)
- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DEC 2005)
- Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC 2007)
- AS 3580.1.1:2007 Methods for Sampling and Analysis of Ambient Air – Guide to Siting Air Quality Monitoring Equipment.
- AS 3580.10.1-2003 Methods of Sampling Analysis of Ambient Air
- Assessing Vibration: A Technical Guideline (DEC 2006)
- British Standard 7385: Part 2 “Evaluation and measurement of vibration in buildings”
- German DIN 4150: Part 3 – 1999 Effects of Vibration on Structure (DIN 1999)
- Interim Construction Noise Guideline (ICNG) (DECC 2009)

- Infrastructure Sustainability Council of Australia V1.2 Guideline
- Managing Urban Stormwater: Soils and Construction (4th Edition) Volume 1 (Landcom 2004) (the “Blue Book”)
- Managing Urban Stormwater: Soils and Construction. Volume 2D: Main Road, DECC (2008)
- National Environment Protection Council’s (NEPC) – NEPM for Ambient Air Quality Guidelines
- NSW Government Resource Efficiency Policy 2019, requirement E3 “minimum standards for new electrical appliances and equipment”
- NSW Government Resource Efficiency Policy 2019, requirement W3 “minimum standards for new water using appliances”
- NSW Industrial Noise Policy (INP) (EPA 2000)
- NSW Road Noise Policy (RNP) (DECCW 2011)
- Policy and Guidelines for Fish Habitat Conservation and Management (2013 update), DPI Fisheries
- Transport for NSW’s Air Quality Management Guidelines (9TP-SD-107/3.0) (TfNSW 2016)
- Transport for NSW’s Chemical Storage and Spill Response Guidelines (9TP-SD-066) (TfNSW 2015)
- Transport for NSW’s Construction Noise and Vibration Strategy (7TP-ST-157) (TfNSW 2018)
- Transport for NSW’s Guide to Environmental Control Map (3TP-SD-015/8.0).

3.2 Minister's Conditions of Approval

The CoA relevant to this Plan are listed in **Table 3-1**. 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 SEMP

CoA No.	Condition Requirements	Document Reference	How Addressed
A1	The CSSI must be carried out in accordance with the terms of this approval and generally in accordance with the description of the CSSI in the Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement (dated August 2017) (the EIS) as amended by (a) the Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report) (February 2018) (the SPIR); (b) SSI 8285 Administrative modification (November 2018) (MOD 1); and (c) SSI 8285 Correction to Administrative modification (January 2019) (MOD 2).	This Plan	This SEMP outlines the environmental management practices and procedures as required by the CoA, REMMMs and EPOs. Relevant requirements are detailed in Table 3-1 , Table 3-2 and Table 3-3 together with how the matters are addressed.

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 6 Appendix E	The terms of this approval require the SEMP to be prepared in consultation with consultation with the relevant Council(s) and relevant government authorities. The JV issued the SEMP to the following Council(s) and government authorities for consultation: • Environmental Protection Authority (EPA) • City of Parramatta Council • Cumberland Council • NSW Health - Cumberland Hospital • NSW Health - Westmead Hospital • Roads and Maritime Services (RMS) • Natural Resources Access Regulator (NRAR) A summary of the outcomes of the consultation is presented in Section 6 of this Plan with detailed consultation logs and comments registers presented in Appendix E.

CoA No.	Condition Requirements	Document Reference	How Addressed
C18	Before establishment of any construction ancillary facility as identified in the EIS and SPIR (and excluding minor construction ancillary facilities), the Proponent must prepare a Site Establishment Management Plan which outlines the environmental management practices and procedures to be implemented for the establishment of the construction ancillary facilities. The Site Establishment Management Plan must be prepared in consultation with the relevant council(s) and relevant government authorities. The Plan must be submitted to the Secretary for approval one (1) month before establishment of any construction ancillary facilities. The Site Establishment Management Plan must detail the management of the construction ancillary facilities and include:	This Plan Section 5.3 Section 6	This SEMP outlines the environmental management practices and procedures for the establishment of the construction ancillary facilities for the Project. These will be implemented during pre-construction and construction phases of the project and are communicated through the management practices described in Section 5.3. This Plan was provided to the relevant councils and agencies for consultation as summarised in Section 6. This SEMP will be submitted to the Planning Secretary for approval no later than one month before establishment of ancillary facilities (excluding minor construction ancillary facilities).
(a)	a description of activities to be undertaken during establishment of the construction ancillary facility (including scheduling and duration of works to be undertaken at the site);	Table 4-1	Proposed ancillary facilities and activities to be undertaken during site establishment are described in Table 4-1 .
(b)	figures illustrating the proposed operational site layout(s);	Appendix A	Figures illustrating indicative operational site layouts are included in Appendix A .

CoA No.	Condition Requirements	Document Reference	How Addressed
(c)	a program for ongoing analysis of the key environmental risks arising from the site establishment activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of site establishment works;	Section 5.3.1 Appendix B	The site-specific initial environmental risk assessment is outlined in Appendix B and briefly addressed in Section 5.3.1. The process for ongoing environmental risk analysis is outlined in Section 5.3. The environmental risk register for the Infrastructure Works is reviewed annually, at minimum, and in response to significant issues, incidents and non-compliances.
(d)	details of how the site establishment activities described in subsection (a) of this condition will be carried out to:	-	-
i)	meet the performance outcomes stated in the documents listed in the documents identified Condition A1,	Table 3-3 Section 8 Section 9	The Environmental Performance Outcomes (EPOs) relevant to site establishment are detailed in Table 3-3 . These will be implemented during pre-construction and construction phases of the Project through the application of the management measures and controls listed in Section 8, and will be communicated through the processes described in Section 9.

CoA No.	Condition Requirements	Document Reference	How Addressed
ii)	to address traffic, pedestrian access and amenity around each site, and	Section 4.1 Section 8	Access routes for each ancillary facility are outlined in Section 4.1. Traffic management controls are also addressed in Section 8 of this SEMP. These will be implemented during pre-construction and construction phases of the Project through development of Traffic Control Plans and will be communicated through the site induction, relevant ECMs, Toolbox talks and daily pre-starts.
iii)	manage the risks identified in the risk analysis undertaken in subsection (c) of this condition; and	Section 8 Appendix B Section 9.2	Controls to manage identified risks are detailed in Section 8 of this SEMP. The site-specific initial environmental risk assessment is outlined in Appendix B. These will be implemented during establishment of ancillary facilities and communicated through the processes described in Section 9.2.
(e)	a program for monitoring the performance outcomes, including a program for construction noise monitoring consistent with the requirements of Conditions C9 and C11. Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each construction ancillary facility.	Section 9.4	The inspection and monitoring program is outlined in Section 9.4 of this Plan. Monitoring will be undertaken during pre-construction and construction phases of the Project and will be communicated through the site induction, relevant ECMs, Toolbox talks and daily pre-starts.

CoA No.	Condition Requirements	Document Reference	How Addressed
C19	Boundary fencing that incorporates screening must be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of site establishment and construction of the CSSI unless otherwise agreed with Relevant Council(s), affected residents, business operators and/or landowners and in accordance with Condition B2(b).	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities and minor ancillary facilities. Boundary fencing that incorporates screening will be installed as appropriate. This will be communicated through relevant ECMs, toolbox talks and daily pre-starts and has been included as mitigation measure SE34 in Table 8-1.
C20	Boundary screening required under Condition C19 of this approval must reduce visual, noise and air quality impacts on adjacent sensitive receivers.	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities and minor ancillary facilities. Boundary screening that reduces visual, noise and air quality impacts will be installed as appropriate and their use will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measures SE35.

CoA No.	Condition Requirements	Document Reference	How Addressed
C21	All construction spoil haulage vehicles, and construction plant must be clearly marked as being for the CSSI in such a manner to enable immediate identification within at least 50 metres of the vehicles and plant.	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities and minor ancillary facilities. This process will be communicated through relevant ECMs, Toolbox talks and daily pre-starts and included in sub-contractor procurement requirements. This has been included as mitigation measure SE36.
E6	Current condition reports for all existing roads and all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected during work must be prepared before commencement of such work. The report must state the current condition of the asset. A copy of the report must be provided to the asset owner no later than one month before the commencement of works of the CSSI.	Table 8-1	Condition reports will be prepared before the commencement of work for all existing roads, property and infrastructure where the physical condition is likely to be negatively impacted. This has been included as mitigation measure SE49.

CoA No.	Condition Requirements	Document Reference	How Addressed
E42	Construction Noise and Vibration Impact Statements must be prepared and implemented for each construction site before construction noise and vibration impacts commence and include specific mitigation measures identified through consultation with affected sensitive receivers. Each Construction Noise and Vibration Impact Statement will supplement the Noise and Vibration Management Sub-Plan and must specifically address each of the major construction sites and must include but not be limited to: (a) a description of the proposed activities; (b) predicted noise and vibration levels based on background noise levels; (c) examination of alternative methods of construction that would potentially reduce noise and vibration if the potential noise and vibration exceeds the relevant criteria; (d) description and commitment to work practices which limit noise and vibration; (e) description of specific noise and vibration mitigation treatments and time restrictions, including respite periods, duration, and frequency; (f) justification for any activities to be undertaken outside the specified construction hours defined in Conditions E21 and E22; (g) internal noise audit systems including recording of daily hours of construction, progressive impact assessments as work proceeds, conducting informal checks by the AA, providing active and communication links to Council and surrounding residents and sensitive receivers;	Table 8-1 Section 7.2.2.	Table 8-1 details the requirement to prepare a Construction Noise and Vibration Impact Statement (CNVIS) for each ancillary facility prior to site establishment (SE42). The requirements of each CNVIS are detailed in Section 7.2.2.

CoA No.	Condition Requirements	Document Reference	How Addressed
	(h) assessment of potential noise from the proposed construction methods including noise from construction vehicles and noise impacts from required traffic diversions; (i) community consultation and notification; (j) all reasonable and feasible measures including adopting the least noisy available construction methods, systems and equipment; (k) additional noise and vibration mitigation measures as negotiated with affected residents and other sensitive receivers. Note: Existing noise levels, pre-construction noise levels, or the like for the purposes of identifying rating background noise levels, noise management levels and construction noise impacts are noise levels that do not include any other construction related noise.		
E82	Nothing in this approval permits advertising on any element of the CSSI.	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities, including the requirement to maintain hoarding that is free from advertising (SE28).
E83	The Proponent must design and construct the CSSI in a manner that minimises opportunities for graffiti.	Table 8-1	Table 8-1 details mitigation measures to minimise opportunities for graffiti on ancillary facilities, including retention of boundary vegetation (SE26) and requirements to remove graffiti promptly.

CoA No.	Condition Requirements	Document Reference	How Addressed
E86	The CSSI must be constructed in a manner that minimises visual impacts resulting from construction sites, including protecting and retaining existing vegetation around the perimeter of compound sites providing temporary landscaping and screening where appropriate to soften views of the construction sites and minimising light spill to adjacent residential areas.	Table 8-1	The CSSI will be constructed in a sensitive manner that minimises visual impacts and will be communicated through the site induction, relevant ECMs, Toolbox talks and daily pre-starts. This has been addressed through mitigation measures SE33, SE34 and SE35 listed in Table 8-1.
E97	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.	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. Temporary lighting will be provided and strategies to impact glare and light spill will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE25.

CoA No.	Condition Requirements	Document Reference	How Addressed
E98	The Proponent must ensure that all external lighting associated with the operation of the CSSI (excluding light rail vehicles) is mounted, screened and directed in such a manner so as not to create nuisance to residences. The lighting must be the minimum level of illumination necessary and shall comply with AS 4282:1997 – Control of the Obtrusive Effects of Outdoor Lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. Temporary lighting will be provided and strategies to impact glare and light spill will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE25.
E99	The placement, obstruction and removal of CCTV cameras must be undertaken in consultation with the relevant public authority and Relevant Council(s).	Table 8-1	Table 8-1 notes that the placement, obstruction and removal of CCTV cameras at ancillary facilities must be undertaken in consultation with the relevant public authority and City of Parramatta Council. This has been included as mitigation measure SE43 and will be reflected in Environmental Control Maps.
E111	Before undertaking any works and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with LandCom's Managing Urban Stormwater series (The Blue Book).	Table 8-1	All stockpiled materials within ancillary facilities will be stored in accordance with the 'Blue Book' Managing Urban Stormwater: Soils and Construction (Landcom 2004) and kept away from waterways and stormwater drainage structures to avoid sediment entering surrounding waterways. This has been included as mitigation measure SE13 and will be reflected in Environmental Control Maps.

CoA No.	Condition Requirements	Document Reference	How Addressed
E119	Before commencement of any activities that would result in the disturbance of land and/or soil in Areas of Environmental Interest (AEI) identified as having a high risk of contamination, or identified as medium risk subject to further desktop assessment as specified in the documents listed in Condition A1, a Site Contamination Report must be prepared by a suitably qualified person(s) in accordance with the requirements of the <i>Contaminated Land Management Act 1997</i> and associated guidelines. The Site Contamination Report must outline the potential contamination risks from the AEIs to human health and receiving waterways and detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation. For AEIs where there is insufficient information and data available to draw such conclusions, the Site Contamination Report must also detail the outcomes of Phase 2 site contamination investigations within those AEIs.	Table 8-1 Appendix B	The requirement to prepare a Site Contamination Report prior to undertaking excavation activities within ancillary facilities located in an AEI identified as having a high risk of contamination, or identified as medium risk subject to further desktop assessment as specified in the documents listed in Condition A1, is reflected in mitigation measure SE44. AEIs are nominated on relevant Environmental Control Maps and detailed in the risk assessment in Appendix B.

CoA No.	Condition Requirements	Document Reference	How Addressed
E136	A Sustainability Strategy must be prepared to achieve a minimum project score of 65 for 'Design' and 'As built' rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Section 4.1 Section 9.3.1 Section 9.3.2	A Delivery Phase Sustainability Management Plan (PLR-INF-CPBD-PJT-EN-PLN-000003) has been prepared to ensure implementation of the PLR Sustainability Strategy. Relevant requirements have been reflected in this Plan to achieve the minimum project score, including: • Objectives (Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements) • Preference given to the fit out of existing buildings as ancillary facilities (e.g. Hawkesbury Road) • Inclusion of site facility energy and water efficiency (efficient fixtures, fittings and appliances) in inspections • Monthly monitoring of construction facilities to confirm that Site Accommodation Requirements have been implemented.

3.3 Revised Environmental Mitigation and Management Measures

Relevant REMMMs are listed in **Table 3-2**. 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 SEMP

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Communication	GEN-1	A construction environmental management plan (CEMP) would be prepared for the construction phase of the project. The CEMP would provide a centralised mechanism through which all potential environmental impacts would be managed. The CEMP would document mechanisms for demonstrating compliance with the commitments made in the Environmental Impact Statement, the submissions report, as well as any other relevant statutory approvals (e.g. conditions of approval, licences and permits). The CEMP would outline a framework for the management of environmental impacts during construction, including further details on the following:	Pre-construction	CEMP	The CEMP provides a central mechanism for all potential environmental impacts will be managed. The CEMP outlines the framework for the management of environment impacts. The CEMP has been prepared and will be implemented during construction.
Communication	GEN-1	Site compound and ancillary works management.	Pre-construction	This Plan	The SEMP establishes the necessary controls to manage the environmental impacts associated with ancillary facilities. This Plan complies with relevant approval, statutory and contract requirements.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Communication	GEN-2	A construction compounds plan would be prepared for the project as part of the overall CEMP. This sub-plan would set out details for each of the approved construction compounds, including stockpile areas, laydown areas and other ancillary activities required to construct the project. The Sub-plan would supplement, in greater detail, the information provided in the main body of the CEMP. The objectives and strategies of the construction compounds and ancillary facilities management sub-plan would include the following:	Pre-construction	This Plan Appendix A	The Project's ancillary facility plan has been prepared and included as part of the SEMP. The details for each ancillary facility are included in Appendix A. The SEMP will be implemented to provide details for each of the approved ancillary facilities.
Sensitive receiver and land uses management	GEN-2	Minimise the impact of construction compounds on surrounding land uses and sensitive receivers.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. These requirements will be communicated through the site induction, relevant ECMs, Toolbox talks and daily pre-starts.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Sensitive receiver and land uses management	GEN-2	Locate construction compounds away from sensitive land uses and receivers, wherever practical and feasible, or configure internal compound layouts in a manner that considers noise and light sensitive receivers (e.g. use of buildings to shield noisy activities, minimising the requirement for reversing vehicles, or locating noise intensive activities to maximise the distance to noise sensitive receivers).	Construction	Section 4 Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE03.
Stockpile management	GEN-2	Manage stockpile areas to minimise potential pollution of watercourses, groundwater and local air quality.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This management process will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE12.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Vegetation management	GEN-2	Minimise the clearing of vegetation (e.g. street trees and trees within public open spaces) to the minimum amount necessary to construct the project, particularly where construction compounds are proposed in public open spaces/parkland areas.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This process will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE15.
Heritage management	GEN-2	Locate construction compounds away from (or able to be managed in such a way so as to not impact on) heritage items and high retention value trees.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE16.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Water quality management	GEN-2	Locate construction compounds away from or implement management measures so as to not impact on waterways.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE17.
Flood management	GEN-2	Flood response measures for compounds that are located on land affected by the 20 year ARI flood level (e.g. bridge support construction compounds).	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This has been included as mitigation measure SE19.
Heritage and contaminated land management	GEN-2	Situate construction compounds and ancillary facilities on relatively level ground, and avoid excavation in construction compounds where risk of heritage impacts or disturbance of contaminated material.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE33.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Visual amenity management	GEN-2	Minimise the visual impact of construction compounds and ancillary facilities through either siting such facilities away from sensitive receivers (where practical and feasible) and/or providing screening.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. Screening will be provided as appropriate and this process will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE37.
Visual amenity management	GEN-2	Reinstatement strategies for construction compounds. As a minimum, this would include:	Post-construction	-	-
Visual amenity management	GEN-2	At the completion of construction, all plant, temporary buildings or vehicles would be removed.	Post-construction	Table 8-1	These strategies for reinstatement will be implemented and will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE38 in Table 8-1.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Visual amenity management	GEN-2	All land, including roadways, footpaths or other land having been occupied temporarily would be returned to their pre-existing condition or better.	Post-construction	Table 8-1	These strategies for reinstatement will be implemented and will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE39 in Table 8-1.
Visual amenity management	GEN-2	Reinstatement of community spaces, infrastructure and services would occur as soon as possible after completion of construction.	Post-construction	Table 8-1	These strategies for reinstatement will be implemented and will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE40 in Table 8-1.
Communication	GEN-2	Environmental management measures for construction compounds would be developed as part of the overall CEMP, with the construction compounds sub-plan identifying where such measures are documented within the CEMP.	Pre-construction	This Plan Table 8-1	The environmental management measures for ancillary facilities are reflected in this Plan and specifically Table 8-1 .

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Stockpile management	HY-8	Large areas of disturbance such as compound areas and stockpile sites would, where feasible and reasonable, be located away from any surface runoff flow paths and above the 10% AEP flood levels.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This process will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE18.
Vegetation management	BI-4	Construction compounds would, where feasible, be located within previously disturbed areas, away from riparian vegetation (to the extent possible).	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This will be communicated through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE20.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Aboriginal heritage	AB-4	Exclusion zones would be established during construction for the following partially impacted sites to protect the portion of the site located outside the project construction disturbance boundary: • Cumberland Hospital East. • Harris Street Footpath/Robin Thomas Reserve. Suitable controls would be identified in the heritage management plan and shown on the Environmental Control Maps (refer Transport for NSW Guide to Environmental Control Map), which may include barrier fencing to delineate the exclusion zones.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on archaeology. This has been specifically included as mitigation measure SE16. These locations will be shown on ECMs and will be communicated through Toolbox talks and daily pre-starts.
Dust management	AQ-1	Ensure that compound area surfaces are well compacted or sealed to limit the potential for dust generation.	Construction	Table 8-1	Ancillary facilities will be treated (compacted or sealed) to limit dust and this will be communicated and managed through relevant ECMs, Toolbox talks and daily pre-starts. This has been included as mitigation measure SE11 in Table 8-1.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Dust management	AQ-1	Impose low speeds limits around compound sites to limit the generation of dust from vehicle movements.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce dust impacts on surrounding land uses and sensitive receivers. This will be communicated and managed through relevant ECMs, Toolbox talks and daily pre-starts. This requirement has been included as mitigation measure SE21.
Dust management	AQ-1	Installation of perimeter screening around areas where there is a potential to generate emissions to air and around long-term compound and stockpile locations.	Construction	Table 8-1	Perimeter screening will be installed around potential emission generating areas, and long-term ancillary facilities and stockpile areas. This has been included as mitigation measure SE22 in Table 8-1.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Hazardous material management	HR-5	Environmental management measures relating to hazards and risk would be developed and implemented as part of the CEMP. These would include: • Potential environmental hazards and risks associated with construction activities would be identified prior to construction. • The storage of hazardous materials, and refuelling/maintenance of construction plant and equipment would be carried out in clearly marked and bunded areas within the construction site that are designed to contain spills and leaks in accordance with Australian Standards and DECCW guidelines. • Hazardous materials would not be stored below the ten per cent AEP flood level flood level. • Chemical spill kits would be readily available and accessible to construction workers. Kits would be kept at site compounds and on specific construction vehicles, and all hazardous materials spills and leaks would be reported to site managers and actions would be immediately taken to remedy spills and leaks. • Employees would be trained in the correct use of spill kits.	Construction	Section 5.3.1 Table 8-1	A site specific Initial Environmental Risk Analysis has been undertaken for each of the worksites and is contained in Appendix B. Relevant controls relating to the storage of hazardous materials and chemical spill kits are detailed in Table 8-1 (mitigation measures SE14 and SE23).

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Visual amenity management	VL-16	Where feasible and reasonable, the elements within worksites and construction compounds would:	Construction	-	-
Visual amenity management	VL-16	Be located to minimise visual impact, for example materials and machinery would be stored behind fencing/hoarding.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. This process will be communicated through Toolbox talks and daily pre-starts. This has been included as mitigation measure SE24.
Visual amenity management	VL-16	Include temporary lighting that would be orientated to minimise glare and light spill impact on adjacent receivers.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. Temporary lighting will be provided and strategies to impact glare and light spill will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE25.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Visual amenity management	VL-16	Retain and protect existing vegetation around the perimeters where feasible and reasonable to act as a visual screen.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. This protection measure will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE26.
Visual amenity management	VL-17	The footprint of construction compounds in open space areas would be minimised where feasible to reduce visual impacts. This includes the following areas: - Westmead compound. - Parramatta North Compound. - Parramatta River Bridge (north). - Dundas. - Kissing Point Road. - Carlingford.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken to reduce the visual impact of ancillary facilities on surrounding land uses and sensitive receivers. Limitations on the footprint of construction sites will be identified on ECMs. This has been included as mitigation measure SE27.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Noise management	NV-2	For construction concentrated in a single area, such as at the stops, worksites, substation construction sites, bridge sites and the stabling and maintenance facility location, temporary acoustic fencing/barriers around the site perimeter would be considered where feasible and reasonable to mitigate off-site noise levels.	Construction	Section 8	This has been included as mitigation measure SE28. The need for this requirement will be determined through the site-specific Construction Noise and Vibration Impact Statement.
Noise management	NV-2	Structures such as site sheds would be positioned to further shield sensitive and residential receivers from works activities.	Construction	Table 8-1	This has been included as mitigation measure SE29 in Table 8-1 .
Noise management	NV-2	Construction compounds would use 2.4 metre high hoarding of solid construction where required to minimise noise on sensitive receivers, where safe to do so.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the noise impacts of ancillary facilities on surrounding land uses and sensitive receivers. Hoarding will be provided and erected to minimise noise and the requirement intent will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE28.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Noise management	NV-2	Ongoing noise monitoring would be carried out during construction at sensitive receptors during critical periods to identify and assist in managing high risk noise events.	Construction	Table 8-1 Section 9.3.2	Noise monitoring will be undertaken and this process will be communicated through Toolbox talks and daily pre-starts. The monitoring program is outlined in Section 9.3.2 of this Plan. This requirement has been included as mitigation measure SE29 in Table 8-1 .
Noise management	NV-2	Reversing of equipment should be minimised so as to prevent nuisance caused by reversing alarms, which would be limited to the use of non-tonal reversing alarms.	Construction	Table 8-1	This has been included as mitigation measure SE30. Where feasible, the layout of ancillary facilities will be such that vehicles do not need to reverse to exit the site.
Tree management	TR-9	As far as practical, the construction compounds would be configured so as to not directly impact on trees that would not already be directly impacted by the project. Where trees which can be retained are located within construction boundaries, exclusion fencing would be erected to protect these trees from construction activities. Similarly, for road network modifications away from the main alignment, these works would be carried out, as far as practical, so as to minimise any further impact on trees as a result of the project.	Construction	Table 8-1	Exclusion fencing will be provided and erected where appropriate to protect trees from construction activities. This requirement will be communicated through relevant ECMs, the site induction, toolbox talks and daily pre-starts. This has been included as mitigation measures SE15 and SE26 in Table 8-1 .

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Privacy	PR-5	The design and placement of construction hoardings would consider opportunities to minimise privacy impacts on adjacent residents or other adjacent land uses sensitive to privacy concerns.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken to minimise privacy impacts of ancillary facilities on surrounding land uses and sensitive receivers. Hoardings will be provided and erected to minimise impact. This requirement will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE28.
Traffic management	TT-24	Existing cycle routes would be maintained or diverted during construction.	Construction	Table 8-1	Existing cycle routes will be maintained or alternate cycle routes will be provided as necessary. This commitment will be communicated through Toolbox talks and daily pre-starts. This has been included as mitigation measure SE04 in Table 8-1.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Traffic management	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:	Construction	Table 8-1	The Traffic, Transport and Access Management Sub-plan will be prepared as required and implemented during construction of the Project. Table 8-1 details mitigation measures to be to reduce traffic and access impacts associated with ancillary facilities on surrounding land uses and sensitive receivers. This has been included as mitigation measure SE05.
Traffic management	TT-25	Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers	Construction	Table 8-1	Speed awareness and variable speed message signs will be provided and this commitment will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE06 in Table 8-1.
Traffic management	TT-25	Appropriate controls where vehicles are required to cross footpaths to access construction areas, including manual supervision, physical barriers or temporary traffic signals.	Construction	Table 8-1	Appropriate safety controls and barriers will be provided and this commitment will be communicated through relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE07.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Traffic management	TT-25	Consideration of shared experience educational events that allow pedestrians, cyclists or motorists to sit in trucks and understand the visibility restrictions of truck drivers, and for truck drivers to understand the visibility from a bicycle.	Construction	Pedestrian and Cyclist Network and Facilities Strategy	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 will be considered as a potential educational event planned for the construction phases within the Pedestrian and Cyclist Strategy to be prepared in accordance with Planning Condition E14.
Traffic management	TT-25	Consideration of pedestrian access needs for elderly people, children and people with disability, where reasonably practicable.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. This commitment will be communicated through the site induction, relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE08.

Outcome	Ref #	Commitment	Timing	SEMP Reference	How Addressed
Traffic management	TT-25	Specific construction driver training to understand route constraints, expectations, safety issues and to limit the use of compression braking.	Construction	Table 8-1	Specific construction driver training will be provided. This commitment will be communicated through the site induction, relevant ECMs, toolbox talks and daily pre-starts. This has been included as mitigation measure SE09 in Table 8-1.
Traffic management	TT-25	Safety devices on construction vehicles that warn drivers of the presence of a vulnerable road user located in the vehicles' blind spots and warn the vulnerable road user that a vehicle is about to turn.	Construction	Table 8-1	Table 8-1 details mitigation measures to be undertaken in order to reduce the impact of ancillary facilities on surrounding land uses and sensitive receivers. Safety devices will be provided on construction vehicles and their use and relevance will be communicated through toolbox talks and daily pre-starts. This has been included as mitigation measure SE10.

3.4 Environmental Performance Outcomes

Relevant EPOs are listed in **Table 3-3**. 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 SEMP

ID Ref#	Environmental Performance Outcome	Timing	SEMP reference	How Addressed
EPO-TT-1 Construction	The project would implement measures to minimise impacts on the road network, including staging.	Construction	Table 8-1	This EPO has been incorporated into mitigation measures that address road safety and access management, including SE05 to SE09.
EPO-TT-2 Construction	Pedestrian and cyclist safety would be maintained.	Construction	Table 8-1	This EPO has been incorporated into mitigation measures that address pedestrian and cyclist safety, including SE04, SE05 and SE08.
EPO-TT-3 Construction	Effective coordination would be carried out to minimise cumulative network impacts.	Construction	Table 8-1	This EPO has been incorporated into mitigation measures that address network impacts (SE05).
EPO-TT-4 Construction	Access to property would be maintained.	Construction	Table 8-1	This EPO has been incorporated into mitigation measures that address access management, including SE05 and SE07.
EPO-NV-1 Construction	Noise levels would be minimised with the aim of achieving the noise management levels where feasible and reasonable.	Construction	Table 8-1	This EPO has been incorporated into Various mitigation measures that address noise management, including SE28, SE29, SE35 and SE41.

ID Ref#	Environmental Performance Outcome	Timing	SEMP reference	How Addressed
EPO-NV-2 Construction	The project would avoid any damage to buildings or heritage items from vibrations.	Construction	Table 8-1 Section 9.4	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures in Section 8 that address noise management in relation to heritage structures, including SE16, SE28, SE29 and SE33. The monitoring program is outlined in Section 9.4 of this Plan.
EPO-HE-2	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts to non-Aboriginal heritage items and archaeology.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address heritage management, including SE16, SE33, SE34 and SE37.
EPO-AB-1	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts on Aboriginal heritage items and archaeology.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address heritage management, including SE16, SE33, SE34 and SE37.
EPO-HY-1	No aspect of the project would materially adversely affect existing flood behaviour in the vicinity of the project.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address flood management, including SE18 and SE19.

ID Ref#	Environmental Performance Outcome	Timing	SEMP reference	How Addressed
EPO-HY-3	Where reasonably practicable, existing drainage directly impacted by the project would be replaced in a manner compliant with current laws and applicable standards.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measure SE40.
EPO-BI-1	The project would minimise impacts on biodiversity through the implementation of relevant mitigation measures and the implementation of the Biodiversity Offset Strategy (BOS) for the project.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address biodiversity management, including SE15, SE16, SE20, SE26 and SE32.
EPO-UT-1	There would be no unplanned or unexpected disturbance of utilities.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measure SE45.
EPO-SG-1	Erosion and sediment controls during construction would be implemented in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) and Managing Urban Stormwater: Soils and Construction Volume 2 (Department of Environment and Climate Change, 2008a).	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address erosion control and management, including SE12 and SE13.
EPO-SG-2	There would be no impacts on aquatic environments associated with the disturbance of ASS during construction.	Construction	Table 8-1	This will be communicated through Toolbox talks and daily pre-starts. This EPO has been incorporated into mitigation measures that address erosion control and management, including SE12, SE13 and SE17.

ID Ref#	Environmental Performance Outcome	Timing	SEMP reference	How Addressed
EPO-SU-1	The project would be carried out in accordance with the Parramatta Light Rail Sustainability Strategy.	Construction	Section 2.2 Section 4.1 Table 8-1 Section 9.3.1 Section 9.4	Relevant sustainability requirements are reflected in this Plan including: - Objectives (Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements) - Preference given to the fit out of existing buildings as ancillary facilities (e.g. Hawkesbury Road) - Inclusion of relevant controls in Table 8-1 (SE46) - Inclusion of site facility energy and water efficiency (efficient fixtures, fittings and appliances) in inspections - Monthly monitoring of construction facilities to confirm that Site Accommodation Requirements have been implemented.

ID Ref#	Environmental Performance Outcome	Timing	SEMP reference	How Addressed
EPO-SU-2	The project would comply with the relevant requirements of the NSW Government Resource Efficiency Policy.	Construction	Section 2.2 Section 4.1 Table 8-1 Section 9.4	Relevant requirements of the NSW Government Resource Efficiency Policy are reflected in this Plan including: - Objectives (Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements) - Preference given to the fit out of existing buildings as ancillary facilities (e.g. Hawkesbury Road) - Inclusion of relevant controls in Table 8-1 (SE46). - Inclusion of site facility energy and water efficiency (efficient fixtures, fittings and appliances) in inspections.

4 Ancillary Facilities

Ancillary facilities are enclosed areas used to support construction works in nearby areas. As defined in the Planning Approval, an ancillary facility can include one or more of the following:

- Office and amenities
- Construction compound
- Material crushing and screening plant
- Materials storage compound
- Maintenance workshop
- Testing laboratory
- Material stockpile area
- Car parking
- Truck marshalling.

4.1 Ancillary Facilities

The ancillary facilities have been selected at key locations along the project alignment to support the construction works in nearby areas. Each ancillary facility is detailed in **Table 4-1** together with the location, access routes, site establishment works and the establishment/operation period. Additional details on proposed use are provided in **Appendix A**.

The ancillary facilities have been located away from sensitive land uses and receivers, where possible, and the internal layouts have been configured in a manner that considers noise and light sensitive receivers (e.g. use of buildings to shield noisy activities, minimising the requirement for reversing vehicles, or locating noise intensive activities to maximise the distance to noise sensitive receivers) (**Appendix A**). Prior to any tree removal, a tree register will be prepared and approved by the Independent Arborist.

Preference will be given to the fit out of existing buildings as ancillary facilities. In addition, the JV will fully investigate renewable power options for site facilities and implement where feasible.

If additional ancillary facilities are identified as being required during construction, they will be assessed through the approval process outlined in Section 7 of this Plan.

4.2 Site Establishment/Demolition

Where demolition works are required as part of site establishment, activities will include:

- Install site hoarding
- Install site fencing and shade cloth at the entry/exit locations; connect with hoarding to fully encapsulate the site
- Install screen walls where required to contain any falling debris
- Establish exclusion areas around demolition zones
- Establish misting water sprays to control dust

- Conduct a Hazardous Material Assessment, including:
 - Where asbestos is identified, the site will be isolated from other work areas and the public
 - Asbestos containing material will be prepared, removed and disposed of by a licenced specialist contractor (refer to Table 8-1, SE50 and SE51)
 - Engage a third party occupational hygienist to provide air monitoring and provide clearance following asbestos removal
 - Provide a copy of the Hazardous Material Assessment to TfNSW
- Obtain relevant permits and submit notifications (refer to Section 9.6)
- Complete service investigation and isolation
- Demolish buildings; indicative equipment includes an excavator (5t, 12t, 20t or 30t), elevated work platform, telehandler, forklift, cherry picker, and truck and dog/tilt tray
- Segregate materials, crush and reuse onsite to the maximum permitted extent (e.g. asphalt and concrete); transfer to a remainder to a recycling facility or an appropriately licenced facility if unable to be recycled
- Cover truck loads prior to leaving worksite.
- If during demolition hazardous materials are identified, in addition to those identified in the Hazardous Material Assessment, TfNSW will be notified.

Table 4-1: Ancillary Facilities

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Westmead precinct			
Westmead Station	• SP 44343 and Lot 6, DP 1077852 • Located on the corner of Railway Parade and Hawkesbury Road to the north of Westmead Station (i.e. at the site of the proposed Westmead terminus for the project) • Access via Hawkesbury Road (heavy vehicles) and Ashley Lane (light vehicles). • On-site parking will be provided for construction workers • Site establishment will be undertaken in two phases: 1. Phase 1 – Demolish the front half of the building at 149 Hawkesbury Road. Retain rear of building as crib sheds. 2. Phase 2 – Demolish the rear of the building and install site sheds.	• Install hoarding prior to demolition and fencing with screening at entrance • Install environmental mitigation measures • Demolish building (two phases) • Tree removal • Install platform and laydown hardstand • Install site structures	• Establishment – 1 month • Operation – Late 2019 to late 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Parramatta North precinct			
Parramatta North	- Lot 3 DP 808447 - Located in a cleared area on the eastern bank of Parramatta River near the Parramatta River Bridge at Westmead - Access from the existing Cumberland Hospital (east) Precinct access roads. During works on the Parramatta North Bridge, emergency vehicle access will be maintained at all times - On-site parking will be provided for construction workers	- Install hoarding - Install environmental mitigation measures - Import clean fill to create a platform on the site which will provide additional protection to Aboriginal archaeology - Install site structures	- Establishment – 2 months - Operation – Late 2019 to late 2021
Factory Street	- SP 42595 - Located on the corner of Factory Street and Church Street - Currently contains an apartment building which will be demolished to enable establishment of the ancillary facility - Access to and from the ancillary facility will be via Factory Street and Galloway Street - On-site parking will be provided for construction workers	- Install hoarding prior to demolition and fencing with screening at entrance - Install environmental mitigation measures - Implement asbestos controls (friable and non-friable asbestos containing material has been identified in the hazardous material assessment) - Demolish building to ground surface or retain the lowest floor slab and install the site office on top (to retain existing site parking) - Tree removal - Install hardstand for laydown - Install site structures	- Establishment – 1 months - Operation – Mid 2019 to mid 2022

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Fennell Street	• Lot 1/2 DP 320697 • Lot 6 DP 79601 • Lot 1 DP 859830 • Lot 1 DP 631527 • Lot 9 DP 73282 • Lot A/B DP 159311 • Lot 1 DP 998949 • Lot 7 DP 843045 • Lot 1/2/3 DP 436171 • Located on the corner of Fennell Street and Church Street in the area primarily acting as an at-grade car park and will also include several of the adjacent commercial properties fronting onto Church Street and Harold Street • Access to and from the ancillary facility will be via Villiers Street, Fennell Street and Church Street • On-site parking will be provided for construction workers	• Install hoarding prior to demolition and fencing with screening at entrance • Install environmental mitigation measures • Demolish existing structures (staged demolition) • Install hardstand laydown within demolition footprint • Install site structures	• Establishment – 1 month • Operation – Late 2019 to late 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Ross Street	• Lot 1 DP 85794 • Located on the corner of Ross Street and Church Street in the site that currently comprises the Royal Oaks Hotel which will be demolished and eventually form part of the operational footprint for the light rail • Access to and from the ancillary facility will be via Ross Street • On-site parking will be provided for construction workers	• Install hoarding prior to demolition and fencing with screening at entrance • Install environmental mitigation measures • Demolish existing structures • Install hardstand laydown • Install site structures	• Establishment – 1 month • Operation – Late 2019 to late 2021
Parramatta CBD precinct			
O'Connell Street	• Lot 34 O'Connell Street, Parramatta • The compound would be located within a vacant lot accessible from O'Connell Street and on the western side of Parramatta River, directly adjacent to the foreshore. • Access to and from the compound would be via O'Connell Street. • Limited on-site parking will be provided for construction workers and heavy vehicles	• Installation of perimeter screening • Installation of an acoustic barrier along the northern boundary of Lot 34 O'Connell Street (noise blankets on fencing). • Install environmental mitigation measures • Install hardstand laydown • Install site structures	• Establishment – 1 month • Operation – Mid 2020 to early 2022

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Barrack Lane	• Lot 12 DP 856102. • The existing Endeavour Energy substation located at 1A Barrack Lane will be acquired to construct a substation for the project and will be used as an ancillary facility until the construction of the substation • Barrack Lane is a one-way street accessible from George Street with traffic exiting onto Macquarie Street • On-site parking will be provided for construction workers	• Install hoarding prior to decommissioning and fencing with screening at entrance • Install environmental mitigation measures • Decommission the existing substation site including removal of oil from within transformers, dismantling of equipment and transfer off-site for recycling. • Install hardstand laydown • Install site structures	• Establishment – 2 months • Operation – Late 2019 to late 2021
Rosehill and Camellia precinct			
Alfred Street	• Lot 1, Lot 2 and Lot 3 DP 19275 • Located at 129–133 Alfred Street, Parramatta, and occupies land that will ultimately would contain light rail infrastructure • Vehicles accessing and leaving the ancillary facility would do so along Alfred Street. • Prior to demolition, the existing houses on the site would be occupied in the interim as a minor ancillary facility • On-site parking will be provided for construction workers	• Occupy existing houses as site offices in the interim • Install hoarding prior to demolition and fencing with screening at entrance • Install environmental mitigation measures • Demolish three houses • Tree removal • Connect to utilities • Construct platform and hardstand laydown • Install site structures	• Establishment – 2 months • Operation – Late 2019 to mid 2022

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Parramatta River Bridge South	• Lot 201 DP 669350 • Located on the southern side of Parramatta River adjacent to the T6 Carlingford Line. The site is currently used as a maintenance site for Sydney Trains and utility providers • Construction vehicles will access the site via an access road that runs parallel and to the west of the T6 Carlingford Line. Vehicles would cross beneath the rail alignment and through the James Hardie underpass to access the ancillary facility. • Major underground utilities may limit access to trafficking of heavy vehicles • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Undertake clearing and grubbing • Demolish pavements to install utilities • Install hardstand for laydown • Install structures	• Establishment – 2 months • Operation – Late 2019 to mid 2022
Carlingford precinct			
Vineyard Creek	• Lot 100 DP 816829 • Located within a grassed area and bordered by Railway Street, Vineyard Creek and the T6 Carlingford Line near Rydalmere Station • Vehicles will access the site from Railway Street off Victoria Road, via the Western Sydney University Campus • On-site parking will be provided for construction workers	• Install fencing with screening and hoarding • Install environmental mitigation measures • Install hardstand for laydown • Install concrete footpaths • Install structures	• Establishment – 1 month • Operation – Late 2019 to mid 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Rydalmere Station (west)	• Lot 1 DP 1021694 • Located within an existing Sydney Trains maintenance compound located off Victoria Road and adjacent to the west of the T6 Carlingford Line near Rydalmere Station • Access to the site will be off Victoria Road and along an unnamed and unsealed private road • On-site parking will be provided for construction workers	• Install fencing with screening and hoarding • Install environmental mitigation measures • Install hardstand for laydown • Install concrete footpaths • Install structures	• Establishment – 1 month • Operation – Late 2019 to mid 2021
Rydalmere Station (east)	• Lot 1 DP 1021694 • Located within the existing Rydalmere commuter car park located off Victoria Road and adjacent to the east of the T6 Carlingford Line near Rydalmere Station • Access to and from the ancillary facility will be via Brodie Street • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Undertake clearing and grubbing • Conduct minor fencing changes and excavation works for utility connections • Install hardstand for laydown • Install concrete footpaths • Install structures	• Establishment – 1 month • Operation – Late 2019 to mid 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Dundas Station	• Lot 1 DP 1021694 • Located in an existing Sydney Trains maintenance compound and Dundas Station commuter car park • Vehicles would access the compound through the commuter car park onto Station Street • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Conduct minor fencing changes and excavation works for utility connections • Undertake clearing and grubbing • Install hardstand for laydown • Install concrete footpaths • Install site structures	• Establishment – 1 month • Operation – Late 2019 mid 2021
Kissing Point Road	• Lot 14 DP 264138 • Located within Vineyard Creek Reserve located off Kissing Point Road near the bridge • Access to and from the site would be via Kissing Point Road (eastbound) • During construction, pedestrian access would be maintained along 'Molly's Way' between Wyuna Place and Kissing Point Road • On-site parking will be provided for construction workers	• Install fencing with screening and hoarding (western side) • Install environmental mitigation measures • Undertake clearing and grubbing • Install hardstand for laydown • Install concrete footpaths • Install site structures	• Establishment – 1 month • Operation – Late 2019 to mid 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Adderton Road compound	• Lot D DP 418114 • Located in an existing Sydney Trains maintenance compound located in the rail corridor off Adderton Road • Vehicles would access the ancillary facility via Adderton Road • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Install hardstand for laydown • Install site structures	• Establishment – 1 month • Operation – Late 2019 mid 2021
Telopea Station	• Located within the at-grade commuter car park located adjacent to Telopea Station • Access to the ancillary facility will be via the existing drive way located on Sturt Street • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Conduct minor excavation works for utility connections • Remove existing outdoor furniture • Undertake clearing and grubbing • Install hardstand for laydown • Install concrete footpaths • Install site structures	• Establishment – 1 month • Operation – Late 2019 mid 2021

Ancillary Facility	Location and Access	Establishment Works	Timing (Indicative)
Carlingford Station	• Lot 1 DP 1147407 • Located within an open space area north of Carlingford Station on land owned by RailCorp • Located within the curtilage of the heritage listed Carlingford Produce Store however will not impact on the fabric of the building • Access to the compound will be from Pennant Hills Road and through the Carlingford Station commuter car park or via Boundary Road • On-site parking will be provided for construction workers	• Install fencing with screening (hoarding may be installed subject to CNVIS) • Install environmental mitigation measures • Install heritage protections • Conduct minor excavation works for utility connections • Undertake clearing and grubbing • Install hardstand for laydown • Install concrete footpaths and hoarding • Install site structures	• Establishment – 1 month • Operation – Late 2019 to mid 2021

5 Environmental aspects and potential impacts

5.1 Construction activities, site establishment and decommissioning

5.1.1 Construction activities, site establishment and operation

Key aspects when establishing the ancillary facilities that could result in impacts to the environment as outlined in Section 4 include:

- Vegetation clearing and topsoil stripping
- Works around watercourses
- Service searching, utilities relocations and installation of new utilities, as appropriate
- Excavation and soil disturbance
- Ground levelling works or installation of capping material
- Demolition of existing commercial and residential properties
- Vehicle and plant exhaust emissions (establishment and operation)
- Fuel and chemical storage, refuelling and chemical handling
- Noxious weed treatment including herbicide spraying
- Stockpiling of construction materials and spoil
- Storage and transfer of plant and equipment
- Site access out of standard hours
- Use of lighting towers
- Operation of heavy vehicles on access roads
- Parking or queuing on public roads.

An initial environmental risk assessment is outlined in **Appendix B** of this Plan, outlining site-specific aspects and impacts of above activities.

5.1.2 Decommissioning and rehabilitation

Once the ancillary facility is no longer required for construction activities, all materials, buildings and equipment will be removed and reinstated to their pre-construction condition (or agreed condition as per the Project Deed). De-mobilisation of the ancillary facility will include the following activities:

- Site clean-up and rehabilitation works including re-turfing grassed areas
- Removing all fencing / hoarding, signage and temporary ancillary facilities, including capping off
- Reinstating and stabilising the ground surface as per the original condition or as agreed in the relevant agreement
- Reinstating any existing or new planted areas
- Reinstating any heritage items removed during construction, where practical.

- Removing environmental controls (e.g. erosion and sediment controls) once the site is stabilised.

The decommissioning and handover of each of these sites will be subject to a completions process whereby all statutory and commercial obligations will be gradually discharged by the contractor and handed to the land owner and rail operator (Great River City Light Rail). In some cases, sites will not be decommissioned and returned to their pre-existing condition as they will be utilised by SOM or for light rail infrastructure.

Opportunities to improve ancillary facilities, as compared to prior land use, will be explored prior to decommissioning as part of the design process and ISCA design submission. This may include development of community space, enhanced public amenity and enhanced ecological value.

5.2 Impacts

Likely and/or potential impacts associated with the establishment, operation and decommissioning of the ancillary facilities include:

- Community complaints for loss of amenity and visual impact
- Traffic and pedestrian access impact
- Nuisance impact on nearby sensitive receivers (e.g. dust, noise, vibration and lighting)
- Water quality impacts due to runoff from stockpiles or stored material
- Interruption of overland flow paths and changes to flood behaviour
- Removal of vegetation and trees
- Direct and indirect impacts on heritage items
- Temporary reduction in privacy for surrounding residents and adjacent businesses.

5.3 Management of Ancillary Facilities

5.3.1 Environmental risk assessment for ancillary facilities

A site-specific Environmental Risk Analysis has been undertaken for each of the ancillary facilities (**Appendix B**). This analysis includes:

- Key activities and related environmental aspects
- Potential impacts
- Indicative mitigation and management measures
- Risk level for each environmental aspect prior to / following mitigation measures
- Relevant management documents and training requirements.

A program for ongoing analysis of key environmental risks associated with the establishment and operations of ancillary facilities will be documented through the following:

- Environmental Risk Register (reviewed annually and in response to significant issues, incidents and non-compliances)
- Engineering Workshops conducted throughout the delivery of the works
- Work Area Plan (WAP) risk assessments
- Safe Work Method Statements (SWMS) to address environmental risks (at a high level of detail)

- Environmental Work Method Statements (EWMS) to address task specific environmental risks and mitigations
- Environmental Control Maps (ECMs) for each worksite, detailing site-specific controls
- Erosion and Sedimentation Control Plans (ESCPs) detailing the site controls to be installed and maintained (where required)
- Traffic Control Plans for each ancillary facility
- Construction Noise and Vibration Impact Statements for each ancillary facility.

6 Consultation

In accordance with the CoA A5, this SEMP has been developed in consultation with relevant local councils and relevant government authorities.

This Plan was submitted to the DPIE no later than one month before the establishment of any construction ancillary facilities.

Relevant stakeholder reviews and responses to reviews are summarised in **Table 6-1**. Detailed consultation log and response to comments are provided in **Appendix E**.

Should additional ancillary facilities be required, this Plan will be updated following further stakeholder consultation and review in reference to the CoA.

Table 6-1: Summary of Consultation and Approval

Agency	Requirement	Status	Response	Date
EPA	Comments regarding potential EPL conditions	Addressed	Closed	17/10/19
City of Parramatta Council	Dilapidation Reports	Addressed	Closed	29/07/20
Cumberland Council	No comments	-	-	11/07/19
NSW Health – Health Administration Corporation	Comments on access and notification requirements	Addressed	Closed	1/11/19
NSW Health - Westmead Hospital (Sydney Children's Hospital Westmead)	No comments	-	-	29/07/19
Health Administration Corporation (HAC)	Comments on minor ancillary facilities	Addressed	Closed	Awaiting confirmation
RMS	No comments	-	-	30/07/20
Natural Resources Access Regulator (NRAR)	No comments	-	-	15/07/19

7 Assessment and approval process

The Planning Approval includes a number of requirements for ancillary facilities. The use and prior approval of the site under the SPIR will dictate the approval pathway required for the ancillary facility. The assessment and approval process outlined in Section 7 will be followed to gain approval by either the Environmental Representative (ER) or Planning Secretary (as required).

7.1 Minor construction ancillary facilities

Minor ancillary facilities are required to service the construction activities along the project alignment. Minor ancillary facilities may be mobile (i.e. transportable) and will generally consist of minor site sheds, lunch/crib sheds and portable toilets. To support the construction workforce, minor ancillary facilities are often co-located near construction activities and within the construction footprint. Due to the minor nature and impact of these facilities, they will be assessed in accordance with the process outlined below.

Minor ancillary facilities are not required to comply with CoA C18 and will be assessed against the following criteria:

- Be located within an active construction zone within the approved project boundary
- Have minimal amenity impacts to surrounding residences and stakeholders (as demonstrated through consultation), with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts
- Have minimal impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the project
- Have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in the CEMP for the project

A Minor Impact Ancillary Facility Checklist (see **Appendix C**) and Construction Noise and Vibration Impact Statement (CNVIS) will be prepared to assess the impact of the proposed facilities and identify relevant mitigation measures. Relevant documentation, including the ECM, will be submitted to both the Acoustics Advisor (AA) and Environmental Representative (ER) for approval.

7.2 Approved ancillary facilities under the EIS/SPIR

Ancillary facilities listed in **Appendix A** have been previously assessed for the project in the EIS and SPIR and approved for use as part of the Infrastructure Works. Facilities that comply with the approved usage, boundary layout and all applicable safeguards will be reflected in the ECM. Relevant requirements to address in the ECM include:

- Management of stockpile areas
- Vegetation clearing, including minimisation of clearance and tree protection measures
- Protection of waterways and riparian vegetation
- Flood response measures
- Heritage mitigation including exclusion zones around significant Aboriginal and Non-Aboriginal sites
- Avoidance of disturbance of contaminated material
- Mitigation of visual impacts

- Minimisation of footprint (Westmead, Parramatta North, Parramatta River Bridge, Kissing Point Road and Carlingford)
- Positioning of sheds to shield sensitive receivers from the site activities
- Hoarding requirements
- Noise monitoring and control measures as defined in the CNVIS.

ECMs will be provided to the ER for review at least two weeks prior to the commencement of any activities in the area covered by the document. All comments received from the ER will be addressed and endorsement obtained prior to commencement of works.

All construction personnel and Subcontractors undertaking a task governed by an ECM must participate in training on the ECMs and acknowledge that they have read and understood their obligations by signing an attendance record prior to commencing work.

Consistency assessments will be carried out where:

- Changes to the use and/or boundaries of approved ancillary facilities are proposed
- Additional ancillary facilities are proposed and the predicted impacts are not minor in nature.

Consistency assessments will be submitted to TfNSW for approval. Where a consistency assessment determines that the proposal is not consistent with the EIS, a modification will be prepared for approval by DPIE.

7.3 Construction Noise and Vibration Impact Statement

Construction Noise and Vibration Impact Statements (CNVIS) will be prepared and implemented for each ancillary facility before construction noise and vibration impacts commence and include specific mitigation measures identified through consultation with affected sensitive receivers. Each CNVIS will be provided to the ER and AA for review and endorsement in accordance with Condition A23(d) and Condition A29(e), respectively. The content of each CNVIS will include but not be limited to:

- A description of the proposed activities (construction scenarios), duration and associated plant proposed to be used
- Predicted noise and vibration levels based on background noise levels
- Examination of alternative methods of construction or innovative technologies that would potentially reduce noise and vibration if the potential noise and vibration exceeds the relevant criteria
- Description and commitment to work practices which limit noise and vibration
- Description of site specific noise and vibration mitigation treatments and time restrictions, including respite periods, duration, and frequency
- Justification for any activities to be undertaken outside the specified construction hours defined in CoA E21 and E22
- Internal noise audit systems including recording of daily hours of construction, progressive impact assessments as work proceeds, conducting informal checks by the AA, providing active and communication links to Council and surrounding residents and sensitive receivers
- Assessment of potential noise from the proposed construction methods including noise from construction vehicles and noise impacts from required traffic diversions
- Measures to coordinate the JV works with other PLR contract works, or other construction and infrastructure projects

- Community consultation and notification
- Examination of all reasonable and feasible measures including any suggested by the AA, ER or TfNSW
- Additional noise and vibration mitigation measures as negotiated with affected residents and other sensitive receivers.

Existing noise levels, pre-construction noise levels, or the like for the purposes of identifying rating background noise levels, noise management levels and construction noise impacts are noise levels that do not include any other construction related noise.

8 Environmental control measures

Specific measures and requirements to meet the objectives of this SEMP and to address impacts resulting from ancillary facilities are outlined in **Table 8-1**.

Table 8-1: Ancillary facilities management and mitigation measures

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE01	All site personnel will undertake a project induction in relation to identifying and managing risk of impacts during site establishment.	Project training	Construction	Safety Manager	Best practice
SE02	Site sheds will be maintained in a clean condition and be established at locations and positions that will minimise the impact on adjoining properties and residents.	Environmental Inspection Checklist	Construction	Site Supervisor	Best practice
SE03	Ancillary facilities will be located away from sensitive land uses and receivers, wherever practical and feasible, and internal layouts will be configured in a manner that considers noise and light sensitive receivers (e.g. use of buildings to shield noisy activities, minimising the requirement for reversing vehicles, using non-tonal reverse warning alarms or locating noise intensive activities to maximise the distance to noise sensitive receivers).	ECM	Pre-construction	Environment and Sustainability Manager	REMMM GEN-2
SE04	Existing cycle routes will be maintained or diverted during construction.	Traffic Control Plans	Construction	Traffic Manager	REMMM TT-24 EPO-TT-2

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE05	To maintain safe motorist, pedestrian and cyclist access during construction works and minimise cumulative network impacts including parking, mitigation and management measures will be detailed in the Traffic Control Plan to be approved by the Sydney Coordination Office to manage cumulative network impacts.	ECM Traffic Control Plan Environmental Inspection Checklist	Construction	Traffic Manager	REMMM TT-25 EPO-TT-1 EPO-TT-2 EPO-TT-3 EPO-TT-4
SE06	Speed awareness signs will be used in conjunction with variable message signs near construction sites to provide alerts to drivers.	Traffic Control Plan	Construction	Traffic Manager	REMMM TT-25 EPO-TT-1
SE07	Appropriate controls will be used where vehicles are required to cross footpaths to access construction areas, including manual supervision, physical barriers or temporary traffic signals.	Traffic Control Plan	Construction	Traffic Manager	REMMM TT-25 EPO-TT-1 EPO-TT-4
SE08	Pedestrian access needs for elderly people, children and people with disability will be considered, where reasonably practicable.	Traffic Control Plan	Construction	Traffic Manager	REMMM TT-25 EPO-TT-1 EPO-TT-2
SE09	Specific construction driver training to understand route constraints, expectations, safety issues and to limit the use of compression braking will be provided.	Project training (induction, toolbox or specific training)	Construction	Safety Manager	REMMM TT-25 EPO-TT-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE10	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 will be used.	Principal Risk Assessment	Construction	Safety Manager	REMMM TT-25
SE11	The ancillary facility surfaces will be well compacted or sealed to limit the potential for dust generation.	ECM	Construction	Site Supervisor	REMMM AQ-1
SE12	Stockpile areas will be managed to minimise potential pollution of watercourses, groundwater and local air quality.	ECM	Construction	Site Supervisor Environment and Sustainability Manager	REMMM GEN-2 EPO-SG-1 EPO-SG-2
SE13	All stockpiled materials will be stored in accordance with the 'Blue Book' Managing Urban Stormwater: Soils and Construction (Landcom 2004) and kept away from waterways and stormwater drainage structures to avoid sediment entering surrounding waterways.	ECM	Construction	Site Supervisor Environment and Sustainability Manager	CoA E111 EPO-SG-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE14	All fuels, chemicals and hazardous liquids will be stored within an impervious bunded area in accordance with Australian Standards (e.g. AS 1940) and NSW Environment Protection Authority guidelines. Bunds must be stored in areas above the 10% AEP flood level.	ECM	Construction	Site Supervisor Environment and Sustainability Manager	REMMM HR-5
SE15	The clearing of vegetation (e.g. street trees and trees within public open spaces) will be limited to the minimum amount necessary to construct the project, particularly where ancillary facilities are proposed in public open spaces/parkland areas. Where trees which can be retained are located within construction boundaries, exclusion fencing would be erected to protect these trees from construction activities.	ECM Tree Management Plans	Construction	Environment and Sustainability Manager	REMMM GEN-2 REMM TR-9 EPO-BI-1
SE16	Ancillary facilities will be located away from (or able to be managed in such a way so as to not impact on) heritage items and high retention value trees. Exclusion zones must be established to protect Aboriginal archaeological sites including Cumberland Hospital East and Harris Street Footpath/Robin Thomas Reserve.	ECM	Construction	Area Manager	REMMM GEN-2 REMMM AB-4 EPO-HE-2 EPO-AB-1 EPO-BI-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE17	Ancillary facilities will be located away from waterways and flood prone land, where possible. Where relocation is not feasible, relevant management measures will be implemented in accordance with this Plan.	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM GEN-2 EPO-SG-2
SE18	Ancillary facilities and stockpiles will, where feasible and reasonable, be located away from any surface runoff flow paths and above the 10% AEP flood levels.	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM HY-8 EPO-HY-1
SE19	Flood response measures will be implemented for ancillary facilities that are located on land affected by the 20 year ARI flood level (e.g. bridge support ancillary facilities). Such measures will be detailed in Site Flood Evacuation Plans.	ECM	Construction	Construction Manager Environment and Sustainability Manager	REMMM GEN-2 EPO-HY-1
SE20	Ancillary facilities will, where feasible, be located within previously disturbed areas, away from riparian vegetation (to the extent possible). Pre-clearing surveys will be conducted at least 12 to 48 hours prior to vegetation clearing to search for native wildlife (e.g. reptiles, frogs) which can be captured and relocated.	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM BI-4 EPO-BI-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE21	Low speed limits will be imposed around ancillary facilities to limit the generation of dust from vehicle movements.	ECM	Construction	Traffic Manager	REMMM AQ-1
SE22	Perimeter screening will be installed around areas where there is a potential to generate emissions to air and around long-term ancillary facilities and stockpile locations.	ECM	Construction	Construction Manager Environment and Sustainability Manager	REMMM AQ-1
SE23	Chemical spill kits will be readily available and accessible to construction workers. Kits will be kept at ancillary facilities and on specific construction vehicles and all workers would be trained in the correct use.	ECM	Construction	Environment and Sustainability Manager Site Supervisor	REMMM HR-5
SE24	Materials and machinery will be stored behind fencing/hoarding to minimise visual impact.	ECM	Construction	Site Supervisor	REMMM VL-16
SE25	Temporary lighting will be orientated to minimise glare and light spill impact on adjacent receivers. The lighting must be the minimum level of illumination necessary and comply with AS 4282:1997 – Control of the Obtrusive Effects of Outdoor Lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces.	Project training (induction, toolbox or specific training) ECM	Construction	Area Manager Site Supervisor	CoA E97 CoA E98 REMMM VL-16

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE26	The existing vegetation around the perimeters will be retained and protected, where feasible and reasonable, to act as a visual screen and deterrent to graffiti.	ECM Tree Management Plans	Construction	Site Supervisor Environment and Sustainability Manager	CoA E82 REMMM VL-16 REMM TR-9 EPO-BI-1
SE27	The footprint of ancillary facilities in open space areas will be minimised where feasible to reduce visual impacts, including the following areas: • Westmead station • Parramatta North • Parramatta River Bridge (north) • Dundas • Kissing Point Road • Carlingford	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM VL-17

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE28	Ancillary facilities will use 2.4 metre high hoarding of solid construction where required to minimise privacy impacts and noise and vibration on sensitive receivers (as determined by the Construction Noise and Vibration Impact Statement), where safe to do so. Hoarding shall be free from advertising and graffiti. Offensive graffiti or unauthorised advertising material will be cleaned or covered within 24 hours. Highly visible yet non-offensive graffiti will be cleaned or covered within 5 working days. Graffiti that is neither offensive nor highly visible will be cleaned or covered within three weeks.	ECM	Construction	Area Manager Environment and Sustainability Manager	CoA E82 REMMM NV-2 REMMM PR-5 EPO-NV-1 EPO-NV-2
SE29	Position site sheds to shield sensitive and residential receivers from works activities.	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM NV-2 EPO-NV-1 EPO-NV-2
SE30	Where feasible, design ancillary facilities to enable a one-way flow of vehicles through the site and minimise the extent to which vehicles are required to reverse (to prevent nuisance caused by reversing alarms).	ECM	Construction	Area Manager Environment and Sustainability Manager	REMMM NV-2

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE31	Ongoing noise and vibration monitoring will be carried out during construction at sensitive receptors during critical periods in accordance with the Construction Noise and Vibration Impact Statement (Section 7.2.1) and the noise and vibration monitoring program (refer to the Noise and Vibration Management Sub-plan) to identify and assist in managing high risk noise events.	ECM Noise and Vibration Records	Construction	Environment and Sustainability Manager	REMMM NV-2
SE32	Where trees which can be retained will be located within construction boundaries, exclusion fencing will be erected to protect these trees from construction activities.	ECM	Construction	Environment and Sustainability Manager Site Supervisor	REMMM TR-9 EPO-BI-1
SE33	Ancillary facilities will be situated on relatively level ground and will avoid excavation in where risk of heritage impacts or disturbance of contaminated material.	ECM	Construction	Area Manager	REMMM GEN-2 EPO-NV-2 EPO-HE-2 EPO-AB-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE34	Boundary fencing that incorporates screening will be erected around all ancillary facilities that are adjacent to sensitive receivers for the duration of site establishment unless otherwise agreed with Relevant Council(s), affected residents, business operators and/or landowners and in accordance with Condition B2(b)	ECM	Construction	Area Manager	CoA C19 EPO-HE-2 EPO-AB-1
SE35	Boundary screening will reduce visual, noise and air quality impacts on adjacent sensitive receivers.	ECM	Construction	Area Manager	CoA C20 EPO-NV-1
SE36	All construction spoil haulage vehicles and construction plant will 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.	Environmental Inspection Checklist ECM	Construction	Environment and Sustainability Manager	CoA C21
SE37	The visual impact of ancillary facilities will be minimised through either siting such facilities away from sensitive receivers (where practical and feasible) and/or providing screening.	ECM	Construction	Area Manager	REMMM GEN-2 EPO-HE-2 EPO-AB-1
SE38	At the completion of construction, all plant, temporary buildings or vehicles will be removed.	Environmental Inspection Checklist	Post-construction	Area Manager	REMMM GEN-2

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE39	All land, including roadways, footpaths or other land having been occupied temporarily will be returned to their pre-existing condition or better.	Environmental Inspection Checklist	Post-construction	Area Manager	REMMM GEN-2
SE40	Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of construction.	Environmental Inspection Checklist	Post-construction	Area Manager	REMMM GEN-2 EPO-HY-3
SE41	The standard construction hours in which ancillary facilities will be constructed and operated are: • 7:00am to 7:00pm Mondays to Fridays, inclusive; • 8:00am to 6:00pm Saturdays; and • at no time on Sundays or public holidays. Works may be undertaken outside of the hours defined above in accordance with the Out of Hours Protocol.	ECM	Construction and Post-construction	Area Manager Site Supervisor	CoA E21 CoA E22 EPO-NV-1
SE42	Prepare and implement a Construction Noise and Vibration Impact Statement for each ancillary facility prior to site establishment.	Construction Noise and Vibration Impact Statement	Construction	Environment and Sustainability Manager	CoA E42

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE43	Placement, obstruction and removal of CCTV cameras at ancillary facilities must be undertaken in consultation with the relevant public authority and Relevant Council(s).	ECM	Construction	Area Manager Site Supervisor	CoA E99
SE44	Prior to any excavation activities on ancillary facilities within designated AEI identified as having a high risk of contamination, or identified as medium risk subject to further desktop assessment as specified in the documents listed in Condition A1, a Site Contamination Report must be prepared in accordance with the Contaminated Land Management Sub-plan.	ECM	Construction	Environment and Sustainability Manager	CoA E119
SE45	There would be no unplanned or unexpected disturbance of utilities during the establishment of ancillary facilities. Positive identification of utilities in accordance with the Permit to Excavation process and isolation of above ground utilities would be undertaken prior to the disassembly of buildings.	Principal Risk Assessment	Construction	Area Manager Site Supervisor	EPO-UT-1

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE46	Ancillary facilities must be established in accordance with ISCA and the Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements (SAR), including: • Energy efficient lighting • The NSW Government Resource Efficiency Policy 2019, requirement E3 “Minimum Energy Performance Standards” and requirement W3 “Minimum Water Appliance Standards” • High performance thermal insulation & optimal thermal performance design • TfNSW Sustainability Design Guidelines (SDG) V4 compulsory requirement 8A. Water Efficiency • TfNSW SDG V4 compulsory Requirement 2. “Lighting Standards” • Water efficient fixtures and fittings • Installation of rainwater tanks (where feasible) for ablution facilities • Installation of solar panels (where feasible) to power facilities • Use of air conditioning refrigerants with low or zero global warming potential.	Procurement scope	Construction	Area Manager Environment and Sustainability Manager	EPO-SU-1 EPO-SU-2

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE47	Install solar lighting towers within ancillary facilities wherever practicable. Consider the following criteria to determine suitability: • illumination intensity requirements • panel shading within the CBD • space constraints • market supply.	Procurement scope	Construction	Area Manager Environment and Sustainability Manager	REMMM GG-4
SE48	Establish adequate flood protection controls within flood prone ancillary facilities including: Alfred Street – Provide an overland flow path along the eastern boundary to maintain existing overland flow direction and reduce the volume of (clean) water entering the works area. Vineyard Creek – Undertake detailed site planning to minimise use of flood affected portion of the site. Adderton Road – Review overland flows to confirm they can be managed through existing and/or proposed drainage. Carlingford Station – Undertake detailed site planning to avoid or minimise impact to the detention centre.	ECM	Pre-construction	Area Manager Environment and Sustainability Manager	Flood Management Sub-plan

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE49	A road dilapidation report will be prepared for all roads likely to be used by construction traffic prior to commencement of construction and after construction is completed. The dilapidation reports will include all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected. A copy of the dilapidation reports will be provided to the asset owner no later than one month before the commencement of works.	Road dilapidation reports	Prior to commencement of ancillary facilities where the physical condition is likely to be adversely affected by use of the facility.	Traffic Manager	CoA E6
SE50	Conduct a Hazardous Materials Assessment prior to undertaking demolition works. - Where asbestos is identified, the site will be isolated from other work areas and the public - Asbestos containing material will be prepared, removed and disposed of by a licenced specialist contractor (refer to SE51) - Engage a third party occupational hygienist to provide air monitoring and provide clearance following asbestos removal	Safe Work Method Statements	Construction	Area Manager	CoA E131 CoA E129 REMMM WM-5

ID	Measure/Requirement	How Implemented	When to implement	Responsibility	Reference
SE51	Asbestos or asbestos-contaminated materials that are discovered during demolition and construction works will be strictly managed in accordance in accordance with the requirements of the <i>Work Health and Safety Regulation 2011</i> and the <i>Protection of the Environment Operations (Waste) Regulations 2014</i> . All asbestos waste over 10m ³ must be tracked through EPA's WasteLocate service.	Safe Work Method Statements	Construction	Area Manager	CoA E131 CoA E129 REMMM WM-5
SE52	Prior to establishing ancillary facilities within approved locations, undertake consultation with landowners and adjacent key stakeholders in accordance with Third Party Agreements to inform site specific controls for ancillary facilities.	Principal Risk Assessment	Pre-Construction	Area Manager	Best practice

9 Compliance management

9.1 Roles and responsibilities

Specific responsibilities for the implementation of environmental controls are detailed in Section 8 of this Plan.

9.2 Training

All personnel (including Subcontractors) are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. The purpose of the induction is to ensure all personnel involved in the Infrastructure Works are aware of the requirements of the CEMP, CoA and REMMMs.

Short-term visitors to site will be required to attend a visitor's induction and be accompanied by inducted personnel at all times.

Temporary visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

The Environment and Sustainability Manager (or delegate) will conduct the environmental component of the site inductions. The environmental component of the induction must cover relevant requirements of the SEMP, including:

- Standard hours of operation
- Noise mitigation measures
- Dust controls
- Tree protection
- Emergency procedure and response
- Permitted activities
- Environmental incident and emergency response
- ECMS, including purpose, scope and use.

A record of all environment inductions will be maintained on-site. The Environment and Sustainability Manager may authorise amendments to the induction at any time. Possible reasons for changes to the induction may be modifications to the Infrastructure Works, legislative changes or amendments to this SEMP.

An Induction Register is maintained within the Project Safety Records.

9.3 Environmental Incident and Emergency Response

In the event of an environmental incident, the Environmental Incident and Emergency Response Plan will be implemented. The full plan is provided in **Appendix D** with the key requirements summarised below. The requirements of the Plan are communicated to all workers through the induction.

Definitions of environmental incidents are provided in **Table 9-1**.

Environmental incident or non-compliance reporting required prior to the approval of the Construction Environmental Management Plan (CEMP) will follow the process described below. Where the CEMP is approved, then the incident reporting procedure of that document shall apply.

Table 9-1: Environmental Incidents Definitions

Type	Definition
Environmental Incident	An occurrence or set of circumstances that causes, or threatens to cause, material harm.
Material harm	Is harm that: a) Involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or b) Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).
Notifiable Incident	Any environmental incident or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.
Non-compliance	An occurrence, set of circumstances or development that is a breach of the planning approval but is not an incident.

9.3.1 Internal Reporting

All environmental incidents and non-compliances must be immediately reported to the Environment and Sustainability Manager who will verbally notify the TfNSW Environment and Planning Manager and ER. The verbal notification must occur immediately on becoming aware of the incident or non-compliance.

All environmental incidents must be immediately reported to the Person-In-Charge (PIC) who will distribute an SMS notification to all JV and TfNSW senior managers.

An event report must be lodged by the Environment and Sustainability Manager in the TfNSW INX system within four hours of occurrence. Additional details on the environmental incident or non-compliance must be provided in INX within 48 hours of occurrence.

The event report will detail action(s) taken to control and correct the environmental incident or non-compliance and address the consequences, including mitigating any adverse environmental impacts. In evaluating the need for action, the cause of the environmental incident or non-compliance will be determined and the potential for similar environmental incidents or non-compliances to exist. Relevant corrective actions will be documented, implemented, and assessed for effectiveness. Any changes to operations or practices resulting from actions are to be communicated to employees and sub-constructors as required.

A register of all environmental incidents and non-compliances will maintained in INX.

Non-compliances will not be automatically raised as the result of an identified issue from an environmental inspection or audit. Where considered appropriate, by agreement of the JV, ER, IC and TfNSW representatives, issues identified during an environment inspection or audit will be closed-out as part of the inspection or audit reporting process. In the event that repetitive observations are made, i.e. if low-risk site improvement actions are not corrected within the agreed timing for actions (for more than a month in most cases) the Environment and Sustainability Manager, TfNSW and/or ER will request that a NCR is raised.

9.3.2 External Reporting

DPIE and ER

The Environment and Sustainability Manager must immediately notify the ER in writing of all environmental incidents and non-compliances. Environmental incidents must also be immediately reported to the DPIE in writing to (compliance@planning.nsw.gov.au). The notification must identify the Project (including the CSSI application number) and set out the location and nature of the incident.

Within one week of notification of an environmental incident, the Environment and Sustainability Manager will submit a report to TfNSW for submission to the DPIE including the time and date of the incident, details of the incident and any consequent non-compliance with the CoA.

All written requirements of the Planning Secretary, which may be given at any point in time, to address the cause or impact of an environmental incident must be complied with, within any timeframe specified by the Planning Secretary or relevant public authority. This may include the outcomes of environmental incident investigations.

Notifiable Pollution Event

If an environmental incident is a notifiable pollution event (as defined in **Table 9-1**), the Environment and Sustainability Manager will immediately notify the EPA (131 555) and the following agencies:

- Ministry of Health (1300 066 055)
- SafeWork NSW (13 10 50)
- City of Parramatta Council (1300 617 058)
- Fire and Rescue NSW (1300 729 579).

For notifiable incidents other than pollution events, the TfNSW Environment and Planning Manager will advise on whether external notification is to be made by the Environment and Sustainability Manager.

If an environmental incident occurs or if statutory notification is given to the EPA as required under the POEO Act in relation to the Infrastructure works, such notification must also be provided to the DPIE within 24 hours after the notification was given to the EPA.

9.3.3 Environmental Incident Investigations

All environmental incidents logged in the INX system must be investigated with a root cause analysis undertaken for environmental incidents with a risk rating of high and above and for lower risk items as determined by the moderator (i.e. TfNSW Senior Manager Environment).

9.3.4 Environmental Incident Simulation Drills

Environmental incident simulation drills will be undertaken at least once every 12 months. Additional drills may be required at the discretion of the Environment and Sustainability Manager in response to notifiable pollution incidents.

Environmental incident simulation drills may be integrated into other emergency and incident testing and training programs and delivered as a desktop simulation or practical exercise. The Environment and Sustainability will coordinate the drill and prepare a brief report on the outcomes and lessons learned.

9.3.5 Environmental Incidents and Response Procedures

Reflecting the Environmental Risk Register, significant environmental incidents have been identified and detailed in **Appendix D** together with appropriate response actions. Workers are responsible for responding to environmental incidents under the direction of the Environment and Sustainability Manager.

Where an environmental incident or other event results on the need for emergency construction works, the Environment and Sustainability Manager must notify the TfNSW Environment and Planning Manager and the ER of the need for those activities or works (SMS or email). The Environment and Sustainability Manager must also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

9.4 Monitoring and inspection

Monitoring and Inspections requirements relevant to ancillary facilities are identified in **Table 9-2**. These requirements are in addition to the monitoring, compliance and assurance processes detailed in relevant Sub-plans and Section 3.8 of the CEMP.

9.5 Reporting

Reporting requirements relevant to ancillary facilities are identified in **Table 9-3**.

Table 9-2: Inspection and Monitoring Requirements

Item	Scope	Timing	Frequency	Responsibility	Records / Reporting
Weather forecasts	Monitoring of weather forecasts to determine when adverse weather conditions are predicted. Specific notifications will be made if: • Winds >25 km/hr and/or • Temperature >30°C are forecast • High rainfall events.	Site Establishment	Weekly forecast Daily updates when adverse weather is predicted	Environmental Coordinator / Graduate	Email alerts Pre-starts
Weather observations	Weather observations from the Parramatta BoM Parramatta North AWS. A wind speed gauge that can provide wind velocity alerts will be kept on site to identify periods when activities may need to be restricted or additional mitigation implemented.	Site Establishment	Monthly	Environmental Coordinator / Graduate	Monthly Environmental Monitoring Report

Item	Scope	Timing	Frequency	Responsibility	Records / Reporting
Weekly Inspections The Environment and Sustainability Manager (or delegate) will include the ancillary facilities as part of their weekly inspections.	Inspection of the environmental controls and implementation of the mitigation measures outlined in Table 8-1 including but not limited to: • Hoardings and boundary fences • Waste storage, collection and disposal practices • Erosion and sediment controls • Measures to prevent tracking of material onto the surrounding road network • Temporary lighting orientated to minimise glare and light spill • Vegetation protection measures • Ancillary facility surfaces compacted or sealed to limit the potential for dust generation • Chemical and fuel storage • Traffic Control Plan measures (including safe motorist, pedestrian and cyclist access) • Reinstatement of community spaces, infrastructure and services occurring as possible after completion of works.	Site Establishment and construction	Weekly	Environmental Coordinator & Site Supervisor	Site Establishment Weekly Environmental Inspection Checklist

Item	Scope	Timing	Frequency	Responsibility	Records / Reporting
Sustainable Site Shed Assessment	Review of compliance of ancillary facilities in accordance with ISCA and the Responsible Construction Leadership Group (RCLG) minimum Site Accommodation Requirements (refer to environmental control measure SE46 in Table 8-1)	Site Establishment Ongoing throughout Construction	Quarterly	Environmental Coordinator / Graduate	Sustainable Site Shed Assessment Checklist
Visual surveillance of dust	No visible dust emissions during activities with high potential to produce dust and during prolonged dry or windy conditions	Site Establishment	Continual	Site Supervisors	Report by exception in Daily Diary Notification of issues / incidents / non-compliance to Environmental Coordinator
Grey-headed flying fox	Review and implementation of the Grey-headed flying fox program (The Grey-Headed Flying Fox Monitoring Program, PLR-TFNSW-CBD-PE-PRG-000001). This predominately applies to the Parramatta North ancillary facility.	Site Establishment	Any works within 300m of the Parramatta Park Grey-headed flying fox camp	Environmental Coordinator / Graduate	Monthly Environmental Monitoring Report

Item	Scope	Timing	Frequency	Responsibility	Records / Reporting
Noise and Vibration	Noise and vibration monitoring of ancillary facilities will occur at the nearest sensitive receiver as defined in the Construction Noise and Vibration Impact Statement(s) and the Noise and Vibration Monitoring Program (refer to the Noise and Vibration Management Sub-plan). The noise and vibration monitoring data will be used to inform construction scheduling and the adequacy of mitigation measures.	Site Establishment and Operation	Monthly once commencing the month the site is established	Environmental Coordinator / Graduate	Monthly Environmental Monitoring Report
Waste	Waste tracking	Site Establishment	Monthly once commencing the month the site is established	Environmental Coordinator / Graduate	Waste/material tracking register Monthly Environmental Monitoring Report

Table 9-3: Reporting Requirements

Report	Scope	Timing	Frequency	Responsibility	Submission
Monthly Environmental Monitoring Report	Summary of months: • Weather observations • Grey headed flying fox monitoring actions • Noise and vibration monitoring results • Waste tracking • Water quality monitoring results	Within seven Business Days after the month end.	Monthly	Environment and Sustainability Manager	TfNSW IC Made publicly available
Quarterly Environment Report (Compliance Tracking Program)	Compliance reporting against the Planning Approval and CEMP including the requirements identified in this plan (Table 3-1, Table 3-2 and Table 3-3).	Within seven Business Days after the relevant quarter end	Quarterly	Environment and Sustainability Manager	TfNSW IC
Annual Environment Report	Annual review of the monitoring and reporting requirements of the CEMP Sub-plans including data from the Site Establishment period if this plan is approved prior to the CEMP.	Within ten Business Days after the end of the relevant calendar year	Annually	Environment and Sustainability Manager	TfNSW IC

9.6 Licences and permits

The JV was issued Environmental Protection Licence (EPL) Number 21347 on the 3 January 2020 for Railway activities - railway infrastructure construction. The EPL includes conditions permitting works to be undertaken outside of the approved working hours that are substantially consistent with the Planning Approval. The Out of Hours Works Protocol does not apply to works subject to EPL. Use of facilities will be managed in accordance with the EPL.

Additional licences or permits may be required if road access is altered, utilities are changed, the amount of placed hazardous materials exceeds minimum trigger levels or other criteria are exceeded in relation to Schedule 1 of the POEO Act.

9.7 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Plan, CoA and other relevant approvals, licenses and guidelines.

10 Review and improvement

10.1 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 environmental management and performance
- Determine the cause or causes of non-compliances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-compliances 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.

10.2 SEMP update and amendment

A review of the SEMP will be undertaken annually (at minimum) and within three months of the following events:

- Reportable environmental incidents
- Identification of new risks, including risks identified during risk register updates
- Non-compliances
- Environmental audit findings
- Material project changes (including modifications)
- Legislative changes.

Where one or more of the above events present a risk of material harm, the SEMP will be revised within one month.

Any minor amendments to the SEMP may be approved by the ER in accordance with the process detailed below. What constitutes a “minor” amendment is subject to the discretion of the ER, but could include changes that:

- Are editorial in nature
- Do not increase the type or magnitude of impact on the environment when considered individually or cumulatively
- Do not compromise the ability of the JV to meet approval or legislative requirements.

In accordance with CoA A37(g), details of any review of, and minor amendments made to, the SEMP will be detailed in the Construction Compliance Report.

Changes to the SEMP that are not defined as minor must be reviewed by the ER in accordance with CoA A23d) and submitted to the Planning Secretary for approval.

Appendix A – Location of Ancillary Facilities and Proposed Uses

Table A-1: Identified locations of the ancillary facilities in accordance with EIS / SPIR

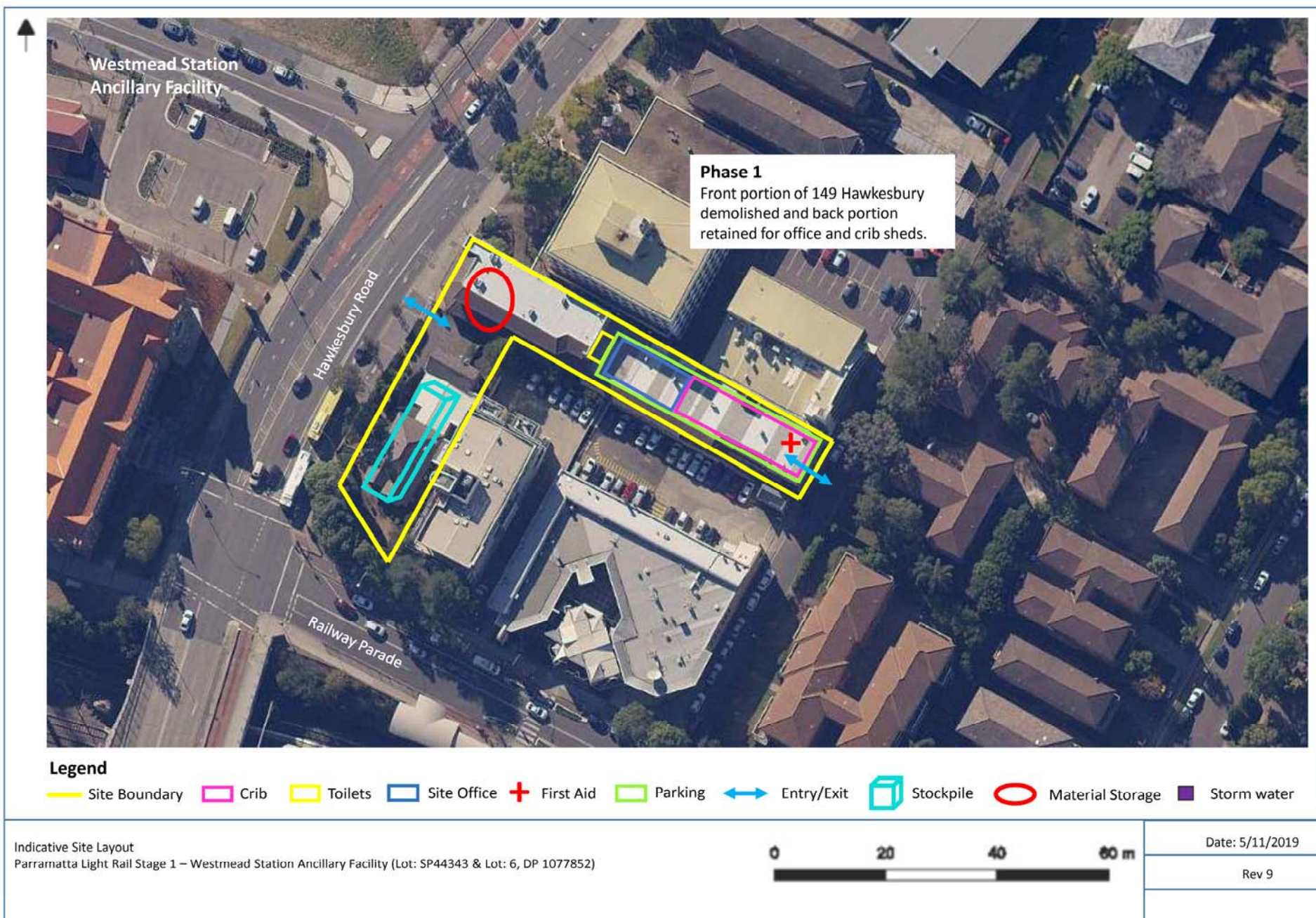
Facility ID	Lot ID	Facility Name	Chainage	Identified and assessed in the SPIR (C18)	Proposed boundary changes from SPIR?	SPIR Proposed Use (including hours of use)	JV Proposed Use
Westmead Precinct							
WP01	SP 44343 Lot 6, DP 1077852	Westmead Station	CH3829 - CH3770	Yes	No	The ancillary facility will support construction activities proposed to be carried out between Westmead Station and the Cumberland Hospital Precinct. The ancillary facility will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.
Parramatta North Precinct							
PNP01	Lot 3 DP 808447	Parramatta North	CH2640 – CH2520	Yes	No	The ancillary facility will support works associated with the construction of the project generally and in particular, construction of Parramatta North Bridge and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.
PNP02	SP 42595	Factory Street	CH1920 – CH1850	Yes	No	The ancillary facility will support construction activities within the Parramatta North precinct and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.

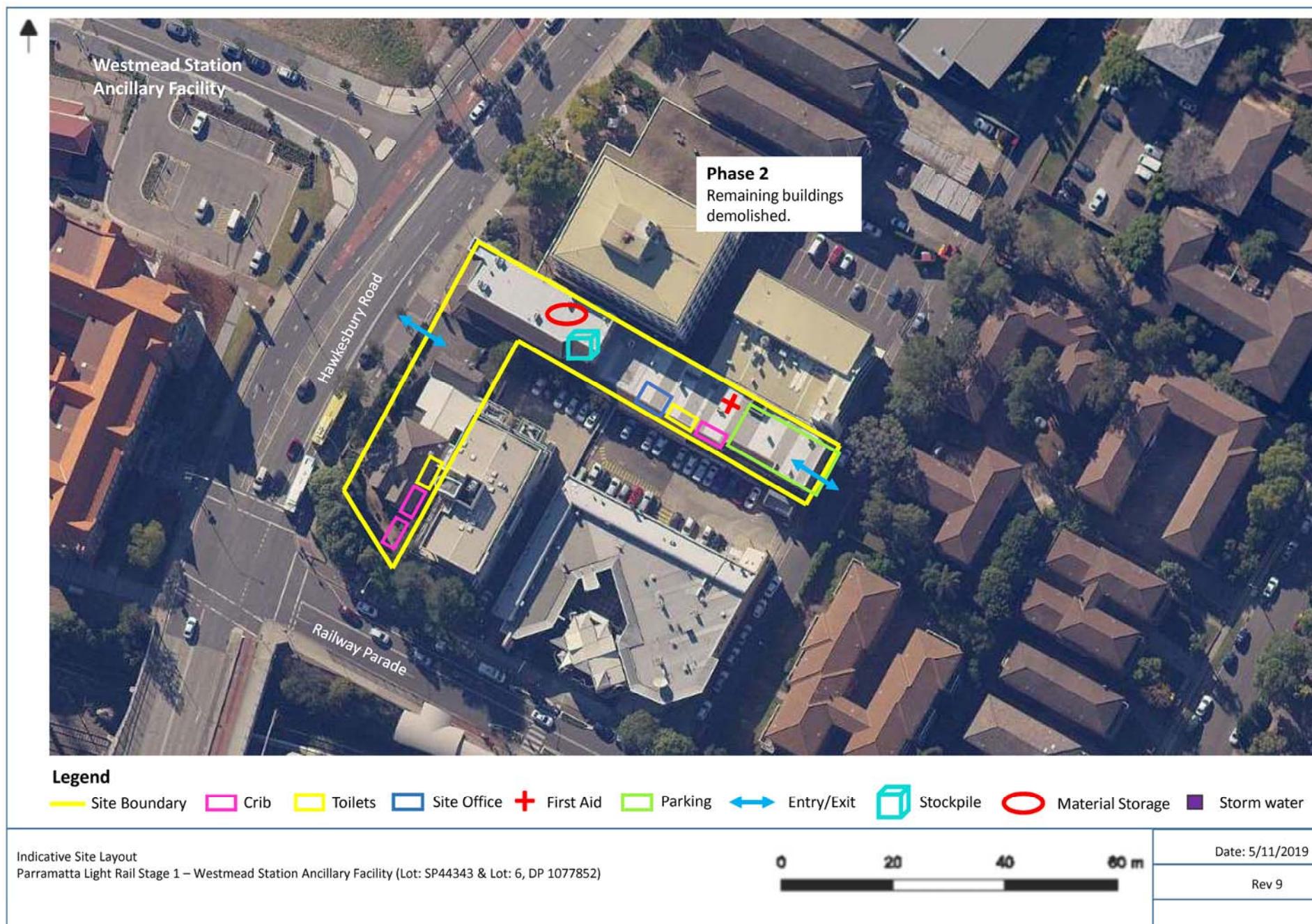
Facility ID	Lot ID	Facility Name	Chainage	Identified and assessed in the SPIR (C18)	Proposed boundary changes from SPIR?	SPIR Proposed Use (including hours of use)	JV Proposed Use
PNP03	Lot 1/2 DP 320697 Lot 6 DP 79601 Lot 1 DP 859830 Lot 1 DP 631527 Lot 9 DP 73282 Lot A/B DP 159311 Lot 1 DP 998949 Lot 7 DP 843045 Lot 1/2/3 DP 436171	Fennell Street	CH1500 – CH1280	Yes	No	The ancillary facility will support construction activities within the Parramatta North precinct and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, a first aid facility, laydown and ablutions.
PNP04	Lot 1 DP 85794	Ross Street	CH1080 – CH1040	Yes	No	The ancillary facility will support construction activities within the Parramatta North precinct and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, a first aid facility, laydown and ablutions.

Facility ID	Lot ID	Facility Name	Chainage	Identified and assessed in the SPIR (C18)	Proposed boundary changes from SPIR?	SPIR Proposed Use (including hours of use)	JV Proposed Use
Parramatta CBD Precinct							
PCP01	Lot 34 DP1206876	Lot 34 O'Connell Street	Off-alignment	Yes	No	This compound would be the primary compound to support the off-alignment road works required to minimise traffic impacts during construction and operation of the project. The compound would operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, a first aid facility, laydown and ablutions.
PCP02	Lot 12 DP 856102	Barrack Lane	CH140 – CH180	Yes	No	The ancillary facility will be used for the storage of small materials and provision of staff facilities. Following completion of the main activities within the Parramatta CBD, a substation will be constructed at this site.	The JV proposed use is consistent with the SPIR. The ancillary facility will include a crib facility, laydown and ablutions.
Rosehill and Camellia Precinct							
RCP01	Lot 1, Lot 2 and Lot 3 DP 19275	Alfred Street	CH1300 – CH1360	Yes	No	The ancillary facility will support construction activities within Parramatta CBD as well as the bridge crossing over Clay Cliff Creek and James Ruse Drive and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.
RCP02	Lot 201 DP 669350	Parramatta River Bridge South	CH2290 – CH2460	Yes	No	The ancillary facility will be used to support works associated with modifications to the Parramatta River Bridge and will operate on a 24/7 basis.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.

Facility ID	Lot ID	Facility Name	Chainage	Identified and assessed in the SPIR (C18)	Proposed boundary changes from SPIR?	SPIR Proposed Use (including hours of use)	JV Proposed Use
Carlingford Precinct							
CP02	Lot 100 DP 816829	Vineyard Creek	CH2960 – CH3000	Yes	No	The ancillary facility will support works associated with modifications to the rail bridge over Vineyard Creek and more generally for works within the Carlingford precinct. The ancillary facility will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include laydown and ablutions.
CP03	Lot 1 DP 1021694	Rydalmere Station (west)	CH3040 – CH3140	Yes	No	The ancillary facility will support construction of the new rail bridge over Vineyard Creek and more generally for works within the Carlingford precinct. The ancillary facility will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include a crib facility, laydown and ablutions.
CP04	Lot 1 DP 1021694	Rydalmere Station (east)	CH3040 – CH3140	Yes	No	The ancillary facility will be the main compound supporting modifications to the rail bridge over Vineyard Creek and more generally for works within the Carlingford precinct. The ancillary facility will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include a crib facility, laydown and ablutions.
CP05	Lot 1 DP 1021694	Dundas Station	CH3760 – CH3920	Yes	No	The ancillary facility will support construction activities within the Carlingford precinct and will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, a first aid facility, laydown and ablutions.

Facility ID	Lot ID	Facility Name	Chainage	Identified and assessed in the SPIR (C18)	Proposed boundary changes from SPIR?	SPIR Proposed Use (including hours of use)	JV Proposed Use
CP06	Lot 14 DP 264138	Kissing Point Road	CH4060 – CH4120	Yes	No	The ancillary facility will support the duplication of the Kissing Point Road Bridge and general construction works within the Carlingford precinct. The ancillary facility will generally operate during standard construction hours but will operate out of standard hours during night work periods associated with the Kissing Point Bridge duplication.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.
CP07	Lot D DP 418114	Adderton Road compound	CH4700 – CH4760	Yes	No	The ancillary facility will support general construction activities within the Carlingford precinct and will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include a crib facility, laydown and ablutions.
C08	N/A	Telopea Station	CH5360 – CH5420	Yes	No	The ancillary facility will support general construction activities within the Carlingford precinct and will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.
CP09	Lot 1 DP 1147407	Carlingford Station	CH6980 – CH7185	Yes	No	The ancillary facility will support general construction activities within the Carlingford precinct and will operate during standard construction hours.	The JV proposed use is consistent with the SPIR. The ancillary facility will include site offices, a crib facility, laydown and ablutions.













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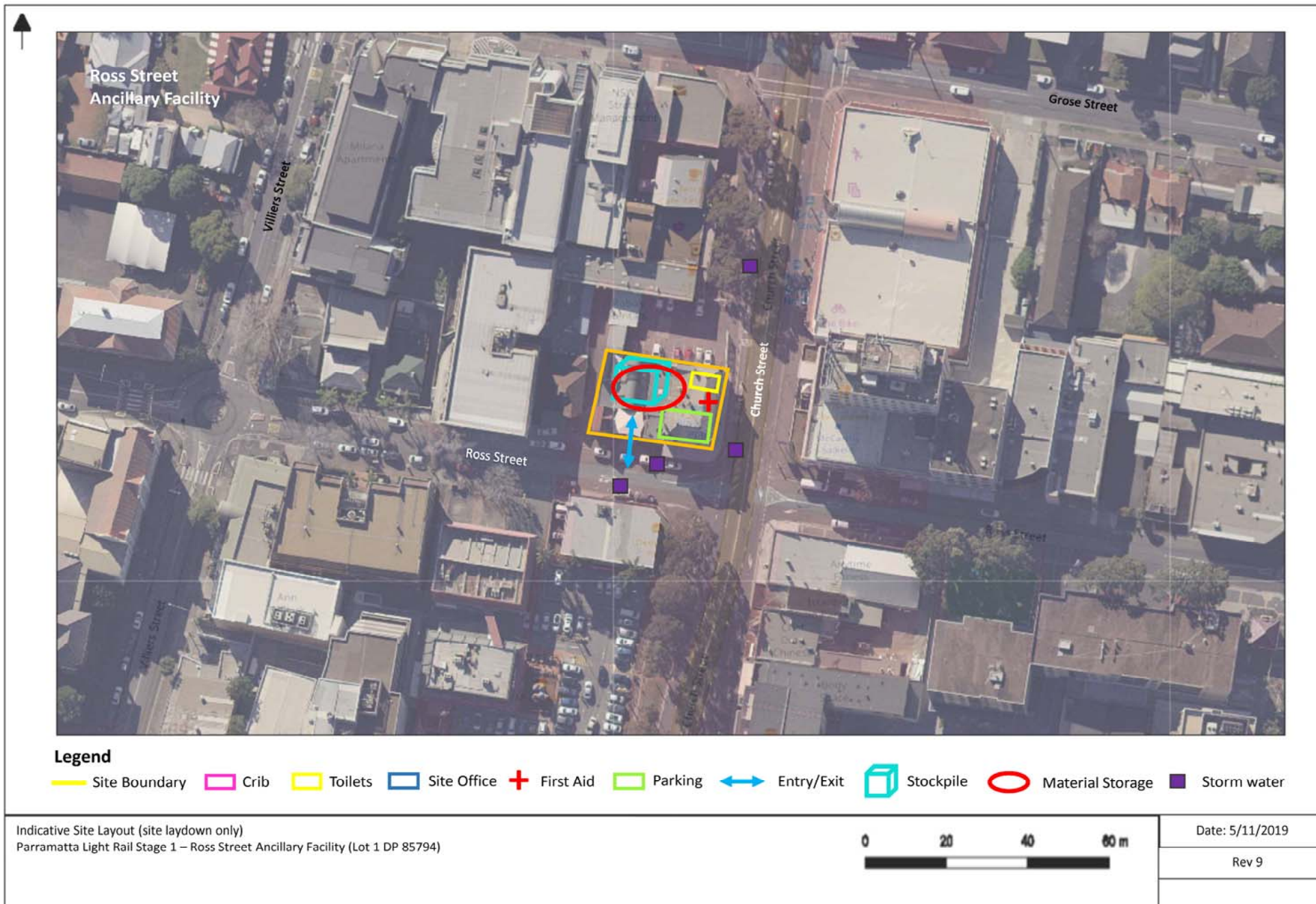


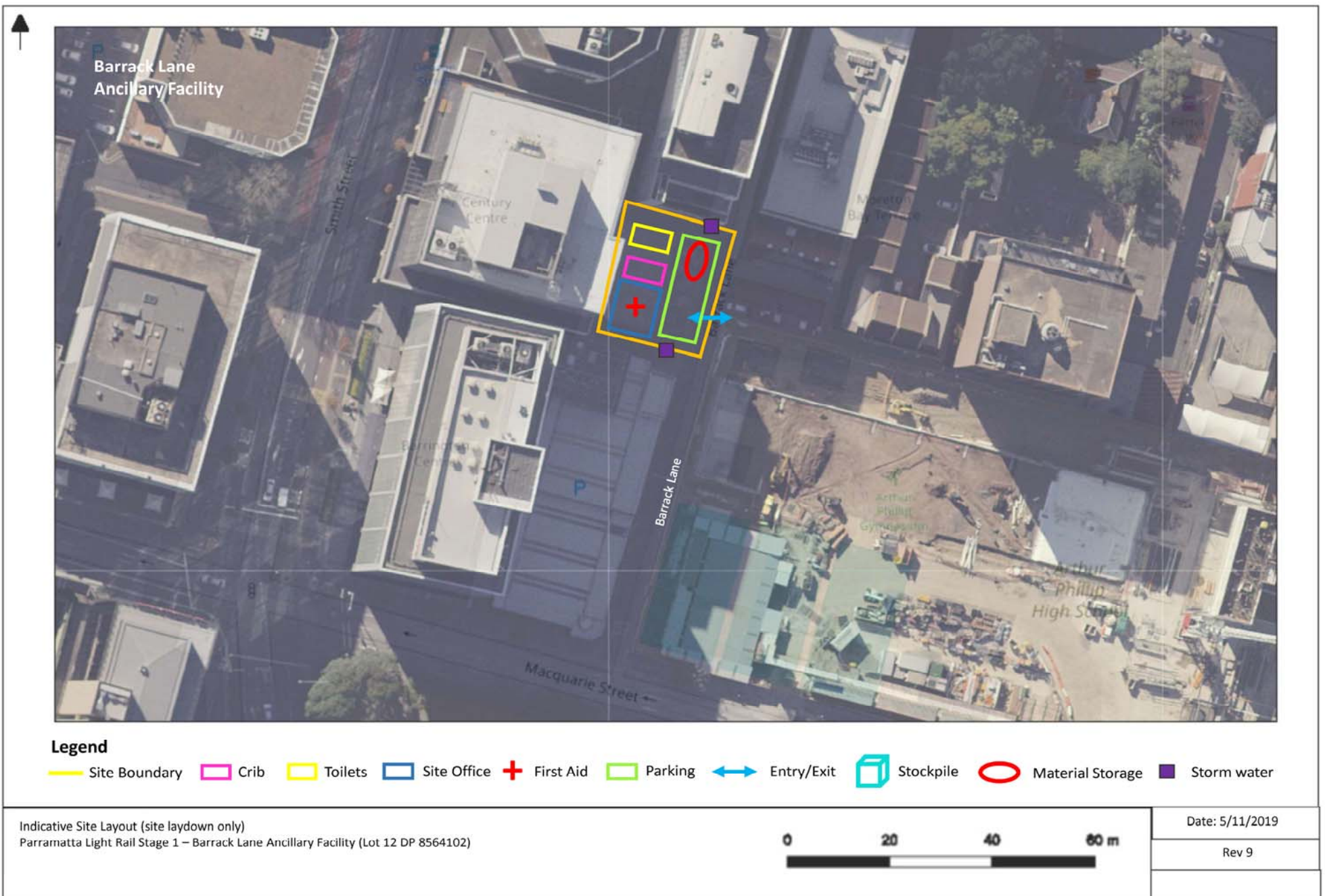
- Site Boundary
- Crib
- Toilets
- Site Office
- Parking
- Entry/Exit
- Stockpile
- Material Storage

Indicative Site Layout
Parramatta Light Rail Stage 1 – Lot 34 O'Connell Street Ancillary Facility (Lot 34 DP1206876)

Date: 22/06/2020

Rev 1









Legend

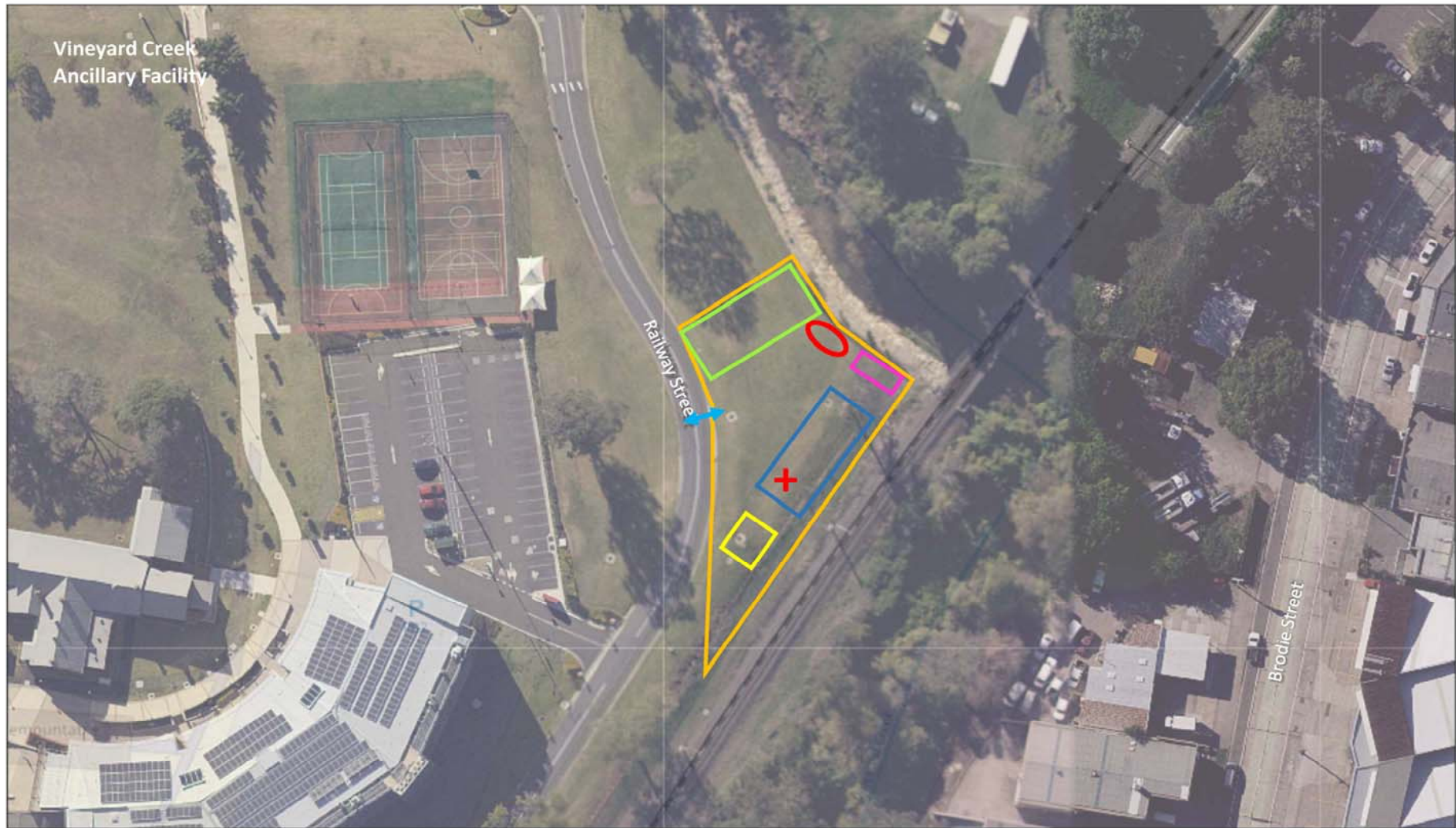
Site Boundary Crib Toilets Site Office + First Aid Parking Entry/Exit Stockpile Material Storage Storm water

Indicative Site Layout
Parramatta Light Rail Stage 1 – Parramatta Bridge South Ancillary Facility (Lot 201 DP 669350)



Date: 5/11/2019

Rev 9



Legend

— Site Boundary — Crib — Toilets — Site Office + First Aid — Parking ↔ Entry/Exit Stockpile Material Storage Storm water

Indicative Site Layout (site laydown only)
Parramatta Light Rail Stage 1 – Minor Ancillary Facility (Vineyard Creek – Lot 100 DP 816829)



Date: 5/11/2019

Rev 9



Legend

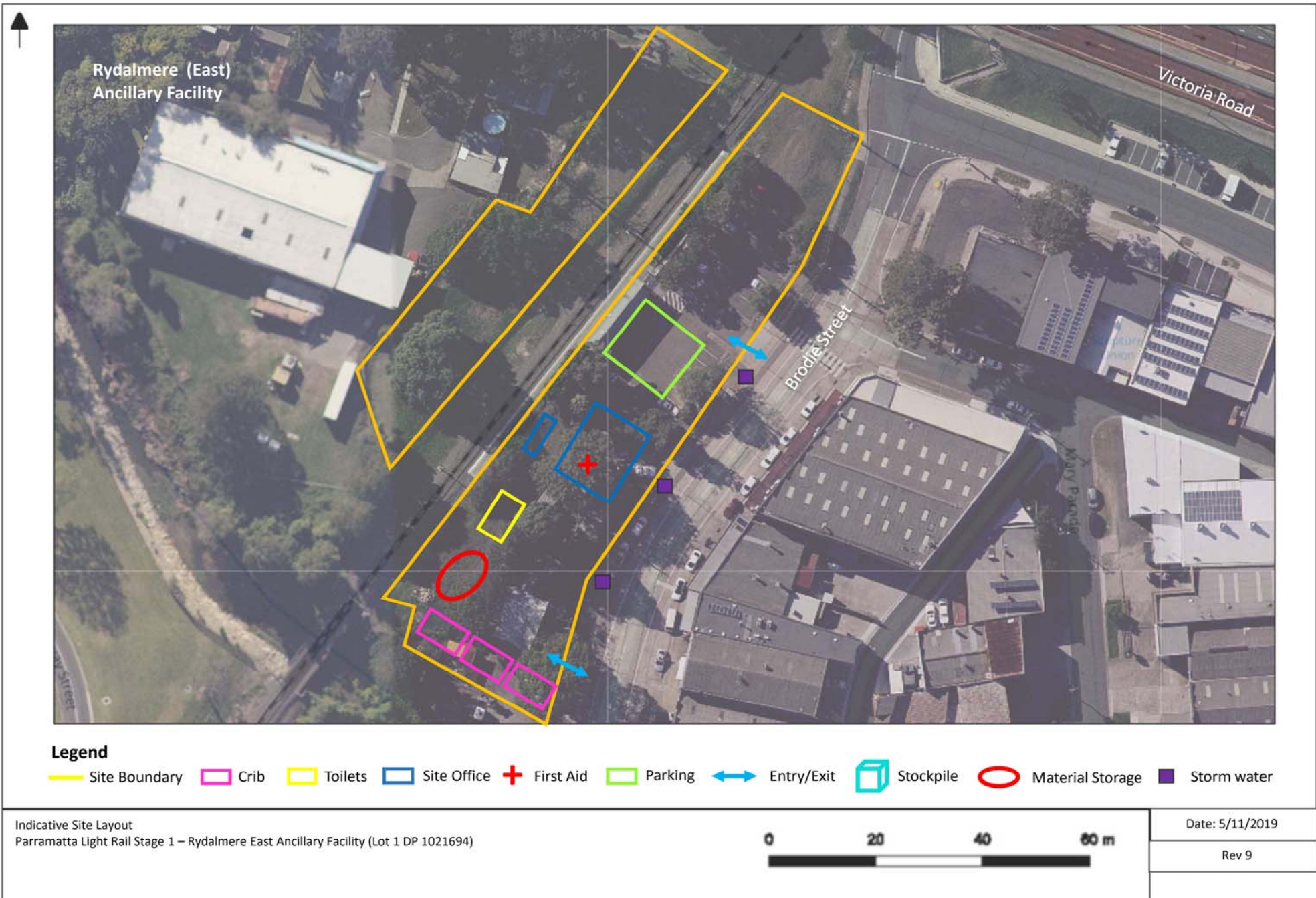
Site Boundary Crib Toilets Site Office + First Aid Parking Entry/Exit Stockpile Material Storage Storm water

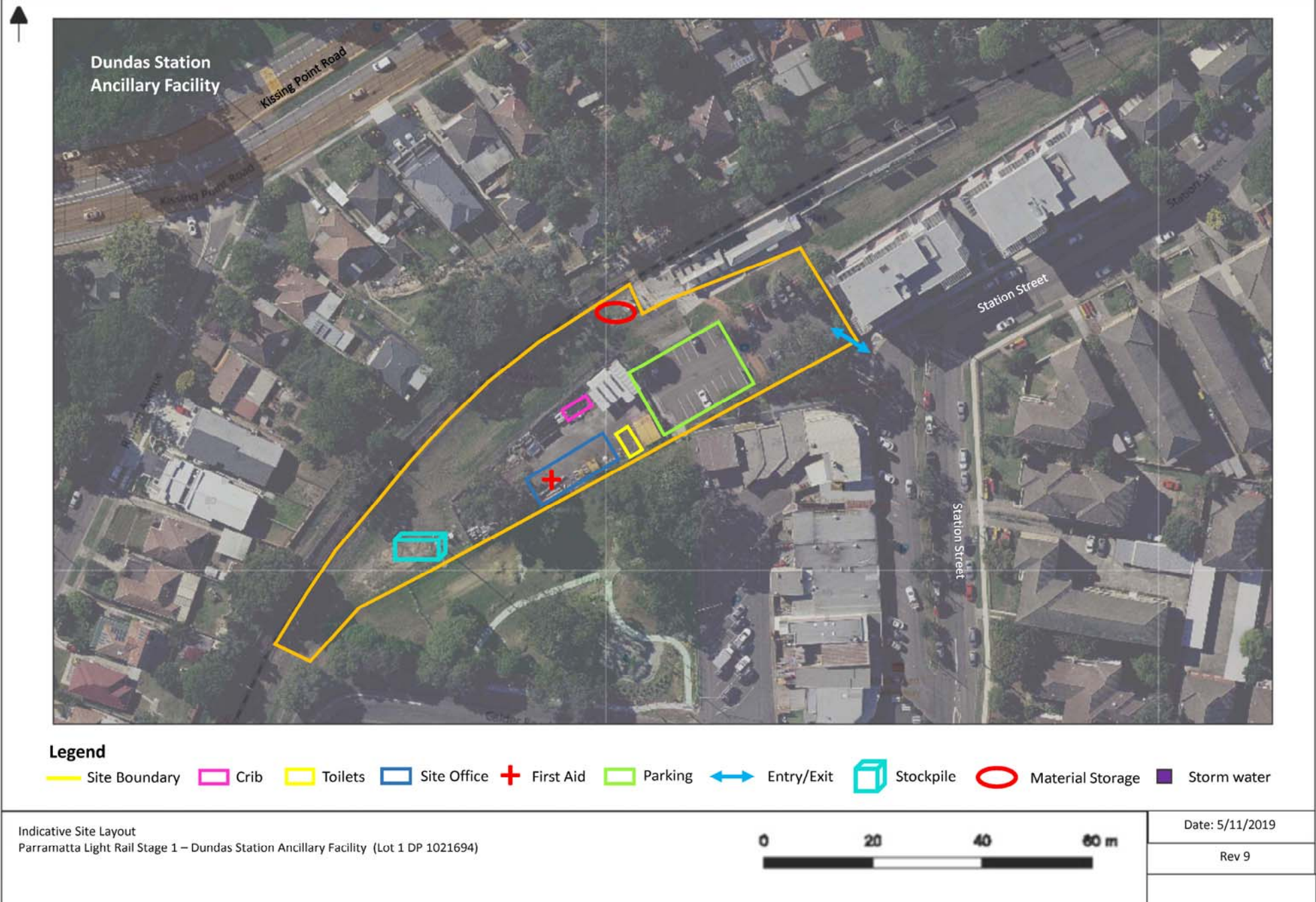
Indicative Site Layout (site laydown only)
Parramatta Light Rail Stage 1 – Minor Ancillary Facility (Lot 1 DP 1021694)

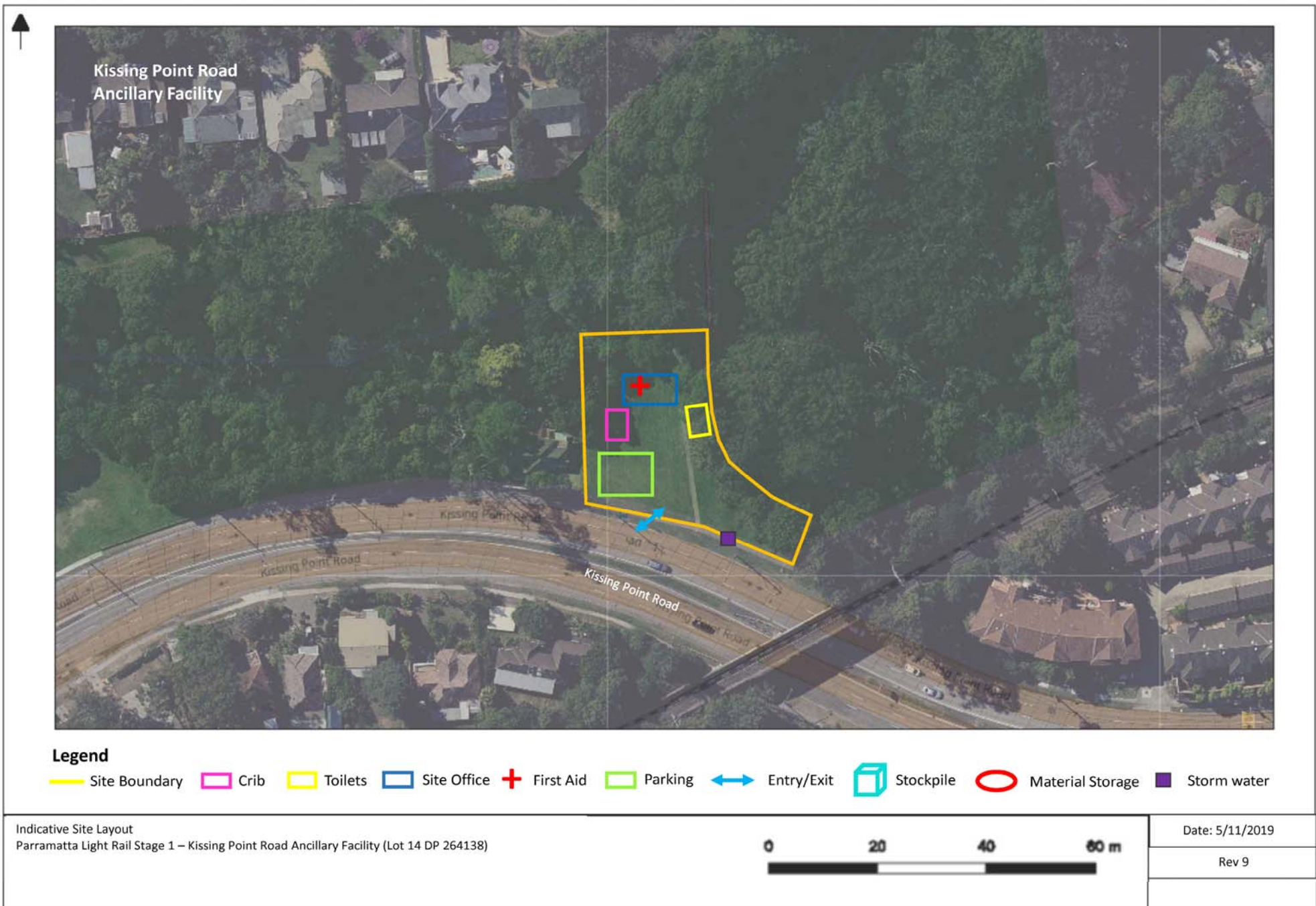
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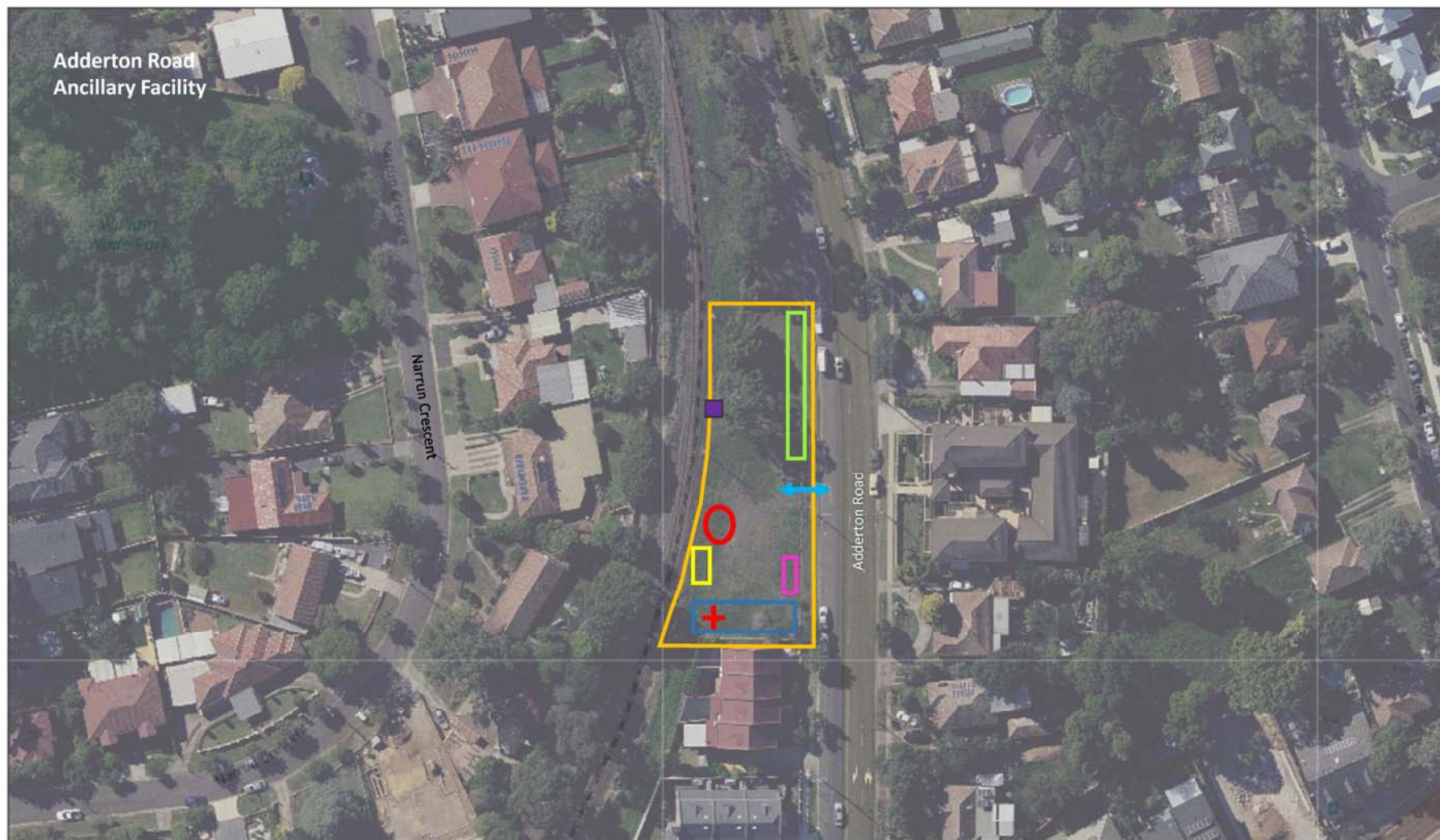
Date: 5/11/2019

Rev 9









Legend

— Site Boundary Crib Toilets Site Office + First Aid Parking ↔ Entry/Exit Stockpile Material Storage Storm water

Indicative Site Layout
Parramatta Light Rail Stage 1 – Adderton Road Ancillary Facility (Lot D, DP 418114)



Date: 5/11/2019

Rev 9



Legend

— Site Boundary Crib Toilets Site Office + First Aid Parking ↔ Entry/Exit ⊞ Stockpile Material Storage Storm water

Indicative Site Layout
Parramatta Light Rail Stage 1 – Telopea Station Ancillary Facility



Date: 5/11/2019

Rev 9



Appendix B – Environmental risk assessment

An environmental risk assessment was undertaken of each ancillary facility to identify the site-specific controls to adequately mitigate identified risks. In accordance with the TfNSW Project Risk Management Procedure (3TP-PR-086/2.0), consequence criteria are presented in **Table B-1** and likelihood criteria are defined in **Table B-2**. The overall risk rating (extreme, high, medium, and low) was then determined by use of the risk matrix in **Table B-3**.

To inform the risk assessment, the site-specific environmental aspects and potential impacts have been identified for each ancillary facility (**Table B-4**). The aspects and impacts include both site establishment and operational activities. Reflecting the outcomes of the risk assessment (**Table B-5**), mitigation and management measures were then added to **Table B-4**.

Table B-1 Consequence Criteria

INSIGNIFICANT S6	MINOR S5	MODERATE S4	MAJOR S3	CRITICAL S2	CATASTROPHIC S1
SAFETY Injury and Disease (including employees, contractors, passengers, and the public)					
Illness, first aid treatment or injury not requiring treatment.	One or more Minor Injuries (medical treatment required).	Loss Time Injury (or restricted injury or occupational illness (recoverable)).	Multiple Injuries or permanent major disabilities of employees, contractors, passengers, and/or the public.	Fatality of one employee, contractor, passenger, or a member of the public.	Multiple Fatalities involving employees, contractors, passengers, and/or the public.
ENVIRONMENT Environmental Effects / Cultural Heritage					
No appreciable change to environment or highly localised event.	Change from normal conditions but within environmental regulatory limits. Environmental effects are within site boundaries.	Short lived environmental effect. Effects to environment but experienced mostly within boundary. Minor remedial actions probably required. Breach of environmental law or regulation.	Impacting external ecosystem. Considerable remediation required. Serious breach of environmental law or regulation with investigation or report to authority with prosecution and/or moderate fine possible.	Long-term environmental impairment felt in neighbouring or valued ecosystem functions. Long term remediation required. Major breach of environmental law or regulation with likely major litigation.	Irreversible large scale environmental impact. Loss of valued ecosystem. Violation of environmental law or regulation such that very serious litigation, fines and prosecution.
FINANCIAL Project/Program/I&S Division Project Budgets					
Loss or increased cost of < \$100k.	Loss or increased cost of \$100k -\$500k.	Loss or increased cost of \$500k - \$1M.	Loss or increased cost of \$1M - \$10M.	Loss or increased cost of \$10M - \$100M	Loss or increased cost of > \$100M.
SERVICE RELIABILITY Passengers					
No impact on on-time or Nil impact on commuters	< 5 trains delayed or cancelled for less than 5 minutes in 1 sector	5 or more trains delayed or cancelled for 5 or more minutes in 1 sector	12 or more trains delayed or cancelled for 5 or more minutes in 1 sector	Whole network closes down for 1 peak period. 240-480 peak hour train delays and cancellations	Whole network closes down for multiple peak periods. > 480 peak hour train delays and cancellations

INSIGNIFICANT S6	MINOR S5	MODERATE S4	MAJOR S3	CRITICAL S2	CATASTROPHIC S1
REPUTATION Government / Media / Stakeholders					
No reaction / apprehension: Goodwill and reputation retained.	Unease: Reputation remains but loss of some goodwill. Some ongoing scrutiny / attention.	Disappointment: reputation questioned but quickly recoverable. Ongoing local public and/or media attention and/or complaints.	Concern: Reputation damaged but recoverable with time. Heightened concern by local community/media.	Displeasure: Reputation damaged but recoverable given significant effort, time & resources. Adverse media / public attention.	Outrage: Reputation damaged beyond repair. Serious public or media outcry.
REPUTATION Community					
Little or no community reaction or recognition.	Unease: Community recognises issues with minor reaction.	Community reaction and concern is evident. All or most concerns are capable of management by actions.	Community reaction and concern is significant and may impact on the success of the initiative. Issues require additional project resources to resolve.	Community actively oppose activities. Issues are substantial and require diversion of resources to resolve.	Community reaction and concern is overwhelming causing major changes or project cancellation. Requires fundamental changes to project resourcing / approach.
REPUTATION Time					
No real delay, as project has provision for accelerated schedule.	Minor delay on the project or another project and no public implications.	Final completion date missed or track possession missed for non-critical path activity (i.e. will not ultimately delay intended date for usage).	Publicly announced portion / milestone missed or final completion date missed or track possession missed - – but demonstrable mitigating external circumstances.	Publicly announced portion / milestones missed or final completion date missed or track possession missed - all for critical path projects.	Publicly announced portion/milestones significantly missed or final completion date significantly missed or multiple track possessions missed – all for critical path projects.

Table B-2 Likelihood criteria

INCREDIBLE (L6)	IMPROBABLE (L5)	REMOTE (L4)	OCCASIONAL (L3)	PROBABLE (L2)	FREQUENT (L1)
Quantitative Frequency					
Less than once every 100 years.	Once every 10 to 100 years.	Once every 5 to 10 years.	Once every 2 to 5 years.	Annually	More than once per year.
Qualitative Expectation					
You do not expect it would ever occur during the life of the project.	You do not expect it to occur during the life of the project.	You would expect it will more likely not occur than occur during the life of the project.	You would expect it will occur more likely than not occur during the life of the project.	You expect it will very likely occur during the life of the project.	You expect it will definitely be a regular & repeated feature of the project life.

Table B-3 Risk Matrix

Risk Level: 1 – Extreme 2 – High 3 – Medium 4 – Low		L6	L5	L4	L3	L2	L1
		INCREDIBLE	IMPROBABLE	REMOTE	OCCASIONAL	PROBABLE	FREQUENT
S1	CATASTROPHIC	2	1	1	1	1	1
S2	CRITICAL	3	2	1	1	1	1
S3	MAJOR	3	3	2	2	2	1
S4	MODERATE	4	3	3	2	2	2
S6	MINOR	4	4	3	3	3	2
S7	INSIGNIFICANT	4	4	4	4	4	3

Table B-4 Initial Environmental Risk Assessment

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Traffic, Access and Transport	• Use of street car parking in adjacent residential streets and commercial areas during deliveries	• Loss of parking availability to adjacent residential and commercial properties could result in community complaints	• Provision of adequate worker parking at each ancillary facility • Community notifications • Minimise parking or queuing on public roads • Traffic Control Plans	• All ancillary facilities
Traffic, Access and Transport	• General construction traffic impacting public access between local roads	• Increased traffic, loss of pedestrian access and amenity resulting in complaints, limited access and potential for delays at local road access points	• Deliveries of plant and materials to be undertaken outside of peak periods where possible • Minimise parking or queuing on public roads • Pedestrian access needs for elderly people, children and people with disability will be considered, where reasonably practicable • 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 will be used • Traffic Control Plans to be developed in consultation with relevant authorities and detour routes to be advertised and notified	• All ancillary facilities

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Traffic, Access and Transport	Operation of heavy vehicles on access routes	Complaints from sensitive receivers due to increased level and frequency of noise	- Delivery drivers will be provided with haulage routes prior to travelling to site and delivery times - Deliveries of plant and materials will be undertaken outside of peak periods where possible - Minimise parking or queuing on public roads - Scheduled road movements will be minimised where possible - Community notifications - Pedestrian management with traffic controller in place where required - Traffic Control Plans	All ancillary facilities

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Noise and Vibration	Site establishment and construction activities	Disturbance to residents or neighbouring businesses. Potential for complaints	- Standard mitigation measures will be applied as per the Noise and Vibration Management Sub-plan and reflected in Table 8-1 - Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible - Consult with community in relation to upcoming activities that may result in concern - Monitor noise for compliance as the works progress at sensitive receiver locations - Provide periods of respite for high noise generating activities	- Westmead Station - Parramatta North - Factory Street - Fennel Street - Ross Street - O'Connell Street - Barrack Lane - Alfred Street - Vineyard Creek - Rydalmere West - Rydalmere East - Dundas Station - Kissing Point Road - Adderton Road - Telopea Station - Carlingford Station

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Noise and Vibration	Site establishment demolition works	Disturbance to residents or neighbouring businesses. Potential for complaints	- Standard mitigation measures will be applied as per the Noise and Vibration Management Sub-plan and reflected in Table 8-1 - Consult with community in relation to the nature and duration of demolition activities - Ancillary facilities will use 2.4 metre high hoarding of solid construction - Monitor noise for compliance as the works progress at sensitive receiver locations - Provide periods of respite for high noise generating activities	- Westmead Station - Factory Street - Fennel Street - Ross Street - Barrack Lane - Alfred Street
Noise and Vibration	Site access out of standard construction hours	Disturbance to residents or neighbouring businesses. Potential for complaints	- Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible - Ancillary facilities will use 2.4 metre high hoarding of solid construction where required to minimise noise and vibration on sensitive receivers where safe to do so (subject to outcomes of CNVIS) - Monitor noise for compliance to project goals	Subject to approved Out of Hours Permits

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Flora and Fauna	- Vegetation clearing and topsoil stripping - Noxious weed treatment	Loss of vegetation	- Tree Protection Plans - Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible - Pre-clearance survey will be conducted prior to clearing activities - The clearing of vegetation (e.g. street trees and trees within public open spaces) will be limited to the minimum amount necessary to construct the project - Where trees which can be retained will be located within construction boundaries, exclusion fencing will be erected to protect these trees from construction activities	- Factory Street - Alfred Street - Parramatta Bridge South - Vineyard Creek - Rydalmere West - Rydalmere East - Dundas Station - Kissing Point Road - Adderton Road - Telopea Station
Flora and Fauna	Noise and vibration	Impact to the Grey-headed flying fox colony	Implement the Grey-Headed Flying Fox Monitoring Program (PLR-TFNSW-CBD-PE-PRG-000001)	Parramatta North

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Visual Amenity	Construction and operation of ancillary facilities	- Surrounding aesthetic temporary altered during construction - Loss of privacy and amenity	- Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible - Maintain work area in an orderly manner - Site sheds will be maintained in a clean condition and be established at locations and positions that will minimise the impact on adjoining properties and residents - Position site sheds to shield sensitive and residential receivers from works activities - Temporary fencing / hoarding will be applied on boundary of ancillary facilities - Materials and machinery will be stored behind fencing/hoarding to minimise visual impact	- Parramatta North - Factory Street - Fennel Street - O'Connell Street - Ross Street - Alfred Street - Dundas Station - Kissing Point Road - Adderton Road - Telopea Station - Carlingford Station
Visual Amenity	Lighting towers used during out of hours works	Light spill impacting nearby residents	Lighting required during night works will be directed towards the work area and away from adjacent sensitive receivers	- Parramatta North - Factory Street - Fennel Street - Ross Street - Alfred Street - Dundas Station - Kissing Point Road - Adderton Road - Telopea Station - Carlingford Station

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Hazardous Materials	Fuel and chemical storage, handling and refuelling	- Contamination of soil/water - Spills or leaks resulting in pollution of land or water	- All stormwater drains will be identified prior to works and controls will be implemented - Appropriate bunding / storage of substances - Toolbox on site procedures for sediment controls and chemical storage will be provided - Spill kits located adjacent to storage areas - All fuels, chemicals and hazardous liquids will be stored within an impervious bunded area in accordance with Australian Standards (e.g. AS 1940) and NSW Environment Protection Authority guidelines. Bunds must be stored in areas above the 10% AEP flood level	All ancillary facilities
Hazardous Materials	Demolition of existing buildings	- Contamination of soil/water - Human health impacts	- Conduct a hazardous materials assessment of buildings to be demolished and implement recommended actions - Where asbestos is identified, the site will be isolated from other work areas and the public - Asbestos containing material will be prepared, removed and disposed of by a licenced specialist contractor (refer to Table 8-1, SE50 and SE51) - Engage a third party occupational hygienist to provide air monitoring and provide clearance following asbestos removal	- Westmead Station - Factory Street - Fennel Street - Ross Street - Barrack Lane - Alfred Street

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Heritage	Demolition and ground levelling works	Potential impact to heritage items	- Unexpected finds procedure will be implemented in accordance with the TfNSW Standard Management Procedure – Unexpected Heritage Finds Guideline - A heritage induction will be delivered to all workers - Ancillary facilities will be located away from (or able to be managed in such a way so as to not impact on) heritage items and high retention value trees - Ancillary facilities will be situated on relatively level ground and will avoid excavation where risk of heritage impacts or disturbance of contaminated material - Archaeological monitoring will be undertaken in accordance with the Historical Archaeological Design and Excavation Methodology	- Ross Street - Parramatta Bridge South

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Air Quality	• Movement of plant and machinery • Stockpiling of materials	• Generation of dust in close proximity to residential and commercial premises; complaints received	• Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible • Compact or seal ancillary facility surfaces • Low speed limits will be imposed around compound sites to limit the generation of dust from vehicle movements • Stockpile areas will be managed to minimise potential pollution of watercourses, groundwater and local air quality • Standard mitigation measures will be applied as per Table 8-1	• Westmead Station • Parramatta North • Factory Street • Fennel Street • O'Connell Street • Ross Street • Alfred Street • Rydalmere West • Rydalmere East • Dundas Station • Adderton Road • Telopea Station • Carlingford Station

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Air Quality	Exhaust from plant and equipment	Localised air pollution	- Locate ancillary facilities away from sensitive land uses and receivers wherever practical and feasible - Plant and equipment to be adequately maintained and assessed through pre-start checks - Perimeter screening will be installed around areas where there is a potential to generate emissions to air and around long-term ancillary facilities and stockpile locations - Standard mitigation measures will be applied as per Table 8-1	- Westmead Station - Parramatta North - Factory Street - Fennel Street - O'Connell Street - Ross Street - Alfred Street - Rydalmere West - Rydalmere East - Dundas Station - Adderton Road - Telopea Station - Carlingford Station
Air Quality	Demolition and ground levelling works	Generation of dust in close proximity to residential and commercial premises; complaints received	- Install site hoarding - Install site fencing and shade cloth at the entry/exit locations; connect with hoarding to fully encapsulate the site - Install screen walls where required to contain any falling debris - Establish misting water sprays to control dust - Monitor weather conditions daily and cease activities during periods of high wind	- Westmead Station - Factory Street - Fennel Street - Ross Street - Barrack Lane - Alfred Street

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Soil Contamination	Excavation, soil disturbance and ground levelling works	- Discovery of contamination during activities - Health and safety impacts to workers or the community through inhalation and/or direct contact with contaminated materials	Prior to any excavation activities within an Area of Environmental Interest (AEI) identified as having a high risk of contamination or identified as medium risk subject to further desktop assessment, a Site Contamination Report must be prepared. This requirement is applicable to the Fennell Street (436 Church Street), Barrack Lane (1A Barrack Lane) and Carlingford Station (Former Producers Co-Op) ancillary facilities	- Fennell Street - Barrack Lane - Carlingford Station
Soil Contamination	Excavation, soil disturbance and ground levelling works	- Unanticipated discovery of contamination during demolition/excavation activities - Health and safety impacts to workers or the community through inhalation and/or direct contact with contaminated materials	- Unexpected Land and Asbestos Finds procedure - Standard mitigation measures will be applied as per Table 8-1	All ancillary facilities

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Asbestos	Excavation, soil disturbance and ground levelling works	- Unanticipated discovery of asbestos during excavation activities - Health and safety impacts to workers or the community through inhalation and/or direct contact with asbestos-containing materials	- Unexpected Contaminated Land and Asbestos Finds procedure will be implemented - Standard mitigation measures will be applied as per Table 8-1	All ancillary facilities
Water Quality	- Works around watercourses - Excavation and soil disturbance - Stockpiling of construction materials and spoil	Localised water pollution	- Ancillary facilities will be located away from waterways, where possible - Ancillary facilities and stockpiles will, where feasible and reasonable, be located away from any surface runoff flow paths and above the 10% AEP flood levels - Stockpile areas will be managed to minimise potential pollution of watercourses, groundwater and local air quality - All stockpiled materials will be stored in accordance with the 'Blue Book' Managing Urban Stormwater: Soils and Construction (Landcom 2004) and kept away from waterways and stormwater drainage structures to avoid sediment entering surrounding waterways - Standard mitigation measures will be applied as per Table 8-1	- Parramatta North - Parramatta Bridge South - Vineyard Creek

Issue	Construction activity/aspect	Potential impact	Indicative Mitigation and Management Measures	Applicable Ancillary Facilities
Utilities	Utility installations and relocations	Loss of service to surrounding residents and businesses	- Positive identification of utilities in accordance with the Permit to Excavation process - Inground removal works are not planning to be undertaken - Isolation of above ground utilities prior to the disassembly of buildings	All ancillary facilities

Table B- 5 Site-specific Environmental Risk Assessment

	Westmead Station		Parramatta North		Factory Street		Fennel Street	
	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk
Noise and Vibration (establishment)	2 (High)	3 (Medium)	3 (Medium)	4 (Low)	2 (High)	3 (Medium)	2 (High)	3 (Medium)
Noise and Vibration (operation)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Traffic and Access	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	2 (High)	4 (Low)	2 (High)	3 (Medium)
Air Quality	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Flora and Fauna	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Water Quality	4 (Low)	4 (Low)	2 (High)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Visual	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Heritage	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Contamination	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)

Table B-5 (cont.) Site-specific Environmental Risk Assessment

	Ross Street		O'Connell Street		Barrack Lane		Alfred Street	
	Initial Risk	Residual Risk			Initial Risk	Residual Risk	Initial Risk	Residual Risk
Noise and Vibration (establishment)	2 (High)	3 (Medium)	3 (Medium)	4 (Low)	2 (High)	3 (Medium)	2 (High)	3 (Medium)
Noise and Vibration (operation)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Traffic and Access	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Air Quality	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Flora and Fauna	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Water Quality	4 (Low)	4 (Low)	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Visual	2 (High)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Heritage	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Contamination	3 (Medium)	3 (Medium)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)
Flood	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	2 (High)	3 (Medium)

Table B-5 (cont.) Site-specific Environmental Risk Assessment

	Parramatta River Bridge (south)		Vineyard Creek		Rydalmere Station (west)		Rydalmere Station (east)	
	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk
Noise and Vibration (establishment)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Noise and Vibration (operation)	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Traffic and Access	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	2 (High)	4 (Low)
Air Quality	4 (Low)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Flora and Fauna	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Water Quality	2 (High)	3 (Medium)	2 (High)	3 (Medium)	2 (High)	3 (Medium)	2 (High)	3 (Medium)
Visual	3 (Medium)	4 (Low)	3 (Medium)	3 (Medium)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Heritage	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Contamination	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Flood	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)

Table B-5 (cont.) Site-specific Environmental Risk Assessment

	Dundas Station		Kissing Point Road		Adderton Road		Telopea Station	
	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk	Initial Risk	Residual Risk
Noise and Vibration (establishment)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Noise and Vibration (operation)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Traffic and Access	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)
Air Quality	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)
Flora and Fauna	4 (Low)	4 (Low)	2 (High)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Water Quality	4 (Low)	4 (Low)	2 (High)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Visual	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	3 (Medium)	4 (Low)	4 (Low)	4 (Low)
Heritage	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Contamination	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)
Flood	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)	4 (Low)

	Carlingford Station	
	Initial Risk	Residual Risk
Noise and Vibration (establishment)	3 (Medium)	4 (Low)
Noise and Vibration (operation)	3 (Medium)	4 (Low)
Traffic and Access	3 (Medium)	4 (Low)
Air Quality	3 (Medium)	4 (Low)
Flora and Fauna	3 (Medium)	4 (Low)
Water Quality	4 (Low)	4 (Low)
Visual	3 (Medium)	4 (Low)
Heritage	2 (High)	3 (Medium)
Contamination	4 (Low)	4 (Low)
Flood	2 (High)	3 (Medium)

Appendix C – Minor ancillary facility checklist template

Minor Impact Ancillary Facility Checklist

[site name]

1. Criteria for minor ancillary facilities

Chapter 7 of the Site Establishment Management Plan (SEMP) outlines the procedure for the approval of ancillary facilities.

As outlined in the procedure, this checklist is to be used for minor construction related ancillary facilities including minor site sheds, lunch sheds and portable toilets or other ancillary facilities determined by the ER to have a minor environmental impact. These facilities will be located in accordance with the criteria listed in **Table C-1** and submitted to the TfNSW Environment Manager for approval prior to installation.

Table C-1: Criteria for minor impact ancillary facilities

Site Name	
Precinct	
Chainage / Address	
Date	
Document Number (Revision)	

Criteria	Compliant (Yes / No)	Comments
Located within an active construction zone within the approved project boundary.		
Have minimal amenity impacts to surrounding residences and stakeholders (as demonstrated through consultation), with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts.		
Have minimal impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the project.		
Have environmental and amenity impacts that can be managed through the implementation of environmental measures been detailed in the construction environmental management plan for the project.		

A locational map including site layout and environmental constraints is attached in Attachment A.

2. Mitigation measures

[If the above criteria is not satisfied, add additional mitigation measures to the below table]

Table C-2: Site specific mitigation measures additional to the CEMP

	Measure/ Requirement	Responsibility	Timing / frequency	Reference
INSERT TOPIC				
	<i>Insert mitigation measure</i>			

Relevant mitigation measures must be included in the Environmental Control Map and submitted to the ER for endorsement prior to commencement of works.

3. Certification

This minor ancillary facility checklist provides a true and fair review of the proposed activity for Parramatta Light Rail project.

Signed	
Name	
Position: TfNSW/CPBD JV Engineer	Date
Signed	
Name	
Position: Environment Representative	Date

[site name]

Attachments

Attachment A: Locational map (ECM) including site layout and environmental constraints

Appendix D – Environmental Incident and Emergency Response Plan

Appendix E – Consultation Evidence

Table E-1: Log of consultation with City of Parramatta Council as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19&20/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 17:36	Email	Issue of Site Establishment Management Plan for review.
In	08/07/19, 17:01	Email	Response Site Establishment Management Plan review with comments register.
Out	16/07/19, 19:27	Email	Return of updated comments register confirming that recommendations had been incorporated into the plan.
In	02/08/19, 12:18	Email	Response confirming that City of Parramatta Council is satisfied with the response to the comments.
Out	29/07/20, 07:14	Email	Revised SEMP provided with the inclusion of the O'Connell Street ancillary facility. Feedback requested.
In	29/07/20, 12:07	Email	City of Parramatta Council confirmed that they have no objection to the proposed O'Connell Street ancillary facility.

Table E-2: Log of issues raised by City of Parramatta Council as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	No reference to Dilapidation reports	Comment has been addressed in Table 8-1 (SE49) A road dilapidation report will be prepared for all roads likely to be used by construction traffic prior to commencement of construction and after construction is completed. The dilapidation reports will include all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected. A copy of the dilapidation reports will be provided to the asset owner no later than one month before the commencement of works.	Table 8-1 (SE49)

Table E-3: Log of consultation with Cumberland Council as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 18:40	Email	Issue of Site Establishment Management Plan Sub-plan for review.
In	11/07/19, 17:01	Email	Response to CEMP and Sub-plan review received. No comments provided for the Site Establishment Management Plan.
Out	16/07/19, 19:41	Email	Email requesting confirmation that Cumberland Council has no feedback on the Site Establishment Management Plan.
In	17/07/19, 9:11	Email	Email confirming that Cumberland Council has no feedback on the Site Establishment Management Plan.

Table E-4: Log of consultation with EPA as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended)
Out	21/06/19, 18:40	Email	Issue of Site Establishment Management Plan for review.
In	09/07/19, 17:21	Email	Response Site Establishment Management Plan review with comments register.
Out	17/07/19, 19:53	Email	Return of updated comments register confirming that recommendations had been incorporated into the plan.
In	17/10/19, 13:10	Email	Email confirming that the EPA has no further comment on plans.

Table E-5: Log of issues raised by EPA as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	Section 5.1.2 Decommissioning and Rehabilitation Should an EPL apply please include the process for informing the EPA of decommissioned land to comply with licence conditions	Noted. The PLR Infrastructure Works is consistent with the definition of a Railway activities – railway infrastructure construction (clause 33) pursuant to Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> (the Act) and as such will require an EPL. The SEMP and CEMP will be revised to be consistent with the requirements of the EPL.	<i>To be completed in future revision when requirements of EPL are incorporated.</i>
1.02	Table, 8-1 SE41 Should an EPL apply please include hours that align with licence conditions	As per comment 1.02	<i>To be completed in future revision when requirements of EPL are incorporated.</i>
1.03	Section 9.3 External Reporting and Appendix D, External Reporting Where an EPL applies it is suggested that information is included to confirm that Reporting will comply with EPL conditions	As per comment 1.02	<i>To be completed in future revision when requirements of EPL are incorporated.</i>
1.04	Section 9.6 Licences and Permits Should an EPL apply, please amend to confirm use of facilities outside of standard hours will comply with EPL conditions	As per comment 1.02	<i>To be completed in future revision when requirements of EPL are incorporated.</i>

Table E-6: Log of consultation with NSW Health – Health Administration Corporation as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 18:40	Email	Issue of Site Establishment Management Plan for review.
Out	26/06/19: 12:30	Meeting	The USB memory stick delivered with full CEMP, each sub-plan, SEMP and briefing sessions presentation.
In	09/07/19, 15:21	Email	Response to Site Establishment Management Plan review with comments register.
Out	01/08/19, 9:53	Email	Return of updated comments register and request for confirmation that NSW Health – Cumberland Hospital is satisfied with the response.
In	09/08/19, 13:32	Email	Response from Westmead Precinct stating that final response will be streamlined through one party for NSW Health. Final responses to CEMP and Sub-Plans will be forthcoming.
In	04/09/19, 6:44	Email	Response from PWC (NSW Health nominated representative) detailing consolidated comments on all plans. It is noted that the comment on the Flood Management Sub-plan was not included and is therefore closed.
In	01/11/19, 17:59	Email	Response from PWC confirmed that all comments on the SEMP, CEMP and Sub-plans have been satisfactorily closed.

Table E-7: Log of issues raised by NSW Health – Health Administration Corporation as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	This plan denotes a site compound will be located in a cleared area on the eastern bank of Parramatta River near the Parramatta River Bridge at Westmead from late 2019 until Late 2021. This is where our contractor Renascent's site compound is situated currently – PLR Cumberland East project that Project Director Moureen Wong manages. We request a minimum of FOUR WEEKS notice for PLR to occupy the current Renascent compound site – our program is being revised and our Contractor is highly likely to be still on-site till Feb 2020.	Noted.	No specific update required in the SEMP
1.02	Parramatta North precinct - Access from the existing Cumberland Hospital (east) Precinct access roads – we require reassurance and ongoing consultations to maintain access because about 600 operational staff clinical and non-clinical, works in Cumberland East.	Traffic Control Plans (TCP) and Vehicle Movement Plans (VMP) will be prepared in accordance with the Traffic Transport and Access Management Plan in consultation with the Cumberland Hospital. An Executive Briefing is to be completed to map contact points and clarify the consultation and notification protocols.	No specific update required in the SEMP
1.03	Parramatta North precinct - During works on the Parramatta North Bridge, emergency vehicle access will NEED to be maintained at all times at Cumberland Hospital campus– we require a minimum of 8 weeks notice so we plan and socialise with the appropriate service units, consumers and carers.	The Infrastructure Works Contract includes requirements in relation to traffic management including maintaining and clearly signposting access to all hospital emergency departments at all times. This will be incorporated in Traffic Control Plans (TCP) and Vehicle Movement Plans (VMP) prepared in accordance with the Traffic Transport and Access Management Plan in consultation with the Cumberland Hospital.	No specific update required in the SEMP

Reference	Comment	How addressed	Management plan reference location
1.04	INFRA to confirm if any minor ancillary construction facilities proposed? Appendix A shows 2 facilities at the Westmead Campus, Section 7.1 discusses additional facilities outside of C18. Will further sites be added? How will HAC be consulted to assess potential impact on operations?	No additional ancillary facilities are proposed with the Westmead Campus. Portable toilets may be placed within the traffic stage barriers within the site. Additional minor facilities are proposed within the project area within Cumberland Hospital East Campus.	No specific update required in the SEMP

Table E-8: Log of consultation with Health NSW – Westmead Precinct (Sydney Children’s Hospital Westmead) as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19& 20/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 18:40	Email	Issue of Site Establishment Management Plan for review.
Out	10/07/19 11:02	Email	Request for comments or update on when comments may be received.
Out	17/07/19 20:03	Email	Request for comments or update on when comments may be received.
In	29/07/19 17:27	Email	Response with no comments on the Site Establishment Management Plan

Table E-9: Log of consultation with RMS as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended)
Out	21/06/19, 18:40	Email	Issue of Site Establishment Management Plan for review.
In	05/07/19, 14:05	Email	Response CEMP and Sub-plan (including Site Establishment Management Plan) review with comments register. No comments provided on the Site Establishment Management Plan.
Out	29/07/20	Phone call	Discussed revised SEMP and scope of the TMP. Feedback requested.
In	30/07/20, 10:05	Email	RMS confirmed that they have no issue with the ongoing operation of the O'Connell Street ancillary facility.

Table E-10: Log of consultation with Natural Resources Access Regulator (NRAR) as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19&20/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (attended).
Out	21/06/19, 17:36	Email	Issue of Site Establishment Management Plan for review.
Out	13/07/19, 15:35	Email	Request for comments or update on when comments may be received.
In	15/07/19, 9:44	Email	Email confirming that NRAR has no feedback on the Site Establishment Management Plan

Table E-11: Log of consultation with HAC as per A5(b) and (c)

In / Out	Date and time	Method of contact	Details of contact
Out	19/06/19 and 20/06/19	Workshops	PLR Infrastructure Package CEMP and Sub-plan briefing sessions (non-attendance).
Out	02/08/19	Meeting	HAC Internal Coordination Meeting #1. Minutes item #5 to issue Plans to HAC
Out	09/08/19	Email	Issue of Site Establishment Management Plan for review.
Out	15/08/19	Email	CEMP and Subplans re-issued to HAC (to alternate stakeholders).
In	04/09/19, 06:44	Email	Response to Site Establishment Management Plan review with comments.

Table E-12: Log of issues raised by HAC as per A5 (d) and (e)

Reference	Comment	How addressed	Management plan reference location
1.01	INFRA to confirm if any minor ancillary construction facilities proposed? Appendix A shows 2 facilities at the Westmead Campus, Section 7.1 discusses additional facilities outside of C18. Will further sites be added? How will HAC be consulted to assess potential impact on operations?	There are no minor ancillary facilities proposed in Westmead at this stage. In the event that minor ancillary facilities are proposed, consultation will be undertaken with HAC. This requirement has been added to the process for evaluating Minor Ancillary Facilities (Section 7.1 and Appendix C).	Section 7.1 and Appendix C

Appendix F – Environmental Representative Endorsement

2 September 2020

Transport for NSW

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

**Review of Site Establishment Management Plan.
Infrastructure Works (Package 4) - Parramatta Light Rail Stage 1
(PLR1INF-CPBD-ALL-PE-PLN-000003 Rev 11)**

Pursuant to SSI8285 Condition of Approval A23 (d) i), as the approved Environmental Representative, I confirm that I have reviewed the Site Establishment Management Plan. Infrastructure Works (Package 4), Parramatta Light Rail - Stage 1 (PLR1INF-CPBD-ALL-PE-PLN-000003, Rev 11), dated 26/08/2020, prepared by CPB Downer Joint Venture, for consistency with the requirements of the Conditions of Approval.

In my opinion the Site Establishment Management Plan remains consistent with the requirements included in or required under the terms of the Conditions of Approval for the Parramatta Light Rail (Stage 1) development.

Yours sincerely,

Australian Quality Assurance & Superintendence Pty Ltd (AQUAS)



Gillian Lehn

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Filename : *AQ1148.05 PLR CPBD SEMP rev 11endorsement 200902*

For more information about the Parramatta Light
Rail project, visit Parramattalightrail.nsw.gov.au

Call: 1800 139 389

Email: Parramattalightrail@transport.nsw.gov.au

