



**PARRAMATTA LIGHT RAIL
STAGE 1
INFRASTRUCTURE
CONTRACT 1SD-17-6721**

**POLLUTION INCIDENT RESPONSE
MANAGEMENT PLAN**



JOINT VENTURE

Document Control

Project number	N81080
Document number	
Revision date	02 October 2023
Revision:	5

Rev.	Date	Prepared By	Reviewed By	Approved By	Remarks
0	1/09/2019				Nil
1	20/01/2020				Nil
2	29/10/2020				Nil
3	15/10/2021				Nil
4	10/10/2022				Nil
5	02/10/2023				Nil



Contents

Acronyms	iv
1. Overview and Scope	1
1.1. Objectives	1
1.2. Scope	1
1.3. Accountabilities	1
1.4. System Assurance	2
2. Implementation	3
2.1. When to implement this plan.....	3
3. Notification	5
3.1. Incident Reporting Protocol.....	5
Relevant Information required to be given to the Relevant Authorities when making a notification is specified in Section 150 of the POEO Act 1997 as follows:	6
3.2. Community Notification Protocol.....	6
4. Potential Impacts	8
4.1. Pollution Incident Planning.....	8
4.1.1. Risk Matrix	8
4.1.2. Environmental Risk Register	8
4.1.3. Sensitive Receivers:	9
4.2. Incident/Emergency Response Procedures	9
4.2.1. Potential Incidents/Emergencies and Response Procedures	9
5. Mitigation	11
5.1. Inventory of Potential Hazardous Materials	11
5.2. Pre-emptive Actions	12
5.3. Minimising Harm to Persons on the Premises	12
5.4. Management Plans and Procedures	12
5.4.1. Safety Equipment	12
5.4.2. Maps	13
5.5. Staff Training.....	13
6. PIRMP	14
6.1. Continual Improvement.....	14
6.1.1. Testing and review of this Plan.....	14
6.1.2. Updating the PIRMP	14
6.2. Availability of the PIRMP.....	14
A-1 Premises Maps	15
A-2 Risk Matrix (Consequence & Likelihood Criteria)	16
A-2-1 Likelihood Criteria	16
A-2-2 Consequence Criteria	16
A-2-3 Risk Matrix	19
A-3 Environmental Risk Register	20
Tables	
Table 2-1: Action to be taken in response to a notifiable pollution incident	3



Table 2-2: CPBD JV Key Contacts (to be notified of all notifiable pollution incidents).....	4
Table 2-3: TfNSW and ER Contacts.....	4
Table 3-1: Authority Notification Protocol	5
Table 3-2: Community Notification Requirements in Event of Emergency or Incident	7
Table 4-1: Notifiable Events	10
Table 5-1: Potential Pollutants on Site	11



Acronyms

Terms and acronyms commonly used in this report are outlined in the glossary table below.

Acronym / Term	Definition
ASS	Acid Sulphate Soils
CEMP	Construction Environmental Management Plan
CoA	The Planning Minister's Conditions of Approval of the Infrastructure Approval
CSSI	The Critical State Significant Infrastructure as described in Schedule 1 of the Parramatta Light Rail – Stage 1 Infrastructure Approval (Application No. SSI 8285)
Parramatta Connect	An unincorporated joint venture between CPB Contractors Downer EDI Works to deliver the Parramatta Light Rail Stage 1 Infrastructure Works package.
ECMs	Environmental Control Maps
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EPL	Environment Protection License under the POEO Act
ER	The Environmental Representative for the CSSI: A suitably qualified and experienced person independent of the Contractor and Proponent, and project design and construction personnel, employed for the duration of construction. The Environmental Representative sits under the Independent Certifier.
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).
OEH	Office of Environment and Heritage
Package 4	Package 4: Infrastructure Contract of the Parramatta Light Rail – Stage 1.
PIC	Person in Charge. 24-hour incident notification number.
PIRMP	Pollution Incident Response Management Plan
PLR	Parramatta Light Rail (Stage 1)
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Pollution Incident	Has the meaning as defined in the Dictionary to the POEO Act: An incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
Premises	Areas as shown on the EPL Premise Area Maps (Appendix A-1).
TfNSW	Transport for NSW



1. Overview and Scope

1.1. Objectives

The Pollution Incident Response Management Plan (PIRMP) details the requirements for responding to a pollution incident as required by the *Protection of the Environment Operations Act 1997* (POEO Act). The CPB Contractors Downer Joint Venture (Parramatta Connect) has prepared this PIRMP in accordance with the legal requirements and with reference to the NSW Environment Protection Authority's (EPA) *Environmental guidelines: Preparation of pollution incident response management plans* (2012).

The objectives of the PIRMP are to:

- ensure comprehensive and timely communication about a pollution incident to staff at the Premises, the EPA, other relevant authorities specified in the POEO Act, and people in the vicinity of the Premises who may be impacted by the pollution incident. The Premises are the areas as shown on the EPL Premise Area Maps (**Appendix A-1**).
- minimise and control the risk of a pollution incident at the Premises by requiring identification of risks and the development of planned actions to minimise and manage those risks.
- ensure that the PIRMP is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the PIRMP is regularly tested for accuracy, currency and suitability.

1.2. Scope

This PIRMP applies to the Parramatta Light Rail – Stage 1 (Westmead to Carlingford) Package 4: Infrastructure Contract (Package 4). These works are being undertaken by Parramatta Connect. This PIRMP applies to all activities undertaken by these parties at the Premises and all personnel undertaking such activities.

This Plan is interrelated with other Parramatta Connect Plans, as set out below:

- Incident Management Plan (LR1INF-CPBD-ALL-HS-PLN-000001).
- Emergency Management Plan (PLR1INF-CPBD-ALL-HS-PLN-000003).
- Crisis Management Plan (PLR1INF-CPBD-ALL-HS-PLN-000004).

1.3. Accountabilities

The Project Director and the Environmental and Sustainability Manager are accountable for this PIRMP. Accountability includes authorising the document, monitoring its effectiveness and performing formal document reviews. The Construction Manager and General Superintendent(s) are accountable for ensuring the requirements of this document are implemented within their areas of responsibility.



1.4. System Assurance

Whenever this plan has been used to conduct an exercise or drill, details shall be recorded and retained on file. Identified improvements will be included in future revisions of this plan.



2. Implementation

2.1. When to implement this plan

This PIRMP must be implemented immediately if, in the course of any activity at the Premises, a notifiable pollution incident occurs. A pollution incident is required to be notified if there is a risk of ‘material harm to the environment’, which is defined in section 147 of the POEO Act as follows:

- (a) *harm to the environment is material if:*
 - (i) *it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
 - (ii) *it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and*
- (b) *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.*

This PIRMP must be implemented immediately if a pollution incident occurs resulting in actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial.

In the event of an occurrence of a notifiable pollution incident, the protocol detailed in Table 2-1 shall apply. Incidents that do not constitute material harm to the environment do not trigger implementation of this plan. Under such circumstances, the requirements of the relevant incident management procedure shall apply.

Table 2-1: Action to be taken in response to a notifiable pollution incident

Step	Action	Responsibility	Reference
Step 1	Immediately advise key Parramatta Connect contacts that pollution has occurred or is occurring. Direct verbal contact must be made; sending an SMS/text/email and/or leaving a voicemail message does not constitute contact. Where a person is not able to be contacted, the worker is to attempt to contact the next listed person until contact is made.	All workers	Table 2-2
Step 2	Immediately notify Parramatta Connect Senior Leadership Team, TfNSW Environment Team and the Environmental Representative that pollution has occurred or is occurring.	Environmental and Sustainability Manager or Environment Advisors	Table 2-3
Step 3	Immediately notify authorities of the pollution incident.	Environmental and Sustainability Manager in consultation with TfNSW	Section 4



Step	Action	Responsibility	Reference
Step 4	Implement actions to minimise and control any pollution and ensure the safety of site personnel, neighbours and the community.	Environment Team and Safety personnel with Site Superintendent / Supervisor	Section 5
Step 5	Implement action to clean up pollution and dispose of waste appropriately.	Environment /Safety personnel with Site Superintendent/ Supervisors (including subcontractor’s personnel)	Section 5
Step 6	Determine if neighbours or the community are affected and method of community notification.	Manager Community Relations and Stakeholders	Section 4 PLR Community Liaison Plan
Step 7	Notify neighbours and the community of the pollution incident (if required).	Manager Community Relations and Stakeholders	Section 3

Table 2-2: Parramatta Connect Senior Leadership Team (to be notified of all notifiable pollution incidents)

Position	Mobile
Environmental and Sustainability Manager, [REDACTED]	[REDACTED]
Project Director, [REDACTED]	[REDACTED]
Construction Manager, [REDACTED]	[REDACTED]
General Superintendent, [REDACTED]	[REDACTED]
Manager Community Relations and Stakeholders, [REDACTED]	[REDACTED]
Person in Charge (PIC) – Incident notification	[REDACTED]

Table 2-3: TfNSW and ER Contacts

Position	Mobile
TfNSW Senior Manager Environment, [REDACTED]	[REDACTED]
Environmental Representative, [REDACTED]	[REDACTED]

3. Notification

3.1. Incident Reporting Protocol

In consultation with the TfNSW Senior Manager Environment and the Environmental Representative, the Environmental and Sustainability Manager shall immediately notify the relevant regulatory authority and other authorities (Table 3-1).

Table 3-1: Authority Notification Protocol

Relevant Authority	Name / Location/Purpose	Contact No.
Emergency Services	Ambulance Service / Rescue	000*
	Police Service	*Only ring 000 if the incident presents an immediate threat to human health or property and response by an emergency services agency is warranted. If the incident does not require an initial combat agency, or once the 000 call has been made, notify as listed below.
	Fire and Rescue NSW	
Fire and Rescue NSW	Parramatta Fire Station	(02) 9895 4620
	Wentworthville Fire Station	(02) 9631 0908
NSW Ambulance	Parramatta	(02) 4731 2167
Police Service	Parramatta	(02) 9633 0799
EPA Pollution Line	Environmental Line - Notify potential for actual Material Harm to the environment	13 15 55
NSW Ministry of Health		(02) 9391 9000
SafeWork NSW	Incident notification (including After Hours), information, advice and assistance	13 10 50
City of Parramatta City Council	Where any council owned or governed asset is affected	1300 617 058
Cumberland City Council	Where any council owned or governed asset is affected	8757 9000
Department of Planning, Industry and Environment	TfNSW Senior Manager Environment to contact via the Major Projects Portal	Major Projects Portal
Sydney Water		13 20 90



Jemena (Gas)	13 19 09
Electricity – Endeavour Energy	13 10 03

Relevant Information required to be given to the Relevant Authorities when making a notification is specified in Section 150 of the POEO Act 1997 as follows:

- (a) the time, date, nature, duration and location of the incident;*
- (b) the location of the place where pollution is occurring or is likely to occur;*
- (c) the nature, the estimated quantity or volume and the concentration of any pollutants involved;*
- (d) the circumstances in which the incident occurred (including the cause of the incident (if known));*
- (e) the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution; and*
- (f) other information prescribed by the regulations.*

The Environmental and Sustainability Manager is required to report the information as known at the time of the notification. If the information required by (c), (d) or (e) above is not known at the time of initial notification but becomes known afterwards it must be reported to each authority immediately after it becomes known.

3.2. Community Notification Protocol

The Manager Community Relations and Stakeholders, in consultation with TfNSW Senior Community Liaison Officer, coordinates all community and stakeholder communications and interactions for the Package 4 works. The process for notification of stakeholders of an emergency or incident relates directly to the nature of the hazard. In the event that there is an unacceptable risk to the community from the emergency or incident, the impacted community stakeholders will be notified. In the event of a pollution emergency, the Environment and Sustainability Manager will be notified to implement the PIRMP.

Mechanisms for early warnings, notification of emergency construction works or ongoing regular updates to the community for pollution incidents that have caused or are threatening the environment may include:

- door knock of residents, businesses and others (e.g. schools) potentially impacted by the incident
- phone contact/messages/social media networks
- distribution of advice to residents, businesses and vehicle owners, pedestrians, commuters and schools as required
- publication of information on the TfNSW/project website
- dissemination of information to local and metropolitan media via TfNSW
- liaison with local council and other government stakeholders
- liaison with utilities providers
- installation of temporary directional signage.

In the event of a pollution incident which has the potential to impact the local community, the Environment and Sustainability Manager shall advise the Manager Community Relations and Stakeholders. The Manager Community Relations and Stakeholders will determine, in consultation with the Project Director and TfNSW, if community notification is required, and the mechanism(s) by which notification shall be made. Notification to any residents, businesses or other premises that may be affected by the pollution incident will include the following information:



- details of the pollution incident and extent of impact (as known at the time)
- safety warnings and recommendations to prevent/minimise impacts, if required
- potential impacts on the operation of local businesses, if required.

The area which may be affected by a pollution incident is dependent on the transport vector (water, air or land), pollutant (type, concentration and concentration) and meteorological conditions. The Environment and Sustainability Manager, in consultation with the Manager Community Relations and Stakeholders, will determine an appropriate geographical extent of the public notification and details to be provided in the notification.

In accordance with the Project Community Engagement Plan (CEP), the following steps will be undertaken to notify the community of an emergency or incident.

Table 3-2: Community Notification Requirements in Event of Emergency or Incident

Step	Action
Step 1	The Manager Community Relations and Stakeholders will be notified of the incident by the Project Safety Manager.
Step 2	The Manager Community Relations and Stakeholders and the Safety Manager will determine if the community is at risk from the emergency or incident.
Step 3	If it is determined that the emergency or incident does not impact the community no further action is required.
Step 4	If it is determined that members of the community will be impacted, the Manager Community Relations and Stakeholders will prepare an appropriate notification to the community (dependent upon the circumstances) in consultation with the Project Director.
Step 5	Should a media response be required, it is the responsibility of Parramatta Connect to provide the appropriate information with technical input from the Project Director.
Step 6	No staff member has authority to speak with the media.
Step 7	In the event that the emergency or incident is unable to be contained or managed in a safe manner using site resources and intervention by an Emergency Service is required, the relevant emergency service will direct and control the response to the incident including any evacuation or rescue of any community stakeholders.
Step 8	Any further follow up required after the incident will be undertaken by the Manager Community Relations and Stakeholders.



4. Potential Impacts

4.1. Pollution Incident Planning

4.1.1. Risk Matrix

The risk matrix outlined in **Appendix A-2** provides a tool for the assessment of hazards on the project and the potential risks to the environment if an incident were to occur. It also provides a process for the identification of any areas where the management controls are not sufficient to address the identified risk. The risk assessment takes into account:

- The location of the hazard and its proximity to sensitive receivers
- The volume of the hazard (if applicable) at that location
- The type of hazard
- Its potential consequence on the receiving environment.

The risk assessment assessed the hazards on the project in regard to their consequence and likelihood. Of the risks assessed they could be divided into a number of different types, relating to safety or environment. The consequence categories for the risks in relation to environment are:

- Insignificant: No appreciable change to environment or highly localised event.
- Minor: Change from normal conditions but within environmental regulatory limits. Environmental effects are within site boundaries.
- Moderate: Short lived environmental effect. Effects to environment but experienced mostly within boundary. Minor remedial actions probably required. Breach of environmental law or regulation.
- Major: 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.
- Critical: 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.
- Catastrophic: Irreversible large-scale environmental impact. Loss of valued ecosystem. Violation of environmental law or regulation such that very serious litigation, fines and prosecution may result.

4.1.2. Environmental Risk Register

Package 4 activities are assessed using an 'Environmental Risk Register' (refer to **Appendix A-3**) which outlines minimum environmental operational controls to be implemented for each environmental aspect. For each environmental aspect, within the 'Environmental Risk Register' there is a stated:

- Environmental impact
- Risk analysis (inherent risk) – the likelihood and consequence of an environmental hazard/impact occurring in the absence of any control measures
- Objective and targets to be achieved
- Control measures including environmental monitoring where required – to be implemented to meet management objectives



- Level of residual risk – the likelihood and consequence of an environmental hazard occurring following the implementation of control measures

For any subcontracted works, the nominated Subcontractor is expected to implement the stated environmental controls and undertake monitoring in accordance with contract requirements.

4.1.3. Sensitive Receivers:

The Environmental Risk Register has taken into account the sensitive receivers located along the Package 4 alignment. The Parramatta Connect Geographic Information System (GIS) tool incorporates key features of the alignment and relevant environmental constraints. The features include waterways, heritage, biodiversity, contamination and sensitive receivers (i.e. Westmead Health Precinct) amongst other site relevant features. The GIS forms the basis of Environmental Control Maps (ECMs).

Additional controls are in place for works around sensitive receivers and this includes:

- Stockpiles in sensitive areas to be stabilised with polymer or covered.
- Erosion and Sediment Control Plans to be submitted to ER/TfNSW prior to sensitive area works.
- Vibration monitors to have real-time alarms and modem installed at highly sensitive locations.

4.2. Incident/Emergency Response Procedures

4.2.1. Potential Incidents/Emergencies and Response Procedures

Reflecting the Environmental Risk Register, significant environmental incidents and emergencies have been identified and detailed in Table 4-3 together with appropriate response actions.

Workers are responsible for responding to environmental incidents under the direction of the Environment and Sustainability Manager.

In the event of an environmental emergency, the incident response shall be directed by the Project Director or nominated delegate in accordance with the Emergency Response Plan.

Where an environmental incident or other event results on the need for emergency construction works, the Environment and Sustainability Manager must notify the TfNSW Senior Manager Environment and the Environmental Representative of the need for those activities or works (SMS or email). The Manager Community Relations and Stakeholders must also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works as outlined in Section 3.



Table 4-1: Notifiable Events

Type	Description	Response Procedures
Land/ Water	<p>Leak, spill or escape of any substance in a manner that harms or is likely to harm the environment.</p> <p>Examples include:</p> <ul style="list-style-type: none"> - Watermain strike (loss of sediment and water to stormwater) - Generator leak - Fuel spill - Spill of NDD material during transfer 	<ul style="list-style-type: none"> - Contact 000 to mobilise the NSW Fire Brigade or HAZMAT where the incident cannot be controlled with onsite resources. - Contact Sydney Water in the event of a watermain strike and follow instructions. - Notify Person in Charge (PIC). - Establish and/or strengthen controls around stormwater drains including drain wardens and sandbags around the drain perimeter. - Mobilise a vacuum truck to remove excess water/liquid from the site and dispose to an appropriately licensed facility. - Deploy spill kit materials to contain and absorb the spill. - Remove used spill kit materials from the site and dispose to an appropriately licensed facility. - Ensure spill kits are restocked following the event.
Noise	<p>Excessive or intrusive noise emissions arising from:</p> <ul style="list-style-type: none"> - Inadequate controls - poorly maintained plant/equipment - failure to comply with Out of Hours Works Permit 	<ul style="list-style-type: none"> - Cease noise generating activity if an approved Out of Hours Works Permit is not in place. - Notify PIC - Review controls and revise as necessary. - Ensure noise barriers are installed and there are no gaps between barriers. - Switch off any equipment that is not in use for extended periods (e.g. heavy vehicles). - Avoid unnecessary noise (e.g. swearing, shouting, loud stereos/radios, dropping of materials from height, throwing of metal items and slamming of doors). - Avoid simultaneous use of high noise impact equipment. - Conduct noise monitoring to determine if noise levels are in accordance with predicted levels. - Ensure equipment is adequately maintained.
Air	<p>Gas main strike resulting in loss of gas</p>	<ul style="list-style-type: none"> - Evacuate the worksite and move to a well-ventilated area. - Notify PIC. - Contact the gas main operator and if required contact the Fire Brigade Service (000); follow instructions of the asset owner. - Ensure no naked flames or smoking. - Do not touch or operate electrical equipment. - Ensure no mobile phones are used in the vicinity of the leak.
Air	<p>Excessive and intrusive dust emissions</p>	<ul style="list-style-type: none"> - Cease dust generating activity. - Notify PIC. - Apply dust suppression (water cart, hose, etc). - Review the adequacy of controls (e.g. dust suppression, site barriers). - Recommence works following implementation of controls; monitor effectiveness. - In the event of high winds, reschedule works if dust cannot be controlled to reasonable levels.



5. Mitigation

5.1. Inventory of Potential Hazardous Materials

A Materials Register is maintained by Parramatta Connect, which includes potential pollutants held on site. The Materials Register is a live document, which is revised regularly as materials are used or brought to the works site. Table 5-1 provides a list of potential pollutants on site.

Table 5-1: Potential Pollutants on Site

Pollutant Description	Estimated Maximum Quantity held on-site (generated / used / stored) over the life of Package 4 works	Proposed reuse/recycling/disposal methods
Spoil	156,000T	<p>Spoil is stored across the alignment (transient locations) and site compounds.</p> <p>Spoil shall be managed in accordance with requirements in the Soil and Water Management Sub-Plan and the included the Construction Waste Management Sub-Plan and the Contaminated Land Management Sub-Plan.</p> <p>Key spoil management measures (i.e. stockpiling away from drains, covering, appropriate sediment and erosion controls etc) are indicated in ECMs.</p>
Contaminated spoil	60,000T	Removal and disposal in accordance with the Protection of the Environment Operations (Waste) Regulations 2014 and Waste Classification Guidelines (OEH 2009).
Asbestos Containing Material	3,500T	Asbestos containing material will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the Work Health and Safety Regulation 2011 and the Protection of the Environment Operations (Waste) Regulations.
Oils and used chemicals	7,000L	All waste oils and chemicals will be stored in appropriate covered receptacles (e.g. drums) in bunded sheds or pallets. A licenced contractor will be commissioned to regularly remove/empty the receptacles to approved disposal or recycling facilities.
Liquid Waste	5,000KL	Collected wastewater that is not suitable for onsite reuse (e.g. for dust suppression) would be removed by a licensed contractor and taken to an appropriately licensed liquid waste facility for treatment or disposal.



5.2. Pre-emptive Actions

All aspects of the Package 4 works with potential to impact on the environment are identified in the Construction Environmental Management Plan (CEMP) (PLR1INF-CPBD-ALL-PE-PLN-000001), associated sub-plans and area specific ECMs. The CEMP and associated sub-plans detail the management measures, controls and responsibilities required to carry out the environmental objectives of Package 4 works, prevent pollution incidents and to minimise impacts to the environment.

The CEMP and associated sub-plans apply to all parties working on Package 4 works.

5.3. Minimising Harm to Persons on the Premises

Any mitigation, clean up, corrective or preventative actions are to be undertaken in accordance with the TfNSW Chemical Storage and Spill Response Guidelines, the CEMP (and associated sub-plans) and relevant safety related emergency management plans and procedures. The Safety Manager/Advisor determines and coordinates the response actions to be taken to prevent or minimise any safety or health impacts to site personnel, neighbours or the community.

5.4. Management Plans and Procedures

Specific environmental and incident management plans detailing mitigation measures are outlined below:

- Spoil Management Strategy
- TfNSW Chemical Storage and Spill Response Guidelines - 9TP-SD-066
- CEMP (PLR1INF-CPBD-ALL-PE-PLN-000001) and associated sub-plans
- ECMs (live documents maintained in Parramatta Connect Team Binder Document System).

5.4.1. Safety Equipment

The following equipment is provided to prevent or control and assist with pollution incidents. The locations of these equipment are spread across the worksite and main site compounds and indicated in the ECMs, where applicable:

- Spill Kits – in key locations across the Package 4 site
- Safety Data Sheets – in designated chemical storage containers/main site compounds
- Sediment control equipment including sand bags, gravel, geofabric and sediment fences.

Other plant and equipment present at the site or sourced externally may be used in the management of any pollution incident, including for example excavators, sucker trucks etc. The equipment required to be utilised in response to a pollution incident would be determined by the Site Superintendent in consultation with the Environment Advisor / Manager and Safety Manager/ Advisor.

Emergency Response Plans and maps are displayed in strategic locations within the Site Compound Offices/ notice boards, identifying safety equipment locations on-site (e.g. fire extinguishers, hose reels), assembly and evacuation points. Safety Data Sheets (SDSs) of materials are maintained in the Parramatta Connect Materials Register (including Hazardous Substance) and in chemical/material containers on-site.



5.4.2. Maps

A number of maps are available that illustrate the location of Package 4 works, the potential receivers and impacts, as well as the management measures and equipment in place, these include:

- EPL Premises Maps
- ECMs.

5.5. Staff Training

The Environment and Sustainability Manager will establish an annual environmental training and awareness program to support implementation of the CEMP and sub-plans and maintain a high level of awareness among all workers, including subcontractors. All relevant Parramatta Connect personnel, subcontractors and visitors will receive emergency response training to ensure that they are fully aware of their roles and responsibilities in the event of an emergency arising, whilst ensuring the environmental impacts associated with Package 4 are minimal. This training will generally be provided through:

- Package 4 Project Induction (including environmental induction):
 - Provided to all workers and subcontractors before commencement of works
 - Content includes basic emergency procedures, incident reporting and environmental requirements
 - Provided with information about the arrangements that will apply if a site emergency occurs and an evacuation is necessary
 - 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.
- Toolbox Talks:
 - Toolbox talks will inform environmental risks and controls to workers. Relevant issues addressed in toolbox talks include:
 - Erosion and sedimentation controls
 - Hours of work, out of hours work permits and restrictions on high noise intensive works
 - Emergency and spill response and incident reporting
 - Management of emissions from plant and vehicles
 - Dust control and stop work procedure
 - Wet weather shutdown procedure and responsibilities
 - Community awareness
 - Recent incidents, near misses, and potential issues relating to upcoming works.
- Daily Pre-Start Meeting:
 - Outline environmental issues that could potentially impact activities during the day.

Records of inductions and training will be maintained by the Safety and Environment Teams including the topic of the training carried out, dates, names and trainer details. The Environment and Sustainability Manager will review training requirements and monitor program implementation on an ongoing basis.



6. PIRMP

6.1. Continual Improvement

6.1.1. Testing and review of this Plan

Testing of the PIRMP may be integrated into other emergency and incident testing and training programs and may include a desktop simulation, practical exercise or drill. The Environment and Sustainability Manager will determine the method and date of testing, and will coordinate the test, including advising all relevant personnel as required prior to the test. As a minimum, the PIRMP shall be tested at least once every 12 months or whenever there is a significant change to site activities. Additional testing may be required at the discretion of the Environment and Sustainability Manager in response to notifiable pollution incidents.

The testing will be carried out in such a manner as to ensure the information included in the plan is accurate and up to date and that each plan is capable of being implemented in a workable and effective manner. The testing will be undertaken on an annual basis at minimum.

The mock exercise will involve personnel responsible for the implementation of the PIRMP. This will include (but not be limited to) the following persons:

- Project Manager
- General Superintendent
- Environment and Sustainability Manager
- Construction Manager

A report detailing a record of the testing of the PIRMP will be prepared by the Environment team/Safety team after each test of the PIRMP is undertaken. The report shall recommend amendments to the PIRMP, if required, to ensure that the PIRMP is workable and effective in achieving the stated objectives. The PIRMP Test Report may also recommend amendment to other plans and procedures associated with the test.

6.1.2. Updating the PIRMP

The PIRMP will be updated by the Environmental and Sustainability Manager in response to the following:

- Any recommendation made in the PIRMP test report
- Any changes in law that necessitate amendment to the PIRMP.

6.2. Availability of the PIRMP

Electronic and hard copies of the PIRMP shall be maintained on the Premises at location(s) as determined by the Environmental and Sustainability Manager. The PIRMP must be made available to an authorised officer (of the EPA) at their request.

Some sections of the PIRMP must be made publicly available in accordance with the Protection of the Environment Operation (General) Regulation 2009. The following sections shall be made publicly available via the CSSI website:

- Section 3 Authority Notification Protocol
- Section 4 Community Notification Protocol .



A-1 Premises Maps



A-2 Risk Matrix (Consequence & Likelihood Criteria)

A-2-1 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.

A-2-2 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					



INSIGNIFICANT S6	MINOR S5	MODERATE S4	MAJOR S3	CRITICAL S2	CATASTROPHIC S1
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
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					



INSIGNIFICANT S6	MINOR S5	MODERATE S4	MAJOR S3	CRITICAL S2	CATASTROPHIC S1
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.



A-2-3 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

A-3 Environmental Risk Register

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation and Management Measures	Risk level following mitigation	Management Documents
Air quality	General earthworks	Loss of amenity	3 (medium)	<ul style="list-style-type: none"> Induct personnel on air quality risks and controls Use water carts on unsealed surfaces and stockpiles Utilise safe dust suppressants to reduce dust generation Use street sweepers to reduce dust in areas of dust build up 	4 (low)	Air Quality and Dust Management Sub-plan Environmental Work Method Statements Soil and Water Management Sub-plan Complaints Procedure Delivery Phase Sustainability Management Plan
	Vegetation clearing	Potential adverse health effects	4 (low)	<ul style="list-style-type: none"> Modify or cease operations during high winds All trucks on public roads to cover loads 	4 (low)	
	Open excavation works	Degradation of water quality and other aspects of the natural environment	4 (low)	<ul style="list-style-type: none"> Vehicles, equipment, machinery used and all facilities – designed, operated and maintained to control the emission of smoke, dust, odours and fumes All disturbed areas stabilised, revegetated and/or landscaped as soon as practicable 	4 (low)	
	Spoil handling	Health risks to stakeholders from fumes and/or smoke	4 (low)	<ul style="list-style-type: none"> Establish adequate controls to prevent tracking of mud/dust onto public roads No burning or incineration of any material at any time Dust monitoring Avoid hot work during total fire bans and obtain any necessary permits/exemptions from the Rural Fire Service	4 (low)	
	Stockpiling					
Vehicular movements on unsealed roads Material haulage Quarrying Vehicle emissions Handling of chemicals, waste and hazardous goods.	Excessive greenhouse gas emissions	4 (low)	<ul style="list-style-type: none"> Avoid unnecessary idling of vehicles Minimise offsite transfer of materials Implement Green Travel Plan 	4 (low)		
Soil & Water	Bulk earthworks Vegetation clearing and topsoil stripping Site access including temporary waterway crossings Utility realignment works (All utility providers) Bridge construction & Piling Enabling works / demolition Slope or embankment creation/stabilisation processes Enabling works / demolition Temporary Works	Erosion and sediment runoff from stockpiles and disturbed areas	B (medium)	<ul style="list-style-type: none"> Stockpiles are to be covered, protected with down slope sediment fences, or stabilised Identify suitable stockpile locations on Environmental Control Maps and Erosion and Sediment Control Plans The location of temporary stockpiles must either be elevated or located outside of the 10% AEP flood level. 	C (low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans Flood Management Sub-plan
		Frequency and level of inundation of flood waters (climate change)	B (medium)	<ul style="list-style-type: none"> The location of temporary stockpiles must either be elevated or located outside of the 10% AEP flood level. Implement the Construction Ancillary Facility Checklist and the Minor Ancillary Facility Checklist 	B (medium)	Flood Management Plan Site Establishment Management Plan
		Erosion and sediment runoff from cut area.	B (medium)	<ul style="list-style-type: none"> Site controls to be installed as per LandComs Blue Book (2004). 	C (low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans
		Dust from stockpiles in highly sensitive areas.	B (medium)	<ul style="list-style-type: none"> Stockpiles in sensitive areas to be stabilised with polymer or covered 	C (Low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans
		Contaminated soils (project risk).	B (medium)	<ul style="list-style-type: none"> In-situ waste classifications to be undertaken where feasible Unexpected Contaminated Land and Asbestos Finds Procedure Asbestos hygienist to be on-call for out of hours works near suspected asbestos pits and pipes, i.e. intersections and areas known to be contaminated. 	C (Low)	Contaminated Land Management Sub-plan
		Disturbance of ASS (project risk).	B (medium)	<ul style="list-style-type: none"> Acid Sulphate Soil procedure to be establish Provisions to be made for expected ASS in bridge piling areas near waterways. 	C (Low)	Soil and Water Management Sub-plan
		Intercepting groundwater, in particular during pipe-jacking works, pole structures.	A (High)	<ul style="list-style-type: none"> Construction Site Dewatering and Discharge Procedure to be undertaken by trained staff and dewatering permit to be in place 	B (medium)	Soil and Water Management Sub-plan

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation and Management Measures	Risk level following mitigation	Management Documents
				<ul style="list-style-type: none"> Geo-tech surveys to determine water table height before piling and deep excavation activities. 		Construction Site Dewatering and Discharge Procedure
		Space constraints for stockpiles.	B (medium)	<ul style="list-style-type: none"> Identify suitable stockpile locations on Environmental Control Maps and Erosion and Sediment Control Plans 	C (Low)	Waste and Resource Management Sub-plan
		Proximity of compounds to waterways	B (medium)	<ul style="list-style-type: none"> Compounds to be 50m from waterways with robust surface water controls in place. Designated compound areas to be defined in the Site Establishment Management Plan 	C (Low)	Site Establishment Management Plan
		Drilling fluid.	B (medium)	<ul style="list-style-type: none"> Retained or discharged as per Construction Site Dewatering and Discharge Procedure 	C (Low)	Construction Site Dewatering and Discharge Procedure
		Discharge from sediment basin.	B (medium)	<ul style="list-style-type: none"> Designated stabilised discharge point to be used Approved Discharge permit to be in place 	C (Low)	Soil and Water Management Sub-plan Construction Site Dewatering and Discharge Procedure
		Disposal of prescribed waste (potentially contaminated fill and road deconstruction waste).	B (medium)	<ul style="list-style-type: none"> In-site waste classifications to be prepared, where feasible Materials tracked and logged into a tracking register. 	C (Low)	Waste and Resource Management Sub-plan
	Compounds operation including fuel and chemical storage, refuelling and chemical handling	Flooding runoff reaching site areas (compounds, stockpiles, vehicles, sediment basins).	B (medium)	<ul style="list-style-type: none"> Fuels and chemicals not to be stored in flood prone areas Chemical spill kits / spill response materials must be readily available and accessible to construction workers in the event of a spill Storage of hazardous materials, and refuelling/maintenance of construction plant and equipment to 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 The effective volume of the secondary containment for tank storage needs to be at least 100% of total volume of the largest tank, plus enough additional capacity to contain rain or fire-fighting water. As a guide sufficient capacity should be allowed to cope with a one-in-twenty-year 24-hour storm. 	C (Low)	Flood Management Sub-plan Soil and Water Management Sub-plan Environmental Work Method Statements Erosion and Sediment Control Plans
	Bridge construction	Spoil contamination discharge into waterway (coffer dam & waterway diversion).	A (High)	<ul style="list-style-type: none"> Site erosion and sedimentation controls to be in place as per Erosion and Sediment Control Plans Silt curtains to be used in waterways for bridge works, to be inspected daily. 	B (medium)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans
		Flow velocity and associated impacts to sediment transport and geomorphology (waterway diversion).	A (High)	<ul style="list-style-type: none"> Works in waterways to be in accordance with Bluebook Erosion and Sediment Control Plans to be submitted to ER/TfNSW prior to sensitive area works. 	B (medium)	Erosion and Sediment Control Plans
		Water quality impacts on downstream receptors.	A (High)	<ul style="list-style-type: none"> In-situ continuous water monitoring equipment to be used with real-time data collection Site controls to include silt booms, polymer stabilisation, surface water controls and progressive stabilisation. 	C (Low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans Environmental Work Method Statement
		Physical disruption of riverbed – increase TSS, smothering of ecological habitat (localised and downstream – potentially upstream dependent on tidal strength).	B (medium)	<ul style="list-style-type: none"> Riparian areas to be fenced, tool boxed, and permit to enter before works can commence in these areas. 	C (Low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans, Environmental Work Method Statement
		Tidal impacts (diurnal fluctuation in water level and potential impacts both upstream and downstream).	B (medium)	<ul style="list-style-type: none"> Flood Management Design Report to be prepared at each design stage with potential to cause adverse flooding impacts 	C (Low)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans Environmental Work Method Statement

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation and Management Measures	Risk level following mitigation	Management Documents
	Paving activities	Increased impervious surfaces and therefore runoff.	C (low)	<ul style="list-style-type: none"> Controls to include drainage pit bags (drain wardens), polymer and seal for un-prepped areas. 	C (Low)	Erosion and Sediment Control Plans
	Utility realignment works (All utility providers)	Asbestos pipes	A (High)	<ul style="list-style-type: none"> Hygienist to be in standby for intersection out of hours works. 	B (medium)	Contaminated Land Management Sub-plan
		Imported fill	C (low)	<ul style="list-style-type: none"> Minimise through material reuse. 	C (low)	Contaminated Land Management Sub-plan
		Unknown geology	M (Medium)	<ul style="list-style-type: none"> Check for hard-rock/bedrock vs tertiary level gravels and sands. 	C (Low)	Contaminated Land Management Sub-plan
		Temporary discharges/leaks of sewerage due to diversions	A (High)	<ul style="list-style-type: none"> Vacuum truck(s) on standby during diversions. 	C (Low)	Soil and Water Management Sub-plan
		Stormwater diversions	A (High)	<ul style="list-style-type: none"> Vacuum truck(s) on standby during diversions Works not planned in inclement weather. 	B (medium)	Soil and Water Management Sub-plan Erosion and Sediment Control Plans Environmental Work Method Statement
		Potential risk of rainfall flooding into excavation works	M (Medium)	<ul style="list-style-type: none"> Diverting surface water away from excavations with site controls Dewatering, or pumping excess water into tank for onsite treatment or removal to licenced facility Blinding base of excavations with stabilised inlet to prevent sediment stirring. 	C (Low)	Erosion and Sediment Control Plans
	Site access including temporary waterway crossings	Changes to flow velocity	A (High)	<ul style="list-style-type: none"> Flow rate data to be assessed prior to designing temporary crossing Environmental Work Method Statement to be submitted to review prior to commencement of works and release of hold point. 	B (medium)	Environmental Work Method Statement Erosion and Sediment Control Plans
Noise	Bulk Earthworks Bridge Construction Vegetation clearing and topsoil stripping Utility realignment works (All utility providers) Culvert and drainage works	Highly noise intensive work	H (high)	<ul style="list-style-type: none"> Implement controls as per the Construction Noise and Vibration Impact Statement and Construction Noise and Vibration Strategy (TfNSW) Adhere to the Out of Hours works Protocol Adhere to respite requirements (highly noise intensive works respite and out of hours works respite) as defined in the CoA Coordinate works with other projects to minimise cumulative impacts 	M (Medium)	Noise and Vibration Management Plan Out of Hours Protocol
	Site access including temporary waterway crossings Batch plant operation (TBC) Slope or embankment creation/stabilisation processes Enabling works / demolition	Track alignment vs off-corridor works: difference in activity and therefore noise level.	M (Medium)	<ul style="list-style-type: none"> Implement controls as per the Construction Noise and Vibration Impact Statement and Construction Noise and Vibration Strategy (TfNSW) Adhere to the Out of Hours works Protocol Adhere to respite requirements (highly noise intensive works respite and out of hours works respite) as defined in the CoA Coordinate works with other projects to minimise cumulative impacts 	L (Low)	Noise and Vibration Management Plan Out of Hours Protocol
	Material stockpiles including the treatment of contaminated or acid sulphate soil and rock Compounds operation including fuel and chemical storage, refuelling and chemical handling Dewatering activities Paving activities Construction phase water use / extraction for	Out of Hours Works	A (high)	<ul style="list-style-type: none"> Implement controls as per the Construction Noise and Vibration Impact Statement and Construction Noise and Vibration Strategy (TfNSW) Adhere to the Out of Hours works Protocol Adhere to respite requirements (highly noise intensive works respite and out of hours works respite) as defined in the CoA Coordinate works with other projects to minimise cumulative impacts 	M (Medium)	Communication and Engagement Management Plan
Vibration	Bulk Earthworks Bridge Construction Utility realignment works (All utility providers)	Structural damage and human annoyance	A (high)	<ul style="list-style-type: none"> Implement controls as per the Construction Noise and Vibration Impact Statement and Construction Noise and Vibration Strategy (TfNSW) Adhere to the Out of Hours works Protocol Adhere to respite requirements (highly noise intensive works respite and out of hours works respite) as defined in the CoA 	M (Medium)	Noise and Vibration Management Plan



Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation and Management Measures	Risk level following mitigation	Management Documents
	Culvert and drainage works Site access including temporary waterway crossings Slope or embankment creation/stabilisation processes Enabling works / demolition Material stockpiles including the treatment of contaminated or acid sulphate soil and rock Compounds operation including fuel and chemical storage, refuelling and chemical handling Dewatering activities Paving activities Construction phase water use / extraction for			<ul style="list-style-type: none">• Coordinate works with other projects to minimise cumulative impacts• Vibration monitors to have real-time alarms and modem installed at highly sensitive locations.		

