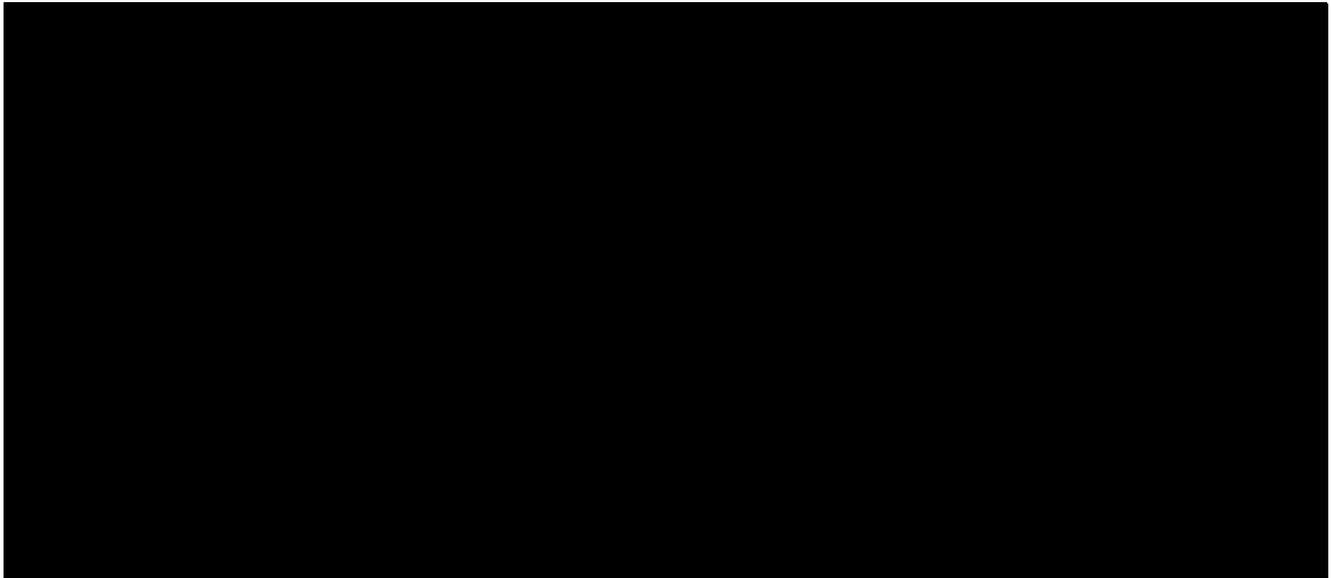




CBGU D&C JV

Hazardous Goods Management Plan

Cross River Rail Project – Tunnel, Stations and Development Package (TSD)



Document number: CRRTSD-EN-ENMP-CBGU-000027

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Revision: 2

Details of Revision Amendments

Document Control

The CBGU Project Director is responsible for ensuring that this Plan is reviewed and approved. The Project Environment & Sustainability Manager 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 CBGU Project Director before being distributed / implemented.

Distribution and Authorisation

The CBGU Project Director is responsible for the distribution of this Plan. The controlled master version of this document is available for distribution as appropriate and maintained on TeamBinder. All circulated hard copies of this document are deemed to be uncontrolled.

All personnel employed on the Project will perform their duties in accordance with the requirements of this Plan, supporting management plans, and related procedures.

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Referenced Documents

The following provides a list of referenced documents either as a sub-plan to this plan or referenced from.

Table 1 Referenced Documents

Document Number	Document Name	Location of Controlled Version
Referenced Project Plans include:		
CRRTSD-EN-MPL-CBGU-000019	Construction Environment Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-00002	Waste Management Plan	TeamBinder
CRRTSD-CS-MPL-CBGU-000036	Construction Worksite Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-000026	Waste Resource Recovery Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-0000010	Contaminated Land Management Plan	TeamBinder

Note: this Management Plan may not contain the current version of the document listed above. Refer to the 'location of controlled version' for the most current version.

Glossary of Terms

Table 2 Terms

Acronym	Definition
All Staff	Means all employees, Proponents and sub-contractors involved in the Project Works
CBGU	D&C Contractor comprising a joint venture with CPB Contractors Pty Ltd, BAM International Australia Pty Ltd, Ghella Pty Ltd and UGL Engineering Pty Ltd
CEMP	The Project's Construction Environmental Management Plan
CG	Coordinator-General
CGCR	Coordinator-General's Change Report
CGER	Coordinator-General's Evaluation Report
CMS	CPB Management System
COEMP	The Project's Commissioning Environmental Management Plan
Contractor	The Contractors appointed to design, construct and commission the Project
Coordinator-General	The corporation sole preserved, continued and constituted under section 8 of the SDPWO Act
CRR	Cross River Rail
CRRDA	Cross River Rail Delivery Authority acting on behalf of the State
CRR TSD (the Project)	Cross River Rail - Tunnels, Stations and Development (TSD) Project
CSEP	Community and Stakeholder Engagement Plan
DES	Department of Environment and Science
EMP	Environmental Management Plan (refers to the OEMP, CEMP, COEMP including any Project sub-plans)
Environmental Monitor	The Environmental Monitor engaged in accordance with Imposed Condition 7
OEMP	Outline Environment Management Plan
Risk matrix	A table used in the evaluation of risk severity that has likelihood and consequence as its axes with numbers and ratings applicable to each likelihood/consequence combination. For use in risk evaluation and Safety in Design reviews.
Risk register	A database containing Project risks, assessments, treatments and responsibilities
Subcontractor	Any company, body or person who is contracted to CBGU for the purpose of supplying plant and/or services
TeamBinder	Proprietary software used as part of the Project wide Electronic Document Management System
the Project (or CRR TSD)	Cross River Rail - Tunnels, Stations and Development (TSD) Project

1 Introduction

1.1 Background

The Design and Construction Joint Venture comprising of CPB Contractors Pty Ltd, BAM International Australia Pty Ltd, Ghella Pty Ltd and UGL Engineering Pty Ltd (CBGU D&C JV or CBGU) is responsible for delivering the Cross River Rail (CRR) Project (the Project) on behalf of the Cross River Rail Delivery Authority (the Delivery Authority).

This Hazardous Goods Management Plan should be read in conjunction with the Project's overarching Construction Environment Management Plan (CEMP).

- The CEMP provides specific details regarding the background of the Project, the scope of the Project and the staging and timing of key milestones associated with the construction of the Project.

1.2 Context

Hazardous Substances refer to any solid, liquid or gas that can cause harm to people or the environment and may include acidic or corrosive chemicals. Examples include diesel, oils, concrete curing agents and other chemicals.

This Procedure applies to any activity involving the use of chemicals and hazardous substances, including:

- Mixing and decanting of chemicals
- Pumping of oil and grease collection pits
- Deliveries of chemicals and hazardous substances
- Application of liquid membranes
- Removal and disposal of excess/waste chemicals and wash down water

1.3 Objectives

The objectives of this Hazardous Goods Management Plan (HGMP) which is a relevant procedure required by the Waste Management Plan (WMP), Contaminated Land Management Plan (CLMP) and Hazard and Risk Management Plan (HRMP) are to:

- Guide staff and subcontractors on hazardous materials management within the Project area and/or Project vicinity during construction
- Provide protocols to appropriately manage specific construction activities that have the potential to cause contamination as a result of hazardous material use
- Minimise risks to the environment, workers and to the public
- Ensure that all hazardous materials stored onsite are handled in a responsible manner and in accordance with legislative requirements.

- To plan and execute the project work so as to minimise the possibility of pollution of the Site and adjoining areas by chemicals, and hazardous substances and to describe the minimum mandatory requirements for managing hazardous substances.
- To detail the requirements for managing concrete wash-out, in order to minimise the potential of uncontrolled release of wash-out water and waste materials from site.
- To manage refuelling onsite and at compound locations to minimise the potential for uncontrolled release of fuel.

1.4 Legislative Framework

Delivery and implementation of the Project must comply with the environmental legislation, guidelines and standards specified in the CEMP (as updated to reflect any changes current at commencement of each Project phase) and any additional requirements specified in the conditions of approval.

Specific legislation relevant to this HGMP is detailed below.

1.4.1 Commonwealth Legislation

Commonwealth legislation that is likely to be relevant to the Project and this HGMP includes:

- *Environment Protection and Biodiversity Conservation Act 1999.*

1.4.2 State Legislation

State legislation that is relevant to the Project and this HRMP includes:

- *Building Act 1975*
- *City of Brisbane Act 2014*
- *Cross River Rail Delivery Authority Act 2016*
- *Dangerous Goods Safety Management Act 2001*
- *Economic Development Act 2012*
- *Environmental Protection Act 1994*
- *Environmental Protection (Air) Policy 2008*
- *Environmental Protection (Noise) Policy 2008*
- *Environmental Protection (Water) Policy 2008*
- *Explosives Act 1999*
- *Land Act 1994*
- *Local Government Act 2009*
- *Planning Act 2016*
- *Public Health Act 2005*
- *Queensland Heritage Act 1992*
- *Transport Infrastructure Act 1994*
- *Transport Planning and Coordination Act 1994*
- *Transport (Rail Safety) Act 2010*
- *Transport Security (Counter Terrorism) Act 2008*
- *Work Health and Safety Act 2011*
- *Building (Flammable and Combustible Liquids) Regulation 1994*
- *State Development and Public Works Organisation Act 1971*

- *Transport Operations (Passenger Transport) Act 1994*
- *Transport Operations (Road Use Management) Act 1995*

1.4.3 Approvals, Permits and Licences

CBGU will obtain licences, permits and approvals as required by law and maintain them as required throughout the delivery phase of the project. No condition of the Infrastructure Approval removes the obligation for CBGU to obtain, renew or comply with such necessary licences, permits or approvals.

All relevant approvals, permits and licences have been identified in the CEMP.

1.4.4 Guidelines and Standards

Project works must be undertaken in accordance with specific guidelines and standards. Guidelines and standards related to the management of noise and vibration, that must be met include, but are not limited to:

- AS/NZS ISO 14001 Environmental management systems
- AS/NZS ISO 31000 Risk Management – Principles and Guidelines
- AS/NZA 3833:2007 The Storage and Handling of Mixed Classes of Dangerous Goods, in Packages and Intermediate Bulk Containers
- Australian Explosives Code for the Transport of Explosives by Road and Rail (AEC3)
- ISO/IEC 31010 Risk management – risk assessment techniques
- AS4292 Rail Safety Management
- Rail Safety National Law
- Queensland Rail Limited’s Safety Management System including MD-11-1338 Standard – Risk Management, MD-12-219 and Safety Change Management
- AS 1216 Class Labels for Dangerous Goods
- AS 1678 Emergency Procedure Guides – Transport
- AS 1940 Storage and Handling of Flammable and Combustible Liquids
- AS 3780 The Storage and Handling of Corrosive Substances
- AS 2809 Road Tank Vehicles for Dangerous Goods
- AS 2931 Selection of Use of Emergency Procedure Guides for Transport of Dangerous Goods
- AS 2187 Explosives – Storage, Transport and Use.
- Code of Practice for Labelling of Workplace Hazardous Chemicals

2 Mitigation Measures

The following mitigation measures should be implemented to achieve the nominated environmental outcomes and performance criteria. Relevant approvals and mitigation measures which are required to undertake the task will be compiled in site specific documents.

- Undertake the storage and transport of any hazardous materials or dangerous goods (including fuel and hazardous waste) in accordance with relevant Australian standards, legislative requirements and guidelines
- Hazardous materials and potential sources of hazardous wastes must be documented, and a register of hazardous and regulated waste updated and maintained as required. The register is required to be updated for each new hazardous material introduced on site. A hazardous materials register will be developed for each worksite and is to include (Outline CLMP – OCLMP p 147):
 - storage location
 - storage requirements
 - information on the proper use
 - handling information
 - disposal procedures.
- A register of Safety Data Sheets (SDS) for all materials and chemicals included in the hazardous materials register are to be stored and maintained with the relevant materials (OCLMP p 148).
- Safety Data Sheets (SDS) must be kept on site for all hazardous materials and dangerous goods
- Undertake refuelling and maintenance activities within designated bunded areas to minimise the potential for soil and water contamination from these activities
- Prepare and implement, if required, spill response measures in relation to hazardous materials and dangerous goods. Refer to Occupational Health & Safety Management (OHSMP).
- Comply with the Energy Networks Association Industry Guideline in the removal and disposal of sulphur hexafluoride (SF6) filled electrical equipment (OWMP p 8-9).
- All chemical and fuel storage areas are to be designed to comply with Australian Standards, including Australian Standard (AS) AS 1940: Storage and Handling of Flammable and Combustible Liquids 2004 and AS 3780: The Storage and Handling of Corrosive Substances 2008 (OCLMP p 148).
- Hazardous substances and dangerous goods will be labelled in accordance with the Code of Practice for Labelling of Workplace Hazardous Chemicals and AS 1216 Class Labels for Dangerous Goods, respectively. The labels may include the following information:
 - Product identified and chemical ingredients
 - Name, address and business telephone number (manufacturer or importer)
 - Pictograms
 - Statement
 - First aid and emergency procedures

— Expiry date.

- The WHSMP provides details on incident management including procedures for containing and cleaning-up accidental spillage of fuels and other hazardous materials (OCLMP p 148).
- Spill response equipment commensurate of the type and quantity of hazardous substances being stored is provided at appropriate locations on site, in close proximity to storage and handling areas (OCLMP p 148).
- Clean-up and remediation of spills and leaks as quickly as possible and in accordance with the Spill Management Procedure (OCLMP p 148).
- Undertake refuelling and maintenance activities in appropriately located designated bunded areas to avoid the potential for soil and water contamination. The location of refuelling and maintenance activities have been identified on the General Construction Site Plans for each Site (OCLMP p 148).
- Undertake regular inspections of tanks, bunds and storage areas to ensure the integrity of all facilities (OCLMP p 148).

3 Hazardous Waste Procedure

3.1 Training

- All personnel are to undertake project inductions identifying their environmental and compliance obligations under the Governor General Change Report Conditions of Approval for the Cross River Rail. Refer to Onboarding Guideline (Health and Safety).
- Obligations and responsibilities relevant to the management of chemicals and hazardous substances will also be included in daily pre-start or activity-specific pre-start briefings, toolbox talks or targeted environmental training as appropriate
- All personnel must be trained in the appropriate handling and storage requirements for chemicals and hazardous substances
- Training in the use of spill kits must be provided to all personnel.

3.2 Chemicals and hazardous substances procedure

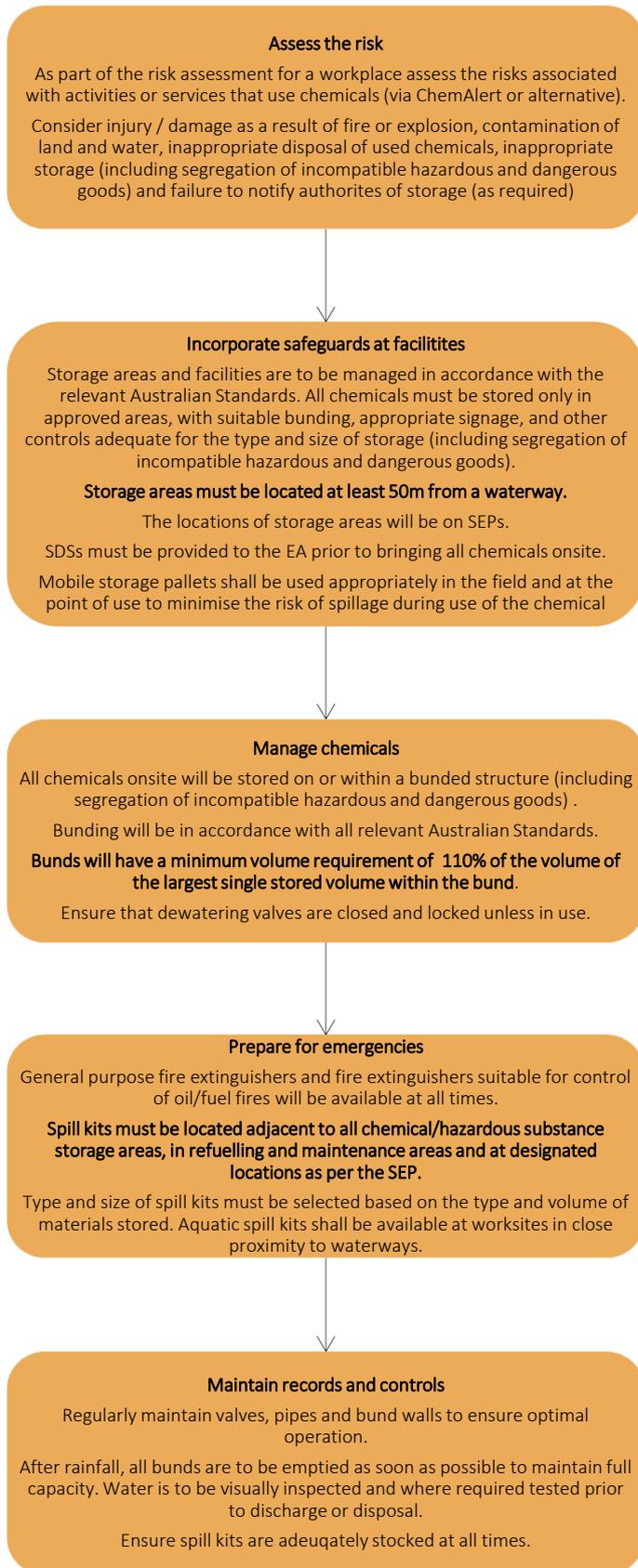
The flowchart below sets out the key steps for the design, establishment and operation of chemical storage areas. Refer to the *Workplace Health and Safety Management Plan (WHSMP)* for the relevant safety requirements.

3.2.1 Plant wash-down areas

- Washing of plant and equipment is to be conducted in an appropriately bunded and impermeable area with appropriate collection and treatment systems.
- Contents of wash-down areas are to be routinely pumped out and disposed of in accordance with the Waste Resource Recovery Management Plan (WRRMP).

3.2.2 Incident management

- Incidents are managed in accordance with the CEMP.



Legend

Responsibilities
 PM – Project Manager
 SS – Site Supervisor
 SM – Safety Manager
 EM – Environment and Sustainability Manager
 EA – Environmental Adviser

Acronyms
 SEPs – Site Environmental Plans
 EPA – Environment Protection Authority
 SDS – Safety Data Sheet

4 Concrete Management Procedure

4.1 Training

- All personnel are to undertake Project inductions identifying their environmental and compliance obligations under the Minister's Conditions of Approval for the Cross River Rail Project.
- Obligations and responsibilities relevant to concrete management will also be included in daily pre-start or activity-specific pre-start briefings, toolbox talks or targeted environmental training as appropriate.
- All personnel, and in particular concrete delivery and pumping personnel, must be made aware via site induction and toolbox talks that a wash-out area is available on site and when and how it is to be used.
- Specific training on the appropriate use of the various spill kit materials will be undertaken periodically.

4.2 Concrete management procedure

- This procedure is to be read in conjunction with the SMP
- Any storage and handling of chemicals associated with concrete pouring activities (e.g. concrete curing agents) must be in accordance with the CHSP.

4.2.1 Concrete pumping

- Concrete pours and curing activities must be planned to avoid wet weather.
- Safety Data Sheets (SDS) must accompany all chemicals used on site.

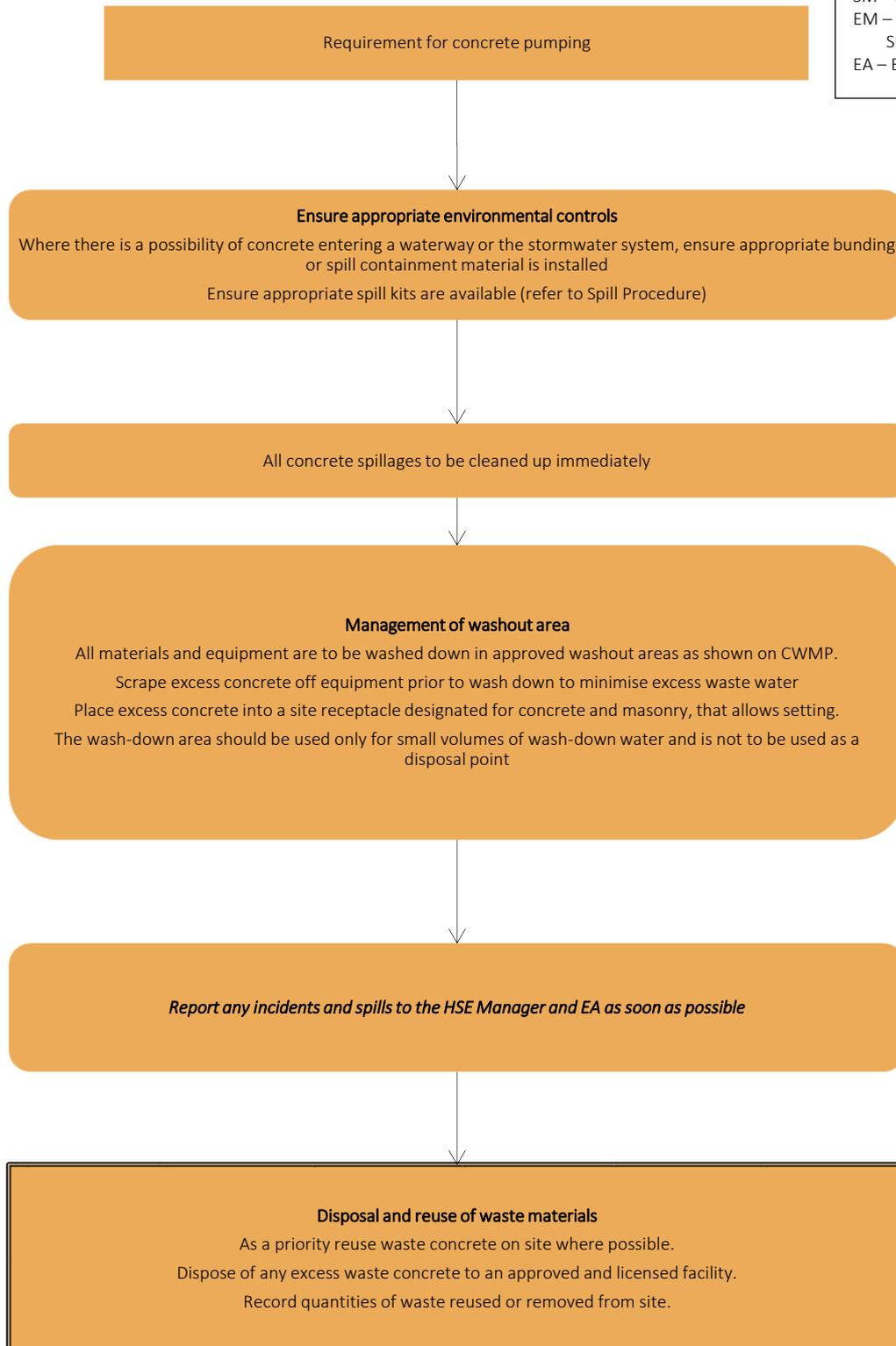
4.2.2 Concrete wash-out areas

- Wash-out of plant and equipment must only be conducted in a designated wash-out area.
- Wash-out areas must be located away from drainage lines, stormwater drains and water bodies.
- All wash-out areas must be maintained to securely capture and store concrete waste water and solids in an impervious bunded area.
- Excess concrete waste should be returned to the batching plant for treatment and reuse as a first priority or be disposed of appropriately, in accordance with the WMP.
- Water discharge must be in accordance with the Dewatering and Discharge Procedure.
- Spill kits must be readily available and near to equipment wash-out areas and all designated locations as per the relevant Construction Worksite Management Plan (CWMP).

Legend

Responsibilities

- PM – Project Manager
- SS – Site Supervisor
- SM – Safety Manager
- EM – Environment and Sustainability Manager
- EA – Environmental Adviser



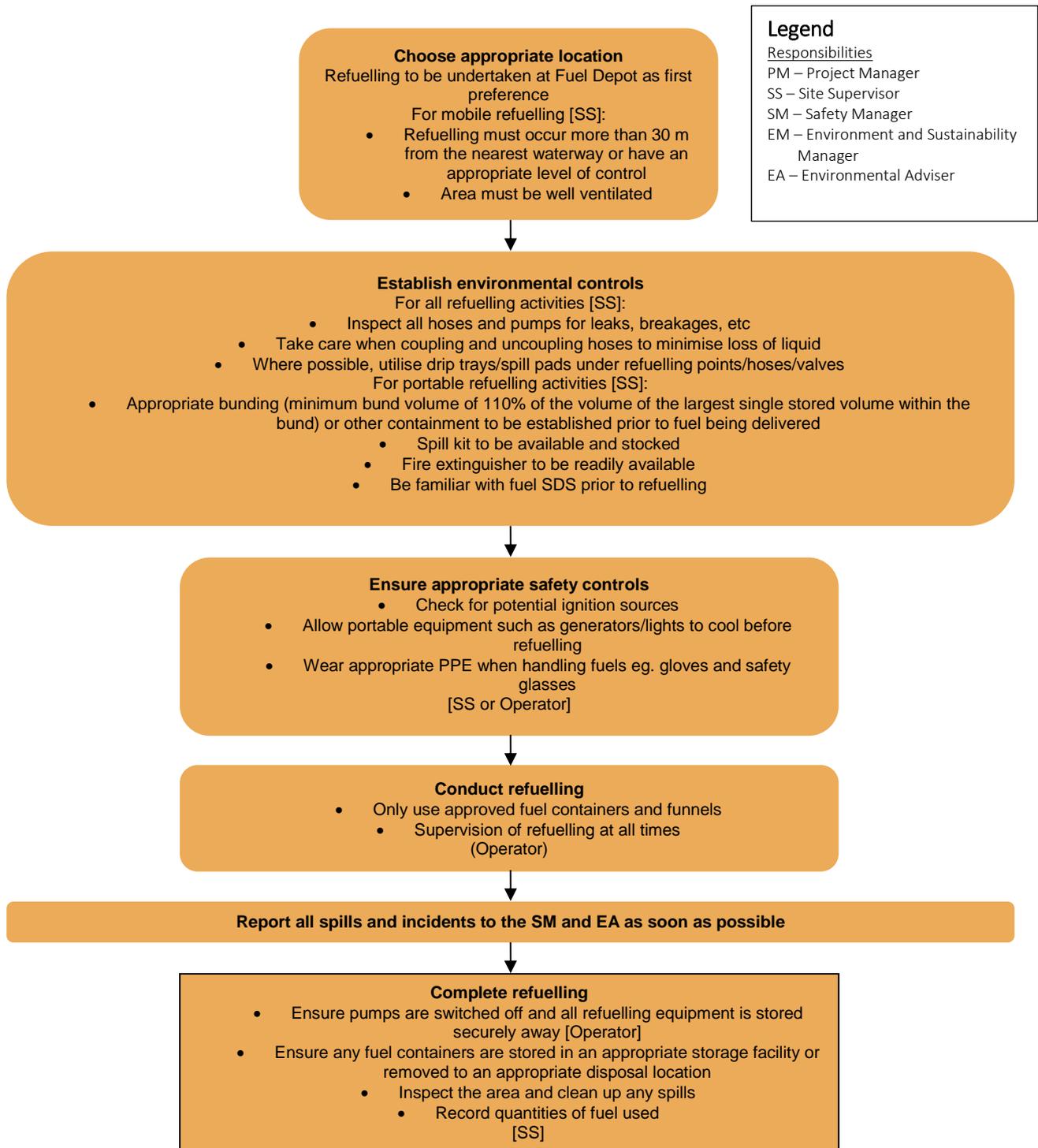
5 Refuelling Procedure

5.1 Training

- All personnel are to undertake Project inductions identifying their environmental and compliance obligations under the Minister's Conditions of Approval for the Cross River Rail Project.
- Obligations and responsibilities relevant to the management of refuelling will also be included in daily pre-start or activity-specific pre-start briefings, toolbox talks or targeted environmental training as appropriate.
- All personnel must be trained in the appropriate environmental controls for refuelling.
- Specific training on the appropriate use of the various spill kit materials will be undertaken periodically.

5.2 Procedure for refuelling

- This procedure is to be read in conjunction with the CHSP and the SMP.
- Any storage of fuels must be in accordance with the CHSP and SDS.
- All refuelling controls to be implemented onsite are detailed in the CWMP and associated Precinct Construction Management Plan.
- Refuelling must not occur within 30m of a waterway or adjacent to any drains (without appropriate controls in place).
- Spill kits must be located near to all chemical/hazardous substance storage areas, in refuelling and maintenance areas and at designated locations as per the CWMP.
- Type and size of spill kits must be selected based on the type and volume of materials stored.
- All fuel storage vehicles are to be equipped with a spill kit.
- Where refuelling from a mobile fuel truck, only the driver of the fuel truck is to operate the fuel pump. At the completion of refuelling, ensure the pump is switched off and nozzle is securely in the cradle.
- Safety Data Sheets (SDS) must be available on site.
- General purpose fire extinguishers and fire extinguishers suitable for control of oil/fuel fires must be available at all times.
- The refuelling operations shall be supervised at all times.
- After refuelling the truck driver shall inspect the area and clean up any spills.



6 Compliance Management

6.1 Roles and Responsibilities

The Contractor's organisational structure and overall roles and responsibilities are to be in accordance with those outlined in the CEMP.

6.2 Induction and Training

6.2.1 Environmental Induction

All CBGU staff, subcontractors and visitors to worksites must attend general induction training that covers general environmental management requirements, site-wide controls and site-specific and work specific risks and mitigation measures. Further details regarding environmental induction requirements have been outlined in the overarching CEMP. The site induction should also include general duties under contractual requirements, measures established in the CEMP and this HGMP.

Conduct induction and training for construction staff in relation to:

- The management and remediation of contaminated land
- Procedures for the handling, storage and disposal of hazardous materials
- Incident response practices and procedures
- Environmental awareness to encourage good material handling practices, spill management and incident reporting.

6.2.2 Environmental Training

Details regarding environmental training requirements have been outlined in the overarching CEMP.

6.3 Communication

Communication strategies including internal communication, external and Government Authority consultation, and stakeholder and community liaison must be undertaken in accordance with the CEMP and the CSEP.

6.4 Incidents and Emergencies

All incidents and emergencies are to be managed according to the process as outlined in the CEMP.

6.4.1 Incident Notification

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. The Environment and Sustainability Manager, Shared Services Director and Project Director should be notified immediately in the event of an environmental incident.

Further details regarding Incident Notification have been outlined in the overarching CEMP.

6.4.2 Incident Types

For the purpose of this HGMP, incidents may include, but are not limited to:

- Any breach of the legislation or an approval or permit condition
- Contamination of waterways or land
- Contamination of groundwater
- An incident involving material or serious environmental harm (refer to EP Act for definition).

6.4.3 Incident Prevention Management

Incident Classification and Procedure has been identified within the overarching CEMP.

6.4.4 Incident Investigation

The Incident Investigation process has been specified in the overarching CEMP.

6.4.5 Complaint Management

All complaints are to be dealt with in accordance with the complaints management procedure outlined in the CEMP.

7 Inspections, Monitoring, Auditing and Reporting

7.1.1 Environmental Inspections

CBGU will undertake environmental inspections to develop and evaluate the effectiveness of environmental controls.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance is observed, they will be recorded on the Project's Environmental Checklist. A register of all corrective actions including due date, closed out date, item description and responsible person will be recorded in such a way as to be able to be generated into a register when required.

Inspections are to be undertaken as nominated in the CEMP.

7.1.2 Environmental Monitoring

Monitoring will be undertaken at various sensitive receptors to validate the impacts predicted for the Project and to measure the effectiveness of environmental controls and implementation of this HGMP. The monitoring also helps in addressing any potential Community Complaints that may be made. The monitoring requirements specific to hazardous goods are outlined below.

- Daily site inspections are to be undertaken and documented by CBGU throughout the construction phase and are to include identification of any actual or potential contamination issues or risks. Any spills or other uncontrolled release of contaminants to the environment are to be addressed in accordance with the construction incidents and non-conformance reporting procedure described in the CEMP
- Immediately following a defined rainfall event, inspect and conduct necessary maintenance on all bunded chemical and hazardous storage areas
- Ensure that sign-off from a licensed asbestos contractor has been obtained and documented prior to any partial or full demolition of buildings and structures.

7.1.3 Environmental Auditing

Audits will be undertaken to assess the effectiveness of environmental controls, compliance with the CEMP, compliance with Environmental Design Requirements, and other relevant permits, approvals, and guidelines.

Audits will be undertaken in accordance with the CEMP.

7.1.4 Corrective Actions

Corrective actions must be undertaken where monitoring or validated complaints indicate the environmental outcomes or Imposed Conditions are not achieved in relation to particular works, either because the performance criteria have not been met, or mitigation measures have not been implemented. Where corrective actions become necessary, the specific works that do not achieve the environmental outcomes or meet the Imposed Conditions must cease until the corrective actions have been developed and implemented.

The process for developing and implementing Correction Actions has been specified within the overarching CEMP.

7.1.5 Environmental Reporting

To ensure compliance with Coordinator-General Condition 6, CBGU will prepare and submit a monthly report within 6 weeks from the end of the month.

The specific requirements of the Monthly Report have been identified in the CEMP.

7.1.6 Incidents and Non-Compliance Reporting

Environmental incidents meeting the criteria of an NCE shall be notified verbally as soon as practical and in writing within 48 hours of becoming aware of an incident occurring. Notification will generally be undertaken by the Environment and Sustainability Manager or delegate. Additional notification of the incident to the relevant authorities, EM and parent companies will also be undertaken as required

Further details regarding reporting, including provision of interim and detail reports have been provided in the overarching CEMP.

7.1.7 Document Control

The Contractor will coordinate the preparation, review and distribution as appropriate, of the environmental documents as detailed throughout the CEMP.

The Project will implement a document control procedure to control the flow of documents within and between Contractor, Regulatory Agencies, the Authority, the Environmental Monitor and relevant stakeholders and subcontractors.